
PROJECT MANUAL

CONTRACT NO.1 – GENERAL SITEWORK AND CONSTRUCTION

**NYSDOS CONTRACT No. C1000931 (Design)
NYSDOS CONTRACT No. C1002036 (Construction)**

TOWN OF PLATTSBURGH BATTLEFIELD MEMORIAL GATEWAY PARK PHASE I

**TOWN OF PLATTSBURGH
CLINTON COUNTY, NY**

February 7, 2023

Project Sponsor:
Town of Plattsburgh
151 Banker Rd
Plattsburgh, NY 12901

Project Funding:



Project designs were prepared with funding provided by the
New York State Department of State under
Title 11 of the Environmental Protection Fund.

Construction Administration:
Elan Planning, Landscape Architecture and Engineering, DPC
18 Division Street Suite 304
Saratoga Springs, NY 12866
518.306.3702

SECTION 000010
PROJECT CERTIFICATIONS

OWNER'S REPRESENTATIVE:

ELAN PLANNING,
LANDSCAPE ARCHITECTURE &
ENGINEERING, D.P.C
18 Division Street, Suite 304
Saratoga Springs, New York 12866

TELEPHONE: (518) 306-3702

Professional Stamp



END OF SECTION 000010

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NOTICE TO BIDDERS

Battlefield Memorial Gateway Park Site Development – Phase I Town of Plattsburgh Clinton County, New York

Sealed bids will be received by the Town of Plattsburgh at the Clerk's office at 151 Banker Road, Plattsburgh, NY 12901 until **2:00pm, March 9, 2023**, at which time they will be publicly opened and read aloud.

The proposed project is located on Sunset Drive, off of New York State Route 9, in the Town of Plattsburgh.

The work includes providing all labor, materials, machinery, tools, equipment and other means of construction necessary and incidental to providing the work shown on the plans and described in these specifications including, but not necessarily limited to the following:

Description of Work:

- Tree removal
- Clearing, grubbing, and site demolition
- Earthwork
- Storm Water management system
- Block retaining wall
- Asphalt paved roadway
- Asphalt parking lot
- Asphalt paved multi-use trail
- Asphalt paved trail
- Concrete paved area
- Traffic control signage
- Timber barrier
- Landscape plantings

Refer to Project Manual Summary (General Requirement Section 011000) for additional project information.

Bidding documents will be available to download at www.revplan.com. A public notice and link to the bidding documents will be available at www.townofplattsburgh.com/public-notice/. Hard copies of full and partial plan sets will not be distributed. Drawings and specifications may be examined at 151 Banker Road, Plattsburgh NY 12901. An engineer's estimate is not available for this project.

Potential bidders that obtain Bidding Documents from a source other than the issuing office must notify the issuing office in order to be placed on the official plan holders list. Project sponsor information issued during the bidding process will be provided via e-mail to the plan holders. **Bids received from contractors other than those on the official plan holder's list, will not be accepted.**

Bids are to be submitted on the Project Manual Bid Forms and enclosed in a sealed envelope with the following clearly marked on the front of the envelope:

- Bidders Name and Address
- "Battlefield Memorial Gateway Park – Phase I – Town of Plattsburgh"
- Date and Time of Bid Opening

Bid proposals may be hand delivered, mailed, or express mailed to the following address prior to 2:00pm local time on the day of the bid opening.

Town of Plattsburgh
Clerk's Office
151 Banker Road
Plattsburgh, NY 12901

Bids received after 2:00pm local time on the bid due date are rejected for submission.

This is a Stipulated Sum Amount bid. No bidder may withdraw their bid within forty-five (45) calendar days after the actual date of the bid opening thereof. Each bid is to be accompanied by a bid security in the amount of 5 percent of the bid amount in accordance with the Instruction to Bidders. The successful bidder is required to furnish construction performance and payment bonds in the full amount of the contract amount.

“This project is funded in part by a grant from the NYS Office of Parks, Recreation and Historic Preservation through Title 9 of the Environmental Protection Act of 1993.”

“All bidders are subject to the terms of the NYS Master Contract for Grants -- Standard Terms and Conditions, which can be found online at <http://grantsreform.ny.gov>.”

Owner reserves the right to reject any-and-all Bids, to waive any-and-all informalities, and the right to disregard all nonconforming, non-responsive or Conditional Bids.

Suggestions for Legal Notice to Bidders

Funding for this project comes in part through an Environmental Protection Fund grant administered by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). Under Article 15A, Executive Law, the State of New York is committed to providing Minority and Women Owned Business (MWBE) equal opportunity to participate in government contracts. The following goals have been set for this project: 15% Minority Business Enterprise (MBE) and 15% Women-owned Business Enterprise (WBE). The successful bidder may be required to furnish reports showing the participation of various business enterprises of subcontractors and suppliers on the contract.

OWNER

Town of Plattsburgh
151 Banker Road
Plattsburgh, NY 12901

PROJECT CONSULTANT & OWNER'S REPRESENTATIVE

Elan Planning, Landscape Architecture & Engineering, D.P.C.
18 Division Street
Studio 304
Saratoga Springs, NY 12866

SECTION 002113 - INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.1 DEFINITIONS

- A. **Bidding Documents:** Include the Project Manual and the proposed Contract Documents. The Project Manual consists of the Invitation to Bidders, Instructions to Bidders, Reports of Exploration, Bid Form, Wage Rates, and other sample bidding and contract forms. The proposed Contract Documents consist of the Form of Agreement between the Owner and Contractor, Conditions of the Contract, including Supplementary Conditions, Drawings, Technical Specifications, and all Addenda issued prior to execution of the Contract.
- B. **Definitions:** Terms set forth in the General Conditions of the Contract for Construction, AIA Document A201, 2017 Edition, are applicable to the Bidding Documents.
- C. **Addenda:** Written or graphic instruments issued prior to the execution of the Owner/Contractor Agreement which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
- D. **Bid:** A complete and properly signed proposal to do the work for the sums stipulated therein and submitted in accordance with the Bidding Documents.
- E. **Base Bid:** The sum stated in the Bid for which the Bidder agrees to perform the Work described in the Bidding Documents as the base inclusive of the stated contingency and allowance item values.
- F. **Stipulated Sum Amount:** A single lump sum price for all work.
- G. **Allowance:** An amount specified and included in the Base Bid for a certain item(s) of work whose details or quantities are not yet determined.
- H. **Contingency:** A specified amount (or percentage of contract value) set aside for unpredictable changes in the scope of work, inclusive with the Base Bid. (NOT USED)
- I. **Alternate:** An amount stated in the Bid to be added to or deducted from, the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, if owner accepted.
- J. **Unit Price:** An amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents. (NOT USED)
- K. **Bidder:** Person or entity who submits a Bid.
- L. The term Consultant, Owner's Representative, Resident Project Representative, Architect, Landscape Architect, and/or Engineer is used interchangeably for the person(s) serving in the Project Sponsor's construction administrative role.
- M. The terms Owner and Project Sponsor are used interchangeably in these documents.

PART 2 - BIDDER'S OBLIGATIONS

2.1 EXAMINATION OF BIDDING DOCUMENTS AND LOCATION OF WORK

- A. The Bidder has read and understands the Bidding Documents and the Bid is made in accordance with the stated requirements.
- B. The Bidder has read and understands the Bidding Documents and proposed Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, for other portions of the Project, if any, being bid concurrently or presently under construction.
- C. Before submitting a Bid, each Bidder should visit and examine the site of the work. Each Bidder shall inform himself prior to bidding as to all existing conditions and limitations under which the work shall be performed, and they shall include in their bid a sum to cover costs of all items necessary to perform the work as set forth in the Bidding Documents. No exceptions will be given to any bidder because of lack of such examination or knowledge. The submission of a bid will be construed as conclusive evidence that the bidder has made such examination.

2.2 CONDITIONS OF THE WORK

- A. Each Bidder shall inform himself of all conditions relating to the construction and labor under which the work shall be performed. 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 the Contract Documents and to complete the contemplated work for the consideration set forth in their bid.
- B. Each Bidder, in carrying out of their work, must employ such methods or means as will not cause any interference with the work of any other Contractor, Owner's occupancy requirements, and safety of persons and property.
- C. Each Bidder shall schedule his work in cooperation with the Owner so that efficient and coordinated progress of all work occurs.

2.3 START OF WORK AND TIME OF COMPLETION

- A. Work of this Contract, shall be started within ten (10) working days after receipt by the contractor of a "Notice to Proceed" from the Owner. It is intended, but not guaranteed, that the project Contractor will be issued a notice to proceed on or before April 17, 2023.
- B. On or before September 29, 2023 all work as indicated in the Contract Documents shall be completed. At that time, and upon the work of this Contract being complete, the Owners Representative will issue a Certificate of Substantial Completion which will establish the date of substantial completion. Within seven (7) calendar days from the date of substantial completion, the Contractor shall have fully completed the work of the Contract, as specified.
- C. Contractor and bonding companies shall be held strictly accountable for the completion of the Contractor's work per the specified schedule as a condition to satisfactory contract performance.

2.4 PRE-BID CONFERENCE

- A. Pre-Bid Conference will be conducted on the date of March 1, 2023, via Zoom (or similar digital meeting) at 10:00am.
- B. The project site should be inspected by all bidders prior to the pre-bid meeting. Any questions or interpretations resulting from on-site inspection of proposed work site shall be addressed to the Owner's Representative in accordance with the instructions to bidders.

2.5 PROOF OF COMPETENCY OF BIDDERS

- A. Bidders must be skilled and regularly engaged in the type of work bid for and, if required by the Owner, must submit satisfactory evidence of mechanical facilities and financial ability to do the work within the agreed time and in accordance with all requirements of the Agreement.
- B. The Owner reserves the right to reject any bid if the evidence by the Bidder is not submitted as above indicated or if the evidence submitted by or investigation of any such bidder fails to satisfy the Owner that any such bidder is responsible or is able or qualified to carry out the obligations of the Agreement or to complete the work as contemplated therein.
- C. The successful bidder is required to maintain control of the Agreement under their control at all times.
- D. Bidders are hereby notified that only those submitting Bonds rated A, or better, as per the Best Rating Guide, will be considered for award of contract. Bonding of lesser rating will be considered an irregularity in the submitted Bid, and as defined elsewhere in those documents will be reason for rejection of the Bid by the Owner.
- E. "Upon selection, for all contracts that equal or exceed \$100,000, the contractor will be required to submit to the State a Vendor Responsibility Questionnaire: Construction – For-Profit. The questionnaire can be found online at http://www.osc.state.ny.us/vendrep/forms_vendor.htm".

PART 3 - BIDDING DOCUMENTS

3.1 AVAILABILITY

- A. Bidder registration is required at the time of securing bidding documents.
- B. A public notice and link to the bidding documents will be available at www.townofplattsburgh.com/public-notice/.
- C. Bidding documents can be examined at no expense at:

Town of Plattsburgh
Office of Planning
151 Banker Road
Plattsburgh, NY 12901

3.2 INTERPRETATION OR CORRECTIONS OF THE BIDDING DOCUMENTS

- A. The Bidder, upon review of the Bidding Documents, shall provide notice to Owner's Representative via email, inconsistencies or ambiguities discovered.
- B. Interpretations, corrections, and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections, and changes of the Bidding Documents made in any other manner are not binding.

3.3 EQUIVALENTS AND SUBSTITUTIONS

- A. Equivalent is a product or system proposed by the bidder that is different from that specified in the bidding documents. The bidder requested Equivalent description is to be included in the bid submission. An Equivalent's components or characteristics are identical to, or exceed, the specified criteria for that product or system. If accepted, an Equivalent results in no change to the contract amount. The Owner's Representative's decision is the final authority regarding whether a product is equivalent or not.
- B. Substitution is a product or system proposed for substitution, after the award of agreement, whose components or characteristics differ from the specified criteria for that product or system. If accepted, a Substitution may result in a change to the contract amount. Substitutions will only be accepted in-the-event that specified products or systems are discontinued.
- C. Prospective bidders are advised that when options for specific brands, manufacturers, materials, or equipment are referenced in the Specifications, they are regarded as the required standard of quality and are presumed to be equal. The bidder may select one of the specified items or, if the bidder desires, they may use an equivalent type, brand, manufacturer, material, or equipment other than those named in the specification. When selecting to use an equivalent product or material not specified, the bidder shall submit, prior to the award of contract, the kind, type, brand and/or manufacturer included in the base bid. The bidder is further required to provide information, describing in specific detail, how the bid material differs from the quality and performance required by the base specifications, and other pertinent information as may be required by the Owner's Representative or the Owner.
- D. The apparent successful bidder shall submit within ten (10) calendar days after opening of bids, and prior to award of contract, the kind, type, brand, manufacturer, or equipment included in the base bid. Equivalent products must be highlighted on this list. When requested, the successful bidder shall also submit information, describing in specific detail, how the equivalent bid material differs from the appearance, quality and performance required by the base specification.
- E. The risk of whether bid equivalents will be accepted is borne by the Bidder. No substitutions will be considered after the Agreement award unless specifically provided in the Contractual Documents.

3.4 ADDENDA

- A. No interpretation of the meaning of the Bidding Documents will be made to any bidder orally. All requests for such interpretation shall be made in writing and emailed/addressed to:

Subject: "Town of Plattsburgh – Battlefield Gateway Memorial Park"
Owner's Representative: Elan Planning, Landscape Architecture &
Engineering, DPC
Email: mwesta@elanpd.com

- B. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Owner's Representative at least five (5) business days prior to the date for Owner's receipt of Bids. Questions received less than five (5) business days before the date for receipt of bids will not receive a response.
- C. Addenda will be emailed to all that are registered as plan holders.
- D. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
- E. No Addenda will be issued within two (2) business days prior to the date and time for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.
- F. Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.
- G. Failure of any bidder to receive any such addendum shall not relieve any bidder from any obligation under their bid as submitted. All addenda so issued shall become a part of the Contract Documents.

PART 4 - BIDDING PROCEDURES

4.1 PREPARATION OF BIDS

- A. Bids must be submitted on forms identical to the form included with the Bidding Documents. All blank spaces must be filled in, with ink or typewritten, in both words and figures where so indicated. In the case of discrepancy between the two stated amounts, the amount written in words shall govern.
- B. Erasures or other changes in the bid form must be explained or noted over the signature of the Bidder.
- C. Each copy of the Bid shall include the legal name of the Bidder and shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.
- D. Instruction to Bidders: required bid forms to be submitted as part of a qualified Bid Submission are outlined in Section 004233 – Bidders Checklist.
- E. "The State has established a goal for MWBE participation of 30% Minority and Women-Owned Businesses combined, with at least 15% MBE and 15% WBE. The lowest bidder must submit, either with their bid or within seven business days of notification of selection, a Grants MWBE Utilization Plan, Contractor's Solicitation Log and documentation that NYS Certified Minority and Women-Owned Business

Enterprises (MWBEs) were contacted during preparation of said bid. Participants that do not submit the Grants MWBE Utilization Plan, Contractor's Solicitation Log and evidence of their good faith efforts will be deemed non-responsive and their bid may be rejected. Evidence of good faith efforts is contact by certified mail, follow-up with phone contact and a summary of all contact and results. Prior to the award of a contract to the lowest bidder; review and acceptance of the bid summary and all MWBE documentation by State Parks is required."

4.2 BID SECURITY

- A. Each bid must be accompanied by Bid Bond using AIA Document A310, Certified Check, or Cashier's Check payable to the Owner in the amount of five percent (5%) percent of the base bid proposal.
- B. Such Bid Bond, Certified Check, or Cashier's Check will be returned to all except the two lowest formal Bidders within seven (7) calendar days after the formal opening of the Bids. The remaining security will be returned to the two lowest Bidders within forty-eight (48) hours after the Owner and the accepted bidder have executed the Contract or, if no contract has been so executed, within forty-five (45) calendar days after formal bid opening, so long as bidder has not been notified of the acceptance of their proposal.

4.3 SUBMISSION OF BIDS

- A. One (1) copy of the Bid Form shall be submitted with each bid. Second copy of Bid Form normally furnished should be retained for Bidder's own records.
- B. All copies of the Bid, the bid security, and other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. All bids shall be submitted in duplicate. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.
- C. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the stated time and date for receipt of Bids will be returned.
- D. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

4.4 MODIFICATION OR WITHDRAWAL OF BID

- A. Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder or by telegram; if by telegram, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.
- B. Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided they are then fully in conformance with the bidding requirements.

PART 5 - CONSIDERATION OF BIDS

5.1 OPENING OF BIDS

- A. Bids will be opened at the time and place set forth in the Invitation to Bid. Every bid received before that time, or authorized postponement thereof, will be opened and publicly read aloud.

5.2 REJECTION OF BIDS

- A. The Owner shall have the right to reject any or all Bids, reject a Bid not accompanied by other data required by the Bidding Documents, or reject a Bid which is in any way is incomplete or irregular.
- B. No bidder may withdraw a bid within forty-five (45) calendar days after the time and date set forth for receipt of bids.

5.3 ACCEPTANCE OF BID (AWARD)

- A. It is the intent of the Owner to award a Contract with the lowest responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities or irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.
- B. The Owner shall have the right to accept Bid Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder based on the sum of the Base Bid and Alternates accepted.

PART 6 – POST BID INFORMATION

6.1 CONTRACTOR'S QUALIFICATION STATEMENT

- A. Bidders to whom award of a Contract is under consideration shall submit, if required, to the Owner's Representative, upon request, a properly executed AIA Document A305, Contractor's Qualification Statement.

6.2 OWNER'S FINANCIAL CAPABILITY

- A. The Owner will, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

6.3 SUBMITTALS

- A. The Bidder shall, within ten (10) calendar days after notification of selection for the award of a Contract, furnish to the Owner through the Owner's Representative in writing:

1. A designation of the Work to be performed with the Bidder's own forces.
 2. Names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the work.
 3. Names of persons or entities (including those who are to furnish material or equipment fabricated to a special design) proposed for their portions of the Work.
- B. The Bidder will be required to establish to the satisfaction of the Owner's Representative and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.
- C. Prior to the award of the Contract, the Owner's Representative will notify the Bidder in writing if either the Owner or Owner's Representative after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Owner's Representative has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid, or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.
- D. Persons and entities proposed by the Bidder and to whom the Owner and Owner's Representative have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Owner's Representative.

PART 7 - PERFORMANCE BOND AND PAYMENT BOND

7.1 BOND REQUIREMENTS

- A. As a condition precedent to the Bid Bond execution of the contract, the Contractor shall furnish a bond in a sum of one hundred percent (100%) of the contract sum as security for the faithful performance of this contract (Performance Bond) and a bond in a sum of one hundred percent (100%) of the contract sum as security for the payment of all persons performing labor on the project and furnishing materials in connection with this project (Payment Bond).
- B. Only Bonds that carry an A, or better rating, as determined by the Best Rating Guide, will be acceptable on the project.
- C. Bond shall be executed on AIA Document A312, Performance Bond and Payment Bond, 1984 Edition, with amounts shown on each part. Surety shall be a company licensed to do business in the State of New York.
- D. Attorneys in fact who sign bid bonds or contract bonds must file with each bond a certified copy of their power of attorney to sign said bonds.
- E. The successful bidder shall be held strictly accountable for the completion of this work on the specified schedule as a condition to satisfactory contract performance.

7.2 FAILURE TO ENTER INTO CONTRACT

- A. The successful bidder, upon its failure or refusal to execute and deliver the contract, bond, and other bidding requirements required within ten (10) calendar days after the bidder has received notice of acceptance of its bid, shall forfeit to the Owner, the security deposited with its proposal or the difference between its bid and the next lowest responsible bid, whichever sum is greater.

PART 8 - COMPLIANCE WITH GOVERNING AGENCIES

8.1 PERMITS, TAXES, AND ASSESSMENTS

- A. The Contractor, in submitting a bid for this Contract, shall include in their Base Bid all costs and liabilities for permit conformance. The Contractor shall secure a construction permit if required. They shall also include within their Base Bid taxes and assessments upon the wages and salaries paid to employees of the Contractor and their subcontractors under the Contract, or any other taxes which may be assessed by the Federal, State or Local governments except as noted herein. The Owner has acquired the required Agency permits or approvals for installation of the project unless noted otherwise.
- B. The Owner, a public municipality, is exempt from payment of sales and compensating use taxes of the State of New York and of all cities and counties, and the Contractor shall notify all Subcontractors and material suppliers to this effect so the Bid, the Contract Sum, and subsequent requisitions for payment will not include any amount for sales or use taxes. All Contractors are referred to the General Conditions of the Contract for Construction and the Supplementary General Conditions of the Contract.

8.2 LAWS AND REGULATIONS

- A. All applicable Federal, State, or other Laws, orders, Rules and Regulations of Authorities having jurisdiction over construction work in the project locality shall apply to the Contract duration.
- B. These construction documents, are governed by applicable provisions of the Federal law(s), including but not limited to the latest amendments of the following:
- C. Williams-Steiger Occupational Safety & Health Act of 1970, Public Law 910596;
- D. Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;
- E. Part 1518 - Safety and Health Regulations for Construction Chapter XIII of Title 29, Code of Federal Regulations.

8.3 PREVAILING WAGE RATE

- A. This project is utilizing New York State public funding for its implementation and as such the project is in conformance with the Davis-Bacon Act requiring prevailing wage rate compensation be paid to workers.

8.4 MWBE COMPLIANCE

- A. The project is utilizing New York State public funding with a stated 15% Minority and 15% Woman Owned Business Enterprise participation goal. Bidders shall put forth a Good Faith Effort in the utilization of MWBE Enterprises to undertake this project.

8.5 NON-COLLUSIVE BIDDING CERTIFICATION AND CORPORATE RESOLUTION

- A. Pursuant to the requirements of Section 103-d of the General Municipal Law, each proposal submitted shall be accompanied by a fully executed Non-Collusive Bidding Certification, a copy of which is attached to the Bid Form.

8.6 NON-SEGREGATED FACILITIES CERTIFICATION

- A. Notice of Requirement for Certification of Non-Segregated Facilities - Bidders are cautioned as follows: By signing this bid, the bidder will be deemed to have agreed to the provisions of the "Certification of Non-Segregated Facilities", a copy of which is enclosed hereafter. The Certification provides that the bidder does not maintain or provide for their employees' facilities which are segregated on a basis of race, creed, color, or national origin, whether such facilities are segregated by directive or on a de facto basis. The Certification also provides that they will not maintain such segregated facilities. Failure of a bidder to agree to the Certification of Non-Segregated Facilities will render their bid non-responsive to the terms of solicitation involving awards of contracts exceeding \$10,000.00, which are not exempt from the provisions of the Equal Opportunity Clause.

8.7 ASSIGNMENT OF CONTRACT

- A. The successful bidder is prohibited from assigning, transferring, conveying, subletting, or otherwise disposing of the same, or their right, title, or interest therein, or of their power to execute such contract to any other person or corporation without the previous consent in writing of the Owner. If such assignment, transfer conveyance, subletting, or otherwise, is made without the required consent of the Owner, the Contract herein shall be revoked, and annulled in accordance with Section 109 of the General Municipal Law, which is incorporated herein.

8.8 GENERAL COVERAGE CLAUSE

- A. All provision of law and clauses required by law to be inserted in this Agreement shall be deemed to have been inserted herein, and if through error or otherwise, such provision is not inserted, then upon the application of either party, this Agreement shall be physically amended forthwith to make such insertion.

8.9 NON-WAIVER

- A. No waiver of any breach of any condition in this Agreement shall be binding unless the same shall be in writing and signed by the party waiving the said breach. No such waiver shall in any way affect any other term or condition of this agreement or constitute a cause or excuse for the repetition of such or any other breach unless the waiver shall include the same.

8.10 MODIFICATIONS OF AGREEMENT

- A. This agreement constitutes the complete understanding of the parties, no modification or any provision thereof shall be valid unless in writing and signed by both parties.

PART 9 - SPECIAL INSTRUCTIONS

9.1 SCHEDULE OF VALUES

- A. The contractor shall submit a Schedule of Values indicating contract amount separated into project features and/or tasks with assigned dollar values to each that when added equal the contract amount.

END OF SECTION 002113

SECTION 003113 - PRELIMINARY SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Project Milestone Schedule for the project duration.

1.2 RELATED DOCUMENTS

- A. Related Sections Include the Following
 - 1. Section 011100 – Project Summary
 - 2. Sections 013300 – Submittal Procedures

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on a critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor activity is an activity that must be completed before a given activity can be started.
- B. Critical Path: The longest continuous chain of events through the network schedule that establishes the minimum overall project duration.
- C. Event: The starting or ending point of an activity
- D. Major Area: A story of construction, a separate building, or similar significant construction element.
- E. Milestone: A key or critical point in time for reference or measurement

PART 2 – PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 PREPARATION

- A. Contractor to submit draft work schedule prior to the Post Award Pre-Construction Conference.
- B. Project Milestone Schedule shall be used by each prime contractor to reference start and completion dates, and their respective durations, for each activity listed within each

Phased work area. The Prime Contractor's Construction Schedule shall be submitted to the Owner's Representative, for conformance review with the Master Schedule.

- C. The approved Project Master Schedule shall supersede all previous schedules. Master Schedule shall be reviewed weekly and updated as required, with each revision taking precedence over previously issued.

PART 4 – MILESTONE SCHEDULE

4.1 Project Schedule

- A. The below schedule is for tentative planning purposes only.

1. Release Bid Documents	February 10, 2023
2. Pre-bid Meeting:	March 1, 2023
3. Bid Submission:	March 9, 2023
4. Contract Award:	April 17, 2023
5. Notice to Proceed:	April 17, 2023
6. Substantial Completion:	September 29, 2023
7. Project Complete:	October 20, 2023

END OF SECTION 003113

BID FORM CONTRACT NO. 1 – GENERAL SITE WORK AND CONSTRUCTION

TO: Town of Plattsburgh
151 Banker Road
Plattsburgh, NY 12901

PROJECT: Town of Plattsburgh – Battlefield Memorial Gateway Park – Phase I

In accordance with Section 002113 Instructions to Bidders, and in compliance with the proposed Bid Documents for the construction of the referenced project, please be advised that:

The Undersigned _____
(Name of Contractor)

(Address)

Having examined the Bidding Documents, and having familiarized themselves with the local conditions and any other conditions affecting the work of this Project, including the availability of materials and labor, hereby agrees to execute a contract to furnish all labor, materials, equipment, transportation, and services necessary to perform and complete the construction of the Project in accordance with the Contract Documents within the time limit, for the sums given as follows:

STIPULATED SUM AMOUNT BID

- 1. Allowance No. 1: Work in NYS DOT Right of Way \$20,000
- 2. Allowance No. 2: As Built Condition Topographic Feature Survey \$8,000
- 3. Stipulated Sum Total Bid Amount Including Allowance No.1 and No.2 \$ _____
Figure

Dollars (in words)

ADDENDA

Receipt of the following addenda is hereby acknowledged and the work of the same are hereby included in the Stipulated Sum of the Bid and/or Alternate:

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

GENERAL AGREEMENTS

The stipulated sum given within this Bid is based upon the following general agreements:

1. The stipulated sum given in the Bid represents the entire cost of the Project. The sum given shall include any and all cost for insurance, including all insurance required by the Agreement, any and all fees for licenses and permits. The Undersigned agrees that no claim will be made for any additional costs regardless of any increases in costs such as higher wage scales or material prices. No amount is included in the bid amount for sales or use taxes on materials and supplies to be incorporated in the work, except as specified.
2. The Undersigned has carefully checked all the figures used in compiling the stipulated sum given in the bid amount and understands that the Owner will not be responsible for any errors or omissions incurred by the Undersigned in making up of this bid. The Undersigned further understands that no modification or withdrawal of this proposal will be permitted after the time specified for the receipt of bids.
3. The Undersigned agrees that this Bid shall be good and may not be withdrawn for a period of forty-five (45) consecutive calendar days after the time specified for the receipt of bids.
4. The Undersigned agrees to furnish the performance bond and payment bond as specified prior to the execution of the Contract.
5. The Undersigned hereby agrees to commence work under this Contract within five (5) working days of receipt of "Notice to Proceed".
6. The Undersigned hereby agrees that on or before the date indicated in the Instructions to Bidders, they shall have substantially completed all the work of the Contract Documents as specified and that within fourteen (14) working days from the date of substantial completion, they shall have fully completed the work of the total Contract as specified.
7. Attach to each copy of the Bid Form a Bid Bond using AIA Document A310, a certified check, or a cashier's check payable to the Owner. Any Bid Bond on other forms may be considered an irregularity in bidding. AIA forms as required by these Contract Documents are available from the American Institute of Architects, 1735 New York Avenue, NW, Washington, DC 20006.
8. Bid allowances: The Bidder affirms that all allowances listed in the Bidding Documents have been included in the Base Bid and include the overhead and profit for said Allowance.

Dated: _____, 20__ Signed _____

For _____
(Name of Company)

Street _____

City _____

State _____

Zip _____

Telephone _____

Fax _____

BIDDER'S CHECKLIST

Bidders shall submit the following documents at the time of the bid submission:

- _____ Bidder's Checklist with Submitted Items Checked
- _____ Bid Form Contract No.1 – General Site Work and Construction
- _____ Certified Copy of Resolution of Board of Directors
- _____ Non-Collusive Bidding Certifications
- _____ Bid Bond – AIA Document A310, 2010 Edition
- _____ Iran Divestment Act Certification
- _____ Statement of Surety's Intent
(Requires completion and signature by Surety's Representative)
- _____ NYS Department of State Forms (Forms A-D)
 - Form A: Minority and Women-Owned Business Enterprises and Equal Employment Opportunity Policy Statement
 - Form B: Staffing Plan
 - Form C: Work Force Employment Utilization
 - Form D: MWBE Utilization Plan



AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Town of Plattsburgh
c/o Trevor Cole
151 Banker Road
Plattsburgh, NY 12901

BOND AMOUNT: \$**PROJECT:**

(Name, location or address, and Project number, if any)

Battlefield Memorial Gateway Park - Phase I
Sunset Drive, Town of Plattsburgh, NY

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Init.

furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this day of ,

_____	_____
<i>(Witness)</i>	<i>(Contractor as Principal)</i> <i>(Seal)</i>
_____	_____
	<i>(Title)</i>
_____	_____
	<i>(Surety)</i> <i>(Seal)</i>
_____	_____
<i>(Witness)</i>	<i>(Title)</i>

Init.

SECTION 004333 – PROPOSED EQUIVALENT LIST

Related Sections

1. Section 002113-3 – Part 3; 3.3 Equivalents

List to be provided within 5 days of receiving notice of being the apparent low bidder.

If bidder proposes to use materials and equipment other than those specified, he shall list below any equivalents he proposes to use.

Materials and equipment not listed on this sheet and not proposed, as equivalents in the bid may NOT be considered, evaluated, or accepted as equivalents after the bids are received.

This identification of equivalent is required of Bidder(s) as part of the Supplementary Bid Forms and is in partial fulfillment of requirements of the Instructions to Bidders. Equivalents may affect Owner's acceptance of the bid and decision to award Contract. Additional data on equivalents may be requested from selected Bidders after the Bid Opening in accordance with the Instructions to Bidders.

Additional sheets will be provided on request:

SPECIFICATION SECTION EQUIVALENT	SPECIFIED ITEM	PROPOSED
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

PART 1 – GENERAL (NOT USED)

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 004333

SECTION 004336 – SUBCONTRACTOR LISTING

List to be provided within 5 days of receiving notice of being the apparent low bidder. Should any part or portion of the Work be planned for subcontracting, list the name, address, and phone numbers of all Subcontractors that Bidder(s) proposes to use on this Contract and the Work assigned to each. Please print in ink or type in the spaces provided. Attach additional sheets if necessary.

This identification of equivalent is required of Bidder(s) as part of the Supplementary Bid Forms and is in partial fulfillment of requirements of the Instructions to Bidders. Additional data on proposed Subcontractors may be requested from selected Bidders after the Bid Opening in accordance with the Instructions to Bidders.

1. (Name of Subcontractor)

(Address of Subcontractor)

(Phone Number of Subcontractor)

2. (Name of Subcontractor)

(Address of Subcontractor)

(Phone Number of Subcontractor)

3. (Name of Subcontractor)

(Address of Subcontractor)

(Phone Number of Subcontractor)

4. (Name of Subcontractor)

(Address of Subcontractor)

(Phone Number of Subcontractor)

PART 1 – GENERAL (NOT USED)

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 004336



AIA® Document A305™ – 1986

Contractor's Qualification Statement

The Undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

SUBMITTED TO: Town of Plattsburgh, c/o Trevor Cole

ADDRESS: 151 Banker Road, Plattsburgh, NY 12901

SUBMITTED BY:

NAME:

ADDRESS:

PRINCIPAL OFFICE:

- Corporation
- Partnership
- Individual
- Joint Venture
- Other

NAME OF PROJECT: *(if applicable)*

Town of Plattsburgh - Battlefield Gateway Memorial Park - Phase I:

TYPE OF WORK: *(file separate form for each Classification of Work)*

- General Construction
- HVAC
- Electrical
- Plumbing
- Other: *(Specify)*

§ 1 ORGANIZATION

§ 1.1 How many years has your organization been in business as a Contractor?

§ 1.2 How many years has your organization been in business under its present business name?

§ 1.2.1 Under what other or former names has your organization operated?

§ 1.3 If your organization is a corporation, answer the following:

§ 1.3.1 Date of incorporation:

§ 1.3.2 State of incorporation:

§ 1.3.3 President's name:

§ 1.3.4 Vice-president's name(s)

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This form is approved and recommended by the American Institute of Architects (AIA) and The Associated General Contractors of America (AGC) for use in evaluating the qualifications of contractors. No endorsement of the submitting party or verification of the information is made by AIA or AGC.

- § 1.3.5 Secretary's name:
- § 1.3.6 Treasurer's name:

§ 1.4 If your organization is a partnership, answer the following:

- § 1.4.1 Date of organization:
- § 1.4.2 Type of partnership (if applicable):
- § 1.4.3 Name(s) of general partner(s)

§ 1.5 If your organization is individually owned, answer the following:

- § 1.5.1 Date of organization:
- § 1.5.2 Name of owner:

§ 1.6 If the form of your organization is other than those listed above, describe it and name the principals:

§ 2 LICENSING

§ 2.1 List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.

§ 2.2 List jurisdictions in which your organization's partnership or trade name is filed.

§ 3 EXPERIENCE

§ 3.1 List the categories of work that your organization normally performs with its own forces.

§ 3.2 Claims and Suits. (If the answer to any of the questions below is yes, please attach details.)

§ 3.2.1 Has your organization ever failed to complete any work awarded to it?

§ 3.2.2 Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers?

§ 3.2.3 Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years?

§ 3.3 Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? (If the answer is yes, please attach details.)

§ 3.4 On a separate sheet, list major construction projects your organization has in progress, giving the name of project, owner, architect, contract amount, percent complete and scheduled completion date.

§ 3.4.1 State total worth of work in progress and under contract:

§ 3.5 On a separate sheet, list the major projects your organization has completed in the past five years, giving the name of project, owner, architect, contract amount, date of completion and percentage of the cost of the work performed with your own forces.

§ 3.5.1 State average annual amount of construction work performed during the past five years:

§ 3.6 On a separate sheet, list the construction experience and present commitments of the key individuals of your organization.

§ 4 REFERENCES

§ 4.1 Trade References:

§ 4.2 Bank References:

§ 4.3 Surety:

§ 4.3.1 Name of bonding company:

§ 4.3.2 Name and address of agent:

§ 5 FINANCING

§ 5.1 Financial Statement.

§ 5.1.1 Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:

Current Assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses);

Net Fixed Assets;

Other Assets;

Current Liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes);

Other Liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).

§ 5.1.2 Name and address of firm preparing attached financial statement, and date thereof:

§ 5.1.3 Is the attached financial statement for the identical organization named on page one?

§ 5.1.4 If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsiary).

§ 5.2 Will the organization whose financial statement is attached act as guarantor of the contract for construction?

§ 6 SIGNATURE

§ 6.1 Dated at this day of

Name of Organization:

By:

Title:

§ 6.2

M being duly sworn deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading.

Subscribed and sworn before me this day of

Notary Public:

My Commission Expires:

NON-COLLUSIVE BIDDING CERTIFICATION

Bidder to provide information listed below:

Bidder Address: _____
Street or PO Box No

_____ *City*

_____ *State* _____ *Zip*

Federal Identification No: _____

Name of Contact Person: _____

Phone # of Contact Person: _____

If Bidder is a Corporation:

_____ *Presidents Name & Address*

_____ *Vice Presidents Name & Address*

_____ *Other officer's Name & Address*

If Bidder is a Partnership:

_____ *Partners Name & Address*

_____ *Partners Name & Address*

If Bidder is a Sole Proprietorship

_____ *Owners Name & Address*

CERTIFICATION OF COMPLIANCE IRAN DIVESTMENT ACT

As a result of the Iran Divestment Act of 2012 (the "Act"), Chapter 1 of the 2012 Laws of New York, a new provision has been added to the State Finance Law (SFL), § 165-a, and New York General Municipal Law § 103-g, both effective April 12, 2012. Under the Act, the Commissioner of the Office of General Services (OGS) will be developing a list (Prohibited Entities List) of "persons" who are engaged in "investment activities in Iran" (both are defined terms in the law). Pursuant to SFL § 165-a(3)(b), the initial list is expected to be issued no later than 120 days after the Act's effective date, at which time it will be posted on the OGS website.

By submitting a bid in response to this solicitation or by assuming the responsibility of a Contract awarded hereunder, each Bidder/Contractor, any person signing on behalf of the Bidder/Contractor and any assignee or subcontractor and, in the case of a joint bid, each party thereto, certifies, under penalty of perjury, that once the Prohibited Entities List is posted on the OGS website, that to the best of its knowledge and belief, that each Bidder/Contractor and any subcontractor or assignee is not identified on the Prohibited Entities List created pursuant to SFL § 165-a(3)(b).

Additionally, Bidder/Contractor is advised that once the Prohibited Entities List is posted on the OGS website, any Contractor seeking to renew or extend a Contract or assume the responsibility of a Contract awarded in response to this solicitation, must certify at the time the Contract is renewed, extended or assigned that it is not included on the Prohibited Entities List.

During the term of the Contract, should the County receive information that a Bidder/Contractor is in violation of the above-referenced certification, the County will offer the person or entity an opportunity to respond. If the person or entity fails to demonstrate that it has ceased its engagement in the investment which is in violation of the Act within 90 days after the determination of such violation, then the County shall take such action as may be appropriate including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Bidder/Contractor in default.

The County reserves the right to reject any bid or request for assignment for a Bidder/Contractor that appears on the Prohibited Entities List prior to the award of a contract, and to pursue a responsibility review with respect to any Bidder/Contractor that is awarded a contract and subsequently appears on the Prohibited Entities List.

I _____, being duly sworn, deposes and says that he/she is the
_____ of _____ and

neither the Bidder/Contractor nor any proposed subcontractor is identified on the Prohibited Entities List.

Signed

SWORN to before me this

_____ day _____ of 20_____

Notary Public: _____

BY EXECUTING THIS DOCUMENT, THE CONTRACTOR AGREES TO:

- 1. Perform all work listed in accordance with these Contract Documents at the stipulated sum amount bid; subject to the provisions of these Bidding Documents.
- 2. All the terms and conditions of the non-collusive bidding certifications required by section 139-d of State Finance Law, and Section 112(c), Title 23, U,S, Code;
- 3. Certification of Specialty Items category selected, if contained in this proposal;
- 4. Certification of any other clauses required by this proposal and contained herein;
- 5. Certification, under penalty of perjury, as to the current history regarding suspensions, debarments. Voluntary exclusions, determinations of ineligibility, indictments, or civil judgments required by 49 CFT Part 29.

 (Legal name of Person, Corporation, or Firm Which is Submitting Bid or Proposal)

Date _____

By: _____
 (Signature of Person Representing Above)

As: _____
 (Official Title of Signator in Above Firm)

(Acknowledge By a Corporation)

STATE OF NEW YORK)
) SS:
 COUNTY OF)

On this _____ day of _____, 20__ before me personally came _____ to me known and known to me to be the person who executed the above instrument, who being duly sworn by me, did depose and say that he/she resides at _____, and that he/she is the _____ of the Corporation described in and which executed the above instrument, and that he/she signed his/her name thereto on behalf of said Corporation by order of the Board of Directors of said Corporation.

 Notary Public

(Acknowledge By Partnership)

STATE OF NEW YORK)
) SS:
COUNTY OF)

On this _____ day of _____, 20__ before me personally came _____ to me known and known to me to be the person described in and who executed the above instrument, who being duly sworn by me, did depose and say that he/she is a partner of the firm of _____, consisting of himself/herself and _____ and that he/she executed the foregoing instrument in the firm name of _____ and that he/she had authority to sign same, and did duly acknowledge to me that he/she executed same as the act and deed of said firm of _____ for the uses and purposes mentioned herein.

Notary Public

(Acknowledge By Individual Contractor)

STATE OF NEW YORK)
) SS:
COUNTY OF)

On this _____ day of _____, 20__ before me personally came _____ to me known and known to me to be the person who executed the above instrument, and that he/she acknowledge that he/she executed the same.

Notary Public

FORM A
MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES – EQUAL
EMPLOYMENT OPPORTUNITY POLICY STATEMENT

M/WBE AND EEO POLICY STATEMENT

I, _____, the (awardee/contractor) _____ agree to adopt the following policies with respect to the project being developed or services rendered at _____

M/WBE This organization will and will cause its contractors and subcontractors to take good faith actions to achieve the M/WBE contract participations goals set by the State for that area in which the State-funded project is located, by taking the following steps:

- (1) Actively and affirmatively solicit bids for contracts and subcontracts from qualified State certified MBEs or WBEs, including solicitations to M/WBE contractor associations.
- (2) Request a list of State-certified M/WBEs from AGENCY and solicit bids from them directly.
- (3) Ensure that plans, specifications, request for proposals and other documents used to secure bids will be made available in sufficient time for review by prospective M/WBEs.
- (4) Where feasible, divide the work into smaller portions to enhanced participations by M/WBEs and encourage the formation of joint venture and other partnerships among M/WBE contractors to enhance their participation.
- (5) Document and maintain records of bid solicitation, including those to M/WBEs and the results thereof. Contractor will also maintain records of actions that its subcontractors have taken toward meeting M/WBE contract participation goals.
- (6) Ensure that progress payments to M/WBEs are made on a timely basis so that undue financial hardship is avoided, and that bonding and other credit requirements are waived or appropriate alternatives developed to encourage M/WBE participation.

EEO (a) This organization will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing programs of affirmative action to ensure that minority group members are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on state contracts.

(b) This organization shall state in all solicitation or advertisements for employees that in the performance of the State contract all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex disability or marital status.

(c) At the request of the contracting agency, this organization shall request each employment agency, labor union, or authorized representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of this organization's obligations herein.

(d) Contractor shall comply with the provisions of the Human Rights Law, all other State and Federal statutory and constitutional non-discrimination provisions. Contractor and subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

(e) This organization will include the provisions of sections (a) through (d) of this agreement in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the State contract.

Agreed to this _____ day of _____, 2_____

By _____

Print: _____ Title: _____

_____ is designated as the Minority Business Enterprise Liaison
(Name of Designated Liaison)

responsible for administering the Minority and Women-Owned Business Enterprises- Equal Employment Opportunity (M/WBE-EEO) program.

M/WBE Contract Goals

15% Minority Business Enterprise Participation

15% Women's Business Enterprise Participation

PLEASE NOTE THAT THIS REQUIERMENT "EEO CONTRACT GOALS" IS ONLY APPLICABLE WHERE A STATE AGENCY REQUIRES SUCH A PROVISION. NOTE: THIS LANGUAGE SHOULD BE DELETED FROM THE FINAL CONTRACT

EEO Contract Goals

_-__% Minority Labor Force Participation

_-__% Female Labor Force Participation

(Authorized Representative)

Title: _____

Date: _____

MINORITY/WOMEN OWNED BUSINESS ENTERPRISES SUMMARY

The following procedures shall be followed to satisfy the requirements of the Omnibus Procurement Act with regard to the procurement of subcontractors and suppliers.

- I. A directory of minority and women-owned business enterprises is available from:

Empire State Development
Division Minority and Women's Business Development
Albany, NY 12245
Phone: (518) 292-5250
<https://ny.newnycontracts.com> (MWBE Directory search)

- II. Definition. For the purposes of these clauses, the following definition shall apply:
 - (a) "Certified business" shall mean either a business certified as a minority or women-owned business enterprise pursuant to section 314 of the Executive Law.
 - (b) "Director" shall mean the Director of the Division of Minority and Women's Business Development established by section 311 of the Executive Law.
 - (c) "Minority group member" shall mean a United States citizen or permanent resident alien who is and can demonstrate membership in one of the following groups:
 - (1) Black persons having origins in any of the Black African racial groups;
 - (2) Hispanic persons of Mexican, Puerto Rican, Dominican, Cuban, Central or South American of either Indian or Hispanic origin, regardless of race;
 - (3) Native American or Alaskan native persons having origins in any of the original peoples of North America;
 - (4) Asian and Pacific Islander persons having origins in any of the Far East countries, South East Asia, the Indian subcontinent or the Pacific Islands.
 - (d) "Minority-owned business enterprises" shall mean a business enterprise, including a sole proprietorship, partnership or corporation that is:
 - (1) at least fifty-one percent owned by one or more minority group members;
 - (2) an enterprise in which such minority ownership is real, substantial and continuing;
 - (3) an enterprise in which such minority ownership has and exercises the authority to control independently the day-to-day business decisions of the enterprise; and
 - (4) an enterprise authorized to do business in this state and independently owned and operated.
 - (e) "Subcontract" shall mean an agreement providing for total expenditures in excess of \$25,000 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon between a contractor and any individual or business enterprise, including a sole proprietorship, partnership, corporation or not-for-profit corporation, in which a portion of a contractor's obligation under a state contract is undertaken or assumed.
 - (f) "Women-owned business enterprise" shall mean a business enterprise, including a sole proprietorship, partnership or corporation that is:
 - (1) at least fifty-one percent owned by one or more United States citizens or permanent resident aliens who are women;

- (2) an enterprise in which the ownership interest of such women is real, substantial and continuing;
- (3) an enterprise in which such women ownership has and exercises the authority to control independently the day-to-day business decisions of the enterprise ; and
- (4) an enterprise authorized to do business in this state and independently owned and operated.

III. Good Faith Efforts. In order to show good faith efforts comply with the M/WBE participation goals of this contract, the contractor shall submit such documentation as will enable the STATE to make a determination in accordance with the following criteria:

- (a) Did the contractor submit a completed, acceptable utilization plan and EEO program aimed at meeting the goals for the participation of minorities and women in the contract?
- (b) Did the contractor place advertisements in appropriate general circulation, trade and minority or woman-owned publications in a timely fashion?
- (c) Did the contractor make written solicitations to women and minority-owned business enterprises listed in the directory of certified businesses in a timely fashion and include plans, specifications and contract terms. Did the businesses solicited respond in a timely fashion?
- (d) Could the contractor have reasonably structured the work to be performed under subcontracts so as to increase the likelihood of participation by certified businesses?
- (e) Did the contractor attend any prebid or preaward meetings scheduled by the STATE with M/WBE's which the STATE determined were capable of performing work or supplying materials on the contract?
- (f) Were the subcontract terms and conditions offered to M/WBE's comparable to those offered in the ordinary course of the contractor's business to other subcontractors on the contract?

IV. Utilization Plans

- (a) If goals have been established by the STATE for the participation of certified M/WBE's on this agreement, at the direction of the STATE, but in no case later than execution of the agreement the contractor shall submit to the STATE a utilization plan on forms to be provided by the STATE. The utilization plan shall list all subcontractors and suppliers the contractor intends to use on the contract and indicate which are certified M/WBE's.
- (b) The STATE will review the utilization plan and will issue to the contractor a written notice of acceptance or deficiency within twenty days of receipt. A notice of deficiency shall include;
 - (1) the name of any M/WBE which is not acceptable for the purpose of complying with M/WBE participation goals;
 - (2) elements of the contract scope of work which the STATE has determined can be reasonably structured by the contractor to increase the likelihood of participation of M/WBES; and
 - (3) other information which the STATE determines to be relevant to the utilization plan.
- (c) The contractor shall respond to the notice of deficiency within seven days of receipt by submitting to the STATE a written statement which remedies the deficiencies in the original plan. If the written remedy which the contractor submits is not timely or is found by the STATE to be inadequate, the STATE shall so notify the contractor within five days and direct the contractor to submit a request for a partial or total waiver of M/WBE participation goals on forms to be provided by the STATE. The request for waiver must be submitted within five days of the contractors receipt of a notice that the statement of remedy was untimely or inadequate.

- (d) A contractor who has made good faith efforts to obtain commitments from M/WBE subcontractors and suppliers prior to submitting its utilization plan may request a waiver at the same time it submits its utilization plan. If a request for waiver is submitted with the utilization plan, and is not accepted by the STATE at that time, the provisions of clauses (b) and (c), regarding the notice of deficiency and written remedy will apply. In this case, the contractor may submit a second request for waiver as directed by the STATE.
- (e) If the contractor does not submit a request for waiver, or if the STATE determines that the utilization plan does not indicate that the M/WBE participation goals will be met and that the good faith efforts of the contractor have been inadequate to justify the granting of the request for waiver, the STATE shall terminate the contract, or if the contract has not been executed, the STATE shall withdraw from contract negotiations. Notice of termination or withdrawal, along with a denial of a request for waiver, where applicable, shall be delivered to the contractor no later than twenty days after the STATE receives the request for waiver.
- (f) The contractor shall attempt to utilize, in good faith, any MBE or WBE identified within its utilization plan, at least to the extent indicated in the plan.

V. Administrative Hearing on Disqualification of Contractor.

- (a) If the STATE disqualifies the contractor on the ground that the contractor has failed to remedy deficiencies in its utilization plan or document good faith efforts to remedy such deficiencies, the contractor shall be entitled to an administrative hearing, on the record, before a hearing officer appointed by the STATE, to review the determination of disqualification of the contractor.
- (b) The hearing officer's determination shall be a final administrative determination of the STATE and shall be reviewable by a proceeding brought pursuant to the Civil Practice Law and Rules, provided such proceeding is commenced within thirty days of notice given by certified mail, return receipt requested, rendering such final administrative determination in accordance with the provisions of section 313 of the Executive Law.
- (c) Such review shall be commenced in the Supreme Court, Appellate Division, Third Department, and shall be heard and determined in preference to all other civil business pending therein, except election matters, irrespective of position on the calendar. Appeals taken to the Court of Appeals of the State of New York shall be subject to the same preference.

VI. Reports.

The contractor shall submit, and shall require subcontractors to submit, reports showing the participation of all business enterprises on this contract, including minority and women-owned business enterprises on forms and at intervals to be established by the STATE. Reports not submitted at such times as shall be required by the STATE shall be cause for the STATE to delay implementing scheduled payments to the contractor.

VII. Contractor's Failure or Inability to Meet M/WBE Participation Goals.

- (a) If the contractor, after making good faith efforts, is unable to comply with a contract's M/WBE participation goals, the contractor may submit a request for a partial or total waiver on forms provided by the STATE. If the documentation required with the request for a waiver is complete, the STATE shall evaluate the request and issue a written notice of acceptance or denial within twenty days of receipt.
- (b) If the STATE, upon review of the contractor's utilization plan and compliance reports, determines that the contractor is failing or refusing to comply with M/WBE participation goals, and no waiver has been issued in regards to such non-compliance, the STATE may issue a notice of deficiency to the contractor. The contractor must respond to the notice within seven days of receipt. This response may include a request for partial or total waiver of M/WBE participation goals.

VIII. Contractor and Agency Complaints, Arbitration.

- (a) If the contractor submits a request for a waiver of M/WBE participation goals and the STATE denies the request or fails to respond within twenty days of receiving it, the contractor may file a complaint with the Director according to the provisions of section 316 of Article 15-A of the Executive Law. The complaint must be filed within twenty days of the STATE's receipt of the request for waiver, if the STATE has not responded in that time, or within twenty days of a notification that the request has been denied by the STATE.
- (b) If the contractor fails to respond to a notice of deficiency, the STATE may file a complaint with the Director pursuant to section 316 of Article 15-A of the Executive Law.
- (c) A complaint shall set forth the facts and circumstances giving rise to the complaint together with a demand for relief.
- (d) The party filing a complaint, whether the contractor or the STATE, shall deliver a copy to the other party. Both the complaint and the copy shall be delivered by either personal service or by certified mail, return receipt requested.
- (e) Upon receipt of a complaint, the Director shall provide the party against whom the complaint has been filed with an opportunity to respond to the complaint. If within thirty days of receipt of the complaint, the Director is unable to resolve the complaint to the satisfaction of the STATE and the contractor, the complaint shall be referred to the American Arbitration Association for resolution pursuant to section 316 of Article 15-A of the Executive Law and the applicable requirements of Article 75 of the Civil Practice Law and Rules.
- (f) Upon conclusion of the arbitration proceedings, the arbitrator will submit to the Director his or her award regarding the alleged violation of the contract or the refusal of the STATE to grant a waiver request by the contractor. The award of the arbitrator with respect to an alleged violation of the contract or the refusal of the state agency to grant a waiver shall be final and may be vacated or modified only as provided by Article 75 of the Civil Practice Law and Rules.
- (g) Upon conclusion of the arbitration proceedings and the rendition of an award, the arbitrator will also recommend to the Director a remedy, including, if appropriate, the imposition of sanctions, fines or penalties. The Director will either;
 - (1) adopt the recommendation of the arbitrator;
 - (2) determine that no sanctions, fines or penalties should be imposed; or
 - (3) modify the recommendation of the arbitrator, provided that such modification shall not expand upon any sanction recommended or imposed by any new sanction, or increase the amount of any recommended fine or penalty.
- (h) The Director, within ten days of receipt of the arbitrator's award and recommendations, will file a determination of such matter and shall cause a copy of such determination to be served upon the parties by personal service or by certified mail, return receipt requested. The determination of the Director as to the imposition of any fines, sanctions, or penalties shall be reviewable pursuant to Article 78 of the Civil Practice Law and Rules.
- (i) The determination of the STATE or the contractor to proceed with a complaint shall not preclude the STATE, in its discretion, from pursuing any-other remedies which it may have pursuant to law and the contract.

IX. Subcontracts. The contractor will include the provisions of sub-paragraphs (V) and (VIII) above in every subcontract, as defined in sub-paragraph (II), in such a manner that such provisions will be binding upon the subcontractor as to work in connection with this contract.

CONTRACTORS MWBE UTILIZATION PLAN

Contract Number: D00

Region: _____

REMINDER: As a condition of this contract, you are required to submit the Cumulative Monthly Payment Statement on a monthly basis.

Contractor's Name:		Project Description:		MWBE Goals Assigned to Contract:		
Are you a NYS MWBE Certified by the NYS Empire State Development Corp? <input type="checkbox"/> Yes <input type="checkbox"/> No				MBE _____%		
Contact Person:		Project Location:		WBE _____%		
Address:						
Telephone Number:	E-Mail Address:	Total Contract Value: (Including any field order allowance) \$				
Federal ID Number:	SFS Vendor ID:					
Certified MWBE Sub Contractors/ Suppliers Name, Address, Telephone Number and E-Mail Address		MBE	WBE	Description of Sub Contracting/Supplies	Total Dollar Value of Sub Contracting/Supplies	Anticipated MWBE performance/purchase date(s)
Federal ID No.: _____ SFS Vendor ID: _____		<input type="checkbox"/>	<input type="checkbox"/>			Start: _____ Completion: _____
Federal ID No.: _____ SFS Vendor ID: _____		<input type="checkbox"/>	<input type="checkbox"/>			Start: _____ Completion: _____
Federal ID No.: _____ SFS Vendor ID: _____		<input type="checkbox"/>	<input type="checkbox"/>			Start: _____ Completion: _____
Federal ID No.: _____ SFS Vendor ID: _____		<input type="checkbox"/>	<input type="checkbox"/>			Start: _____ Completion: _____

Pursuant to Executive Law Article 15-A, my firm will engage in good faith efforts to achieve the MWBE goals on this contract. I understand that failure to make good faith efforts can result in the contract being awarded to another contractor. I understand that all listed sub contractors will be contacted for verification of solicitation.

Contractor's Signature: _____ Date: _____

Print Name and Title: _____

FOR NYS OPRHP USE ONLY:

Approved Approved as Noted Rejected

MBE: _____% MBE \$ _____ WBE: _____% WBE \$ _____

OPRHP Notes: _____

OPRHP Authorized Signature: _____ Date: _____

(Revised August 2012)

The Freedom of Information Law requires public disclosure of certain records held by NYS OPRHP. Based upon the foregoing, you are hereby notified that this document, and related documents, constitute "records" that fall under the scope of the Freedom of Information Law. Therefore, such documents may be made available to the public, including posting for public review on OPRHP's website.

New York State Office of Parks, Recreation and Historic Preservation

Contractor's Solicitation Log

Project No: _____ Region: _____ Date Submitted: _____ Page _____ of _____

Contractor/Firm Name & Address: _____
 County: _____

Contact Person: _____

E-Mail: _____

Telephone No: _____

#	Firm Name Address, City, State, Zip Contact Person	Telephone No Fax No E-Mail Address	Date of Contact Follow-up Date	Deadline Response Date	Method(s) of Contact	M / WBE Response Code	Bidder Action Code
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

M/WBE Response Codes:
 11 - Submitted Written Quote
 12 - Submitted Verbal Quote
 13 - Negotiating With Prime
 14 - Developing Quote
 21 - Not Certified for Item(s)
 22 - Location Unacceptable
 23 - No Price Agreement
 24 - No Time For Bid
 25 - Schedule Unacceptable

Bidder Action Codes:
 31 - Selected
 32 - Unavailable
 33 - No Longer in Business
 34 - Undeliverable

Method of Contact:
 41 - Mail
 42 - E-Mail
 43 - Phone
 44 - FAX
 45 - Face to Face

Program:
 MBE
 WBE
 DBE
 Other

Select to Clear Form

Revised 2015

MWBE PAYMENT STATEMENT - GRANTS

INSTRUCTIONS: As a condition of the contract awarded, this form is to be properly completed by the primary contractor and submitted with each payment application indicating ALL subcontractors and suppliers utilized on the project.

Section 1: Grant Project Information					
Grant Contract Number:	MWBE Goals Assigned: MBE % WBE %	Total Dollar Value of Grant Award: \$			
Name of the Grant Recipient:	Description of Project:	Total Cost/Value of this Contract: \$			
Section 2: Prime Contractor					
Name of Prime Contractor:	Contact Person:	Certified NYS MWBE? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Section 3: Payment Report					
Sub Contractors/ Suppliers Name & Address	Designation (Please check all that apply)	FEIN	Total Dollar Value of Contract	Payments This Reporting Period Only	Total Payments made to MWBE to Date
	<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> Supplier <input type="checkbox"/> Sub	FEIN:			
	<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> Supplier <input type="checkbox"/> Sub	FEIN:			
	<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> Supplier <input type="checkbox"/> Sub	FEIN:			
	<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> Supplier <input type="checkbox"/> Sub	FEIN:			
<p>DECLARATION: Under penalty of perjury, I attest as follows: I certify that I am a representative of the above-stated Contractor and that I am authorized to make this DECLARATION on behalf of the Contractor. All information stated on this Payment Statement is true and correct. Payments stated on this form were made by the Contractor for work actually performed by the subcontractor(s) and/or supplier(s) listed, including MWBE. The Contractor has complied with all contract provisions and laws, including those related to use of MWBEs, equal opportunity and affirmative action.</p>					
Signature of Contractor:		Date:		FOR NYS OPRHP USE ONLY:	
				Total value of contract for services and/or supplies assigned to MBE:	
				Total value of contract for services and/or supplies assigned to WBE:	
				Total overall dollar value and percentage of contract assigned to MWBE	
<p>Print Name and Title</p>					

APPLICATION FOR WAIVER OF MWBE PARTICIPATION GOALS

This form must be submitted for review and approval by State Parks' MWBE staff and the Governor's staff. Waiver approval must be received prior to completion of the project and is a prerequisite for full and final payment.

Section 1: Basic Information		
Contractor's Name:	Federal ID Number:	SFS Vendor ID Number:
Are you a NYS MWBE certified by the NYS Empire State Development Corp? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Street Address:	E-Mail Address:	
City, State, Zip Code:	Telephone:	
Contract Number:	Location:	
Description of Project:	MWBE Goals Assigned to the Contract	
	MBE%	WBE %

Section 2: Type of MWBE Waiver Requested			
MBE Waiver	<input type="checkbox"/> Total Waiver	<input type="checkbox"/> Partial Waiver	If partial waiver is being requested please indicate the proposed MBE utilization: MBE: _____%
WBE Waiver	<input type="checkbox"/> Total Waiver	<input type="checkbox"/> Partial Waiver	If partial waiver is being requested please indicate the proposed WBE utilization: WBE: _____%
Does a certified MWBE exist anywhere in New York State that can provide at least 20% of the products and/or services needed for the contract? If so, please explain in detail the reason you are requesting a waiver.			

Section 3: Supporting Documentation
Provide the following documentation as evidence of your good faith efforts to meet the M/WBE goals set forth in the contract and support of your waiver application: (Please check all that apply).
<input type="checkbox"/> Attachment A. List of the general circulation, trade and MWBE specific publications and dates of publications in which your firm solicited for certified MWBE participation as a subcontractor/supplier and copies of such solicitations.
<input type="checkbox"/> Attachment B. List of the certified MWBEs appearing in the Empire State Development M/WBE directory (www.esd.ny.gov) that were solicited for this contract. Provide proof of dates or copies of the solicitations and copies of the responses made by the certified MWBEs. Describe specific reasons that responding certified MWBEs were not selected.
<input type="checkbox"/> Attachment C. Descriptions of the contract documents/plans/specifications made available to certified MWBEs by the contractor when soliciting their participation and steps taken to structure the scope of work for the purpose of subcontracting with or obtaining supplies from certified MWBEs.
<input type="checkbox"/> Attachment D. Description of the negotiations between the contractor and certified MWBEs for the purposes of complying with the MWBE goals of this contract.
<input type="checkbox"/> Attachment E. Identify dates of pre-bid, pre-award or other meetings attended by the contractor and scheduled by OPRHP with certified MWBEs whom OPRHP determined were capable of fulfilling the MWBE goals set in the contract.
<input type="checkbox"/> Attachment F. Other information deemed relevant to the request.

Section 4: Signature and Contact Information	
DECLARATION: The undersigned certifies that she or he is authorized by the Contractor identified above to make this Declaration. The Contractor has made good faith efforts, as defined in NYS law, to meet the MWBE goals contained in NYS law and under the applicable contract. The undersigned acknowledges that failure to submit complete and accurate information in connection with a waiver request may result in denial and/or a finding of noncompliance. Failure to establish good faith efforts may result in suspension or termination of a New York State contract.	
Prepared By : (Signature)	Date:
Name and Title of Preparer:	

(Revised August 2012)

The Freedom of Information Law requires public disclosure of certain records held by NYS OPRHP.

Based upon the foregoing, you are hereby notified that this document, and related documents, constitute "records" that fall under the scope of the Freedom of Information Law. Therefore, such documents may be made available to the public.

APPLICATION FOR WAIVER OF MWBE PARTICIPATION GOALS

Instructions for Completing and Submitting an Application for a Waiver of MWBE Utilization Goals

Article 15-A of the New York State Executive Law and 5 NYCRR 140-145 require State agencies to set goals for participation by minority and women owned business enterprises (MWBEs) on many types of State contracts. Prior to the contract award, separate goals are established for MBE and WBE utilization, expressed as a percentage of anticipated payments made under the contract. A State agency shall not grant any automatic waivers of goal requirements on a State contract but may grant a partial or total waiver of goal requirements established on a State contract only upon the submission of a waiver form by a contractor, documenting good faith efforts. Failure to make good faith efforts may result in a State contract being awarded to another bidder, or, if the contract is already in progress, may result in financial penalties.

Section 1: Basic Information

Complete all sections, enter the contractor's name, address, federal identification number, State Financial System (SFS) vendor identification number, contract number. Please provide a current e-mail address and telephone number where the firm can be reached. In the space provided, please summarize a detailed description of the project and state the location of the work under the contract. Please state the MWBE utilization goals assigned to the contract.

Section 2: Type of Waiver Request

You may request a total or partial waiver of the MBE goals and/or a total or partial waiver of the WBE goals. If a partial waiver is being requested, please state the MWBE utilization that the firm is proposing. In the space provided, explain in detail the need of a waiver for the MWBE participation goals.

Section 3: Supporting Documentation

Extensive documentation is required to demonstrate good faith efforts to comply with the MWBE goals. See the form for the specific details on the required documentation and check all that apply.

Section 4: Signature and Contact Information

The waiver application must be signed by an authorized official of the firm who will be responsible for the contract. By signing the waiver application, the authorized official is certifying that he or she is authorized to make the DECLARATION that has been set forth, and that the Contractor has made good faith efforts, as defined in NYS law, to meet the MWBE goals contained in NYS law and under the applicable contract. The undersigned acknowledges that failure to submit complete and accurate information in connection with a waiver request may result in denial and/or a finding of noncompliance. Failure to establish good faith efforts may result in suspension or termination of a New York State contract. Please state the date that the Application for Waiver of MWBE Participation Goals was signed by the authorized official who is responsible for the contract.

For NYS OPRHP Use Only:

Reviewed By:

Date:

OPRHP's Waiver Recommendation for Submission to Governor's Staff, if required :

- Full MBE waiver granted
- Partial MBE waiver granted; revised MBE goal: _____ %
- MBE waiver denied
- Full WBE waiver granted
- Partial WBE waiver granted; revised WBE goal: _____ %
- WBE waiver denied

Date the notice of determination was sent:

Comments:



AIA[®] Document A104[™] – 2017

Standard Abbreviated Form of Agreement Between Owner and Contractor

AGREEMENT made as of the day of in the year
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Town of Plattsburgh
c/o Trevor Cole
151 Banker Road
Plattsburgh, NY 12901

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

Battlefield Memorial Gateway Park
Sunset Drive
Town of Plattsburgh, NY

The Architect:
(Name, legal status, address and other information)

Elan Planning, Landscape Architecture & Engineering, DPC
18 Division Street
Suite 304
Saratoga Springs, NY 12866

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

TABLE OF ARTICLES

- 1 THE WORK OF THIS CONTRACT**
- 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**
- 3 CONTRACT SUM**
- 4 PAYMENT**
- 5 DISPUTE RESOLUTION**
- 6 ENUMERATION OF CONTRACT DOCUMENTS**
- 7 GENERAL PROVISIONS**
- 8 OWNER**
- 9 CONTRACTOR**
- 10 ARCHITECT**
- 11 SUBCONTRACTORS**
- 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**
- 13 CHANGES IN THE WORK**
- 14 TIME**
- 15 PAYMENTS AND COMPLETION**
- 16 PROTECTION OF PERSONS AND PROPERTY**
- 17 INSURANCE AND BONDS**
- 18 CORRECTION OF WORK**
- 19 MISCELLANEOUS PROVISIONS**
- 20 TERMINATION OF THE CONTRACT**
- 21 CLAIMS AND DISPUTES**

EXHIBIT A DETERMINATION OF THE COST OF THE WORK

ARTICLE 1 THE WORK OF THIS CONTRACT

The Contractor shall execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The date of commencement of the Work shall be:
(Check one of the following boxes.)

The date of this Agreement.

A date set forth in a notice to proceed issued by the Owner.

Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 2.2 The Contract Time shall be measured from the date of commencement.

§ 2.3 Substantial Completion

§ 2.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check the appropriate box and complete the necessary information.)

Not later than () calendar days from the date of commencement of the Work.

By the following date:

§ 2.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work

Substantial Completion Date

§ 2.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 2.3, liquidated damages, if any, shall be assessed as set forth in Section 3.5.

ARTICLE 3 CONTRACT SUM

§ 3.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:

(Check the appropriate box.)

Stipulated Sum, in accordance with Section 3.2 below

Cost of the Work plus the Contractor's Fee, in accordance with Section 3.3 below

Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 3.4 below

(Based on the selection above, complete Section 3.2, 3.3 or 3.4 below.)

§ 3.2 The Stipulated Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 3.2.1 The Stipulated Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.2.2 Unit prices, if any:

Init.

(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
------	-----------------------	-------------------------

§ 3.2.3 Allowances, if any, included in the stipulated sum:
(Identify each allowance.)

Item	Price
------	-------

§ 3.3 Cost of the Work Plus Contractor's Fee

§ 3.3.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

§ 3.3.2 The Contractor's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)

§ 3.4 Cost of the Work Plus Contractor's Fee With a Guaranteed Maximum Price

§ 3.4.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

§ 3.4.2 The Contractor's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)

§ 3.4.3 Guaranteed Maximum Price

§ 3.4.3.1 The sum of the Cost of the Work and the Contractor's Fee is guaranteed by the Contractor not to exceed (\$), subject to additions and deductions by changes in the Work as provided in the Contract Documents. This maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.

(Insert specific provisions if the Contractor is to participate in any savings.)

§ 3.4.3.2 The Guaranteed Maximum Price is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.4.3.3 Unit Prices, if any:

(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
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§ 3.4.3.4 Allowances, if any, included in the Guaranteed Maximum Price:

(Identify each allowance.)

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Item

Price

§ 3.4.3.5 Assumptions, if any, on which the Guaranteed Maximum Price is based:

§ 3.4.3.6 To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes or equipment, all of which, if required, shall be incorporated by Change Order.

§ 3.4.3.7 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in Section 3.4.3.5. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the agreed-upon assumptions contained in Section 3.4.3.5 and the revised Contract Documents.

§ 3.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

ARTICLE 4 PAYMENT

§ 4.1 Progress Payments

§ 4.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 4.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 4.1.3 Provided that an Application for Payment is received by the Architect not later than the day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the day of the month. If an Application for Payment is received by the Architect after the date fixed above, payment shall be made by the Owner not later than () days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 4.1.4 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold retainage from the payment otherwise due as follows:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment and any terms for reduction of retainage during the course of the Work. The amount of retainage may be limited by governing law.)

§ 4.1.5 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

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§ 4.2 Final Payment

§ 4.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Section 18.2, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 the Contractor has submitted a final accounting for the Cost of the Work, where payment is on the basis of the Cost of the Work with or without a Guaranteed Maximum Price; and
- .3 a final Certificate for Payment has been issued by the Architect in accordance with Section 15.7.1.

§ 4.2.2 The Owner’s final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect’s final Certificate for Payment, or as follows:

ARTICLE 5 DISPUTE RESOLUTION

§ 5.1 Binding Dispute Resolution

For any claim subject to, but not resolved by, mediation pursuant to Section 21.5, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

Arbitration pursuant to Section 21.6 of this Agreement

Litigation in a court of competent jurisdiction

Other *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, claims will be resolved in a court of competent jurisdiction.

ARTICLE 6 ENUMERATION OF CONTRACT DOCUMENTS

§ 6.1 The Contract Documents are defined in Article 7 and, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 6.1.1 The Agreement is this executed AIA Document A104™–2017, Standard Abbreviated Form of Agreement Between Owner and Contractor.

§ 6.1.2 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203–2013 incorporated into this Agreement.)

§ 6.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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§ 6.1.4 The Specifications:

(Either list the Specifications here or refer to an exhibit attached to this Agreement.)

Section	Title	Date	Pages
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§ 6.1.5 The Drawings:
(Either list the Drawings here or refer to an exhibit attached to this Agreement.)

Number	Title	Date
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§ 6.1.6 The Addenda, if any:

Number	Date	Pages
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Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are enumerated in this Article 6.

§ 6.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 Other Exhibits:
(Check all boxes that apply.)

Exhibit A, Determination of the Cost of the Work.

AIA Document E204™-2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

The Sustainability Plan:

Title	Date	Pages
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Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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.2 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents.)

ARTICLE 7 GENERAL PROVISIONS

§ 7.1 The Contract Documents

The Contract Documents are enumerated in Article 6 and consist of this Agreement (including, if applicable, Supplementary and other Conditions of the Contract), Drawings, Specifications, Addenda issued prior to the execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

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§ 7.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the Owner and the Contractor.

§ 7.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 7.4 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 7.5 Ownership and use of Drawings, Specifications and Other Instruments of Service

§ 7.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 7.5.2 The Contractor, Subcontractors, Sub-subcontractors and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to the protocols established pursuant to Sections 7.6 and 7.7, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 7.6 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 7.7 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

§ 7.8 Severability

The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 7.9 Notice

§ 7.9.1 Except as otherwise provided in Section 7.9.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering Notice in electronic format such as name, title and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 7.9.2 Notice of Claims shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 7.10 Relationship of the Parties

Where the Contract is based on the Cost of the Work plus the Contractor's Fee, with or without a Guaranteed Maximum Price, the Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

ARTICLE 8 OWNER

§ 8.1 Information and Services Required of the Owner

§ 8.1.1 Prior to commencement of the Work, at the written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 8.1.1, the Contract Time shall be extended appropriately.

§ 8.1.2 The Owner shall furnish all necessary surveys and a legal description of the site.

§ 8.1.3 The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 8.1.4 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 9.6.1, the Owner shall secure and pay for other necessary approvals, easements, assessments, and charges required for the construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

§ 8.2 Owner's Right to Stop the Work

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, or repeatedly fails to carry out the Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order is eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

§ 8.3 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 15.4.3, withhold or nullify a

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Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including the Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 21.

ARTICLE 9 CONTRACTOR

§ 9.1 Review of Contract Documents and Field Conditions by Contractor

§ 9.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 9.1.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 8.1.2, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies, or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents.

§ 9.1.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 9.2 Supervision and Construction Procedures

§ 9.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters.

§ 9.2.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

§ 9.3 Labor and Materials

§ 9.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 9.3.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 9.3.3 The Contractor may make a substitution only with the consent of the Owner, after evaluation by the Architect and in accordance with a Modification.

§ 9.4 Warranty

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes

remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation or normal wear and tear under normal usage. All other warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 15.6.3.

§ 9.5 Taxes

The Contractor shall pay sales, consumer, use, and other similar taxes that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 9.6 Permits, Fees, Notices, and Compliance with Laws

§ 9.6.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 9.6.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 9.7 Allowances

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. The Owner shall select materials and equipment under allowances with reasonable promptness. Allowance amounts shall include the costs to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Contractor's costs for unloading and handling at the site, labor, installation, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowance.

§ 9.8 Contractor's Construction Schedules

§ 9.8.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 9.8.2 The Contractor shall perform the Work in general accordance with the most recent schedule submitted to the Owner and Architect.

§ 9.9 Submittals

§ 9.9.1 The Contractor shall review for compliance with the Contract Documents and submit to the Architect Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents in coordination with the Contractor's construction schedule and in such sequence as to allow the Architect reasonable time for review. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements, and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Work shall be in accordance with approved submittals.

§ 9.9.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents.

§ 9.9.3 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents or unless the Contractor needs to provide such services in order to carry out the Contractor's own responsibilities. If professional design services or certifications by a design professional are specifically required, the Owner and the Architect will specify the performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional. If no criteria are specified, the design shall comply with applicable codes and ordinances. Each Party shall be entitled to rely upon the information

provided by the other Party. The Architect will review and approve or take other appropriate action on submittals for the limited purpose of checking for conformance with information provided and the design concept expressed in the Contract Documents. The Architect's review of Shop Drawings, Product Data, Samples, and similar submittals shall be for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. In performing such review, the Architect will approve, or take other appropriate action upon, the Contractor's Shop Drawings, Product Data, Samples, and similar submittals.

§ 9.10 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 9.11 Cutting and Patching

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

§ 9.12 Cleaning Up

The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus material from and about the Project.

§ 9.13 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 9.14 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 9.15 Indemnification

§ 9.15.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 9.15.1.

§ 9.15.2 In claims against any person or entity indemnified under this Section 9.15 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 9.15.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 10 ARCHITECT

§ 10.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction, until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

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§ 10.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 10.3 The Architect will visit the site at intervals appropriate to the stage of the construction to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 10.4 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 10.5 Based on the Architect's evaluations of the Work and of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 10.6 The Architect has authority to reject Work that does not conform to the Contract Documents and to require inspection or testing of the Work.

§ 10.7 The Architect will review and approve or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 10.8 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect will make initial decisions on all claims, disputes, and other matters in question between the Owner and Contractor but will not be liable for results of any interpretations or decisions rendered in good faith.

§ 10.9 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

ARTICLE 11 SUBCONTRACTORS

§ 11.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site.

§ 11.2 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the Subcontractors or suppliers proposed for each of the principal portions of the Work. The Contractor shall not contract with any Subcontractor or supplier to whom the Owner or Architect has made reasonable written objection within ten days after receipt of the Contractor's list of Subcontractors and suppliers. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 11.3 Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents,

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and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract Documents, assumes toward the Owner and Architect, and (2) allow the Subcontractor the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Contract Documents, has against the Owner.

ARTICLE 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 12.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 12.2 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's activities with theirs as required by the Contract Documents.

§ 12.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a Separate Contractor because of delays, improperly timed activities, or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work, or defective construction of a Separate Contractor.

ARTICLE 13 CHANGES IN THE WORK

§ 13.1 By appropriate Modification, changes in the Work may be accomplished after execution of the Contract. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, with the Contract Sum and Contract Time being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Owner, Contractor, and Architect, or by written Construction Change Directive signed by the Owner and Architect. Upon issuance of the Change Order or Construction Change Directive, the Contractor shall proceed promptly with such changes in the Work, unless otherwise provided in the Change Order or Construction Change Directive.

§ 13.2 Adjustments in the Contract Sum and Contract Time resulting from a change in the Work shall be determined by mutual agreement of the parties or, in the case of a Construction Change Directive signed only by the Owner and Architect, by the Contractor's cost of labor, material, equipment, and reasonable overhead and profit, unless the parties agree on another method for determining the cost or credit. Pending final determination of the total cost of a Construction Change Directive, the Contractor may request payment for Work completed pursuant to the Construction Change Directive. The Architect will make an interim determination of the amount of payment due for purposes of certifying the Contractor's monthly Application for Payment. When the Owner and Contractor agree on adjustments to the Contract Sum and Contract Time arising from a Construction Change Directive, the Architect will prepare a Change Order.

§ 13.3 The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work.

§ 13.4 If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be equitably adjusted as mutually agreed between the Owner and Contractor; provided that the Contractor provides notice to the Owner and Architect promptly and before conditions are disturbed.

ARTICLE 14 TIME

§ 14.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing this Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 14.2 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 14.3 The term “day” as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 14.4 The date of Substantial Completion is the date certified by the Architect in accordance with Section 15.6.3.

§ 14.5 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) changes ordered in the Work; (2) by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties, or any causes beyond the Contractor’s control; or (3) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine, subject to the provisions of Article 21.

ARTICLE 15 PAYMENTS AND COMPLETION

§ 15.1 Schedule of Values

§ 15.1.1 Where the Contract is based on a Stipulated Sum or the Cost of the Work with a Guaranteed Maximum Price pursuant to Section 3.2 or 3.4, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Stipulated Sum or Guaranteed Maximum Price to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy required by the Architect. This schedule of values shall be used as a basis for reviewing the Contractor’s Applications for Payment.

§ 15.1.2 The allocation of the Stipulated Sum or Guaranteed Maximum Price under this Section 15.1 shall not constitute a separate stipulated sum or guaranteed maximum price for each individual line item in the schedule of values.

§ 15.2 Control Estimate

§ 15.2.1 Where the Contract Sum is the Cost of the Work, plus the Contractor’s Fee without a Guaranteed Maximum Price pursuant to Section 3.3, the Contractor shall prepare and submit to the Owner a Control Estimate within 14 days of executing this Agreement. The Control Estimate shall include the estimated Cost of the Work plus the Contractor’s Fee.

§ 15.2.2 The Control Estimate shall include:

- .1 the documents enumerated in Article 6, including all Modifications thereto;
- .2 a list of the assumptions made by the Contractor in the preparation of the Control Estimate to supplement the information provided by the Owner and contained in the Contract Documents;
- .3 a statement of the estimated Cost of the Work organized by trade categories or systems and the Contractor’s Fee;
- .4 a project schedule upon which the Control Estimate is based, indicating proposed Subcontractors, activity sequences and durations, milestone dates for receipt and approval of pertinent information, schedule of shop drawings and samples, procurement and delivery of materials or equipment the Owner’s occupancy requirements, and the date of Substantial Completion; and
- .5 a list of any contingency amounts included in the Control Estimate for further development of design and construction.

§ 15.2.3 When the Control Estimate is acceptable to the Owner and Architect, the Owner shall acknowledge it in writing. The Owner’s acceptance of the Control Estimate does not imply that the Control Estimate constitutes a Guaranteed Maximum Price.

§ 15.2.4 The Contractor shall develop and implement a detailed system of cost control that will provide the Owner and Architect with timely information as to the anticipated total Cost of the Work. The cost control system shall compare the Control Estimate with the actual cost for activities in progress and estimates for uncompleted tasks and proposed changes. This information shall be reported to the Owner, in writing, no later than the Contractor’s first Application for Payment and shall be revised and submitted with each Application for Payment.

§ 15.2.5 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in the Control Estimate. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the Control Estimate and the revised Contract Documents.

§ 15.3 Applications for Payment

§ 15.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 15.1, for completed portions of the Work. The application shall be notarized, if required; be supported by all data substantiating the Contractor's right to payment that the Owner or Architect require; shall reflect retainage if provided for in the Contract Documents; and include any revised cost control information required by Section 15.2.4. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 15.3.2 With each Application for Payment where the Contract Sum is based upon the Cost of the Work, or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner to demonstrate that cash disbursements already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Contractor's Fee.

§ 15.3.3 Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

§ 15.3.4 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests.

§ 15.4 Certificates for Payment

§ 15.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner of the Architect's reasons for withholding certification in whole or in part as provided in Section 15.4.3.

§ 15.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluations of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 15.4.3 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 15.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 15.4.1. If the Contractor and the Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is

able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 9.2.2, because of

- .1 defective Work not remedied;
- .2 third-party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 15.4.4 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 15.4.3, in whole or in part, that party may submit a Claim in accordance with Article 21.

§ 15.5 Progress Payments

§ 15.5.1 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-subcontractors in a similar manner.

§ 15.5.2 Neither the Owner nor Architect shall have an obligation to pay or see to the payment of money to a Subcontractor or supplier except as may otherwise be required by law.

§ 15.5.3 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 15.5.4 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 15.6 Substantial Completion

§ 15.6.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 15.6.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 15.6.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. When the Architect determines that the Work or designated portion thereof is substantially complete, the Architect will issue a Certificate of Substantial Completion which shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

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§ 15.6.4 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 15.7 Final Completion and Final Payment

§ 15.7.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions stated in Section 15.7.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 15.7.2 Final payment shall not become due until the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

§ 15.7.3 The making of final payment shall constitute a waiver of claims by the Owner except those arising from

- .1 liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 15.7.4 Acceptance of final payment by the Contractor, a Subcontractor or supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of the final Application for Payment.

ARTICLE 16 PROTECTION OF PERSONS AND PROPERTY

§ 16.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, or replacement in the course of construction.

The Contractor shall comply with, and give notices required by, applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury, or loss. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 16.1.2 and 16.1.3. The Contractor may make a claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 9.15.

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§ 16.2 Hazardous Materials and Substances

§ 16.2.1 The Contractor is responsible for compliance with the requirements of the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents, and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 16.2.2 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area, if in fact, the material or substance presents the risk of bodily injury or death as described in Section 16.2.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 16.2.3 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

ARTICLE 17 INSURANCE AND BONDS

§ 17.1 Contractor's Insurance

§ 17.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in this Section 17.1 or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the insurance required by this Agreement from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 18.4, unless a different duration is stated below:

§ 17.1.2 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than two million dollars (\$ 2,000,000.00) each occurrence, four million dollars (\$ 4,000,000.00) general aggregate, and four million dollars (\$ 4,000,000.00) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 9.15.

§ 17.1.3 Automobile Liability covering vehicles owned by the Contractor and non-owned vehicles used by the Contractor, with policy limits of not less than two million dollars (\$ 2,000,000.00) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage.

§ 17.1.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as those required under Section 17.1.2 and 17.1.3, and in no event shall any excess or umbrella liability insurance provide narrower

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coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 17.1.5 Workers' Compensation at statutory limits.

§ 17.1.6 Employers' Liability with policy limits not less than five hundred thousand dollars (\$ 500,000.00) each accident, five hundred thousand dollars (\$ 500,000.00) each employee, and five hundred thousand dollars (\$ 500,000.00) policy limit.

§ 17.1.7 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than one million dollars (\$ 1,000,000.00) per claim and three million dollars (\$ 3,000,000.00) in the aggregate.

§ 17.1.8 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ 17.1.9 Coverage under Sections 17.1.7 and 17.1.8 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ 17.1.10 The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Section 17.1 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the period required by Section 17.1.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy.

§ 17.1.11 The Contractor shall disclose to the Owner any deductible or self- insured retentions applicable to any insurance required to be provided by the Contractor.

§ 17.1.12 To the fullest extent permitted by law, the Contractor shall cause the commercial liability coverage required by this Section 17.1 to include (1) the Owner, the Architect, and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's Consultants, CG 20 32 07 04.

§ 17.1.13 Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.1, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 17.1.14 Other Insurance Provided by the Contractor

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

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§ 17.2 Owner's Insurance

§ 17.2.1 Owner's Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 17.2.2 Property Insurance

§ 17.2.2.1 The Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed or materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section 17.2.2.2, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ 17.2.2.2 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section 17.2.2.1 or, if necessary, replace the insurance policy required under Section 17.2.2.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 18.4.

§ 17.2.2.3 If the insurance required by this Section 17.2.2 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ 17.2.2.4 If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 18.4, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ 17.2.2.5 Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Section 17.2.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by this Section 17.2.2. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ 17.2.2.6 Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.2.2, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 17.2.2.7 Waiver of Subrogation

§ 17.2.2.7.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by this Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 17.2.2.7 shall not prohibit this waiver of subrogation. This waiver

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of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 17.2.2.7.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 17.2.2.7.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 17.2.2.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements, written where legally required for validity, the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 17.2.3 Other Insurance Provided by the Owner

(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

§ 17.3 Performance Bond and Payment Bond

§ 17.3.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in the Contract Documents on the date of execution of the Contract.

§ 17.3.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 18 CORRECTION OF WORK

§ 18.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed, or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense, unless compensable under Section A.1.7.3 in Exhibit A, Determination of the Cost of the Work.

§ 18.2 In addition to the Contractor's obligations under Section 9.4, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 15.6.3, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty.

§ 18.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 8.3.

§ 18.4 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 18.5 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Article 18.

ARTICLE 19 MISCELLANEOUS PROVISIONS

§ 19.1 Assignment of Contract

Neither party to the Contract shall assign the Contract without written consent of the other, except that the Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 19.2 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 21.6.

§ 19.3 Tests and Inspections

Tests, inspections, and approvals of portions of the Work required by the Contract Documents or by applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 19.4 The Owner's representative:

(Name, address, email address and other information)

§ 19.5 The Contractor's representative:

(Name, address, email address and other information)

§ 19.6 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

ARTICLE 20 TERMINATION OF THE CONTRACT

§ 20.1 Termination by the Contractor

If the Architect fails to certify payment as provided in Section 15.4.1 for a period of 30 days through no fault of the Contractor, or if the Owner fails to make payment as provided in Section 4.1.3 for a period of 30 days, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

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User Notes:

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§ 20.2 Termination by the Owner for Cause

§ 20.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 20.2.2 When any of the reasons described in Section 20.2.1 exists, the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may, without prejudice to any other remedy the Owner may have and after giving the Contractor seven days' notice, terminate the Contract and take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 20.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 20.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 20.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

§ 20.3 Termination by the Owner for Convenience

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Owner shall pay the Contractor for Work executed; and costs incurred by reason of such termination, including costs attributable to termination of Subcontracts; and a termination fee, if any, as follows:

(Insert the amount of or method for determining the fee payable to the Contractor by the Owner following a termination for the Owner's convenience, if any.)

ARTICLE 21 CLAIMS AND DISPUTES

§ 21.1 Claims, disputes, and other matters in question arising out of or relating to this Contract, including those alleging an error or omission by the Architect but excluding those arising under Section 16.2, shall be referred initially to the Architect for decision. Such matters, except those waived as provided for in Section 21.11 and Sections 15.7.3 and 15.7.4, shall, after initial decision by the Architect or 30 days after submission of the matter to the Architect, be subject to mediation as a condition precedent to binding dispute resolution.

§ 21.2 Notice of Claims

§ 21.2.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the Architect within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 21.2.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the other party.

§ 21.3 Time Limits on Claims

The Owner and Contractor shall commence all claims and causes of action against the other and arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in this

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Agreement whether in contract, tort, breach of warranty, or otherwise, within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 21.3.

§ 21.4 If a claim, dispute or other matter in question relates to or is the subject of a mechanic's lien, the party asserting such matter may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 21.5 The parties shall endeavor to resolve their disputes by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with their Construction Industry Mediation Procedures in effect on the date of this Agreement. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 21.6 If the parties have selected arbitration as the method for binding dispute resolution in this Agreement, any claim, subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association, in accordance with the Construction Industry Arbitration Rules in effect on the date of this Agreement. Demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 21.7 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 21.8 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, any party to an arbitration may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described in the written Consent.

§ 21.9 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to this Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 21.10 Continuing Contract Performance

Pending final resolution of a Claim, except as otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 21.11 Waiver of Claims for Consequential Damages

The Contractor and Owner waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 20. Nothing contained in this Section 21.11 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

CONTRACTOR (Signature)

(Printed name and title)

(Printed name and title)

ATTACHMENT A-1

PROGRAM SPECIFIC TERMS AND CONDITIONS
ENVIRONMENTAL PROTECTION FUND

I. Agency Specific Terms and Conditions

A. The **Program Office, Designated Payment Office** and **Designated Refund Office** shall be the STATE AGENCY identified on the face page. Document submission and inquiries should be directed to the Regional Grant Administrator for the Contractor's county of operations.

B. For purposes of notice, the **Contractor's designee** shall be the CONTRACTOR DOS INCORPORATED NAME at the CONTRACTOR PRIMARY MAILING ADDRESS, as identified on the face page.

C. Payment shall be made to CONTRACTOR SFS PAYEE NAME at the CONTRACTOR PAYMENT ADDRESS identified on the Face Page.

D. Special Conditions and Requirements specific to the project, including the timeline for submission of required documents and reports, are contained in Attachment C (Work Plan Summary).

E. Changes to Budget and Program Work Plan. Changes shall not be made in the work described in Attachment C (Work Plan) or the proposed expenditure of funds as shown in Attachment B (Budget), without the prior written approval of the State. Such approval will be granted if the changes are not substantive and do not alter the scope, intent or basic elements of the contract. Changes in the Work Plan or Budget that are substantive or alter the scope, intent or basic elements of the contract, if agreed to by the State, will be implemented by an amendment that may require approval and filing with the New York Attorney General Contract Approval Unit (AG) and the Office of the State Comptroller (OSC or State Comptroller), per Section I(B) of this Master Contract.

F. Procurement. All goods and services required for this project must be procured in a manner so as to assure the prudent and economical use of grant moneys, to facilitate the acquisition of goods and services of maximum quality at the lowest possible cost under the circumstances, and to guard against nepotism, favoritism, improvidence, extravagance, fraud and corruption.

1. If the Contractor is subject to General Municipal Law, documentation of the Contractor's compliance with the procurement and bidding requirements of General Municipal Law shall be included with the applicable request for reimbursement.

2. If the total amount of the goods or services is less than the dollar threshold for competitive bidding, or if the Contractor is not subject to General Municipal Law, the Contractor must follow procurement procedures designed to achieve the purpose of this clause. Such procedures may include, but are not limited to, competitive bidding, the solicitation of three price quotes, written requests for proposals, etc. When submitting a request for reimbursement, the Contractor must include a copy of the organizational

procurement policy applicable to the relevant expenditures and/or documentation of the specific procurement process used for those expenditures.

G. The Contractor and all users of this contract are strongly encouraged, to the maximum extent practicable and consistent with legal requirements, to use responsible and responsive **New York State businesses** as subcontractors, suppliers, and in other supporting roles. The Contractor will be required to identify and describe New York State businesses used and the value of subcontracts and supply contracts.

H. New York State Executive Law Article 15-A and 5 NYCRR Parts 142-144 (“MWBE Regulations”) Participation. Providing equal employment opportunities for minority group members and women (EEO) and contracting opportunities for certified minority and women-owned business enterprises (MWBEs) are a priority of the State of New York. In addition to the requirements set forth in Section IV(J) of this Master Contract, outreach to New York State certified MWBE firms and demonstration of “good faith efforts” shall be required under this Master Contract.

1. For purposes of this Master Contract, MWBE shall mean any business certified as a minority- or women-owned business enterprise pursuant to section 314 of the Executive Law. Information about the certification program and a directory of MWBEs are available at

ESD Division of MWBD
Albany, NY 12245
(518) 292-5250
<https://ny.newnycontracts.com/>

2. The Contractor shall submit, and shall require subcontractors to submit, reports showing the participation of all business enterprises on this contract, including minority and women-owned business enterprises, on forms and at intervals to be established by the State. Reports not submitted at such times as shall be required by the State shall be cause for the State to delay implementing scheduled payments to the Contractor.

3. The State has established a goal for MWBE participation of MBE 13% and WBE 17%.

4. The MWBE Participation goal assignment applies to projects with NYS Grant Awards (State Funds) in excess of \$100,000. Grant awards of \$100,000 or less are subject to good faith efforts for all discretionary purchases.

5. The Contractor is expected to make good faith efforts to achieve MWBE participation. Failure to achieve MWBE participation goals and/or to demonstrate sufficient effort to achieve MWBE participation goals may be grounds for termination of this Master Contract.

6. If any federal funds are involved in the project, the applicable federal program for contracting with small and minority firms, women’s business enterprise and labor surplus area firms and/or federal Disadvantaged Business Enterprises (DBEs) will supersede the state MWBE program outlined above.

I. Non-Discrimination:

1. If the project involves development or acquisition of public facilities, the Contractor shall not limit access or discriminate in the operation of the facilities on the basis of place of residence, race, creed, color, national origin, sex, age, disability or marital status.
2. The Contractor agrees to comply with all applicable Federal, State, and local Civil Rights and Human Rights laws with reference to equal employment opportunities and the provisions of service.

J. Termination. In addition to the options available to the State in the Master Contract, in the event the Contractor fails to comply with its terms and conditions regarding completion of the project, the State at its option may require the Contractor to bring the project to a point of educational/interpretive, historical, recreational or conservation usefulness as determined by the State.

K. Documents submitted to the State may be subject to disclosure under the Freedom of Information Law.

L. Non-Sectarian Purposes. The Contractor agrees that funds made available as shown in Attachment B will only be used to achieve the intended public benefit and will not be used for any sectarian purposes.

M. International Boycott Prohibition. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2NYCRR 105.4).

N. Prohibition on Purchase of Tropical Hardwoods. The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of State Finance Law §165. (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in §165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

O. MacBride Fair Employment Principles. In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

P. Procurement Lobbying. To the extent this agreement is a "procurement contract" as defined by State Finance Law Sections 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law Sections 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

Q. Certification of Registration to Collect Sales and Compensating Use Tax by Certain State Contractors, Affiliates and Subcontractors. To the extent this agreement is a contract as defined by Tax Law Section 5-a, if the contractor fails to make the certification required by Tax Law Section 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

R. Iran Divestment Act. By entering into this Agreement, Contractor certifies in accordance with State Finance Law §165-a that it 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: <http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf>

Contractor further certifies that it 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 will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, the state agency 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 90 days after the determination of such violation, then the state agency 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.

The state agency 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.

II. Program Specific Terms and Conditions

A. Funding for this project is provided pursuant to the terms of the **Environmental Protection Act**, Title 9 of Article 54 of the Environmental Conservation Law, and governed by the Rules and Regulations set forth in 9 NYCRR Sections 439-443.

B. Retroactive funding. Notwithstanding the provisions of Section III(A)(2) of this Master Contract, program regulations set forth in 9 NYCRR 440.5 (Project sponsor's match) permit retroactive reimbursement of certain expenses, when those expenses are included in the project Budget.

C. Notwithstanding the provisions of Section III(C)(4) of this Master Contract, the State will **withhold ten percent (10%)** of the Contract Funding Amount identified on the face page of this Master Contract as security until all terms and conditions of this Master Contract have been satisfied by the Contractor to the satisfaction of the State.

D. Project Sign. At the commencement of the work described in the Work Plan, the Contractor shall erect a sign at the project site noting the State's assistance to the project. The project sign specifications and term length for this requirement are set forth in Attachment C (Work Plan Summary).

E. Public Benefit Requirements.

1. In order to ensure a public benefit accrues from a capital project that is being funded the Contractor shall:

- a) Afford the public reasonable access to or use of the project as specified by the State;
- b) Not impose a fee for use of or access to the project without the prior written approval of the State;
- c) Own or hold by lease or maintain and operate the project as specified by the State;
- d) Not allow operation of the project, or any portion thereof, by any other person, entity, or organization pursuant to any management agreement, license or other arrangement without first obtaining the written approval of the State;
- e) Not alter, demolish, sell, lease or otherwise convey the project, in whole or in part, or permit a change in use of the project, without the prior written approval of the State; and
- f) Submit all plans in writing for restoration, rehabilitation, improvement, demolition or other physical change to the completed project for State approval before work commences.

2. Additional public benefit requirements specific to this project, including the term length and legal mechanism for enforcing any restriction, are set forth in Attachment C.

3. Parkland acquired or improved by a municipality shall not be sold, leased, exchanged or otherwise disposed of (collectively, “disposed of”) or converted to other than public park purposes without the express authority of an act of the Legislature, which shall provide for the substitution of other land of equal fair market value and reasonably equivalent usefulness and location to that being disposed of or converted, and such other requirements as shall be approved by the State.

4. Land acquired for recreation or conservation purposes by a not-for-profit organization shall be subject to a conservation easement to be held by the State and shall not be disposed of except to the State, a local government unit or another qualifying tax exempt not-for-profit organization that shall be required to use it for recreation or conservation purposes. Disposal to any other entity of land acquired for recreation or conservation purposes by a not-for-profit corporation shall require the express authority of an act of the Legislature.

F. It is the Contractor’s responsibility, pursuant to Sections 57 and 220(8) of the Workers' Compensation Law, to maintain for State audit and review either proof that they have **Workers' Compensation and Disability Benefits Insurance** coverage for any employees, or proof of exemption from the New York State Workers’ Compensation Board. The Contractor must also obtain from any contractor or subcontractor hired to provide a service pursuant to this Master Contract, similar proof or waivers from the contractor or subcontractor, and must maintain such documentation on file for audit.

G. Archeology. In the event of any unanticipated archeological discoveries, the Contractor shall stop all work and notify the State immediately. Work shall not resume until the State determines how any previously undiscovered archeological remains will be treated. Special attention shall be given to any discovery of burials, graves, or human remains.

H. Preservation of Historic Properties. It is the public policy and in the public interest of the State to preserve New York’s historical, archeological, architectural and cultural heritage. All activities under this Master Contract shall be reviewed under either Section 106 of the National Historic Preservation Act or Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law to ensure that adverse effects or impacts on significant properties are avoided or mitigated. Any work that affects historic properties shall conform to *The Secretary of the Interior's Standards for the Treatment of Historic Properties 1995*, *The Secretary of the Interior's Standards and Guidelines for Archeological Documentation* or any other applicable *Secretary of the Interior's Standards* (collectively referenced as *STANDARDS*), which are available from the State.

I. Planning Requirements.

1. All planning documents, plans and specifications must be accepted by the State before the Contractor awards contracts for the project or the subject property. These must be prepared by a qualified professional accepted by the State.
2. Any documents developed under this Master Contract shall include recognition of funding through the Environmental Protection Fund from the Office of Parks, Recreation and Historic Preservation.

J. Construction Requirements. If the Project described in this Master Contract includes construction, the following shall apply:

1. Contract plans, specifications, and cost estimates shall be submitted to the State for review prior to the letting of any construction contract by the Contractor. The State shall verify that the plans, specifications and cost estimates are in conformance with the work described in Attachment B and shall so notify the Contractor in writing; the State shall further verify that appropriate documents have been prepared by a professional licensed to practice in the State of New York. All plans and specifications as reviewed shall become part of this Master Contract, and no change or revision may be made to such plans and specifications without the express written consent of the State.
2. The Contractor shall be responsible for assuring that the project is designed and constructed in conformance with the Uniform Federal Accessibility Standards (UFAS -- Appendix A to 41 CFR part 101- 19.6), the Americans with Disabilities Act Accessibility Guidelines (ADAAG -- Appendix A to 28 CFR part 36) and the New York State Uniform Fire Prevention and Building (I)(Code (parts 1219-1228 of Title 19 NYCRR). Where there are discrepancies among the sets of standards with regard to a particular design/construction requirement, the one providing for the greatest degree of accommodation for the disabled shall apply.
3. It is the Contractor's responsibility to assure that all work on the project complies with the State Environmental Quality Review Act, receives all required permits in advance, and complies with all applicable Federal, State and/or local laws including, but not limited to, zoning ordinances and building codes.

Post-Completion Requirements. Following completion of the project, the Contractor shall be responsible for maintaining project records. Where the project involves acquisition of equipment or acquisition of or improvement of real property, the Contractor shall be responsible for maintaining and operating the equipment, property, and/or improvements; providing public access; maintaining public signage related to the project; and seeking any required State approvals. The State shall have the right and responsibility to audit records and inspect the project and property for compliance.



AIA[®] Document A312[™] – 2010

Payment Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Town of Plattsburgh
c/o Trevor Cole
151 Banker Road
Plattsburgh, NY 12901

CONSTRUCTION CONTRACT

Date:

Amount: \$

Description:

(Name and location)

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Init.

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond: | None | See Section 18

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

Signature: _____

SURETY

Company: *(Corporate Seal)*

Signature: _____

Name and _____

Title:

(Any additional signatures appear on the last page of this Payment Bond.)

Name and _____

Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party:)

(Paragraph Deleted)

§ 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 shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 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 Section 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 shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .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
- .2 have sent a Claim to the Surety (at the address described in Section 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 Section 13).

§ 6 If a notice of non-payment required by Section 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 Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall 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 Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

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

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall 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 satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

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

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

§ 12 No suit or action shall 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 Section 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 shall be applicable.

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

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

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

§ 16 Definitions

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

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .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;
- .4 a brief description of the labor, materials or equipment furnished;
- .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;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

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

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

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

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

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

§ 18 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: _____
Signature: _____
(Corporate Seal)

SURETY

Company: _____
Signature: _____
(Corporate Seal)

Name and Title: _____
Address: _____

Name and Title: _____
Address: _____



AIA® Document A312™ – 2010

Performance Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Town of Plattsburgh
151 Banker Road
Plattsburgh, NY 12901

CONSTRUCTION CONTRACT

Date:

Amount: \$

Description:

(Name and location)

Battlefield Memorial Gateway
Park - Phase I
Sunset Drive
Town of Plattsburgh, NY

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Init.

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond: | None | See Section 16

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

Signature:

SURETY

Company: *(Corporate Seal)*

Signature:

Name and

Title:

(Any additional signatures appear on the last page of this Performance Bond.)

Name and

Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party:)

(Paragraph Deleted)

§ 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 Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall 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 Section 3.1 shall 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 shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .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 Section 3.1 shall 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 Section 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 Owner's 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 Section 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:

- .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
- .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 Section 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 Section 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 Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall 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

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .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 Section 5; and
- .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 Section 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 shall not be reduced or set off on account of any such unrelated obligations. No right of action shall 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 may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall 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 period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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 to the Contractor of 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

The project bond is available for a period of twelve (12) months beginning at the time of substantial completion.

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: _____
Signature: _____
(Corporate Seal)

SURETY

Company: _____
Signature: _____
(Corporate Seal)

Name and Title: _____
Address: _____

Name and Title: _____
Address: _____

SECTION 006273 – SCHEDULE OF VALUES

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes administrative and procedural requirements for the project Schedule of Values.

1.2 RELATED DOCUMENTS

- A. Related Sections include the following:
 - 1. Section 002113 – Instructions to Bidders for supplemental document requirements.
 - 2. Section 011100 – Project Summary.
 - 3. Section 012900 – Payment Procedures for submitting and completing the Schedule of Values as part of an Application for Payment.

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 Contractors Applications for Payment.

1.4 FORMS

- A. Use the following form:
 - 1. Schedule of Values: Provide on AIA Document G703 – Continuation Sheet, 1992 edition.

PART 2 – PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SCHEDULE OF VALUES

- A. Provide summaries for all scheduled values as approved by the Owner's representative.
- B. Coordination: Each Prime Contract shall coordinate preparation of its Schedule of Values for its portion of Work.
 - 1. Correlate line items in the Schedule of Value with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittal's schedule.

- c. Material/Equipment status reports.
- C. 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 Section under Division 1, including, but not limited to, those indicated within Prime Contract scope under Section 011100 Project Summary.
- 1. Include and complete all header information on the Schedule of Value forms.
 - 2. No longer than 7 days after Contract award, the Contractor will submit a schedule of values, which will be used as the basis for monthly requisitions. This schedule is to be submitted on the appropriate AIA Form G-702/CMA and G-703. Contract total must be broken into a level of detail that may be easily reviewed each month (i.e. by work category, by area, etc.). In addition, incorporate the following items as separate breakout items:
 - a. Hold 5% retainage
 - b. Hold 1% for closeout
 - c. Hold 1% for safety and cleanup
 - d. Hold 1% for job meeting attendance
 - e. Performance and Payment Bonds
 - f. Project Insurance
 - g. Mobilization & Demobilization
 - h. Field supervision and layout
 - i. Temporary facilities
 - j. Hold 2% Submittals
 - k. Record Drawings and Construction Progress Documentation
 - l. Hold 1.5% Punch list
 - m. Testing or Balancing (if applicable)
 - n. System Commissioning (if applicable)
 - o. Allowances: provide a separate line item for each Allowance (if applicable)
 - p. Alternates: Provide a separate line item for each Alternate (if applicable).
 - q. Unit Prices: Itemize each unit price for the Prime Contract (if

applicable).

- r. Change Orders: On separate G703 sheet, add each Change Order for the Prime Contract, as cumulatively issued/approved through duration of project.
3. Itemize separate line-item cost for work required by each summary task or operation by specification Section numbers.
 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - a. Show total costs including overhead and profit.
 - b. Percentage of total list of item values to equal 100% of 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 progress payments for 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.
 6. After review by the Owner's Representation, revise and resubmit Schedule of Values if required.

END OF SECTION 006273

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT BUSINESS ENTITY**

You have selected the For-Profit Non-Construction questionnaire which may be printed and completed in this format or, for your convenience, may be completed online using the New York State VendRep System.

COMPLETION & CERTIFICATION

The person(s) completing the questionnaire must be knowledgeable about the vendor's business and operations. An owner or owner's official representative authorized to legally bind the Reporting Entity must certify the truth of the questionnaire answers.

NEW YORK STATE VENDOR IDENTIFICATION NUMBER (VENDOR ID)

The Vendor ID is a ten-digit identifier issued by New York State when the vendor is registered on the Statewide Vendor File. This number must now be included on the questionnaire. If the business entity has not obtained a Vendor ID, contact the IT Service Desk at ITServiceDesk@osc.state.ny.us or call 866-370-4672.

DEFINITIONS

All underlined terms are defined in the "New York State Vendor Responsibility Definitions List," found at <https://www.osc.state.ny.us/files/vendors/2017-11/vendor-questionnaire-definitions.pdf>. These terms may not have their ordinary, common or traditional meanings. Each vendor must read the respective definitions for any and all underlined terms. By submitting this questionnaire, the vendor agrees to be bound by the terms as defined in the "New York State Vendor Responsibility Definitions List" existing at the time of certification.

RESPONSES

Every question must be answered fully. Each response must provide **all** relevant information to appropriately explain the answer. If you have concerns as to the legal requirements behind your answers, please seek clarification from your counsel. However, information regarding a determination or finding made in error which was subsequently corrected or overturned, and/or was withdrawn by the issuing government entity is not required to be identified. Individuals and Sole Proprietors may use a Social Security Number but are encouraged to obtain and use a federal Employer Identification Number (EIN).

REPORTING ENTITY

Each vendor must indicate if the questionnaire is filed on behalf of the entire Legal Business Entity or an Organizational Unit within or operating under the authority of the Legal Business Entity and having the same EIN. Generally, the Organizational Unit option may be appropriate for a vendor that meets the definition of "Reporting Entity" but due to the size and complexity of the Legal Business Entity, is best able to provide the required information for the Organizational Unit, while providing more limited information for other parts of the Legal Business Entity and Associated Entities.

ASSOCIATED ENTITY

An Associated Entity is one that owns or controls the Reporting Entity, or any entity owned or controlled by the Reporting Entity. However, the term Associated Entity does **not** include "sibling organizations" (i.e., entities owned or controlled by a parent company that owns or controls the Reporting Entity), unless such sibling entity has a direct relationship with or impact on the Reporting Entity. Please refer to the Definitions List for the complete definition.

STRUCTURE OF THE QUESTIONNAIRE

The questionnaire is organized into eleven sections. Section I is to be completed for the Legal Business Entity. Section II requires the vendor to specify the Reporting Entity for the questionnaire. Section III refers to the individuals of the Reporting Entity, while Sections IV-VIII require information about the Reporting Entity. Section IX pertains to any Associated Entities, with one question about their Officials/Owners. Section X relates to disclosure under the Freedom of Information Law (FOIL). Section XI requires an authorized contact for the questionnaire information.

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT BUSINESS ENTITY**

I. LEGAL BUSINESS ENTITY INFORMATION			
<u>Legal Business Entity Name*</u>		<u>EIN</u>	
Address of the <u>Principal Place of Business</u> (street, city, state, zip code)		<u>New York State Vendor Identification Number</u>	
		Telephone Ext.	Fax
Email		Website	
Additional <u>Legal Business Entity</u> Identities: If applicable, list any other <u>DBA</u> , <u>Trade Name</u> , <u>Former Name</u> , Other Identity, or <u>EIN</u> used in the last five (5) years and the status (active or inactive).			
Type	Name	EIN	Status
1.0 <u>Legal Business Entity</u> Type – Check appropriate box and provide additional information:			
<input type="checkbox"/> <u>Corporation</u> (including <u>PC</u>)		Date of Incorporation	
<input type="checkbox"/> <u>Limited Liability Company (LLC or PLLC)</u>		Date of Organization	
<input type="checkbox"/> <u>Partnership</u> (including <u>LLP</u> , <u>LP</u> or <u>General</u>)		Date of Registration or Establishment	
<input type="checkbox"/> <u>Sole Proprietor</u>		How many years in business?	
<input type="checkbox"/> Other		Date Established	
If Other, explain:			
1.1 Was the <u>Legal Business Entity</u> formed or incorporated in New York State?			<input type="checkbox"/> Yes <input type="checkbox"/> No
If ‘No,’ indicate jurisdiction where <u>Legal Business Entity</u> was formed or incorporated and attach a <u>Certificate of Good Standing</u> from the applicable jurisdiction or provide an explanation if a <u>Certificate of Good Standing</u> is not available.			
<input type="checkbox"/> United States State _____			
<input type="checkbox"/> Other Country _____			
Explain, if not available:			
1.2 Is the <u>Legal Business Entity</u> publicly traded?			<input type="checkbox"/> Yes <input type="checkbox"/> No
If “Yes,” provide <u>CIK Code</u> or Ticker Symbol			
1.3 Does the <u>Legal Business Entity</u> have a <u>DUNS</u> Number?			<input type="checkbox"/> Yes <input type="checkbox"/> No
If “Yes,” Enter <u>DUNS</u> Number			

*All underlined terms are defined in the “New York State Vendor Responsibility Definitions List,” which can be found at <https://www.osc.state.ny.us/files/vendors/2017-11/vendor-questionnaire-definitions.pdf>

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT BUSINESS ENTITY**

I. LEGAL BUSINESS ENTITY INFORMATION

1.4 If the <u>Legal Business Entity</u> 's <u>Principal Place of Business</u> is not in New York State, does the <u>Legal Business Entity</u> maintain an office in New York State? (Select "N/A," if <u>Principal Place of Business</u> is in New York State.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
--	--

If "Yes," provide the address and telephone number for one office located in New York State.

1.5 Is the <u>Legal Business Entity</u> a New York State certified <u>Minority-Owned Business Enterprise</u> (MBE), <u>Women-Owned Business Enterprise</u> (WBE), <u>Service-Disabled Veteran-Owned Business</u> (SDVOB), <u>New York State Small Business</u> (SB) or a federally certified <u>Disadvantaged Business Enterprise</u> (DBE)? If "Yes," check all that apply: <input type="checkbox"/> New York State certified <u>Minority-Owned Business Enterprise</u> (MBE) <input type="checkbox"/> New York State certified <u>Women-Owned Business Enterprise</u> (WBE) <input type="checkbox"/> New York State certified <u>Service-Disabled Veteran-Owned Business</u> (SDVOB) <input type="checkbox"/> <u>New York State Small Business</u> (SB) <input type="checkbox"/> Federally certified <u>Disadvantaged Business Enterprise</u> (DBE)	<input type="checkbox"/> Yes <input type="checkbox"/> No
---	--

1.6 Identify Officials and Principal Owners of the Reporting Entity, if applicable. For each person, include name, title, date of birth, and percentage of ownership. For each Business Entity that is a Principal Owner, include name, address, EIN, and percentage ownership. Identify all Business Entities owning 25% or more of the Reporting Entity and include name, address, EIN and percentage of ownership. Attach additional pages if necessary. If applicable, reference to relevant SEC filing(s) containing the required information is optional. Each Business Entity identified as a Principal Owner must also submit a vendor responsibility questionnaire.

If there is no person or Business Entity that owns 25% or more of the Reporting Entity (or 10% or more if the Reporting Entity is publicly traded), check here.

Name of Officials and Principal Owners (for each person, please include a middle initial)	Title	Date of Birth	Percentage Ownership <i>(Enter 0% if not applicable)</i>
Name of each Business Entity owning 25% or more of Reporting Entity	Address	EIN	Percentage Ownership

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT BUSINESS ENTITY**

II. REPORTING ENTITY INFORMATION

2.0 The Reporting Entity for this questionnaire is:

Note: Select only one.

Legal Business Entity

Note: If selecting this option, “Reporting Entity” refers to the entire Legal Business Entity for the remainder of the questionnaire. (SKIP THE REMAINDER OF SECTION II AND PROCEED WITH SECTION III.)

Organizational Unit within and operating under the authority of the Legal Business Entity

SEE DEFINITIONS OF “REPORTING ENTITY” AND “ORGANIZATIONAL UNIT” FOR ADDITIONAL INFORMATION ON CRITERIA TO QUALIFY FOR THIS SELECTION.

Note: If selecting this option, “Reporting Entity” refers to the Organizational Unit within the Legal Business Entity for the remainder of the questionnaire. (COMPLETE THE REMAINDER OF SECTION II AND ALL REMAINING SECTIONS OF THIS QUESTIONNAIRE.)

IDENTIFYING INFORMATION

a) <u>Reporting Entity</u> Name	
Address of the <u>Primary Place of Business</u> (street, city, state, zip code)	Telephone ext.
b) Describe the relationship of the <u>Reporting Entity</u> to the <u>Legal Business Entity</u>	
c) Attach an <u>organizational chart</u>	
d) Does the Reporting Entity have a <u>DUNS</u> Number?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If “Yes,” enter <u>DUNS</u> Number	
e) Identify the designated manager(s) responsible for the business of the <u>Reporting Entity</u> . <i>For each person, include name and title. Attach additional pages if necessary.</i>	
Name	Title

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT BUSINESS ENTITY**

INSTRUCTIONS FOR SECTIONS III THROUGH VII

For each “Yes,” provide an explanation of the issue(s), relevant dates, the government entity involved, any remedial or corrective action(s) taken and the current status of the issue(s). For each “Other,” provide an explanation which provides the basis for not definitively responding “Yes” or “No.” Provide the explanation at the end of the section or attach additional sheets with numbered responses, including the Reporting Entity name at the top of any attached pages.

III. LEADERSHIP INTEGRITY

Within the past five (5) years, has any current or former reporting entity official or any individual currently or formerly having the authority to sign, execute or approve bids, proposals, contracts or supporting documentation on behalf of the reporting entity with any government entity been:

3.0 <u>Sanctioned</u> relative to any business or professional permit and/or license?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Other
3.1 <u>Suspended, debarred, or disqualified</u> from any <u>government contracting process</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Other
3.2 The subject of an <u>investigation</u> , whether open or closed, by any <u>government entity</u> for a civil or criminal violation for any business-related conduct?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Other
3.3 Charged with a misdemeanor or felony, indicted, granted immunity, convicted of a crime or subject to a <u>judgment</u> for: a) Any business-related activity; or b) Any crime, whether or not business-related, the underlying conduct of which was related to truthfulness?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Other

For each “Yes” or “Other” provide an explanation for the response and attach additional sheets with numbered responses if necessary:

IV. INTEGRITY – CONTRACT BIDDING

Within the past five (5) years, has the reporting entity:

4.0 Been <u>suspended or debarred</u> from any <u>government contracting process</u> or been <u>disqualified</u> on any government procurement, permit, license, concession, franchise or lease, including, but not limited to, <u>debarment</u> for a violation of New York State Workers’ Compensation or Prevailing Wage laws or New York State Procurement Lobbying Law?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.1 Been subject to a denial or revocation of a government prequalification?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.2 Been denied a contract award or had a bid rejected based upon a <u>non-responsibility finding</u> by a <u>government entity</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.3 Had a bid rejected on a <u>government contract</u> for failure to <u>make good faith efforts</u> on any <u>Minority-Owned Business Enterprise, Women-Owned Business Enterprise, Service-Disabled Veteran-Owned Business or Disadvantaged Business Enterprise</u> goal or <u>statutory affirmative action requirements</u> on a previously held contract?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.4 Agreed to a voluntary exclusion from bidding/contracting with a <u>government entity</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.5 Initiated a request to withdraw a bid submitted to a <u>government entity</u> in lieu of responding to an information request or subsequent to a formal request to appear before the <u>government entity</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No

For each “Yes,” provide an explanation for the response and attach additional sheets with numbered responses if necessary:

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT BUSINESS ENTITY**

V. INTEGRITY – CONTRACT AWARD	
<i>Within the past five (5) years, has the reporting entity:</i>	
5.0 Been <u>suspended</u> , cancelled or <u>terminated for cause</u> on any <u>government contract</u> including, but not limited to, a <u>non-responsibility finding</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.1 Been subject to an <u>administrative proceeding</u> or civil action seeking specific performance or restitution in connection with any <u>government contract</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.2 Entered into a formal monitoring agreement as a condition of a contract award from a <u>government entity</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
For each “Yes,” provide an explanation for the response and attach additional sheets with numbered responses if necessary:	

VI. CERTIFICATIONS/LICENSES	
<i>Within the past five (5) years, has the reporting entity:</i>	
6.0 Had a revocation, <u>suspension</u> or <u>disbarment</u> of any business or professional permit and/or license?	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.1 Had a denial, decertification, revocation or forfeiture of New York State certification of <u>Minority-Owned Business Enterprise</u> , <u>Women-Owned Business Enterprise</u> , <u>Service-Disabled Veteran-Owned Business</u> or federal certification of <u>Disadvantaged Business Enterprise</u> status for other than a change of ownership?	<input type="checkbox"/> Yes <input type="checkbox"/> No
For each “Yes,” provide an explanation for the response and attach additional sheets with numbered responses if necessary:	

VII. LEGAL PROCEEDINGS	
<i>Within the past five (5) years, has the reporting entity:</i>	
7.0 Been the subject of an <u>investigation</u> , whether open or closed, by any <u>government entity</u> for a civil or criminal violation?	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.1 Been the subject of an indictment, grant of immunity, <u>judgment</u> or conviction (including entering into a plea bargain) for conduct constituting a crime?	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.2 Received any OSHA citation and Notification of Penalty containing a violation classified as <u>serious or willful</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.3 Had a <u>government entity</u> find a willful prevailing wage or supplemental payment violation or any other willful violation of New York State Labor Law?	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.4 Entered into a consent order with the New York State Department of Environmental Conservation, or received an enforcement determination by any <u>government entity</u> involving a violation of federal, state or local environmental laws?	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.5 Other than previously disclosed: a) Been subject to fines or penalties imposed by <u>government entities</u> which in the aggregate total \$25,000 or more; or b) Been convicted of a criminal offense pursuant to any administrative and/or regulatory action taken by any <u>government entity</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
For each “Yes,” provide an explanation for the response and attach additional sheets with numbered response if necessary:	

NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT BUSINESS ENTITY

VIII. FINANCIAL AND ORGANIZATIONAL CAPACITY	
8.0 Within the past five (5) years, has the <u>Reporting Entity</u> received any <u>formal unsatisfactory performance assessment(s)</u> from any <u>government entity</u> on any contract?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If "Yes," provide an explanation of the issue(s), relevant dates, the <u>government entity</u> involved, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.	
8.1 Within the past five (5) years, has the <u>Reporting Entity</u> had any <u>liquidated damages</u> assessed over \$25,000 for any reason, including failure to meet <u>Minority-Owned Business Enterprise</u> , <u>Women-Owned Business Enterprise</u> , <u>Service-Disabled Veteran-Owned Business</u> , or <u>Disadvantaged Business Enterprise goals</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If "Yes," provide an explanation of the issue(s), relevant dates, contracting party involved, the amount assessed and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.	
8.2 Within the past five (5) years, have any <u>liens, claims</u> or <u>judgments</u> (not including UCC filings) over \$25,000 been filed against the <u>Reporting Entity</u> which remain undischarged?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If "Yes," provide an explanation of the issue(s), relevant dates, the Lien holder or Claimant's name(s), the amount of the <u>lien(s)</u> , the current status of the issue(s), and the balance of the <u>lien</u> or <u>judgment</u> not yet paid. Provide answer below or attach additional sheets with numbered responses.	
8.3 In the last seven (7) years, has the <u>Reporting Entity</u> initiated or been the subject of any bankruptcy proceedings, whether or not closed, or is any bankruptcy proceeding pending?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If "Yes," provide the bankruptcy chapter number, the court name and the docket number. Indicate the current status of the proceedings as "Initiated," "Pending" or "Closed." Provide answer below or attach additional sheets with numbered responses.	
8.4 During the past three (3) years, has the <u>Reporting Entity</u> failed to file or pay any tax returns required by <u>federal</u> , state or local tax laws?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If "Yes," provide the taxing jurisdiction, the type of tax, the liability year(s), the tax liability amount the <u>Reporting Entity</u> failed to file/pay and the current status of the tax liability. Provide answer below or attach additional sheets with numbered responses.	
8.5 During the past three (3) years, has the <u>Reporting Entity</u> failed to file or pay any New York State unemployment insurance returns?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If "Yes," provide the years the <u>Reporting Entity</u> failed to file/pay the insurance, explain the situation and any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.	
8.6 During the past three (3) years, has the <u>Reporting Entity</u> had any <u>government audit(s)</u> completed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
a) If "Yes," did any audit of the <u>Reporting Entity</u> identify any reported significant deficiencies in internal control, fraud, illegal acts, significant violations of provisions of contract or grant agreements, significant abuse or any <u>material disallowance</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If "Yes" to 8.6 a), provide an explanation of the issue(s), relevant dates, the <u>government entity</u> involved, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.	

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
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IX. ASSOCIATED ENTITIES

*This section pertains to any entity(ies) that either controls or is controlled by the reporting entity.
(See definition of "associated entity" for additional information to complete this section.)*

<p>9.0 Does the <u>Reporting Entity</u> have any <u>Associated Entities</u>?</p> <p>Note: All questions in this section must be answered if the <u>Reporting Entity</u> is either:</p> <ul style="list-style-type: none"> - An <u>Organizational Unit</u>; or - The entire <u>Legal Business Entity</u> which controls, or is controlled by, any other entity(ies). <p>If "No," SKIP THE REMAINDER OF SECTION IX AND PROCEED WITH SECTION X. If "Yes," provide the name, address and EIN of each <u>Associated Entity</u> and its relationship to the <u>Reporting Entity</u>.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>9.1 Within the past five (5) years, has any <u>Associated Entity Official</u> or <u>Principal Owner</u> been charged with a misdemeanor or felony, indicted, granted immunity, convicted of a crime or subject to a <u>judgment</u> for:</p> <p>a) Any business-related activity; or b) Any crime, whether or not business-related, the underlying conduct of which was related to truthfulness?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>If "Yes," provide an explanation of the issue(s), the individual involved, their title and role in the <u>Associated Entity</u>, identify the <u>Associated Entity</u>'s name(s), <u>EIN</u>(s), primary business activity, the individual's relationship to the <u>Reporting Entity</u>, relevant dates, the <u>government entity</u> involved, any remedial or corrective action(s) taken and the current status of the issue(s).</p>	
<p>9.2 Does any <u>Associated Entity</u> have any currently undischarged <u>federal</u>, New York State, New York City or New York local government <u>liens</u> or <u>judgments</u> (not including UCC filings) over \$50,000?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>If "Yes," provide an explanation of the issue(s), identify the <u>Associated Entity</u>'s name(s), <u>EIN</u>(s), primary business activity, relationship to the <u>Reporting Entity</u>, relevant dates, the Lien holder or Claimant's name(s), the amount of the <u>lien</u>(s) and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.</p>	
<p>9.3 Within the past five (5) years, has any <u>Associated Entity</u>:</p>	
<p>a) Been <u>disqualified</u>, <u>suspended</u> or <u>debarred</u> from any <u>federal</u>, New York State, New York City or other New York local <u>government contracting process</u>?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>b) Been denied a contract award or had a bid rejected based upon a <u>non-responsibility finding</u> by any <u>federal</u>, New York State, New York City, or New York local <u>government entity</u>?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>c) Been <u>suspended</u>, <u>cancelled</u> or <u>terminated for cause</u> (including for <u>non-responsibility</u>) on any <u>federal</u>, New York State, New York City or New York local <u>government contract</u>?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>d) Been the subject of an <u>investigation</u>, whether open or closed, by any <u>federal</u>, New York State, New York City, or New York local <u>government entity</u> for a civil or criminal violation with a penalty in excess of \$500,000?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>e) Been the subject of an indictment, grant of immunity, <u>judgment</u>, or conviction (including entering into a plea bargain) for conduct constituting a crime?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>f) Been convicted of a criminal offense pursuant to any administrative and/or regulatory action taken by any <u>federal</u>, New York State, New York City, or New York local <u>government entity</u>?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>g) Initiated or been the subject of any bankruptcy proceedings, whether or not closed, or is any bankruptcy proceeding pending?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT BUSINESS ENTITY**

IX. ASSOCIATED ENTITIES

*This section pertains to any entity(ies) that either controls or is controlled by the reporting entity.
(See definition of "associated entity" for additional information to complete this section.)*

For each "Yes," provide an explanation of the issue(s), identify the Associated Entity's name(s), EIN(s), primary business activity, relationship to the Reporting Entity, relevant dates, the government entity involved, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.

X. FREEDOM OF INFORMATION LAW (FOIL)

10. Indicate whether any information supplied herein is believed to be exempt from disclosure under the Freedom of Information Law (FOIL). Note: A determination of whether such information is exempt from FOIL will be made at the time of any request for disclosure under FOIL.	<input type="checkbox"/> Yes <input type="checkbox"/> No
--	--

If "Yes," indicate the question number(s) and explain the basis for the claim.

XI. AUTHORIZED CONTACT FOR THIS QUESTIONNAIRE

Name	Telephone	Fax
	ext.	
Title	Email	

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT BUSINESS ENTITY**

Certification

The undersigned: (1) recognizes that this questionnaire is submitted for the express purpose of assisting New York State government entities (including the Office of the State Comptroller (OSC)) in making responsibility determinations regarding award or approval of a contract or subcontract and that such government entities will rely on information disclosed in the questionnaire in making responsibility determinations; (2) acknowledges that the New York State government entities and OSC may, in their discretion, by means which they may choose, verify the truth and accuracy of all statements made herein; and (3) acknowledges that intentional submission of false or misleading information may result in criminal penalties under State and/or federal law, as well as a finding of non-responsibility, contract suspension or contract termination.

It being acknowledged and agreed that all responses included in this questionnaire are to the knowledge, information and belief of the Business Entity, the undersigned certifies under penalties of perjury that they:

The undersigned certifies that he/she:

- are knowledgeable about the submitting Business Entity's business and operations;
- have legal authority to bind the Business Entity;
- have read and understand all of the questions contained in the questionnaire, including all definitions;
- have not altered the content of the questionnaire in any manner;
- have reviewed and/or supplied full and complete responses to each question;
- have provided true, accurate and complete responses, including all attachments, if applicable;
- understand that New York State government entities will rely on the information disclosed in the questionnaire when entering into a contract with the Business Entity; and
- are under an obligation to update the information provided herein to include any material changes to the Business Entity's responses at the time of bid/proposal submission through the contract award notification, and may be required to update the information at the request of the New York State government entities or OSC prior to the award and/or approval of a contract, or during the term of the contract.

Signature of Owner/Official _____

Printed Name of Signatory _____

Title _____

Name of Business _____

Address _____

City, State, Zip _____

Date _____



AIA Document G702™ - 1992

Application and Certificate for Payment

TO OWNER: Town of Plattsburgh c/o Trevor Cole
151 Banker Road Plattsburgh, NY 12901

PROJECT: Battlefield Memorial Gateway Park
Phase I

APPLICATION NO:
PERIOD TO:

Distribution to:
OWNER:

FROM CONTRACTOR:

VIA ARCHITECT: Elan Planning and Design, DPC
18 Division Street Suite 304
Saratoga Springs, NY 12866

CONTRACT FOR: General Construction
CONTRACT DATE: / /
PROJECT NOS:

ARCHITECT:
CONTRACTOR:
FIELD:
OTHER:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract Continuation Sheet, AIA Document G703, is attached.

- 1. ORIGINAL CONTRACT SUM 0.00
- 2. NET CHANGE BY CHANGE ORDERS 0.00
- 3. CONTRACT SUM TO DATE (Line 1 ± 2) 0.00
- 4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) 0.00
- 5. RETAINAGE:
 - a. 0 % of Completed Work (Column D + E on G703) 0.00
 - b. 0 % of Stored Material (Column F on G703) 0.00

Total Retainage (Lines 5a + 5b or Total in Column I of G703) 0.00

6. TOTAL EARNED LESS RETAINAGE 0.00
(Line 4 Less Line 5 Total)

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT 0.00
(Line 6 from prior Certificate)

8. CURRENT PAYMENT DUE 0.00

9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6) 0.00

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	0.00	0.00
Total approved this Month	0.00	0.00
TOTALS	0.00	0.00
NET CHANGES by Change Order		0.00

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:

Date: _____

By: _____

State of: _____

County of: _____

Subscribed and sworn to before me this _____ day of _____

Notary Public: _____

My Commission expires: _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED 0.00
(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: _____

Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

Request for Interpretation Form

PROJECT: City of Gloversville Parks	DATE
	CONTRACT NO.
PROJECT NO.:	CONTRACT FOR
RFI NO:	

REVIEWED BY (prior to presenting this RFI to the Project Architect)

<input type="checkbox"/> Contractor: Date: Contractor RFI#	<input type="checkbox"/> Site Coordinator Date:
--	--

REQUEST

Subject/Title: (for reference purposes)
Date Response Needed: (indicate a date that will not impact the construction schedule)
Attachment
Diagram #
Reference Drawing #
Spec. #
Detail(s)/Paragraph(s)

Question:

By:	Date:
-----	-------

RESPONSE:

Reference Attached	Sketch No.
<i>Response:</i>	

By:	Date:
-----	-------



AIA[®] Document G706[™] – 1994

Contractor's Affidavit of Payment of Debts and Claims

PROJECT: <i>(Name and address)</i> Battlefield Memorial Gateway Park - Phase I Plattsburgh, NY	ARCHITECT'S PROJECT NUMBER: 20-015.8	OWNER: <input type="checkbox"/>
		ARCHITECT: <input type="checkbox"/>
		CONTRACTOR: <input type="checkbox"/>
		SURETY: <input type="checkbox"/>
		OTHER: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i> Town of Plattsburgh c/o Trevor Cole 151 Banker Road Plattsburgh, NY 12901	CONTRACT FOR: General Construction CONTRACT DATED:	

STATE OF:
COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

- Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose

Indicate Attachment Yes No

CONTRACTOR: *(Name and address)*

BY: _____
(Signature of authorized representative)

(Printed name and title)

The following supporting documents should be attached hereto if required by the Owner:

- Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
- Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
- Contractor's Affidavit of Release of Liens (AIA Document G706A).

Subscribed and sworn to before me on this date:

Notary Public:
My Commission Expires:



AIA[®] Document G706A[™] – 1994

Contractor's Affidavit of Release of Liens

PROJECT: <i>(Name and address)</i> Battlefield Memorial Gateway Park - Phase I Town of Plattsburgh, NY	ARCHITECT'S PROJECT NUMBER: CONTRACT FOR: General Construction	OWNER: <input type="checkbox"/> ARCHITECT: <input type="checkbox"/> CONTRACTOR: <input type="checkbox"/> SURETY: <input type="checkbox"/> OTHER: <input type="checkbox"/>
TO OWNER: <i>(Name and address)</i> Town of Plattsburgh c/o Trevor Cole	CONTRACT DATED:	

STATE OF:
COUNTY OF:

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

CONTRACTOR: *(Name and address)*

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:



AIA® Document G707™ – 1994

Consent Of Surety to Final Payment

PROJECT: *(Name and address)*
Battlefield Memorial Gateway
Park - Phase I
Town of Plattsburgh, NY

ARCHITECT'S PROJECT NUMBER:

OWNER:

ARCHITECT:

CONTRACT FOR: General Construction

CONTRACTOR:

TO OWNER: *(Name and address)*
Town of Plattsburgh
c/o Trevor Cole

CONTRACT DATED:

SURETY:

OTHER:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

on bond of
(Insert name and address of Contractor)

, SURETY,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall
not relieve the Surety of any of its obligations to
(Insert name and address of Owner)

, CONTRACTOR,

as set forth in said Surety's bond.

, OWNER,

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:
(Insert in writing the month followed by the numeric date and year.)

(Surety)

(Signature of authorized representative)

Attest:
(Seal):

(Printed name and title)



AIA® Document A201™ – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Battlefield Memorial Gateway Park - Phase I

THE OWNER:

(Name, legal status and address)

Town of Plattsburgh
151 Banker Road, Plattsburgh, NY 12901

THE ARCHITECT:

(Name, legal status and address)

Elan Planning, Landscape Architecture and Engineering, DPC
18 Division Street, Suite 304
Saratoga Springs, NY 12866

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ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

Init.

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User Notes:

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent

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consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™-2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements,

assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the

Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the

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Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations

and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor,

prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work,

promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

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- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will

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affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and

unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 **Notice of Cancellation or Expiration of Contractor's Required Insurance.** Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 **Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 **Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§ 11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to

the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or Suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance,

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the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the

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Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

APPENDIX A

STANDARD CLAUSES FOR NEW YORK STATE CONTRACTS

PLEASE RETAIN THIS DOCUMENT
FOR FUTURE REFERENCE.

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STANDARD CLAUSES FOR NYS CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licenser, licensee, lessor, lessee or any other party):

1. EXECUTORY CLAUSE. In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

3. COMPTROLLER'S APPROVAL. In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds \$50,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$10,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed \$85,000 (State Finance Law Section 163.6-a). However, such pre-approval shall not be required for any contract established as a centralized contract through the Office of General Services or for a purchase order or other transaction issued under such centralized contract.

4. WORKERS' COMPENSATION BENEFITS. In accordance with Section 142 of the State Finance Law, this

contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex (including gender identity or expression), national origin, sexual orientation, military status, age, disability, predisposing genetic characteristics, marital status or domestic violence victim status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of

any State approved sums due and owing for work done upon the project.

7. NON-COLLUSIVE BIDDING CERTIFICATION. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

8. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2NYCRR 105.4).

9. SET-OFF RIGHTS. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this

contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION.

(a) Identification Number(s). Every invoice or New York State Claim for Payment submitted to a New York State agency by a payee, for payment for the sale of goods or services or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number is any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Failure to include such number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or Claim for Payment, must give the reason or reasons why the payee does not have such number or numbers.

(b) Privacy Notification. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in the Statewide Financial System by the Vendor Management Unit within the Bureau of State Expenditures, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN.

In accordance with Section 312 of the Executive Law and 5 NYCRR 143, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00,

whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this agreement the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) at the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and

(c) the Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "a", "b", and "c" above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment

opportunity which effectuates the purpose of this section. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

13. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

14. GOVERNING LAW. This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. LATE PAYMENT. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in §165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES.

In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

20. OMNIBUS PROCUREMENT ACT OF 1992. It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
Albany, New York 12245
Telephone: 518-292-5100
Fax: 518-292-5884
email: opa@esd.ny.gov

A directory of certified minority and women-owned business enterprises is available from:

NYS Department of Economic Development
Division of Minority and Women's Business Development
633 Third Avenue
New York, NY 10017
212-803-2414
email: mwbecertification@esd.ny.gov
<https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp>

The Omnibus Procurement Act of 1992 requires that by signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than \$1 million:

(a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;

(b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

(c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and

(d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

21. RECIPROCITY AND SANCTIONS PROVISIONS.

Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively) require that they be denied contracts which they would otherwise obtain. NOTE: As of May 15, 2002, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii. Contact NYS Department of Economic Development for a current list of jurisdictions subject to this provision.

22. COMPLIANCE WITH NEW YORK STATE INFORMATION SECURITY BREACH AND NOTIFICATION ACT. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law Section 899-aa; State Technology Law Section 208).

23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW. If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4-g) of the State Finance Law (as amended by Chapter 10 of the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded

the contract, the Department of Civil Service and the State Comptroller.

24. PROCUREMENT LOBBYING. To the extent this agreement is a "procurement contract" as defined by State Finance Law Sections 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law Sections 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

25. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.

To the extent this agreement is a contract as defined by Tax Law Section 5-a, if the contractor fails to make the certification required by Tax Law Section 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

26. IRAN DIVESTMENT ACT. By entering into this Agreement, Contractor certifies in accordance with State Finance Law §165-a that it 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:

<http://www.ogs.ny.gov/about/regs/docs/ListofEntities.pdf>

Contractor further certifies that it 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 will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, the state agency 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 90 days after the determination of such violation, then the state agency 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.

The state agency 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.

SECTION 007343 - WAGE RATES

PART 1 – GENERAL

1.1 SUMMARY

- A. 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 the minimum hourly rates to be paid to employees for work. The rate schedules 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 730 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 supplemental to be paid to all laborers, workmen and mechanics employed on public works projects. The amount of supplemental listed on the enclosed schedule does not necessarily include all types of prevailing supplements.
- B. The Contractor shall make provisions for disability benefits, workman's compensation, unemployment insurance and social security, as required by law.
- C. This Project has been registered with New York State. A New York State PRC number and reference number is established.
- D. The Contractor is responsible for obtaining updated copies of the prevailing wage schedule and list of employers ineligible to bid on or be awarded public work contracts directly from the Department of Labor's Bureau of Public Work's web site at :
 1. <https://apps.labor.ny.gov/wpp/publicViewProject.do?method=showIt&id=1544815>
 - a. If needed enter the PRC number: 2023001460
 - b. Select the first link "Wage Schedule" at the top right.
 2. In the event that the Contractor does not have web access or is unable to access the Department's website, please fax a written request for a printed copy of the schedule to the Central Office of the Bureau of Public Work at (518) 485-1870.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 007343

SECTION 011000 - PROJECT SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes in general terms the scope of work to be provided per these project documents.

1.2 RELATED DOCUMENTS

- A. Bidding Documents include the Project Manual, Drawings, and Addenda issued during project bidding.
- B. Related Sections
 - 1. Section 014000 – Quality Requirements
 - 2. Section 003113 – Preliminary Schedules
 - 3. Section 011400 – Work Restrictions

1.3 DEFINITIONS (NOT USED)

1.4 PROJECT LOCATION

- A. Project location:
 - Sunset Drive
 - (near 4736 Route 9)
 - Plattsburgh, NY

1.5 WORK COVERED BY BIDDING DOCUMENTS

- A. The Project Manual and Construction Drawings describe work required for the construction of the project. In brief, and without force or effect on the Bid Documents, required work is summarized as follows:
 - 1. Temporary erosion control
 - 2. Site feature demolition and removal
 - 3. Vegetation Removal
 - 4. Clearing and grubbing
 - 5. Grading
 - 6. Mill and overlay asphalt pavement
 - 7. Asphalt paved roadway
 - 8. Asphalt paved parking lot

9. Asphalt paved multi-use trail
10. Compacted aggregate trail
11. Cast-in-place concrete curbing
12. Cast-in-place concrete pavement
13. Timber barriers
14. Storm water management system
15. Landscape plantings
16. Turf grass repair
17. Miscellaneous supporting work

1.6 TYPE OF AGREEMENT

- A. The project is bid as a Single Prime Contract with a stipulated lump sum bid amount.
- B. The project is being funded in-part by a grant provided by the NY State Department of State (DOS Contract No. CXXXXXX). This NYS sourced grant contract requires Minority/Women owned Business Enterprise involvement with the project. A good faith effort by the Contractor must be made to involve Minority and Women Business organizations.

1.7 OWNER'S REPRESENTATIVE

- A. The Owner's Representative for the project is Elan Planning, Landscape Architecture and Engineering (Elan). The Office of the Town Planning will conduct the project bidding with support from the project landscape architect: Elan Planning, Landscape Architecture and Engineering. Elan will provide construction administration services consisting of periodic site observations, review of shop drawings, respond to Contractor RFI's, completed work reviews, review Applications for Payment, and conduct project closeout procedures. A full-time on-site Resident Project Engineer or Clerk is not provided for this project.

1.8 OWNER FURNISHED PRODUCTS

- A. The owner has completed project environmental and historical permitting, and Town Lead Agency SEQRA requirements for the project allowing for project construction to occur.

1.9 OWNER'S OCCUPANCY REQUIREMENTS

- A. Maintain access to existing walkways, and other adjacent occupied areas or facilities in use. Do not close or obstruct walkways, corridors, or other occupied or used facilities without permission from Owner's Representative. Provide temporary barricades for the duration of the project.

1.10 USE OF PREMISES

- A. Contractor shall have full use of the project site for construction operations during the construction period. Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which Work is indicated.
- B. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.11 WORK RESTRICTIONS

- A. See Section 011400 - Work Restrictions

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011000

SECTION 011400 -WORK RESTRICTIONS

1.1 SUMMARY

- A. This Section includes administrative provisions for Project site work restrictions including, but not limited to, the following:
1. Area available for use.
 2. Travel not obstructed.
 3. Product delivery, storage, and handling.
 4. Daily construction start time

1.2 RELATED DOCUMENTS

1. Section 011000 – Project Summary

1.3 DEFINITIONS (NOT USED)

1.4 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Confine operations to areas within Contract limits indicated. Do not disturb portions of site beyond areas in which the Work is indicated. No signs or advertising are allowed except as approved by Owner's Representative or as required by laws, regulations or the Contractor's protection as persons and property.
1. Limits: Contractors shall comply with Owner occupancy, and phasing requirements, if any.
 - a. Contractors shall limit operations including storage of materials and prefabrication to areas within the Contract Limit Lines unless otherwise permitted by the Owner's Representative at the Owner's option.
 - 1) All construction material shall be stored in a safe and secure manner.
 - b. Active construction work shall not begin before 7:00 a.m. and shall conclude by 6:00 p.m.
 2. Lock motorized vehicles such as passenger cars and trucks and other types of mechanized and motorized construction equipment when parked and unattended, to prevent unauthorized use. Do not leave such vehicles unattended, with engine running or ignition key in-place.
 3. Keep all areas free from accumulation of waste material, rubbish or construction debris on daily basis.
 4. Open fires are not permitted.

5. Contractors shall assume full responsibility for the protection and safekeeping of products under Contract, stored on the site and shall insure security for the Owner's property.
- B. Contractor shall confine operations to those portions of the Owner's property, and to the right-of-ways or easements, temporary or permanent, acquired or designated for the work of the Contract as shown on the Drawings. Private property adjacent the Site shall not be entered upon or used by the Contractor for any purpose without the written consent of the private property Owner thereof. A copy of such consent shall be filed with the Owner.
- C. Site shall be in a clean and orderly fashion at the close of each workday. Contractor is required to maintain required health and safety capabilities at all times during construction operations.
- D. The project site has limited area for construction staging. The Owner shall assist the Contractor within the Owner's ability to accommodate staging area needs.
- E. Potable and non-potable water sources will not be provided by the Owner for the Contractor's use for work associated with the project and is the responsibility of the Contractor.
- F. Connections to electrical service as needed for this project will not be provided by the Owner and is the responsibility of the Contractor.

1.5 TRAVEL NOT OBSTRUCTED

- A. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, other contractors and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 1. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Contractor shall not needlessly hinder or inconvenience travel on any public or private way, nor wholly obstruct a traveled way, and shall provide plain, appropriately worded signs, adequate barricades and lighting announcing such obstruction at the nearest cross streets, and at each end of the obstructed portion, directing traffic to and along an approved detour.

1.6 PHASING

- A. The Contractor shall assume responsibility for Project Phasing requirements if any. Notify the Owner's Representative of the following:
 1. Shut-down of utilities.
 2. Large Sized Deliveries.
 3. Change-over of utilities (NOT USED)
 4. Disturbance directly adjacent to neighboring privately owned properties and project easement locations.

5. Testing and inspection.
- B. Notify the Owner's Representative of Construction Schedule modifications in writing at each progress meeting per Section 013100 Project Management and Coordination.

PART 2 - PRODUCTS

2.1 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 manufacturers written instructions.
1. Schedule deliveries to minimize long-term storage at Project sites limited areas and to prevent over-crowding of construction sites.
 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 instruction for handling, storing, unpacking, protecting, and installing.
 5. Contractor to inspect products on delivery to ensure correct products have been delivered and follow the Contract Documents and to ensure that products are undamaged and properly protected.
 6. Store products to allow for inspection and measurement of quantity or counting of units.
 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 instruction for temperature, humidity, ventilation, and weather-protection requirements for storage.
 9. Protect stored products from damage.

PART 3 — EXECUTION (NOT USED)

END OF SECTION 011400

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing contract modifications.
 - 1. Provisions of this Section apply to the Work of Prime Contract.

1.2 RELATED DOCUMENTS (NOT USED)

1.3 DEFINITIONS (NOT USED)

1.4 MINOR CHANGES IN THE WORK

- A. The Owner's Representative will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, Architect's Supplemental Instructions or Expedition form "Change in Condition."

1.5 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: The Owner's Representative 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 Owner's Representative 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 data to substantiate quantities.
 - b. Indicate applicable, 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.
- 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 the Owner's Representative.
 - 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 data to substantiate quantities.
 3. Indicate applicable 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.
 5. Comply with requirements in Section 016000 Product and Requirements if the proposed change requires substitution of one product or system for product or system specified.
- C. Proposal Request Form: Use AIA Document G709 for Proposal Requests or Expedition form "Change In Condition."

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request or Change in Condition, Owner's Representative will issue a Change Order for signatures of Owner and Contractor on AIA Document G701, or Expedition form "Change Order."
1. All quotations shall be accompanied by a complete itemization of costs, including labor (type, quantity and unit cost per hour), materials (type, quantity and unit cost) and copies of written quotations from subcontractors and suppliers itemized in the same manner.
 - a. Overhead shall include the cost of insurance, bonds and similar contract requirements.
 - b. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
 2. The combined overhead and profit included in the total cost to the Owner shall be based on the following schedule:
 - a. Contractor: Work performed by the Contractor's own forces, markup shall not exceed a total of 15 percent broken down with 5 percent for the value of materials and labor (L / M) and 5 percent for the value of overhead and profit (O & P).
 - 1) Example: Contractor L / M x 15% O & P = Total Amount
 - b. Contractor's Subcontractor: Work performed by the Subcontractor's own forces, markup shall not exceed a total of 10 percent broken down with 5 percent for the value of materials and labor (L M) and 5 percent for the value of overhead and profit (O & P). For the Contractor for Work performed by that Contractor's Subcontractor,

mark-up shall not exceed 5 percent for the value of overhead and profit.

- 1) Example: Subcontractor UM x 10% O & P = Subcontractor Amount
- 2) Example: Subcontractor Amount x 5% O & P = Prime Contractor Amount

c. Sub-subcontractor: Work performed by Sub-subcontractor's own forces, markup shall not exceed 5 percent for the value of materials labor, overhead and profit. For the Subcontractor, for Work performed by Sub-subcontractor, markup shall not exceed 5 percent for the value of overhead and profit. For the Prime Contractor, for Work performed by Sub-subcontractor, markup shall not exceed 5 percent for the value of overhead and profit.

- 1) Example: Sub-subcontractor's L / M x 5% O & P = Total Sub-Subcontractor's amount.
- 2) Example: Total Sub-subcontractor's Amount x 5% O R P = Total Subcontractor's Amount.
- 3) Example: Total Subcontractor's Amount x 5% O P = Total Prime Contractor's Amount.

3. Performance and Payment Bond Adjustments: Do not itemize increased bond premiums for each individual Change Order per General Conditions of the Contract paragraph 11.4.

1.7 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Consultant may issue a Construction Change Directive on AIA Document G714 or Expedition form "Change In Condition". Construction Change Directive or Change In Condition instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive or Change In Condition contains a 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 Construction Change Directive or Change in Condition.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

1.8 UNIT PRICES (NOT USED)

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 – GENERAL

1.1 SUMMARY

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

1.2 RELATED DOCUMENTS

1. Section 006273 – Schedule of Values
2. Section 006276 – Application and Certification for Payment – AIA Document G702
3. Section 006276.01 – Continuation Sheet – AIA G703

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 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 the Owner's Representative as indicated in Section 002113 Instructions to Bidders.
 - a. Submit Schedule of Values on AIA Documents G702/CMA and G703.
 3. Sub-schedules: Where the Work is separated into phases requiring separately phased payments, provide subschedules 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. Identify each line item with Section number and title as listed in the Table of Contents.
 1. Include and complete all header information on the Schedule of Values forms.

2. Provide an itemized breakdown of the Contract Sum in sufficient detail to facilitate 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.
 - a. Provide a separate line item in the Schedule of Values for each part of the work related to General Requirements as follows:
 1. Performance and Payment Bonds
 2. Field supervision and layout
 3. Temporary facilities
 4. Final site clearing
 5. Project close out
 - b. Itemize by separate line item the cost for work required for each activity or operation.
3. Round line value amounts to nearest whole dollar; total amount shall equal the Contract Sum.
 - a. Costs include overhead and profit.
4. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include progress payments for 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.
5. After initial review by Owner's Representative, revise and resubmit Schedule of Values.
6. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 LABOR RATE BREAKDOWN

- A. For each Labor Classification employed or for which employment is anticipated, submit of the components of the Total Hourly Rate form.
- B. The Contractor must submit an hourly labor rate for all employees associated with the project. The Contractor shall secure and submit an hourly labor rate breakdown for each of the Subcontractor's employees associated with the contractor on the project.

- C. Furnish separate pages for each time period for which labor rates are effective.
- D. Calculations on the labor rate breakdown shall reflect actual costs and shall be in accordance with Contract Requirements. Hourly Rates shown on the labor Rate Breakdown shall be the basis upon which charges for approved time and material work is charged.

1.6 APPLICATIONS FOR PAYMENT

- A. Submit Applications for Payment only after Schedule of Values and Labor Rates have been approved.
- B. Each Application for Payment shall be consistent with previous applications and payments as certified by Owner's Representative as to the actual value of the Work, which will be completed by the end of the month and paid for by Owner. Initial Application for payment, Application for Payment at time of Substantial Completion, and final Application for Payment involves additional requirements.
- C. Payment Application Times: The date for each progress payment is the 20th 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 5 days before the date for each progress payment.
 - 1. Draft copies shall be reviewed by the Owner's Representative prior to formal submission on the 20th of the month in which the submission is occurring.
 - 2. Reflect an accurate projection of Work that the Contractor anticipates will be completed through the end of each month.
- D. Payment Application Forms: Use AIA Document G702/CMA and AIA Document 703 Continuation Sheets as form for Applications for Payment. Provide itemized data on the Continuation Sheet. Format, schedules, line items, and values shall be those of the approved Schedule of Values.
- E. Application Preparation: Complete the application form in its entirety. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. The Owner's Representative will return incomplete applications without action.
 - 1. All amounts shall be rounded to whole dollars on Application Form.
 - 2. Include only amounts of fully executed Change Orders issued before last day of construction period covered by application.
- F. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to the Owner's Representative by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. All substantiating data and attachments required by the Contract Documents shall accompany each Application for Payment upon submission in the form required by the Owner's Representative.

- 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. Contractor's Construction Schedule (preliminary if not final).
 2. Submittals Schedule (preliminary if not final).
 3. Copies of building permits (if required).
 4. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 5. Initial progress report.
 6. Certificates of insurance and insurance policies.
 7. Data needed to acquire Owner's insurance.
- 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 executed 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 in effect for 12 months from date of final application for payment.
 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 0706A, Contractor's Affidavit of Release of Liens.
 - a. Final Release from Subcontractor or supplier from each entity written on form following this section.
 6. AIA Document G707, Consent of Surety to Final Payment.

7. Evidence that claims have been settled.
 - a. The balance of Certified Payroll Records
 - b. Executed Certification of amount Due for Wages and Supplements on form following this Section
 8. Final liquidated damages settlement statement.
 9. Completion of all work includes completion of all items noted on all Punch Lists that have been forwarded to the Contractor. Punch lists must be attached to Application for Final Payment with the Owner's Representative signature verifying work is complete.
- K. Full and Final Payment will not be made until the following have been supplied, approved and accepted by the Owner and The Owner's Representative.
1. The required number of copies of all written guarantees, warranties, bonds, operating and maintenance manuals, and test results.
 2. Documentation that all verbal and written instructions and training sessions required by the Contract has been completed.
 3. The required number of copies of all Project Record Documents ("as-built" drawings) has been received.
 4. All materials and equipment required as stock is delivered.
 5. Any other requirement of the Contract Documents which remains outstanding.

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 SUMMARY

- A. This Section includes administrative provisions required of the prime contractor for coordinating project construction operations including, but not limited to, the following:
 - 1. General project coordination
 - 2. Administrative and supervisory personnel
 - 3. Project Meetings
- B. Prime Contractor and the Prime's Subcontractor(s) shall participate in coordination requirements. The Prime Contractor shall be responsible for the project coordination of their subcontractors.

1.2 RELATED DOCUMENTS

- 1. Section 013200 – Construction Progress Documentation for Construction Schedule.
- 2. Section 017700 – Closeout Procedures for coordinating project closeout.

1.3 DEFINITIONS (NOT USED)

1.4 COORDINATION

- A. Coordination: The Prime Contractor shall coordinate its construction operations with his sub-contractors to ensure efficient and orderly installation of the Work. Each prime contractor shall coordinate with the other multiple prime contractors its operations included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 2. Make adequate provisions to accommodate items scheduled for later installation.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures to avoid conflicts and to ensure orderly progress of the work. Such administrative activities include, but are not limited to, the following:
 - 1. Installation and removal of temporary facilities and controls
 - 2. Delivery and processing of submittals
 - 3. Progress meetings

4. Pre-installation conferences
 5. Coordination meetings
 6. Project closeout activities
- C. The contractor shall manage the process so that each trade/subcontractor provides all required information in a timely manner. Coordination shall be completed on a phase basis so as not to delay the overall project schedule.
- D. The Owner's Representative will be on-site for scheduled bi-weekly meetings and specific issue conferences, to review interim work as necessary, and to conduct punch-list and close-out tasks.

1.5 SUBMITTALS

- A. Staff Names: At the Preconstruction Conference 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 business addresses and telephone numbers, including business office, field office, cellular, and facsimile.

1.6 PROJECT MEETINGS

- A. General: The Owner's Representative shall schedule meetings for bi-weekly intervals and other specific conferences as deemed important. Attendance is mandatory to all meetings and conferences. The Owner's Representative will:
1. Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner's Representative of scheduled meeting dates and times.
 2. Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Record significant discussions and agreements achieved. Owner's Representative shall distribute the meeting minutes to everyone concerned, within 5 days of the meeting.
- B. Preconstruction Conference: Preconstruction conference shall be scheduled before starting construction, no later than 7 days after notification of Award of Contract.
1. Conference Attendees: Authorized representatives of Owner, Owner's Representative; Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall all attend the conference. 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. Introduction
 - b. Contractor to submit:

- i. Tentative procurement and construction schedule as part of the pre-construction conference.
 - c. Construction Manager to provide overview of projected construction milestones and schedules
 - d. Designation of assigned point-of-contact personnel for coordination of work between Contractors
 - e. Job rules
 - f. Change Order status
 - g. Shop, product data, and samples
 - h. Record Document status
 - i. Use of the premises
 - i. Storage area
 - ii. Owner's requirements
 - j. Equipment deliveries and priorities
 - k. Clean-up procedures
 - l. Next progress meetings scheduled date and time
- C. Pre-installation Conferences: Owner's Representative shall conduct pre-installation conferences at Project site before construction activities of significance.
- D. Progress Meetings: The Owner's Representative will conduct bi-weekly status meetings.
 - 1. Bi-Weekly meetings: Owner's Representative, each Contractor's Project Manager, Project Superintendent and 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. Contractors' Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revision is 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. Review minutes of previous bi-weekly or special conference meeting
 2. Review and note field observations, problems, actions and decisions
 3. Identify present problems and necessary resolutions
 4. Contractor's superintendent shall present updated two-week work and coordination plan (two week schedule)
 5. Plan and coordinate work progress during next two-week period and its effect on related work of others
 6. Review shop drawings and submittals status schedule
 7. Coordinate occupancy arrangements and access requirements with Owner as required.
3. Reporting: Owner's Representative shall distribute meeting notes to involved parties. Include a brief summary, in narrative form, of progress since the previous meeting and report.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 013100

SECTION 013150 - SAFETY AND HEALTH

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes administrative requirements for safety and health regulations including the following:
 - 1. Safety and Health Regulations
 - 2. Safety and First Aid
 - 3. Accidents and Accident Reports

1.2 RELATED DOCUMENTS (NOT USED)

1.3 DEFINITIONS (NOT USED)

1.4 SAFETY AND HEALTH REQUIERMENTS

- A. The Contractor shall comply with the U.S. Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-54), latest revisions and with the latest requirements of the "Right to Know" laws and the New York State Labor Law.
- B. In order to protect the general public and the lives and health of his employees under the Contract, the contractor shall comply with all pertinent provisions of the latest issues of the Federal Register, Bureau of Labor Standards, Safety and Health Regulations; New York State Industrial Code Rule 30 pertaining to Tunneling Operations; New York State Industrial Code Rule 23 pertaining to Trenching Operations; and the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work under this Contract. In case of a conflict between the above noted authorities, the most stringent shall prevail.
- C. Contractor shall always have on the project site, while work is in progress, at least one person skilled in safety and health procedures and familiar with State and Federal safety and health regulations whose responsibility shall be to observe methods and procedures. He shall have the duty and authority to stop and correct all unsafe and unhealthy conditions.
- D. Toxic, noxious or otherwise hazardous fumes, gases or dusts, etc. from welding, arc-welding, painting, grinding, sawing, sweeping or any other operations shall be kept to the absolute minimum and shall be vented directly to the outside by the Contractor.
- E. Contractor to submit to the Owner's Representative and prior to first payment application approval, 2 copies of Material Safety and Data Sheets (MSDS) for all material used on site.

1.5 SAFETY AND FIRST AID

- A. Contractor shall always exercise caution of his operations and shall be responsible for the safety and protection of all persons on or about the site arising out of or relating to his Work. All hazards shall be avoided or guarded in accordance with the provisions of the Manual of Accident Prevention in Construction of the AGCA, unless such provisions contravene local law. The safety provisions of all applicable laws, codes and ordinances shall be observed.
- B. Contractor shall provide and maintain at the Site, at each location where work is in progress, as part of his plant, an approved first aid kit. Ready access thereto shall be always provided when men are employed on the work.
- C. Contractor shall take due precautions against infectious diseases and shall arrange for the immediate isolation and removal from the Site of any employee who becomes ill or is injured while engaged on the work.

1.6 ACCIDENTS AND ACCIDENT REPORTS

- A. Notify proper authority of accidents involving persons on the project site in a timely manner.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

- A. The Prime Contractor is responsible for construction site safety. The Owner's Representative bears responsibility for the project construction site matter of safety.

END OF SECTION 013150

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 – GENERAL

1.1 SUMMARY

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

1.2 RELATED DOCUMENTS

1. Section 012900 – Payment Procedures for submitting the Schedule of Values.
2. Section 013100 – Project Management and Coordination for submitting and distributing meeting and conference minutes.
3. Section 013300 – Submittal Procedures for submitting schedules and reports.
4. Section 014000 – Quality Requirements for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources. They must start and finish on the planned early start and finish times.
1. Predecessor activity is an activity that must be completed before a given activity can be started.
- B. Critical Path: The longest continuous chain of activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- C. Event: The starting or ending point of an activity.
- D. Float: The measure of leeway in starting and completing an activity.
1. Float time belongs to Owner's Representative is not for the exclusive use or benefit of either the Owner's Representative or Contractor, but is a jointly

owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.

2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.
 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- E. Fragment: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- F. Major Area: A story of construction, a separate building, or a similar significant construction element.
- G. Milestone: A key or critical point in time for reference or measurement.
- H. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

1.4 SUBMITTALS

- A. Qualification Data: For persons specified in Section 014000 "Quality Requirements" to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, name and address of Owner's Representative, and other information specified.
- B. Submittals Schedule: Submit three (3) copies of schedule. Arrange the following information in a tabular format:
1. Scheduled date for first submittal.
 2. Specification Section number and title.
 3. Submittal category faction or informational
 4. Name of subcontractor.
 5. Description of the Work covered.
 6. Scheduled date for Owner's Representative's final release or approval.
- C. Contractor's Construction Schedule: Submit two (2) printed copies of initial schedule, one a reproducible print and one a blue- or black-line print, large enough to show entire schedule for entire construction period. Include period of schedule whether it is an Initial or Updated and date on label.
- D. Field Condition Reports: Submit three (3) copies at time of discovery of differing conditions to the Owner's Representative.
- E. Special Reports: Submit three (3) copies at time of unusual event to the Owner's Representative.

1.5 QUALITY ASSURANCE

- A. Scheduling Conference: Conduct conference at Project site to comply with requirements in Section 013100 Project Management and Coordination. At Owner's Representative's discretion, this conference may be held in conjunction with Preconstruction Conference Review methods and procedures related to the Preliminary Construction Schedule and Contractors Construction Schedule, including, but not limited to, the following:
1. Review content and format for reporting and schedule updating.
 2. Discuss constraints, including phasing, work stages, area separations, and interim milestones.
 3. Review delivery dates for Owner's furnished products.
 4. Review schedule for work.
 5. Review time required for review of submittals and resubmittal.
 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. 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,
1. Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 2. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each construction activity in the network 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. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AIA's Construction Planning & Scheduling.
- B. Time Frame: Extend schedule from date established for the Notice of Award to date of Final Completion. The Contractor shall submit sequential Construction Schedules each covering an eight week period for the duration of their work.
 - 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.
- C. Activities: Treat each separate project area as a separate numbered activity of the Work. Comply with the following:
 - 1. Activity Duration: Define activities in real time to complete in accordance with meeting the project completion date.
 - 2. Procurement Activities: Include procurement process activities for long lead items and major items requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - 3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 - 4. Startup and Testing Time: Include not less than five (5) days for startup and testing.
 - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Owner's Representative's and

administrative procedures necessary for certification of Substantial Completion.

6. Punch list: Indicate time for the preparation and completion of punch list work items.
- D. Constraints: As part of the schedule include constraints and work restrictions indicated in the Contract Documents and show how the sequence of the Work may be affected.
1. Phasing: Arrange list of activities on schedule by phase.
 2. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing owner operations
 - b. Uninterruptible services
 - c. Seasonal factors
 - d. Environmental factors
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- F. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragments to demonstrate the effect of the proposed change on the overall project schedule.

2.3 PRELIMINARY CONSTRUCTION SCHEDULE

- A. The Project Schedule for construction operations is included in the contract documents. The schedule coordinates the general activities of the contractors and the work by Owner's Representative if any. The Project Schedule dictates the start and finish dates of major work items to be performed. Scheduling of detailed activities within a major item, requiring coordination of efforts shall be the responsibility of the contractor. Contractor shall adhere to the schedule at all times and shall be accountable for all costs and disruptions which result from deviation from the schedule except as follows:
1. If a Contractor cannot adhere to the Project Schedule, he shall submit to the Owner's Representative a Request for Schedule Modification not less than twenty-one (21) calendar days in advance of the deviation. The Contractor shall present a written and graphic modification from the planned schedule which identifies the reason for the deviation and coordinates all affected construction operations of other prime contractors to accommodate the schedule change.
 2. The Contractor requesting the modification shall obtain signoff of acceptance from all affected prime contractors prior to submittal of the Request for Schedule Modification.

- B. Bi-Weekly Scheduling Updating: At the first bi-weekly project meeting of the month the Owner's Representative will review the projected Phase schedule detail with the contractors and establish a coordinated schedule which is acceptable to all parties. The Owner's Representative shall revise and issue the updated schedule prior to the next project meeting. Any claims against any contractor for costs resulting from schedule modification shall be submitted to the Owner's Representative within ten (10) working days of the meeting.

2.4 CONTRACTORS CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart type, Contractor's Construction Schedule within days of date established for the Notice of Award. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require 3 months or longer to be completed indicate an estimated completion percentage in 10 percent increments within time bar.

2.5 REPORTS

- A. Daily Construction Reports: Prepare and return a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. High and low temperatures and general weather conditions.
 - 3. Accidents.
 - 4. Meetings and significant decisions.
 - 5. Unusual events (refer to special reports).
 - 6. Stoppages, delays, shortages, and losses.
 - 7. Services connected and disconnected.
 - 8. Equipment or system tests and startups.
 - 9. Identify construction staff on-site and assigned task.
 - 10. Task completed by close-of-work for each day.

PART 3 – EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At bi-weekly 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, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Owner's Representative, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. 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 SECTION INCLUDES

- A. Submittal procedures
- B. Proposed products list
- C. Shop drawings
- D. Product data
- E. Samples
- F. Certificates
- G. Manufacturers' instructions
- H. Manufacturers' field reports
- I. Erection drawings
- J. Construction photographs

1.2 RELATED DOCUMENTS

- A. All Division 2 specification sections for items identified as submittals.

1.3 DEFINITIONS (NOT USED)

1.4 SUBMITTAL PROCEDURES

- A. Transmit each submittal with submittal form, depicted at the end of this Section.
- B. Sequentially number the transmittal form submissions. Mark revised submittals with original number and sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and deliver to Owner's Representative at business address. Coordinate submission of related items.
- F. For each submittal allow seven (7) days for review excluding delivery time from and back to the Contractor.
- G. Identify variations from Contract Documents and Product or system limitations, which may be detrimental to successful performance of the completed Work.
- H. Allow space on submittals for Contractor and Owner's Representative review stamps.
- I. When revised for resubmission, identify changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

- K. Submittals not requested will not be recognized or processed.

1.5 PROPOSED PRODUCTS LIST

- A. Within 10 calendar days after date the Notice to Proceed is issued, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.6 SHOP DRAWINGS

- A. Product Data: Submit to Owner's Representative for review, for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service or functional equipment and appliances.
- C. Submit three (3) copies, which will be retained by the Owner's Representative, plus one (1) copy, which will be returned to the Contractor.
- D. After review, distribute in accordance with Submittal Procedure article above and provide copies for record documents

1.7 PRODUCT DATA

- A. Product Data: Submit to the Owner's Representative for review with the purpose of checking for conformance with information given and design concept expressed in Contract Documents. Provide copies and distribute in accordance with Section 013300 Submittal Procedures and for record documents.
- B. Submit the number of copies which the Contractor requires, plus two (2) copies which will be retained by the Owner's Representative.
- C. Submit two (2) copies of the Material Safety Data Sheet for all products used on the project, which will be retained by the Owner's Representative.
- D. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- E. After review, distribute in accordance with Submittal Procedures article above and provide copies for Record Documents

1.8 SAMPLES

- A. Product Data: Submit to Owner's Representative for limited review to address conformance with the intent expressed in Contract Documents. Provide copies and distribute in accordance with Section 013300 Submittal Procedures and for record documents.

- B. Samples for Selection as Specified in Product Sections:
 - 1. Submit to Owner's Representative for aesthetic, color, or finish selection.
 - 2. Submit samples of finishes from full range of manufacturers' colors, textures, and patterns for Owner's Representative selection.
 - 3. After review, produce duplicates and distribute in accordance with Submittal Procedures article for record documents purposes.
- C. Submit samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- D. Include identification on each sample, with full project information.
- E. Submit the number or samples specified in individual specification sections, two (2) of which will be retained by Owner's Representative.
- F. Reviewed samples which may be used in the work are indicated in individual specification sections.
- G. Samples will not be used for testing purposes unless specifically stated in specification section.

1.9 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.10 MANUFACTURERS' FIELD REPORTS (NOT USED)

1.11 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification sections, submit manufacturers' certificate to Owner's Representative for review, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to Owner's Representative.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Quality control and control of installation
- B. Tolerances
- C. References
- D. Field Samples
- E. Mock-up requirements
- F. Testing and inspection services
- G. Manufacturers' field services
- H. Examination
- I. Preparation

1.2 RELATED DOCUMENTS

- A. All Division 2 specification sections for items with reference testing.

1.3 DEFINITIONS (NOT USED)

1.4 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of the specified quality and in conformance with accepted industry standards.
- B. Comply with manufacturers' installation and operation instructions.
- C. When manufacturers' instructions conflict with Contract Documents, request clarification from the Owner's Representative before proceeding.
- D. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality. The proposed project work requires specific skill sets and directly related project experience to achieve the intended design results.
- F. Verify field measurements as indicated on Shop Drawings or as instructed by manufacturer.

- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.5 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from the Owner's Representative before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.6 REFERENCES

- A. All specification materials for construction that reference NYSDOT shall conform to the most current version of the New York State Department of Transportation Office of Engineering Standard Specifications.
- B. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
- C. Conform to reference standard by date of issue current on date of Contract Documents, except where specific date is established by code.
- D. Obtain copies of standards where required by product specification sections.
- E. When specified reference standards conflict with Contract Documents, request clarification from the Owner's Representative before proceeding.
- F. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of the Owner's Representative shall be altered from Contract Documents by mention or inference otherwise in reference documents.

1.7 FIELD SAMPLES

- A. Provide field samples at the site as required by individual specification sections for review.
- B. Owner Representative accepted samples represent a quality level for the work.
- C. Where a field sample is specified in individual sections to be removed, clear area after field sample has been accepted by the Owner's Representative.
- D. Tests will be performed under provisions identified in this section and identified in respective product specification sections.

1.8 MOCK-UP REQUIREMENTS

- A. Assemble and erect specified mock-ups items with specified attachment and anchorage devices, flashings, seals, and finishes.
- B. Owner's Representative accepted mock-ups shall be comparison standard for remaining work.
- C. Where mock-up has been accepted by the Owner's Representative and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so by the Owner's Representative.

1.9 TESTING AND INSPECTION SERVICES

- A. Contractor will incur the cost as part of the stipulated sum bid amount and test and inspect materials and installed work by an independent firm certified to conduct such work.
- B. The independent firm will perform inspections, tests, and other services specified in individual specification sections and as required by the Owner's Representative.
- C. Reports will be submitted by the independent firm to the Owner's Representative, in triplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- D. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify the Owner's Representative and independent firm 48 hours prior to expected time for operations requiring services.
- E. Testing and employment of testing agency or laboratory shall not relieve Contractor of obligation to perform work in accordance with requirements of Contract Documents.
- F. Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by the same independent. Payment for re-testing will be charged to the Contractor by deducting inspection or testing charges from the contract sum/price. Failed testing is to be followed by passing test.
- G. Testing Company Responsibilities:
 - 1. Test samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at site. Cooperate with the Owner's Representative and Contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.

5. Promptly notify the Owner's Representative and Contractor of observed irregularities or non-conformance of work or products.
 6. Perform additional tests required by the Owner's Representative.
 7. Attend preconstruction meetings and progress meetings as requested by contractor and or Owner's Representative.
- H. Agency Reports: After each test, promptly submit three (3) copies of report to the Contractor. Contractor is to provide two (2) copies of test reports to the Owner's Representative. When requested by the Owner's Representative, provide interpretation of test results. Include the following:
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 Project
 7. Type of inspection or test
 8. Date of test
 9. Results of tests
 10. Conformance with Contract Documents
- I. Limits on Testing Authority:
1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency or laboratory may not approve or accept any portion of the work.
 3. Agency or laboratory may not assume duties of Contractor.
 4. Agency or laboratory has not authority to stop the work.

1.10 MANUFACTURERS' FIELD SERVICES

- A. Provide as part of the base bid services a Manufacturer's Representative when specified in individual specification sections, require material or conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.

- B. The manufacturer's representative shall be certified to be qualified in design, installation, and servicing of the product. Personnel involved only in sales do not qualify. The manufacturer's representative shall be available to assist and answer questions.
- C. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment as applicable, and to initiate instructions when necessary.
- D. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- E. Refer to Section 013300 Submittal Procedures, Manufacturers' Field Reports article.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify existing site conditions and materials are acceptable condition for testing.

END OF SECTION 014000

SECTION 014200 - REFERENCES & DEFINITIONS

PART 1 – GENERAL

1.1 SUMMARY (NOT USED)

1.2 RELATED DOCUMENTS

- A. All specification for materials of construction shall conform to the most current version of the New York State Department of Transportation Office of Engineering Standard Specifications.

1.3 DEFINITIONS

- A. Accepted: The term 'as accepted', or 'acceptable substitute', and 'for review' mean the Owner's Representative is the sole judge of the quality and suitability of the proposed substitutions. Where used in conjunction with the Owner's Representative's response to submittals, requests, applications, inquiries, reports and claims by the Contractor, the meaning will be held to the limitations of the Owner's Representative's responsibilities and duties as stated in the General and Supplementary Conditions. In no case will 'accepted' by the Owner's Representative be interpreted as an assurance to the Contractor that the requirements of the Contract Documents have been fulfilled.
- B. General: Basic Contract definitions are included in the Conditions of the Contract.
- C. 'Approved': The term "approved," when used in conjunction with Owner's Representative's action on Contractor's submittals, applications, and requests, is limited to Owner's Representative's duties and responsibilities as stated in the conditions of the contract.
- D. "Directed": Terms such as "directed," 'accepted,' 'directed,' 'permitted,' 'requested,' 'required,' and 'selected' mean, unless otherwise explained, 'accepted by the Owner's Representative,' 'directed by the Owner's Representative,' 'permitted by the Owner's Representative,' 'requested by the Owner's Representative,' 'required by the Owner's Representative,' and 'selected by the Owner's Representative.' However, no such implied meaning will be interpreted to extend the Owner's Representative's responsibility into the Contractor's area of construction supervision.
- E. "Owner's Representative": The term "Owner's Representative" shall mean any member or agent of the project contracted with the Owner and responsible for the design and engineering of the project including architects, landscape architects, engineers, and project coordinators not under full or part-time employment of the municipality, but who has been contracted with this said municipality.
- F. "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.
- G. "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 form of incorporation into the project, and maintained ready for use. Supply and deliver products requiring additional or supplemental fitting, assembly, fabrication, or incorporation into other elements of the project directly to the fabricator, installer or manufacturer as required.

- H. "Furnish": The term "furnish" means to supply and deliver to project site, or other designated location ready for unloading, unpacking, storing assembly, installation, application, erection, or other form of incorporation into the project, and maintained ready for use. Supply and deliver products requiring additional or supplemental fitting, assembly, fabrication or incorporation into other elements of the project directly to the fabricator, installer or manufacturer as required.
- I. "Install": The term "install" describes operations at project site including unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring; applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations required to properly incorporate work into project.
- J. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- K. "Installer": An installer is Contractor or another entity engaged by Contractor, as an employee, subcontractor, or contractor of lower tier, to perform a particular construction operation, including installation, erection, application, and similar operations.
- L. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this project; being familiar with the 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.
- M. "Project site" is the space available for performing construction activities, either exclusively or in conjunction with others performing other work as part of project. The extent of project site is shown on the drawings and may or may not be identical with the description of the land on which project is to be built.
- N. The term 'replace' means remove designated, damaged, rejected, defective, unacceptable, or nonconforming work from the Project and provide new work meeting the requirements of the Contract Documents in place thereof.
- O. "Include": The words 'include,' in any form other than inclusive,' is non-limiting and is not intended to mean all-inclusive."
- P. The terms 'Specifications' and 'Project Manual' are interchangeable.
- Q. "Concealed" where used in connection with insulation, painting of piping, piping, conduit, ducts, and accessories shall mean that they are hidden from sight as in

trenches, chases, shafts, furred spaces, walls, slabs, or hung ceilings; also where they are not hidden from sight in the following locations: in partly excavated spaces or crawl spaces, or in service tunnels and used solely for repairs or maintenance.

- R. "Exposed" where used in connection with insulation, painting of piping, piping, conduit, ducts, and accessories shall mean that they are not "concealed" as defined herein above.
- S. "Piping" includes in addition to pipe, also fittings, valves, hangers, and other accessories that comprise system.

1.4 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 the date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: Where 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 Owner's Representative 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 the requirements. Refer uncertainties to Owner's Representative 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 the publication source and make them available on request.
- E. Abbreviations and Names: Abbreviations and acronyms are frequently used in the Specifications and other Contract Documents to represent the name of a trade association, standards-developing organization, and authorities having jurisdiction, or other entity in the context of referencing a standard or publication. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of these entities. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.," which are available in most libraries.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 014200

SECTION 015000 - CONSTRUCTION FACILITIES AND TEMPORARY ITEMS

PART 1 – GENERAL

1.1. RELATED DOCUMENTS

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

1.2. SUMMARY

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Water
 - 2. Electric
- C. Support facilities include, but are not limited to, the following:
 - 1. Temporary Enclosures
 - 2. Temporary Project Identification Signs
 - 3. Construction Aids and Miscellaneous Services
 - 4. Staging Area
 - 5. Portable Toilet
- D. General Requirements
 - 1. All construction materials shall be stored in a safe and secure manner.
 - 2. Fences around construction supplies or debris shall be maintained.
 - 3. Gates shall always be locked unless a worker is in attendance to prevent unauthorized entry.
- E. Security and protection facilities include, but are not limited to, the following:
 - 1. Barricades and Warning Signs
 - 2. Environmental Protection

1.3. DIVISION OF RESPONSIBILITIES

- A. General: These specifications assign responsibilities for certain temporary facilities used and other entities at the site. The Contractor is responsible for providing temporary facilities and controls as described in this specification and/or shown on the contract drawings and of which are not specifically assigned otherwise by the contract documents.
 - B. The Contractor is responsible for the following:
 - 1. Installation, operation, maintenance and removal of each temporary utilities facility considered as its own normal construction activity, as well as the costs and use charges except as listed below.
 - 2. Temporary electrical power for all site work activities and staging areas.
 - 3. Dumpsters and trash removal.
 - 4. Secure lock-up of its own tools, materials, and equipment.
 - 5. Construction aids, miscellaneous services and facilities necessary exclusively for its own construction activities.
- 1.4. USE CHARGE (NOT USED)
- 1.5. SUBMITTALS (NOT USED)
- 1.6. QUALITY ASSURANCE
- A. Regulation: The Contractor shall comply with industry standards and with applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Health and Safety Regulations
 - 2. Utility Company Regulations
 - 3. Police, Fire Department and Rescue Squad Rules
 - 4. Environmental Protection Regulations
 - B. Standards: The Contractor shall comply with NFPA 241 “Standard for Safeguarding Construction, Alterations, and Demolition Operations”, ANSI-A10 series standards for “Safety Requirements for Construction and Demolition”, and NECA Electrical Design Library “Temporary Electrical Facilities”.
 - 1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with the normal application of trade regulations and union jurisdictions.

2. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

1.7. PROJECT CONDITIONS

- A. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on site.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Connections to electrical service as needed for this project will not be provided by the Owner and is the responsibility of the Contractor.
- B. Water: Contractor shall provide potable and non-potable water approved by local health authorities.

2.2 EQUIPMENT

- A. Water Hoses: Provide ¾ inch (19 mm) heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet (30 m) long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles a hose discharge.
- B. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- C. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work.

3.2 SUPPORT FACILITIES INSTALLATION

- A. Temporary Access Roads and Staging Area
 1. Access Road

2. Staging Area – The project site has limited area for construction staging. The Owner to the extent feasible shall assist the Contractor within the Owner’s ability to accommodate staging area needs.
 3. Temporary Fencing in work areas. The Contractor shall provide all temporary fencing as may become necessary during the course of the project and at the responsibility of the Contractor.
 4. Temporary parking by construction personnel shall be allowed only in areas so designated. Owner does not have space for construction parking in existing parking lots or roadways and will subsequently have vehicles in violation of parking prohibitions towed from site and back-charged with all fees to the Contractor.
 5. Access through Owner’s Entrances is limited
 6. Utilize only entrances/temporary roads as designated site access locations
 7. Construction employee and subcontractor parking will not be allowed adjacent to the project site.
- B. Temporary Enclosures: The Contractor shall provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations, and similar activities as follows unless otherwise noted.
- C. Temporary Signs: Prepare signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.
1. Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
- D. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 3 days during normal weather or 1 day when the temperature is expected to rise above 80°F (27°C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.
1. Dumpsters are to be provided by Each Prime Contractor for their use.
 - a. The maintenance of a clean work site shall be the responsibility of each Contractor.
 - b. The Contractor shall remove own debris daily from work area to waste disposal containers (dumpsters), time lapse not acceptable.

- c. The condition of cleanliness in which an area is found at the start of work is the condition each Contractor shall leave it.
 - d. Final cleaning shall be the responsibility of the Contractor.
- E. Protection of Work: The Contractor is reminded to temporarily protect work in place until accepted by the Owner per Article 16 of the General Conditions of the Contract.
- F. Site Security: The Contractor will be responsible for the site security on daily basis to the extent that all perimeter gates for the site and staging areas must also be secured. If any contractor is working beyond the required shift schedule the Contractor will coordinate their schedule with the Owner and take responsibility for site security. The Contractor will remain responsible for any damage or loss of their own material, tools and equipment.
- G. 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 the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- H. Security Enclosure and Lockup: The Contractor shall install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
 - 1. Storage: Where materials and equipment must be stored within the areas of construction, and are of value or attractive for theft, the Contractor shall provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- I. Site Enclosure Fence: At each terminus (2) of the walk and at the dead end street the Contractor shall provide temporary fencing and gates. The Contractor is responsible for maintaining the temporary fence, and minor modifications for the duration of the project.
- J. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effect might result. Avoid using tools and equipment that product harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.3 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Termination and Removal: Unless the Owner requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use or a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are the property of each Prime Contractor. The Owner reserves the right to take possession of project identification signs.
 2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances, as required by the governing authority.
 3. At Substantial Completion, clean and renovate permanent facilities used during the construction period including, but not limited to, the following:
 - a. Replace significantly worn parts and parts subject to unusual operating conditions.

END OF SECTION 015000

SECTION 016000 - PRODUCT AND REQUIREMENTS

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes administrative and procedural requirements for products associated with project Work including the following:
 - 1. Products
 - 2. Product delivery requirements
 - 3. Product storage and handling requirements
 - 4. Product options
 - 5. Product substitution procedures

1.2 RELATED DOCUMENTS (NOT USED)

1.3 DEFINITIONS (NOT USED)

1.4 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work and does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- B. Comply with Specifications and referenced standards as minimum requirements.
- C. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.
- D. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- E. Furnish interchangeable components from same manufacturer for components being replaced.

1.5 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging, dry.
- C. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- D. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.6 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather-tight, climate controlled enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports, above ground.
- E. Provide off-site storage and protection when site does not permit on-site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

1.7 PRODUCT OPTIONS

- A. Products specified by reference standards or by description only: Other product meeting those standards or description.
- B. Products specified by naming one or more manufacturers: Submit a request for equivalent for any manufacturer not named in accordance with Section 002113 Instruction to Bidders.

1.8 PRODUCT SUBSTITUTION PROCEDURES

- A. Section 002113 Instruction to Bidders specifies time restrictions for submitting requests for equivalents during bidding period.
- B. Substitution: A product or system proposed for substitution, after the award of contract, whose components or characteristics differ from the specified criteria for that product or system. If accepted, a substitution may result in a change to the contract amount. Substitutions will only be accepted in the event that products or systems are discontinued.
- C. The materials, products and equipment described in the Contract Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.
- D. Substitutions will only be considered when a product becomes unavailable through no fault of the Contractor.

- E. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the work, including changes in the work of other contracts, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Owner's Representative decision of approval or disapproval shall be final.
- F. A request constitutes a representation that the Contractor:
1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 2. Will provide the same warranty for the Substitution as for the specified product.
 3. Will coordinate installation and make changes to other work which may be required for the Work to be complete with no additional cost to Owner.
 4. Waives claims for additional costs or time extensions which may subsequently become apparent.
 5. Will reimburse Owner for review or redesign services associated with re-approval by Owner's Representative.
- G. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- H. Substitution Submittal Procedure:
1. Submit three (3) copies of request for substitution for consideration. Limit each request to one proposed substitution.
 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 3. The Owner's Representative will notify Contractor in writing of decision to accept or reject request.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 016000

SECTION 017700 - CLOSEOUT PROCEDURES

PART I – GENERAL

1.1 SUMMARY

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

1.2 RELATED DOCUMENTS

- 1. Section 012900 - Payment Procedures
- 2. Section 013200 - Construction Progress Documentation
- 3. General Conditions of the contract for Construction – AIA Document A201-2017
- 4. Supplemental Conditions Article 5, Bonds and Insurances

1.3 DEFINITIONS (NOT USED)

1.4 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit three (3) sets contract drawings that are to have the title: “As-Built Record Prints” applied to each sheet.
 - 2. Submit as-built record prints accompanied with a project submittal.
 - 3. Date
 - 4. Contractor's name and address
 - 5. Signature of Contractor, or his authorized representative applied to each drawing sheet in the package

1.5 SUBSTANTIAL COMPLETION

- A. Preliminary Procedure: Prior to requesting inspection for determining date of substantial completion, complete the following:
 - 1. Advise Owner of pending insurance changeover requirements. Submit special warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents to be turned over to Owner.

2. Submit project record documents, operation, and maintenance manuals.
 3. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 4. Complete start-up testing of systems.
 5. Terminate and remove temporary facilities from project site, along with mockups, construction tools, and other elements.
 6. Complete final cleaning requirements including touch-up painting.
 7. Touch-up, repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request to the Owner's Representative for Substantial Completion inspection. On receipt of request, the Owner's Representative will either proceed with inspection or notify the Contractor of unfulfilled requirements. Owner's Representative will prepare and issue a Certificate of Substantial Completion, AIA G704, complete with signatures of the Owner and Contractor accompanied by Contractor's list of items to be completed and/or corrected, as verified, and amended by Owner's Representative.
1. Re-inspection: When Owner's Representative is required to perform more than two punch list inspections because of failure of work to comply with project intent, the Owner will compensate Owner's Representative for additional services and deduct amount paid from final payment to Contractor.
 2. Results of completed inspections will form the basis of requirements for final completion.
- C. Should the Owner's Representative consider that work is complete in accordance with the requirements of the contract documents, the Owner's Representative shall request the Contractor to provide project closeout submittals.
- D. Should Owner's Representative consider that work is not complete:
1. Owner's Representative shall notify the Contractor, in writing, stating reasons under the title "Close-Out Punch list".
 2. Contractor shall take immediate steps to remedy the stated deficiencies and send second written notice to the Owner's Representative upon completion of the current close-out punch list.
 3. Owner's Representative will re-inspect work per "Re-Inspection" paragraph, "B", this Section.

1.6 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for in-field construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to

Project Record Documents for Owner's Representative's reference during normal working hours.

1. Submit three copies of manual containing operation and maintenance data for all equipment installed on this project. (NOT USED)
 2. Spare Parts and Maintenance Materials: Conform to requirements of individual technical sections. (NOT USED)
 3. Deliver evidence of compliance with any requirements of governing authorities if required.
- B. Record Drawings: Maintain and submit three (3) sets of to-scale black-line white prints of as-built Contract Drawings.
1. Mark drawings to show the actual installation where installation varies from that shown originally on contract documents. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up record prints.
 - a. Give timely attention to information on concealed elements that cannot be readily identified and recorded later.
 - b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - c. Mark contract drawings or shop drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where shop drawings are marked, show cross-reference on contract drawings.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Label each document "Project Record" in two-inch printed letters
 - b. Dimensional changes to Drawings
 - c. Revisions to details shown on Drawings
 - d. Depths of foundations
 - e. Locations of underground utilities
 - f. Revisions to routing of piping and conduits
 - g. Revisions to electrical circuitry
 - h. Changes made by Change Order or Construction Change Directive
 - i. Details not on the original Contract Drawings

- j. Field records for variable and concealed conditions
3. 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.
 4. Mark important additional information that was either shown schematically or omitted from original drawings.
 5. Note construction change directive numbers, change order numbers, alternate numbers, and similar identification where applicable.
 6. Identify and date each record drawing, include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets, bind each set with durable paper cover sheets and include identification on cover sheets.
- D. Evidence of Payments and Release of Liens
1. Contractor's Affidavit of Payment of Debts and Claims: AIA G706
 2. Contractor's Affidavit of Release of Liens: ALA G706A, with:
 - a. Consent of Surety to Final Payment: AIA G707
 - b. Contractor's release of waiver of liens
 - c. Separate releases of waivers of liens for subcontractors, suppliers, and others with lien rights against property of Owner, together with list of these parties
- E. Final Adjustment of Accounts: Owner's Representative will prepare final change order, reflecting approved adjustments to contract sum not previously made by change orders.
1. Submit final statement of accounting to Owner's Representative
 2. Statement shall reflect all adjustments to
 - a. Original Contract Sum
 - b. Additional and deductions resulting from:
 1. Previous Change Orders
 2. Cash Allowances
 3. Other Adjustments
 4. Deductions for Uncorrected Work
 5. Deductions for Reinspection Payments

- c. Total Contract Sum as adjusted
 - d. Previous Payments
 - e. Sum remaining due
- F. Final Application for Payment: Owner's Representative shall notify Owner when all required closeout submittals are received and acceptable for final payment.
 - G. Final Certification for Payment: Owner's Representative will issue final certificate in accordance with provisions of General and Supplementary Conditions.
 - H. Miscellaneous Record Submittals: 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 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.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning.
 - 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 snow and ice.

- f. Clean exposed hard-surfaced finishes to a dirt free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove labels that are not permanent.
 - h. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - i. Leave Project clean and ready for occupancy.
- C. Maintain cleaning until project, or portion thereof, is occupied by Owner.
- D. 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 017836 - WARRANTIES

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.
 - 1. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
 - 2. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- B. Disclaimers and Limitations
 - 1. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.2 RELATED DOCUMENTS (NOT USED)

1.3 DEFINITIONS

- A. Project Warranty
- B. Standard Product Warranties are preprinted written warranties published by individual manufacturers for products and are specifically endorsed by the manufacturer to the Owner.
- C. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.4 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.
- B. Reinstatement of Warranty: When work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that work covered by a warranty has failed, replace, or rebuild the work to an acceptable condition complying with requirements of Contract Documents. Contractor is responsible for the cost of replacing or

rebuilding defective Work regardless of whether the Owner has benefited from use of the work through a portion of its anticipated useful service life.

- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- E. The Owner reserves the right to refuse to accept work for the project where a special warranty, certification, or similar commitment is required on such work or part of the work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.5 SUBMITTALS

- A. When required submit written warranties to the Owner's Representative prior to the date certified for Substantial Completion. If the Owner's Representative's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the work, submit written warranties upon request of the Owner's Representative.
 - 1. When a designated portion of the work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner's Representative within 15 days of completion of that designated portion of the work.
- B. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties.
- C. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or Contractor and subcontractor, supplier or manufacturer.
- D. Form of Submittal: At Final Completion compile two copies of each required warranty properly executed by the Prime Contractor or by the Prime Contractor, subcontractor, supplier, or manufacturer.
- E. Bind warranties in heavy-duty commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.
 - 1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a type description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.

2. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES", the project title or name, and the name of the Contractor.

F. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 — PRODUCTS (NOT USED)

PART 3 — EXECUTION (NOT USED)

END OF SECTION 017836

SECTION 023313 - UNDERGROUND UTILITY LOCATOR SERVICE

PART 1 - GENERAL

1.1 SUMMARY

- A. Retain an independent utility locator service company with a minimum of five (5) years experience to field locate, mark, and stakeout existing underground utilities and service connections.
 - 1. Include 16 hours of “locator service” to locate underground utilities, which shall include all underground facilities for water, controls, and sanitary located within the limits of work for the project.
 - 2. If required, determine the exact location of utilities by hand-excavated test pits or through vacuum methods. Support and protect all utilities to remain in place.
 - 3. Contractor shall field locate, mark, and stakeout underground utilities prior to excavation.
 - 4. Contractor will be responsible for the location of all utilities within areas of excavation, and all costs associated with the repair of utilities hit/damaged during construction.

1.2 RELATED WORK

- A. Section 312333 Trenching and Backfilling
- B. Section 312000 Earthwork.

1.3 ACTION SUBMITTALS

- A. Submit detailed experience and qualifications description of underground utility locator service. Experience and qualifications package should include a description of the types of utility locator equipment and experience that can be provided.

1.4 INFORMATIONAL SUBMITTALS

- A. Provide three (3) sets of paper and one (1) copy of electronic plans documenting all utilities located and identified. All documentation shall be referenced to existing data (horizontal and vertical) previously established.

1.5 COORDINATION AND SCHEDULING

- A. General Location: Within areas of excavations, all utilities shall be field located and their locations marked at least one (1) day prior to the performance of the required excavation.

- B. Exact Location: The performance of hand excavated test pits or vacuum excavations to determine the utilities exact location shall be performed just prior to performing the work to minimize the time that excavated areas will be exposed to erosive conditions.
- C. Coordinate work with the Owner's Representative to minimize utility disruptions and facility operations. The Owner's Representative shall be notified at least three (3) working days prior to performing the work, and should be provided a schedule for the work progression.

PART 2 - (NOT USED)

PART 3 - EXECUTION

3.1 WORK AREAS AND PERFORMANCE

- A. The Owner's Representative may limit or restrict scheduling of the utility locator service based upon project progress.

END OF SECTION 023313

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

1.2 RELATED WORK

- ##### A. Section 311000: Site Clearing.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 PRE-DEMOLITION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.

1.6 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control, and for noise control. Indicate proposed locations and construction of barriers.

- 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. Ensure Owner's and adjacent land Owners are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.

- C. Inventory: Submit a list of items to be removed, salvaged and reinstalled and deliver to Owner prior to demolition.

- D. Pre-demolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces that might be misconstrued as damage caused by demolition operations. Submit before Work begins.

- E. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

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

1.7 CLOSEOUT SUBMITTALS

- A. Inventory of items that have been removed and salvaged.
- B. Landfill Records if hazardous wastes are encountered, provide receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.8 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.9 FIELD CONDITIONS

- A. Notify Owner of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Owner will occupy portions of building immediately adjacent to selective demolition area. Arrange selective demolition schedule so as not to interfere with Owner's operations.
- C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Owner's Representative and Owner.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.10 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- 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/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.
 - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
 - 2. Requirement in subparagraph below is for treatment of historic facilities.
 - 3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.
- D. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
- E. Inventory and record the condition of items to be removed and salvaged.

3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Arrange to shut off utilities with utility companies and Owner.
 - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

3.4 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- C. Remove temporary barricades and protections where hazards no longer exist.

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. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 3. 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 portable fire-suppression devices during flame-cutting operations.
 4. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
 5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

6. Dispose of demolished items and materials promptly. Comply with requirements in Contract Documents.
- B. 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.
- C. Removed and Salvaged Items:
1. Clean salvaged items.
 2. Pack or crate items after cleaning. Identify contents of containers.
 3. Store items in a secure area until delivery to Owner.
 4. Transport items to Owner's storage area designated by Owner.
 5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 3. Protect items from damage during transport and storage.
 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Owner's Representative, items may be removed to a suitable, protected storage location during selective demolition, then cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.6 CLEANING

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Work includes:

1. Cast-in-place concrete including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.
2. Footings and Foundation Walls
3. Site Walls, Site Stairs and Site Ramps
4. Slabs-on-grade.
5. Miscellaneous Concrete.

1.2 DEFINITIONS

- ##### A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.3 RELATED WORK:

- A. Section 312000 Earthwork.
- B. Section 321300 Concrete Walks
- C. Section 321373 Concrete Paving Joint Sealants

1.4 ACTION SUBMITTALS

- ##### A. Product Data: For each type of product indicated.
- ##### B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristic of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
1. No amount of mixing water may be withheld for later addition at Project site.
 2. Aggregates.
- ##### C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar

diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

- D. Shop Drawings: Draw all project elements (e.g. foundations, walls, stairs, ramps, slabs, etc.) in plan and elevation. Indicate all joint locations and grade elevations. Coordinate and show all MEP/FP penetrations, openings, etc.; and equipment and appurtenance connections.
- E. Formwork Shop Drawings: Formwork and Tie layout at all exposed concrete walls with formwork materials
- F. Construction Joint Layout: Indicate proposed construction joints required to construct the structure(s).
 - 1. Location of construction joints is subject to approval of the Engineer.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For testing agency.
- B. Material Certificates: For each of the following, signed by manufacturers.
 - 1. Cementitious materials.
 - 2. Admixtures.
 - 3. Form-release agents.
 - 4. Steel reinforcement and accessories.
 - 5. Surface treatments.
 - 6. Bonding agents.
 - 7. Adhesives.
 - 8. Semi-rigid joint filler.
 - 9. Joint-filler strips.
 - 10. Curing compounds.
 - 11. Repair materials.
- C. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
 - 1. Aggregates. Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity.
- D. Field quality-control reports.

1.6 QUALITY ASSURANCE

- A. **Installer Qualifications:** A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.
- B. “Standard Specifications, Construction and Materials, New York State Department of Transportation, Office of Engineering”, current edition.
- C. **Manufacturer Qualifications:** A firm experienced in manufacturing ready-mixed concrete products that complies with ASTM C94/C 94M requirements for production facilities and equipment.
 - 1. Manufacturer certified according to NRMCA’s “Certification of Ready Mixed Concrete Production Facilities.”
- D. **Testing Agency Qualifications:** An independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E329 for testing indicated, as documented according to ASTM E 548.
 - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
 - 2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician -Grade II.
- E. **Source Limitations:** Obtain each type or class of cementitious material of the same brand from the same manufacturer’s plant, obtain aggregate from one source, and obtain admixtures from one source from a single manufacturer.
- F. **ACI Publications:** Comply with the following unless modified by requirements in the Contract Documents.
 - 1. ACI 301, “Specification for Structural Concrete,” Sections 1 through 5.
 - 2. ACI 117, “Specifications for Tolerances for Concrete Construction and Materials.”
- G. **Concrete Testing Service:** Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

1.8 FIELD CONDITIONS

- A. Cold Weather Placement: Cold-Weather Placement: Comply with ACI 306.1.
 - 1. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- B. Hot-Weather Placement: Comply with ACI 301.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
 - 2. Products: Subject to compliance with requirements, provide one of the products specified.
 - 3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
 - 4. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
 - 1. Plywood, metal, or other approved panel materials.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- C. Chamfer Strips: Wood, metal, PVC, or rubber strips, $\frac{3}{4}$ by $\frac{3}{4}$ inch, minimum.

- D. Form-Release Agent: Commercially formulated bio-based form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
 - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
- E. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
 - 1. Furnish units that will leave no corrodible metal closer than 1 inch to the plane of exposed concrete surface.
 - 2. Furnish ties that, when removed, will leave holes no larger than 1 inch in diameter in concrete surface.

2.3 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- B. Plain-Steel Wire: ASTM A 82, as drawn.

2.4 REINFORCEMENT ACCESSORIES

- A. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60, plain-steel bars, cut bars true to length with ends square and free of burrs.
- B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
 - 1. For concrete surfaces exposed to view where legs of wire bar support contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.

2.5 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
 - 1. Portland Cement: ASTM C 150, Type I/II, gray. Supplement with the following:
 - a. Fly Ash: ASTM C 618, Class F.
- B. Normal-Weight Aggregates: ASTM C 33, Class 1N course aggregate or better, graded. Provide aggregates from a single source.
 - 1. Maximum Course-Aggregate Size: 1-1/2 inches' nominal for footings and walls, 1-inch nominal for slabs.

2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Water: ASTM C94/C 94M non-potable and potable.

2.6 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
- C. Non-Set-Accelerating Corrosion-Inhibiting Admixture: Commercially formulated, non-set-accelerating, anodic inhibitor or mixed cathodic and anodic inhibitor; capable of forming a protective barrier and minimizing chloride reactions with steel reinforcement in concrete.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. BASF Construction Chemicals - Building Systems; Rheocrete 222+.
 - b. Grace Construction Products, W. R. Grace & Co.; DCI-S.
 - c. Sika Corporation; FerroGard 901.

2.7 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
1. Available Products:
 - a. Burke by Edoco; BurkeFilm.
 - b. Conspec Marketing & Manufacturing Co., In., a Dayton Superior Company; Aquafilm.
 - c. Dayton Superior Corporation; Sure Film.
 - d. Euclid Chemical Company (The); Eucobar.

- B. Water: Non-potable meeting ASTM C 94 or Potable.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet. Do not use spray applied membrane coatings.

2.8 RELATED MATERIALS

- A. Semirigid Joint Filler: Two-component, semirigid, 100 percent solids, epoxy resin with a Type A shore durometer hardness of 80 per ASTM D 2240.
- B. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- C. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements, and as follows:
 - 1. Types I and II, non-load bearing, for bonding hardened or freshly mixed concrete to hardened concrete.

2.9 REPAIR MATERIALS

- A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch (3.2 mm) and that can be feathered at edges to match adjacent floor elevations.
 - 1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
 - 2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
 - 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3.2 to 6 mm) or coarse sand as recommended by underlayment manufacturer.
 - 4. Compressive Strength: Not less than 4500 psi at 28 days when tested according to ASTM C 109/C 109M.
- B. Repair Overlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/4 inch (6.4 mm) and that can be filled in over a scarified surface to match adjacent floor elevations.
 - 1. Cement Binder: ASTM C 150, portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
 - 2. Primer: Product of topping manufacturer recommended for substrate, conditions, and application.
 - 3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3.2 to 6 mm) or coarse sand as recommended by topping manufacturer.

4. Compressive Strength: Not less than 5000 psi at 28 days when tested according to ASTM C 109/C 109M.
- C. Vertical Repair Mortar: Single component, rapid-setting repair mortar that can be applied in thicknesses up to 4”and can be applied to new and existing concrete and masonry surfaces.
1. Setting Time: Initial set not more than 10 minutes. Final set not more than 25 minutes.
 2. Bond Strength: Not less than 1,400 psi at 28 days when tested according to ASTM C 1042.
 3. Compressive Strength: Not less than 5,500 psi at 28 days when tested according to ASTM C 109/C 109M.

2.10 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type, aggregate size, and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than Portland cement in concrete as follows:
1. Fly Ash: 15 percent.
- C. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- D. Admixtures: Use admixtures according to manufacturer's written instructions.
1. Use high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 3. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.
 4. Use corrosion-inhibiting admixture in concrete paving mixtures and where indicated.

2.11 CONCRETE MIXTURES FOR PROJECT ELEMENTS

- A. Includes site project elements consisting of cast-in-place concrete footings, foundations, walls, slabs, stairs, ramps, and other miscellaneous concrete applications indicated on the drawings not specified elsewhere. Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength:
 - a. Fence footings and miscellaneous concrete: 3000 psi (18.4 MPa) at 28 days.
 - b. Foundations, walls, slabs, stairs, and ramps: 4500 psi (27.6 MPa) at 28 days.
2. Maximum Water-Cementitious Materials Ratio: 0.45.
3. Slump Limit: 8 inches (200 mm) for concrete with verified slump of 2 to 4 inches (50 to 100 mm) before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch (25 mm).
4. Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch (38-mm) nominal maximum aggregate size; 6.0 percent, plus or minus 1.5 percent at point of delivery for 1-inch (25 mm) nominal maximum aggregate size;

2.12 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice".

2.13 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116, and furnish batch ticket information.
 1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 – EXECUTION

3.1 FORMWORK

- A. All exposed concrete surfaces shall have Class A tolerances and SF-3.0 finish.
- B. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- C. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- D. Limit concrete surface irregularities, designated by ACI 347 as abrupt or gradual, as follows:
 1. Class A, 1/8 inch for smooth-formed finished surfaces.
 2. Class B, 1/4 inch for rough-formed finished surfaces.
- E. Construct forms tight enough to prevent loss of concrete mortar.

- F. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
 - 1. Install keyways, reglets, recesses, and the like, for easy removal.
 - 2. Do not use rust-stained steel form-facing material.
- G. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- H. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- I. Chamfer exterior corners and edges of permanently exposed concrete.
- J. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- K. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- L. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- M. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges." Do not "wet stick" any embedded items.

3.3 REMOVING AND REUSING FORMS

- A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations, and curing and protection operations are maintained.
- B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.

- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Engineer.

3.5 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
- B. Cover: Comply with ACI 318 chapter 7.7.1.
- C. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- D. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
- E. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- F. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.6 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.
 - 1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
- C. Form keyed joints as indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
- D. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
- E. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
 - 1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3.2-mm-) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

- F. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated.
 2. Terminate full-width joint-filler strips not less than 1/2 inch (13 mm) or more than 1 inch (25 mm) below finished concrete surface where joint sealants are indicated.
 3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.
- G. Doweled Joints: Install dowel bars and support assemblies at joints where indicated.

3.7 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Engineer.
- C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
1. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
 2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- D. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 2. Maintain reinforcement in position on chairs during concrete placement.
 3. Screed slab surfaces with a straightedge and strike off to correct elevations.
 4. Slope surfaces uniformly to drains where required.

5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.
- E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
1. When average high and low temperature is expected to fall below 40 deg F (4.4 deg C) for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- F. Hot-Weather Placement: Comply with ACI 301 and as follows:
1. Maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.8 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces not exposed to public view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Apply to concrete surfaces to receive a rubbed finish.
- C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete exposed to public view:
1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.

- D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.9 FINISHING SLABS

- A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
- C. Broom Finish: Apply a medium to coarse broom textured finish to exterior concrete platforms, steps, ramps, and elsewhere as indicated.
 - 1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Engineer before application.

3.10 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

3.11 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Formed Surfaces: Cure formed concrete surfaces. If forms remain during curing period, moisture cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
- D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
- E. Cure all concrete paving and exposed ramp foundations by moist curing methods. The use of curing compounds is not permitted for the above referenced concrete applications.

F. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 - a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
 - b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
 - c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.

3.12 JOINT FILLING

- A. Prepare, clean, and install joint filler according to manufacturer's written instructions.
 1. Defer joint filling until concrete has aged at least one month(s). Do not fill joints until construction traffic has permanently ceased.
- B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contract faces of joint clean and dry.
- C. Install backer rod and self-leveling urethane sealant. Tape sides of joint to prevent excess sealant from adhering to slab surface. See section 079200 for further requirements.
- D. Install semirigid joint filler with full depth saw-cut joints and at least 2 inches deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

3.13 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer's approval.

- B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part Portland cement to two and one-half parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
 - 1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch (13 mm) in any dimension to solid concrete. Limit cut depth to 3/4 inch (19 mm). Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
 - 2. Repair defects on surfaces exposed to view by blending white Portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 - 3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Engineer.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
 - 1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch (0.25 mm) wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
 - 2. After concrete has cured at least 14 days, correct high areas by grinding.
 - 3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
 - 4. Repair random cracks and single holes 1 inch (25 mm) or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
- E. Perform structural repairs of concrete, subject to Engineer's approval, using epoxy adhesive and patching mortar.
- F. Repair materials and installation not specified above may be used, subject to Engineer's approval.

3.14 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 and as noted below:
 - 1. Elevation: 1/2 inch.
 - 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
 - 3. Surface: Gap below 10-foot-long, straightedge not to exceed 1/2 inch.
 - 4. Alignment of Tie-Bar End Relative to Line Perpendicular to Paving Edge: 1/2 inch per 12 inches of tie bar.
 - 5. Lateral Alignment and Spacing of Dowels: 1 inch.
 - 6. Vertical Alignment of Dowels: 1/4 inch.
 - 7. Joint Spacing: 3 inches.
 - 8. Contraction Joint Depth: Plus 1/4 inch, no minus.
 - 9. Joint Width: Plus 1/8 inch, no minus.

3.15 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage a special inspector and qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Inspections.
 - 1. Steel reinforcement placement.
 - 2. Headed bolts and studs.
 - 3. Verification of use of required design mixture.
 - 4. Concrete placement, including conveying and depositing.
 - 5. Curing procedures and maintenance of curing temperature.
- C. Concrete Tests. Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements.
 - 1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
 - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C 143/C 143M; one test at point of placement for each truck delivery, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air content: ASTM C 231, pressure method, for normal-weight concrete.
4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample
5. Unit Weight: ASTM C 567, fresh unit weight of structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
6. Compression Test Specimens: ASTM C 31/C 31M.
 - a. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
7. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
 - a. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
8. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
9. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
10. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28- day tests.
11. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.
12. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Engineer.

13. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
14. Correct deficiencies in the Work that test reports and inspections indicate does not comply with the Contract Documents.
15. Measure floor and slab flatness and levelness within 24 hours of finishing.

END OF SECTION 033000

SECTION 061063 - ROUGH CARPENTRY & TIMBER CONSTRUCTION

PART 1 – GENERAL

1.1 SUMMARY

A. Work includes:

1. Timber Barriers.

1.2 RELATED WORK (NOT USED)

1.3 REFERENCES

A. Standards: Comply with the following references sources unless otherwise specified or indicated on the Drawings:

1. WWPA – Western Wood Products Association
2. ASLA – American softwood Lumber Standard PS 20; U.S. Department of Commerce.
3. UL – Underwriters’ Laboratories, Inc.
4. AWPB – American Wood Preserver’s Bureau, by the American Wood Preserve Institute (AWPI)
5. ASTM – American Society for Testing and Materials.

1.4 ACTION SUBMITTALS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections apply to this Section.
- B. Shop Drawings: Depict application specific to project. Duplicated copies of Contract Drawings will not be accepted as shop drawing submissions.
- C. Submit shop drawings indicating materials, component profiles, fastening methods, jointing details, finishes, accessories, to a minimum scale of 1-1/2 inch to one foot.
- D. Quality Control Submittals:
1. Submit model code evaluation reports for treated wood and engineered wood products.
 2. Wood Preservative Manufacturer’s data with application standards.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of material of the same brand from the same manufacturer and source/location.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver material for use in exposed Work on pallets. Handle by mechanical means, by hand or tongs. Dumping will not be permitted.
- B. Store material off the ground to prevent contamination by mud, dust or other materials likely to cause staining or other defects.
- C. Cover material, when necessary, to protect from the elements.
- D. Protect accessories from the elements.

PART 2 – PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: Less than 4” nominal thickness. Provide dressed lumber, S4S, 19 percent maximum moisture content marked with grade stamp of inspection agency.
- B. Timber: Greater than 4” nominal thickness. Furnish second timber lumber cut to nominal sizes indicated with 19 percent maximum moisture content at time of dressing, marked “S-DRY”. Comply with dry size requirements of PS 20. Furnish wood that has been seasoned a minimum of 4 months.
- C. Lumber and Timber:
 - 1. Dress/finish: Band saw surfaces four (4) sides and both ends. Finish shall be free of any large burs or splinters.
 - 2. Finish Select Structural grade, No. 1 or Better Western Red Cedar (WWPA).
 - 3. Use sound timbers free of heat centers, rot and shake.

2.2 TIMBER BARRIER

- A. Timber Posts: 10”x10” Red Cedar Post
 - 1. Material, Finish, and Preservative as specified in this Section, or as otherwise indicated on Drawings.
- B. Lumber Rail: 3”x10” Red Cedar Plank
 - 1. Material, Finish, and Preservative as specified in this Section, or as otherwise indicated on Drawings.

2.3 FASTENERS

- A. Grade 1: Carbon steel galvanized carriage bolt with galvanized washer and nut. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M. Counter-sink washer and nut.
 - 1. Bolts: Carbon steel bolts complying with ASTM A 307, Grade, with ASTM A 563 hex nuts and, where indicated, flat washers.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install wood members plumb, level true and straight, free of distortion, and fitted. Locate nailers, blocking, and similar supports to comply with the requirements for attaching other construction, as necessary. Conform to all details shown on the drawing.
- B. Apply and cure wood preservative to timber members as per manufacturer's recommendations prior to erecting members.

END OF SECTION 061063

SECTION 101400 - SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

This work consists of all labor, materials, and equipment necessary to provide for the carpentry and timber construction and installation at the project site as shown on the drawings and in conformance with the project specifications.

- A. Work includes:
 - 1. New Vehicle and Pedestrian roadway signs

1.2 ACTION SUBMITTALS

- A. Product Data
- B. Shop drawings of graphic and text image

1.3 INFORMATIONAL SUBMITTALS (Not Used)

1.4 QUALITY ASSURANCE

- A. New sign panels, graphics, panel post, and installation shall conform to the most current edition of NYSDOT Standard Specification Section 645 and the FHA Manual of Uniform Traffic Control Devices.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store signs above ground and protect sign systems while staging installation.
- B. Protect salvaged signs during storage, prior to re-installation.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Provide new signs in the types and quantities indicated on the drawings. Provide new post assemblies for the salvaged signs identified for reinstallation.
- B. Install salvaged sign panels utilizing new post and fasteners.
- C. Sign materials and finishes shall conform to NYSDOT Section 645. Signs panels are to be free from of graphic distortion and all other defects in appearance and functionality.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate signs where indicated on drawings and in accordance with NYSDOT Section 645. Install signs panels and the heights indicated on the drawings, in the read direction indicated on the drawings, and in a plumb and level manor. Verify that the sign surfaces have a clear an unobstructed sight line from the intended viewing positions. Repair damage to surrounding site that may occur from the sign installations.

END OF SECTION 101400

SECTION 310101 - SITE RESTORATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Work includes site restoration at all areas of the project site that have surface disturbance, but, that do not have another finished surface treatment specified other than that specified herein.
 - 1. Fine Grading
 - 2. Topsoil
 - 3. Turf grass seeding and establishment
 - 4. Planting
- B. Topsoil and Turf Grass seeding and Sodding for the sports fields is specified in:
 - 1. Section 329113 – Soil Preparation
 - 2. Section 329200 – Turf and Grasses

1.2 DEFINITIONS (NOT USED)

1.3 RELATED WORK

- A. Section 311000: Site Clearing
- B. Soil Preparation Topsoil and Turf Grass seeding and Sodding for the sports fields is specified in:
 - 1. Section 329113 – Soil Preparation
 - 2. Section 329200 – Turf and Grasses

1.4 ACTION SUBMITTALS

- A. Provide prepackaged seed submittal 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.

1.5 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. Store all seed at the site in a cool dry place as approved by the Owner's Representative. Replace any seed damaged during storage.

1.6 SCHEDULING

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

PART 2 - PRODUCTS

2.1 TOPSOIL

- A. Source: Provide topsoil from existing stockpiles stripped from the project site and approved by the Owner's Representative.
- 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 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: 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 urea-form 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. 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 Owner Standards.

- C. 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.
- D. All seed will be rejected if the label indicates any noxious weed seeds.
- E. 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 which are free of noxious weeds. 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 Owner'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. Do not seed when the wind velocity exceeds 5 miles per hour.
- B. Application Rate: 8 pounds per 1000 sq ft.
- C. 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 2-1/2 inches and 3-1/2 inches and include a minimum of 2 mowing's.
- B. Water and protect all seeded areas until final acceptance of the lawn.

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 Owner's Representative.
- B. Unacceptable seeded areas, dry application: Reseed as specified and fertilized at one-half the specified rate.

C. Once accepted, the Owner will assume all maintenance responsibilities.

END OF SECTION 310101

SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Disconnecting, capping, or sealing site utilities.
7. Temporary erosion and sedimentation control.

1.2 RELATED WORK

- A. Section 024119: Selective Demolition.
- B. Section 312500: Erosion & Sedimentation Control.
- C. Section 312000: Earthwork.

1.3 PRE-INSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.

1.4 MATERIAL OWNERSHIP

- A. Except for materials indicated to be stockpiled or otherwise remain on Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed trafficways if required by Owner or authorities having jurisdiction.
- B. Salvageable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated or as directed by Owner's Representative.
- C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
1. Do not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.
 2. Tree- and Plant-Protection Zones: Protect according to requirements in Drawings.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 312000 "Earthwork".
1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3- EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
1. Verify that trees, shrubs, and other vegetation to remain or to be relocated have been flagged and that protection zones have been identified and enclosed according to the Drawings.
 2. Protect existing site improvements to remain from damage during construction.
 3. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways,

according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.

1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
2. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

- A. Protect trees and plants remaining on-site according to requirements in the Drawings.
 1. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations according to requirements in the Drawings.

3.4 EXISTING UTILITIES

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
 1. Arrange with utility companies to shut off indicated utilities.
 2. Interrupting Existing Utilities: 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:
 3. Notify Owner's Representative not less than two days in advance of proposed utility interruptions.
 4. Do not proceed with utility interruptions without Owner's Representative written permission.
 5. Removal of underground utilities is included in earthwork sections; in applicable fire suppression, plumbing, HVAC, electrical, communications, electronic safety and security, and utilities sections; and in Section 024119 "Selective Demolition".

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 1. Grind down stumps and remove roots larger than 3 inches in diameter, obstructions, and debris to a depth of 18 inches below exposed subgrade.
 2. Use only hand methods or air spade for grubbing within protection zones.

3. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
4. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
 1. Strip topsoil in a manner to prevent intermingling with underlying subsoil or other waste materials.
 2. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
 1. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials, and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 311000

SECTION 312000 - EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. All excavation on this project is defined as unclassified excavation.
- B. The Contractor shall provide all labor, materials, equipment and services necessary for, and incidental to, the preparation of site, protection, excavation, embankment, drainage, dewatering, for site grading, as shown on the Drawings and as specified herein.
- C. This Section includes the following:
 - 1. Excavating and filling for rough grading site.
 - 2. Preparing subgrades for walks, pavements, turf and grasses, and plantings.
 - 3. Excavating and backfilling for structures.
 - 4. Subbase course for concrete walks and pavements.
 - 5. Subbase and base course for asphalt paving.
 - 6. Subsurface drainage backfill for walls and trenches.
 - 7. Excavation and backfilling trenches for buried utilities and pits for buried utility structures.

1.2 RELATED WORK

- A. Other sections that directly affect the work of this Section include but are not limited to:
 - 1. Section 311000 Site Clearing
 - 2. Section 312333 Trenching and Backfilling
 - 3. Section 312500 Erosion & Sedimentation Control

1.3 REFERENCES

- A. "Standard Specifications, Construction and Materials, New York State Department of Transportation, Office of Engineering", current edition.
- B. "Standard Specifications for Highway Materials of Sampling and Testing", American association of State Highway and Transportation Officials (AASHTO).
- C. "New York State Standards and Specifications for Erosion and Sediment Control". New York State Department of Environmental Conservation

- D. "New York State, Stormwater Management Design Manual" August 2010, New York Dept. of Environmental Conservation, Albany, NY.

1.4 DEFINITIONS

- A. Backfill: Soil materials used to fill an excavation.
- B. Base Course: Aggregate layer placed between the subbase course and asphalt paving.
- C. Bedding Course: Aggregate layer placed over excavated subgrade in a trench before laying pipe and/ or utility structure.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Drainage Course: Aggregate layer supporting slab-on-grade used to minimize capillary flow of pore water.
- F. Unclassified Excavation: Excavation and removal/disposal of all surface and subsurface materials of any description necessary to perform the Work.
1. All soil deposits of any description both above and below groundwater levels. These may be naturally deposited or placed by previous construction operations.
 2. Boulders of any size.
 3. Any materials of man-made origin.
- G. Additional Excavation: Excavation below subgrade elevations or beyond lateral limits.
- H. Bulk Excavation: Excavations more than 10 feet in width and pits more than 30 feet in either length or width.
- I. Unauthorized Excavation: Excavation below required subgrade elevations or beyond indicated dimensions. Owner's Representative shall be notified prior to any unauthorized excavation.
- J. Fill: Soil materials used to raise existing grades.
- K. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material exceeding 1 cu. yd. for bulk excavation or $\frac{3}{4}$ cu. yd. for footing, trench, and pit excavation that when tested by an independent geotechnical testing agency, exceeds a standard penetration resistance of 100 blows per 2 inches. It is also material that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
- L. Structures: Buildings, footings, foundations, retaining walls, ramps, stairs, slabs, tanks, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- M. Landscaped Areas: Areas not covered by structures, walks, roads, paving, parking, structures, or other man-made impervious surfaces.

- N. Subbase Course: Layer placed between the subgrade and paving material layer, or layer placed between the subgrade and a concrete pavement or walk.
- O. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below sub base, drainage fill, or topsoil materials.
- P. Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.5 QUALITY ASSURANCE

- A. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials testing, as documented according to ASTM D 3740 and ASTM E 548.
- B. Pre-excavation Conference: Conduct conference at Project site to comply with requirements in General Requirements Section "Project Meetings".

1.6 QUALITY CONTROL

- A. Subbase materials and quality control shall be in accordance with New York State Department of Transportation (NYS DOT) Standard and Specifications, latest revision, or other locally prevalent specification that is reviewed with and approved by the Owner's Representative.
- B. During Construction: Submit samples of each of the following during mass production of gravel materials for performance testing and prior to shipping. All costs associated with materials testing shall be paid for by the Contractor.
 - 1. Earthwork Material Qualification and Testing.
 - a. If necessary, submit the following test data for each potential borrow source:
 - 1) Particle Size Analysis:
 - a. Method: AASHTO D422
 - b. Number of Tests: Three per potential source.
 - c. Acceptance Criteria: Gradation within specified limits.
 - 2) Maximum Density Determination:
 - a. Method: Modified Proctor Test – ASTM D 1557
 - b. Number of Tests: Three per potential source.
 - c. Re-establish gradation and maximum density of fill material if source is changed during construction.

2. Earthwork/Compaction Testing

- a. Compaction testing shall be performed to ascertain the compacted density of the fill and backfill materials in accordance with the following methods.
 - 1) In-place relative density:
 - a. Method: ASTM D-1556, Sand Cone method, or
 - b. ASTM D-2922, Nuclear Method
 - 2) Number of Tests:
 - a. As specified below.
- b. Acceptance Criteria: The sole criterion for acceptability of in-place fill shall be in situ dry density. Minimum dry density for all fill or backfill shall be 95 percent of the maximum dry density as determined by the Modified Proctor Test (ASTM -1557). If a test fails to qualify, the fill shall be further compacted and re-tested. Subsequent test failures shall be followed by removal, replacement of the material and retesting.

1.7 SUBMITTALS

B. Product Data: For the following:

- 1. Each type of plastic warning tape.
- 2. Drainage fabric.
- 3. Separation fabric.

C. Samples: For the following:

- 1. 30-lb samples sealed in airtight containers, of each proposed soil material from on-site or borrow sources, if requested by the Owner's Representative.

D. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:

- 1. Classification according to NYSDOT Article 733-09 and ASTM D 2487 of each on-site or borrow soil material proposed for fill and backfill.
- 2. Laboratory compaction curve according to ASTM D 1557 Modified Standard Proctor Testing for each on-site or borrow soil material proposed for fill and backfill.

1.8 PROJECT REQUIREMENTS

- A. Notify the Owner's Representative of any unexpected subsurface condition.
- B. Protection of existing utilities.
 - 1. Notify utility locator service for area where Project is located before beginning earthwork operations.
 - 2. Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate support and protection during excavation.
 - 3. Provide a minimum of 96 hours notice to the Owner's Representative and receive written notice to proceed before interrupting any utility.
 - 4. Repair any utilities damaged during construction activities as acceptable to the Owner's Representative.
 - 5. Barricade open excavations occurring as part of this work. Fence excavations remaining open for extended periods of time.

PART 2 – PRODUCTS

2.1 SOIL MATERIALS

- A. Provide borrow soil material when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soil Classifications (Suitable Fill) – Groups GW, GP, SW, SP, And SM according to ASTM D 2487, or a combination of these groups, free of rock or gravel larger than 3” in any dimension, debris, waste, frozen material, vegetation, and other deleterious matter.
- C. Unsatisfactory Soil Classifications – Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups. Material containing cinders, organics, industrial or hazardous waste, sludge, construction/demolition debris, muck, and peat shall be considered unsatisfactory material. Unsatisfactory soils also include satisfactory soils not maintained within 2% of optimum moisture content at time of compaction.
- D. Select Granular Fill/Select Fill: Soil material consisting of sound, durable, sand, gravel, stone, and/or blends of these materials, free from organic and other deleterious materials and in conformance with NYSDOT Article 733-11:

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
4 inch	101.6	100
No. 40	0.425	0-70
No. 200	0.075	0-15

- E. Structural Fill: Soil materials conforming to NYSDOT Type 4 subbase material specifications.

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
2 inch	50.8	100
1/4 inch	6.35	30-65
No. 40	0.425	5-40
No. 200	0.075	0-10

- F. Subbase Material: Soil material conforming to NYSDOT Type 2 subbase material.

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
2 inch	50.8	100
1/4 inch	6.35	25-60
No. 40	0.425	5-40
No. 200	0.075	0-10

- G. Drainage Course/Drainage Stone: (ASTM C-033 Blend 57) NYSDOT Item B-12, equal blend of NYSDOT No. 1 and No. 2 stone that complies with the material specification requirements of Article 703-02 for crushed stone only.

- H. Course Aggregate: Crushed stone that complies with the material specification requirements of Article 703-02, NYSDOT No. 2 or as indicated on the drawings.

- I. Rip Rap: Fine, Light, Medium, or Heavy Stone Filling that complies with NYSDOT Article 620-2.02 for stone filling.

- J. Pea Gravel: Comply with NYSDOT Article 703-02 for screened gravel.

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
1/2 inch	12.7	100
1/4 inch	6.35	90-100
1/8 inch	3.17	0-15
No. 200 Sieve	0.075	0-1

- K. Bedding and Backfill Courses: Refer to Section 312333 "Trenching and Backfilling" for utility bedding specifications.

- L. Sand: ASTM C 33; fine aggregate.

2.2 GEOTEXTILES

- A. Stabilization/Separation Geotextile Fabric: Woven geotextile fabric, manufactured for separation applications, made from high-tenacity polypropylene, resistant to biological degradation and naturally encountered chemicals, alkalis, and acids; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 3; AASHTO M 288-06.
 2. Grab Tensile Strength: 200 lbf; ASTM D 4632.
 3. Grab Tensile Elongation: 15%; ASTM D 4632
 4. Trapezoid Tear Strength: 75lbs; ASTM D 4533
 5. CBR Puncture Strength: 700 lbf; ASTM D6241
 6. Apparent Opening Size (AOS): no. 40 sieve; ASTM D 4751.
 7. Permittivity: 0.05 /sec; ASTM D 4491
 8. Flow Rate: 4.0 gpm/sf, ASTM D 4491
 9. UV Stability: 70% strength retained (at 500 hours); ASTM D 4355
- B. Drainage Fabric/Drainage Geotextile/Filter Fabric: Nonwoven, geotextile fabric, specifically manufactured as a drainage geotextile, made from polypropylene; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Grab Tensile Strength: 120 lbf; ASTM D 4632
 2. Grab Tensile Elongation: 50%; ASTM D 4632
 3. Trapezoid Tear Strength: 50 lbf; ASTM D 4533
 4. CBR Puncture Strength: 310 lbf; ASTM D 6241
 5. Apparent Opening Size (AOS): no. 70 sieve; ASTM D 4751
 6. Permittivity: 1.7 /sec; ASTM D 4491
 7. Flow Rate: 135 gpm/sf, ASTM D 4491
 8. UV Stability: 70% strength retained (at 500 hours); ASTM D 4355

2.3 ACCESSORIES

- A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored to comply with local practice or requirements of authorities having jurisdiction.
- B. Detectable/Non-Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, corrosion resistant. Detectable warning tape shall be detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
1. Red: Electric (Detectable).
 2. Yellow: Gas, oil, steam, and dangerous materials (Detectable).
 3. Orange: Telephone and other communications (Detectable).
 4. Blue: Water systems (Detectable).
 5. Green: Sewer systems (Non-Detectable).

PART 3 – EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities not designated for removal from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 31 Section "Site Clearing".
- C. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- D. Protect and maintain erosion and sediment controls, specified in Section 311000 "Site Clearing", during earthwork operations.
- E. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

- A. Explosives: Use of explosives on the project site is not allowed.

3.4 EXCAVATION, GENERAL

- A. Excavate earth as required for the Work in a safe manner, complying with all local, state, federal, and OSHA regulations.
- B. Sheet piling, shoring, and bracing, if required, shall be the responsibility of the Contractor and shall be capable of resisting pressure of earth to be retained.
- C. Any excavated materials to be spoiled on site shall be buried, compacted, and capped with a 9" compacted depth of topsoil and seeded. Spoil location to be field located and approved with Owner's Representative. Spoil locations shall not be located beneath buildings, pavements, or other built structures as defined herein.

- D. Replace excavated unsatisfactory materials intended for fill or backfill with satisfactory soil materials.
- E. Removal of Unsuitable/Unsatisfactory Material Beneath Structures and Other Improvements: Excavate encountered unsuitable/unsatisfactory materials, which extend below required elevations, to additional depth as directed by the Owner's Representative.

3.5 EXCAVATION, HAZARDOUS

- A. Hazardous Material Excavation: Excavated hazardous or environmentally contaminated materials must be removed in their entirety, and disposed of in accordance with the Contract Documents and New York State law.

3.6 EXCAVATION FOR STRUCTURES

- A. Excavate to elevations and dimensions within a tolerance of plus or minus 1 inch. Extend excavations a sufficient lateral distance to provide clearance to execute the work (e.g. placing and removing concrete formwork, installing services and other construction, inspections, etc).
 1. Do not disturb bottom of excavations intended as bearing surfaces.

3.7 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to cross sections, elevations, and grades stated on construction drawings. Stake out and notify the Owner's Representative of any discrepancies prior to construction.

3.8 EXCAVATION FOR UTILITY TRENCHES

- A. Refer to Section 312333 Trenching and Backfilling.

3.9 APPROVAL OF SUBGRADE

- A. Notify Owner's Representative when excavations have reached required subgrade.
- B. If Owner's Representative determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons (or equipment capable of obtaining the same compactive effort) to obtain a thoroughly compacted subgrade. Identify and correct soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 2 mph. Operate in vibratory mode if directed by Geotechnical Engineer.
 2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Owner's Representative, and replace with compacted backfill or fill as directed.

- D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities.

3.10 UNAUTHORIZED EXCAVATION

- A. Owner's Representative shall be notified prior to performing unauthorized excavations. Method and materials for backfilling of unauthorized excavations shall be approved by the Owner's Representative.

3.11 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow materials and satisfactory excavated soil materials. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust and siltation by precipitation.
 - 1. Stockpile soil materials away from edges of excavations. Do not store within drip line of remaining trees or in close proximity of property boundaries and surface waters.

3.12 SOIL FILL AND BACKFILL

- A. Preparation: Remove vegetation, topsoil, debris, unsatisfactory soil materials, obstructions, and other deleterious materials prior to placement of fill. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material. Smooth out and compact areas where wheel rutting has occurred due to stripping or earthwork operations.
- B. Excavation: Place and compact backfill in excavations promptly as Work permits, but not before completing the following.
 - 1. Acceptance by the Owner's Representative of construction below finish grade including, where applicable, dampproofing, waterproofing, perimeter insulation, subdrainage, and bearing capacity of supporting soil.
 - 2. Inspection, testing, approval, and recording locations of underground utilities.
 - 3. Removal of concrete formwork.
 - 4. Removal of temporary sheeting or sheetpiling and backfilling of voids caused by removals.
 - 5. Cutting off top of permanent sheeting or sheetpiling.
 - 6. Removal of trash and debris.
 - 7. Installation of permanent or temporary bracing on horizontally supported walls.
- C. Unless otherwise shown on Drawings, place and compact fill material in layers to required subgrade elevations as follows:
 - 1. Under grass, planted areas and playgrounds: Satisfactory Soil material.
 - 2. Under walks and pavements: Select Fill or Select Granular Fill material.
 - 3. Under buildings, walls, slabs, ramps, stairs, footings, foundations, structures, athletic facilities: Select Fill or Select Granular Fill material.

3.13 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.14 COMPACTION OF SOIL FILLS AND BACKFILLS

- A. Place backfill and fill materials in layers not more than 12 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers. Lift height shall be governed by the ability of the compaction equipment to obtain the required compaction with 12 inches as a maximum lift height. Place and compact fills and backfills to required subgrade.
- B. Place backfill and fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. 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 or more than two (2) percent the optimum content as determined by ASTM D 1557 (Modified Proctor).
 - 1. Buildings and Structures (entire area within ten feet outside perimeter): 95 percent.
 - 2. Walls, slabs, ramps, stairs, footings, foundations, structures, athletic facilities, playgrounds: 95 percent.
 - 3. Pavements and Walks: 95 percent.
 - 4. Pipes, Conduits, and Pipe Bedding: 95 percent
 - 5. Landscaped Areas: 90 percent.
- D. When the existing ground surface to be compacted has a density less than that specified for the particular area classification, break up and pulverize, and moisture condition to facilitate compaction to the required percentage of maximum density.
- E. Open graded Stone: Place material in maximum 12 inch lifts. Each lift shall be raked smooth and compacted through several passes of a walk behind vibratory roller. Compaction Testing is not required.
- F. Moisture Control:
 - 1. Where fill or backfill must be moisture conditioned before compaction, uniformly apply water to the surface and to each layer of fill or backfill. Prevent ponding or other free water on surface subsequent to, and during compaction operations.
 - 2. Remove and replace, or scarify and air dry, soil that is too wet to permit compaction to specified density. Soil that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by

discing, harrowing or pulverizing, until moisture content is reduced to a value which will permit compaction to the percentage of maximum density specified.

- G. If a compacted layer fails to meet the specified percentage of maximum density, the layer will be recompact 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.
- H. Open graded Stone: Place material in maximum 12 inch lifts. Each lift shall be raked smooth and compacted through several passes of a walk behind vibratory roller. Compaction Testing is not required.

3.15 GRADING

- A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations as shown on the Project Plans to within the following tolerances.
 - 1. Lawn or Unpaved Areas: Plus or minus 1 inch.
 - 2. Walks and Pavements: Plus or minus 1/2 inch.
 - 3. Buildings/Structures: Plus or minus 1/4 inch.
- C. Grade Control: During construction, maintain lines and grades including crown and cross-slope of subbase course.

3.16 SUBBASE AND BASE COURSES

- A. Place subbase course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course under pavements, walks and structures as follows:
 - 1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends (where indicated on plans).
 - 2. Shape subbase course to required crown elevations and cross-slope grades.
 - 3. Place subbase course in even lifts, not exceeding 6 inches in compacted thickness in a single layer.
 - 4. Compact as specified.
- C. Pavement Shoulders: Place shoulders along edges of subbase course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each subbase and base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 1557 Modified Proctor Testing.

1. Compact subbase course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557 Modified Proctor Testing.

3.17 DRAINAGE COURSE

- A. Place drainage course on subgrade free of mud, frost, snow, or ice.
- B. On prepared subgrade, place and compact drainage course as follows:
 1. Place drainage course in even lifts, not exceeding 6 inches in compacted thickness in a single layer.
 2. Compact each layer of drainage course to required cross sections and thicknesses with a minimum of two passes of a plate type vibratory compactor.

3.18 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality control testing and inspections.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work complies with requirements.
- C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design-bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Owner.
- D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies.
 1. Minimum Testing Frequency: At subgrade and at each compacted fill and backfill layer, at least one test for every 20,000 sq. ft, but not less than two (2) tests per lift.
 2. Building Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2,000 sq. ft. of building slab, but not less than two (2) tests per lift.
 3. Pavements and Walk Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 5,000 sq. ft. or less of area, but not less than two (2) tests per limits of paving for inclusive area.
 4. Retaining Walls: At subgrade and at each compacted fill and backfill layer, at least one test for 2,000 sq. ft., but not less than two (2) tests per wall.
- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; re-compact and retest until specified compaction is obtained.

3.19 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to the specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth required; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

3.20 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.
- B. Disposal: Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Owner.

END OF SECTION 312000

SECTION 312319 - DEWATERING

PART 1 - GENERAL

1.1 SUMMARY

- A. Work includes:
 - 1. Construction dewatering.

1.2 RELATED SECTIONS

- A. Section 312000: Earthwork.
- B. Section 311000: Site Clearing.

1.3 PRE-INSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.

1.4 FIELD CONDITIONS

- A. 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. 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 ground water and permit excavation and construction to proceed on dry, stable subgrades, as required.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Provide temporary grading to facilitate dewatering and control of surface water.

- B. Protect and maintain temporary erosion and sedimentation controls, which are specified in Section 311000 "Site Clearing", 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 ground-water level.
- C. 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 ground water 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 60 inches, or as otherwise required for performance of the Work, below bottom of excavation.
- C. 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. Survey-Work Benchmarks: Resurvey benchmarks regularly during dewatering and maintain an accurate log of surveyed elevations for comparison with original elevations. Promptly notify Engineer if changes in elevations occur or other damage is evident in adjacent construction.

END OF SECTION 312319

SECTION 312333 – TRENCHING AND BACKFILLING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

- 1. Trenching, backfilling, compacting, excavation support and disposal for utility installation.

- B. Related Sections:

- 1. Section 311000 "Site Clearing" for topsoil stripping and stockpiling.
 - 2. Section 312000 "Earthwork" for excavation, filling and backfilling, and rough grading.
 - 3. Section 330500 "Common Work Results for Utilities" for installation of buried piping.

1.3 REFERENCES

- A. Comply with the latest edition of the following standards, as referenced herein:

- 1. "Standard Specifications, Construction and Materials, New York State Department of Transportation, Office of Engineering."
 - 2. "Standard Specifications for Highway Materials and Methods of Sampling and Testing, American Association of State Highway and Transportation Officials (AASHTO)."
 - 3. American Society for Testing and Materials (ASTM).

1.4 ACTION SUBMITTALS

- A. Samples:

- 1. The Contractor shall furnish representative earth materials to the testing laboratory for analysis and report, as directed by the Engineer, or as outlined in the specifications.

- B. Test Results:
 - 1. The testing laboratory shall submit written reports of all tests, investigations, findings and recommendations to the Contractor and the Engineer including but not limited to field density reports, gradation analysis, and Proctor test results.

- C. Testing Certifications:
 - 1. The Contractor shall submit certifications for testing completed.

1.5 QUALITY ASSURANCE

- A. The Contractor shall comply with the requirements for soil erosion and sedimentation control and other requirements of governmental authorities having jurisdiction, including the State.
- B. The Contractor shall provide and pay for all costs in connection with an approved independent testing facility to determine conformance of soils and aggregate with the specifications, in accordance with Section 014000 "Quality Requirements."

1.6 PROJECT CONDITIONS

- A. Notify the Engineer of any unexpected subsurface condition.
- B. Protect excavations by shoring, bracing, sheet piling, or by other methods, as required to ensure the stability of the excavation. Comply with OSHA requirements.
- C. Underpin or otherwise support structures adjacent to the excavation which may be damaged by the excavation. This includes service lines.
- D. Protection of Existing Utilities:
 - 1. Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations. Comply with OSHA requirements.
 - 2. Coordinate interruption and/or termination of utilities with the utility companies and the Owner.
 - 3. Provide a minimum of forty-eight (48) hours notice to the Owner and receive written notice to proceed before interrupting any utility.
- E. Demolish and completely remove from the site any existing underground utilities designated to be removed, as shown on the Drawings or as specified.
- F. Repair any damaged utilities as acceptable to the Owner, Engineer, and utility company at no additional cost to the Owner.
- G. Contractor shall comply with maintenance and protection requirements as approved by the authority having jurisdiction.

H. Protection of Persons and Property:

1. Barricade open excavations occurring as part of this work and post with warning lights, if required.
2. Operate warning lights as recommended by authorities having jurisdiction.
3. Protect structures, utilities, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
4. Perform excavation within drip-line of trees to remain by hand, and protect the root system from damage or dryout to the greatest extent possible. Maintain moist conditions for root system and cover exposed roots with burlap. Paint cut roots of 1" diameter and larger with emulsified asphalt tree paint.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Pipe Zone Bedding and Backfill: Sound, durable natural run-of-bank (R.O.B. sand, gravel, or a mixture of crushed stone and gravel, free of soft, nondurable particles, organic materials and elongated particles, and shall be well graded from fine to coarse particles. Bedding gradations shall be approved by the Engineer and shall meet the following gradation requirements.

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
3/4 inch	19.00	100
No. 40	0.425	0-70
No. 200	0.075	0-10

- B. Trench Backfill (Lawn Areas): Select Fill, soil material consisting of sound, durable, sand, gravel, stone, and/or blends of these materials, free from organic and other deleterious materials. Comply with the following gradation requirements according to NYSDOT Article 733-09:

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
4 inch	101.6	100
No. 40	0.425	0-70
No. 200	0.075	0-15

Trench backfill in non-traffic, unpaved areas may utilize satisfactory fill or materials excavated from the trench as approved by the Owner's Representative.

Trench Backfill (Paved Areas): Structural Fill, sound, durable sand, gravel, stone or blends of these materials, free from organic, frozen or other deleterious materials, conforming to the requirements of NYSDOT Section 304 and meeting the following gradation requirements (NYSDOT Subbase Type 4):

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
2 inch	50.8	100
1/4 inch	6.35	30-65
No. 40	0.425	5-40
No. 200	0.075	0-10

- C. Cushion Material: Shall consist of clean, hard, durable, uncoated particles, free from lumps of clay and all deleterious substances and shall meet the following gradation requirements:

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
1/4 inch	6.35	100
No. 60	0.25	0-35
No. 100	0.15	0-10

PART 3 - EXECUTION

3.1 PRECONSTRUCTION MATERIAL QUALIFICATION TESTING

- A. General:

1. Sufficient size samples shall be obtained from the potential borrow source to allow completion of tests listed in paragraph B below. Samples may be obtained from test borings, test pits, or from borrow pit faces provided that surficial dry or wet soil is removed to expose undisturbed earth. Tests listed below shall be performed on each sample obtained. A minimum of three (3) representative samples from each potential borrow source shall be furnished to the testing laboratory for prequalification testing. Test data shall be provided to the Engineer a minimum of 2 weeks prior to construction for approval of borrow source. Three test reports completed within three months prior to construction may be submitted for commercial earth borrow sources or suppliers of stone products (crushed stone or graded stone products) in lieu of prequalification tests as approved by the Engineer.

B. Material Tests:

1. Particle Size Analysis:
 - a. Method: ASTM D422
 - b. Number of Tests: One (1) per sample; three (3) per potential source.
 - c. Acceptance Criteria: Gradation within specified limits.
2. Maximum Density Determination:
 - a. Method: ASTM D1557 - Modified Proctor
 - b. Number of Tests: One (1) per sample; three (3) per potential source.
3. Re-establish gradation and maximum density of fill material if source is changed during construction.

3.2 PREPARATION

- A. Establish required lines, levels, contours and datum.
- B. Maintain benchmarks and other elevation control points; re-establish if disturbed or destroyed, at no additional cost to the Owner.
- C. Establish location and extent of existing utilities prior to commencement of excavation.

3.3 EXCAVATION

- A. All excavation shall be made to such depth as required and of the width shown on the Contract Drawings to provide suitable room for building the structures and laying the pipe(s) they are to contain and for sheeting, shoring, pumping and draining as necessary, and for removing peat, silt, or any other materials which the Engineer may deem unsuitable. Hand trench excavation may be required to protect existing utilities and structures.
- B. Trench excavation for pipes shall be made by open cut to accommodate the pipe or structure at the depths indicated on the Contract Drawings. Excavation shall be made to such a depth and to the width indicated on the Contract Drawings so as to allow a minimum of six (6) inches of pipe zone bedding to be placed beneath the bottom of all structures and barrels, bells or couplings of all pipes installed unless otherwise specified on the Contract Drawings.
- C. The bottom of the trench shall be accurately graded to provide a uniform layer of bedding material, as required, for each section of pipe. Trim and shape trench bottoms and leave free of irregularities, lumps, and projections.
- D. Stockpile excavated subsoil for reuse where directed or approved.
- E. Over excavation/undercut: If, in the opinion of the Engineer, existing material below the trench grade is unsuitable for properly placing bedding material and laying pipe, the Contractor shall excavate and remove the unsuitable material and replace the same with an approved pipe zone bedding material properly compacted.

- F. Stability of Excavation: Slope sides of excavations shall comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavation in safe condition until completion of backfilling.
- G. Removal of materials beyond the indicated subgrade elevations, without authorization by the Engineer, shall be classified as unauthorized excavation and shall be performed at no additional cost to the Owner.

3.4 DEWATERING

- A. Dewater the work area according to the requirements in Section 312319 "Dewatering."

3.5 BEDDING AND BACKFILLING

- A. All pipe trenches backfill (pipe zone bedding, pipe zone backfill and trench backfill) shall be compacted by tamping or rolling to achieve a minimum dry density of 95 percent of the modified Proctor maximum dry density of the material used (ASTM D1557). Backfill materials shall be placed with water content within plus or minus 4 percent of optimum moisture content per the modified Proctor method (ASTM D1557). Any water used for compaction shall be provided by the Contractor at his own expense. The Contractor is responsible for the repair of any trench settlement at no expense to the Owner.
- B. Provide uniform bearing and support for each section of pipe at every point along the entire length, except where necessary to excavate for bell holes, pipe joints, or other required connections. Dig bell holes and depressions for joints after trench bottom has been graded. Dig no deeper, longer, or wider than needed to make the joint connection properly.
- C. Bedding and backfilling shall be accomplished in three stages unless otherwise specified on the Contract Drawings.
 - 1. The first stage shall involve placement of "pipe zone bedding" as a layer(s) of selected material required to support, or to stabilize unsound or unsatisfactory foundation conditions.
 - 2. The second stage shall involve placement of "pipe zone backfill" from the top of the bedding material up to one (1) foot above the pipe or as indicated on the Contract Drawings.
 - 3. The third stage involves the placement of "trench backfill" in the remainder of the trench up to the surface of the ground or the bottom of any special surface treatment subgrade elevation.
- D. The pipe bedding material shall be placed in the trench after the trench has been excavated a minimum of six (6) inches below the bell of the pipe to permit the placing of not less than six (6) inches of bedding material unless otherwise specified on the Contract Drawings. Where, in the opinion of the Engineer, more than six (6) inches of bedding material shall be required, the excavation shall be performed and bedding placed to the depth ordered by the Engineer.

- E. The bedding material shall be placed to the full width of the trench. The bedding material shall be placed in loose lifts not exceeding six (6) inches to the elevation shown on the Contract Drawings or directed by the Engineer. The bedding material shall be tamped and compacted to the required density to form a firm and even bearing surface.
- F. Pipe zone backfill shall be placed to the elevation shown on the Contract Drawings in loose lifts not-to-exceed six (6) inches in thickness, before compaction. The backfill shall be placed on both sides of the pipe at the same time and to approximately the same elevation. Any pipe that is damaged or moved out of alignment, regardless of cause, shall be replaced or realigned at the Contractor's expense. Each layer shall be thoroughly compacted by hand-tamping or mechanical means being careful not to damage the pipe. When the pipe zone backfill reaches one (1) foot over the top of the pipe, the entire surface shall be compacted by mechanical means.
- G. The remainder, if any, of the trench above the pipe zone backfill shall be backfilled with trench backfill material in loose lifts not exceeding six (6) inches in thickness before compaction. Each layer shall be thoroughly compacted by mechanical means to the required density.
- H. Install utility detector tape where indicated on the Contract Drawings.

3.6 BACKFILLING AROUND STRUCTURES

- A. The Contractor shall not place backfill against any structure without obtaining the approval of the Engineer. No dumping shall be allowed where materials would flow against or around such structures. Backfill material shall be deposited in horizontal layers not exceeding 6 inches in loose thickness or as shown on the Contract Drawings and thoroughly compacted by hand or by mechanical means to the satisfaction of the Engineer.

3.7 SUSPENSION OF WORK

- A. Whenever the work is suspended, excavations shall be protected and the roadways, if any, left unobstructed. Within or adjacent to private property, material shall be stored at such locations as will not unduly interfere with traffic of any nature and in no case shall materials be stored in locations that will cause damage to existing improvements.

3.8 DISPOSAL OF MATERIAL

- A. Excess and unsuitable materials shall be legally disposed of by the Contractor in accordance with the Contract Documents and at the Contractor's expense. Disposal of any materials on-site shall be restricted to areas having been prior approved by the Engineer, only.

3.9 FIELD QUALITY CONTROL

- A. Notify the Engineer at least three (3) working days in advance of all phases of filling and backfilling operations.
- B. In-place density testing shall be performed to ascertain the compacted density of the fill and backfill materials in accordance with the following methods:

1. In-place relative density:
 - a. Method: AASHTO T238, Nuclear Method
- C. Perform initial density testing to verify that contractors proposed compaction effort will obtain the minimum required densities.
- D. In-place density tests on trench backfills shall be provided for every 500 cubic yards of fill and in vertical lifts not exceeding two (2) feet. Trench backfill compaction under pavements and structures shall be in accordance with Section 312000 "Earthwork."
- E. One particle size analysis (ASTM D422) and one modified Proctor compaction test (ASTM D1557) shall be completed for every 5,000 cubic yards of material placed.
- F. The Owner's Representative may direct additional tests to establish gradation, maximum density, and in-place density as required by working conditions, at the Contractor's expense.
- G. Acceptance Criteria: The criteria for acceptability of in-place fill shall be in-situ dry density and moisture content. If a test fails to qualify, the fill shall be further compacted and re-tested. Subsequent test failures shall be followed by removal and replacement of the material.

END OF SECTION 312333

SECTION 312500 - EROSION & SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes provisions for soil erosion and sedimentation control utilizing, but not limited to; earthen berms, sediment basins, fiber mats, netting, mulches, grasses, silt fencing, hay bales and other devices shown on the Drawings, and or described in this section.

1.2 RELATED SECTIONS

- A. Other specification Sections that affect the work of this Section include but are not limited to:
 - 1. Section 310000: Earthwork
 - 2. Section 312333: Trenching and Backfilling
 - 3. Section 329119: Soil Preparation
 - 4. Section 329200: Turf and Grasses.

1.3 REFERENCES

- A. "New York State, Stormwater Management Design Manual" March 2015, New York Dept. of Environmental Conservation, Albany, NY.

1.4 SYSTEM DESCRIPTION

- A. Control of both soil erosion and water pollution through the use of the temporary and permanent devices specified herein and shown on the Drawings. Implement additional control measures as directed by the Owner's Representative as may be necessary based on field conditions and construction activities. The Contractor is to maintain, adjust, relocate and supplement devices to ensure constant control of erosion and prevention of water pollution at preconstruction levels.

1.5 ACTION SUBMITTALS

- A. Submit product data, samples, specifications, and manufacturer's installation and maintenance procedures.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Comply with Federal, New York State DEC requirements for this project scope.

1.7 GENERAL REQUIREMENTS

- A. Coordinate the use of temporary erosion control measures with permanent erosion control features specified elsewhere to ensure effective and continuous erosion control based on the requirements of the documents and of field conditions.
- B. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas.
- C. The Contractor shall confine grading operations and ground disturbance inside the designated project limits. Disturbance of areas outside project limits shall not be permitted without prior approval from the Owner.
- D. Install temporary erosion control measures prior to the start of construction activities.
- E. Minimize amount of bare soil exposed at one time. The Contractor shall also minimize the disturbance of any perimeter buffer areas or areas designated as to remain undisturbed, if any, as delineated on the plans.
- F. Provide temporary measures such as berms, dikes, silt fencing, straw bales, inlet sediment traps, and drains. The Contractor shall install and maintain all erosion control and sedimentation measures in accordance with this section and the requirements specified in the NYSDOT Standard Specifications, Section 209-3.
- G. Storm drain inlet protection shall be installed at all catch basins, receivers and yard drains unless directed otherwise by the Architect/Engineer.
- H. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
- I. The Contractor shall remove sediment accumulated in the structures periodically as necessary and at the end of construction and deposit on-site in a stable location as ordered by the Architect/Engineer.
- J. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures. Additional measures may be necessary to correct deficiencies and provide adequate control for unforeseen site conditions and extreme weather.
- K. All temporary erosion control measures shall remain in place and maintained until such time as all disturbed areas have become stabilized.

1.8 CONSTRUCTION SEQUENCE

- A. Construction activities shall be scheduled by the Contractor with the intent to minimize the amount of disturbed area at any one time as well as the length of exposure. In general, once work has been started on a particular phase or structure, this work shall be completed, to the extent possible, before work on another phase or structure is started. It will be the Contractor's responsibility to evaluate potential hazards and to use temporary measures to stabilize any areas of incomplete work.

1.9 MAINTENANCE

- A. Inspect all sedimentation and erosion control devices on a daily basis. Provide corrective maintenance immediately upon determining the need.
- B. “Storm Outlet Sediment Trap” - Remove sediment and restore trap to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Deposit removed sediment in a suitable area and in such a manner that it will not erode.
- C. “Stabilized Construction Entrance” - Maintain entrance in a condition that will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. Remove all sediment spilled, dropped, washed or tracked onto public rights-of-way immediately.
- D. “Inlet Protection” - Inspect hay bales daily and repair promptly as needed. Remove bales when they have served their usefulness so as not to block or impede storm flow or drainage.
- E. “Silt Fence” - Remove accumulated material when “bulges” develop in the silt fence. Replace torn sections of fence.
- F. “Check Dam” - Remove and replace stone when the dam impedes storm flow or drainage.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Gravel Bag with clean wash stone as per NYSDOT Standards, Specifications & Approved Products.
- B. Erosion Control Mat - “Curlex Blanket” by ARMCO, “Ero-Mat” by Armco, or equal.
- C. Netting - “Enkamat” by American Enka Company, “Miramat” by Mirafi, or approved equal.
- D. Stone – NYSDOT ITEM 2, or approved equal.
- E. Mulch – Hay, straw, or other suitable material reasonably free and clean of noxious weeds and deleterious material.
- F. Annual Grasses – Rye grass, cereal grasses, or other quick-growing species suitable to the area as a temporary cover that will not compete with the grasses specified for use as a permanent cover.
- G. Silt Fencing - “Envirofence” by Mirafi, “Propex Silt Stop” by Amoco, or approved equal.
- H. Straw Bales - Straw bales, 2” x 2” x 42” stakes, and permeable aggregate filter.

PART 3 - EXECUTION

3.1 GENERAL

- A. Perform all work under this contract in such a manner that objectionable conditions will not be created at water coursing through or adjacent to the project area.
- B. In the event of conflict between these specification requirements and pollution control laws, rules or regulations of other Federal or State local agencies, the Contractor is obligated to comply with the more stringent regulations.
- C. Contractor plans show the minimum requirements for erosion control.
- D. Contractor is required to notify the Owner's Representative of a change in field conditions that alters the erosion and sedimentation control devices to inadequately meet the need of the current field situation.
- E. Install additional erosion control devices as required to control erosion and sedimentation in the opinion of the Owner's Representative, and/or regulatory agencies having jurisdiction.
- F. Install Perimeter Devices prior to any soil or vegetation disturbance.
- G. Install inlet protection devices immediately after each catch basin has been installed.
- H. Install dam devices in ditches as the ditches are formed.
- I. Place pavement only after the storm drainage system is operational.
- J. Do not remove erosion control devices until the entire area has been permanently stabilized, at the discretion of the Owner's Representative.

3.2 INSTALLATION

- A. The Owner's Representative shall have the authority to limit the extent of surface area of erodible earth material exposed by clearing and grubbing, excavation, and by borrow and fill operations. The Owner's Representative has the authority to direct the Contractor to provide immediate erosion control measures, either permanent or temporary, to minimize damage to adjacent property and to minimize contamination of adjacent streams or other watercourses, lakes, ponds or other areas of water impoundment.
- B. Incorporate all permanent erosion control features into the project at the earliest practical time as outlined in the schedule. Temporary control measures are those that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.
- C. Where erosion is likely to be a problem, schedule and perform clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately thereafter if

the project conditions permit; otherwise temporary erosion control measures may be required between successive construction stages.

- D. Establish temporary grass cover on disturbed areas prior to finish grading and seeding, as determined appropriate by the Owner's Representative.

END OF SECTION 312500

SECTION 320117: PAVEMENT REPAIR AND RESURFACING

PART 1 – GENERAL

1.1 SUMMARY

- A. Work includes:
 - 1. Asphalt Pavement Repair and Resurfacing.

1.2 DEFINITIONS

- A. Terms used in this specification section are as referenced in the NYSDOT Standard Specification Manual current edition.

1.3 RELATED WORK

- A. Section 321216: Asphalt Paving.

1.4 ACTION SUBMITTALS

- A. Product Data: Manufacturer's name and brand name for the following:
 - 1. Asphalt filler.
 - 2. Asphalt emulsion.
- B. Quality Control Submittals:
 - 1. Plant name and location of asphalt concrete supplier.

1.5 QUALITY ASSURANCE

- A. Comply with the applicable requirements of the current NYSDOT Standard Specification Section 400-Bituminous Pavements.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp or if the following conditions are not met:
 - 1. Prime and Tack Coats: Minimum surface temperature of 60 deg F (15.5 deg C).
 - 2. Slurry Coat: Comply with weather limitations of ASTM D 3910.
 - 3. Asphalt Base Course: Minimum surface temperature of 40 deg F (4 deg C) and rising at time of placement.
 - 4. Asphalt Surface Course: Minimum surface temperature of 60 deg F (15.5 deg C) at time of placement.
- B. Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 deg F (4 deg C) for oil-based

materials, 50 deg F (10 deg C) for water-based materials, and not exceeding 95 deg F (35 deg C).

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: DOT Table 401-1, Type 7.
- D. Joint Sealant: Comply with NYSDOT, hot-applied, single-component, polymer-modified bituminous sealant.

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.

3.2 PATCHING

- A. Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches (300 mm) into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
- B. Tack Coat: Before placing patch material, apply tack coat uniformly to vertical asphalt surfaces abutting the patch. Apply at a rate of 0.05 to 0.15 gal./sq. yd. (0.2 to 0.7 L/sq. m). 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving. 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- C. Placing Patch Material: Partially fill excavated pavements with hot-mix asphalt binder mix and, while still hot, compact. Cover asphalt binder course with compacted, hot-mix surface layer finished flush with adjacent surfaces.

3.3 RESURFACING WITH ASPHALT CONCRETE

- A. Lay asphalt concrete top course in accordance with DOT Section 401-3.

END OF SECTION 320117

SECTION 321216 - ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cold milling of existing asphalt pavement.
2. Hot-mix asphalt patching.
3. Hot-mix asphalt paving.
4. Hot-mix asphalt overlay.

1.2 RELATED WORK

1. Section 312000: Earthwork.
2. Section 320117: Pavement Repair and Resurfacing
3. Section 321373: Concrete Paving Joint Sealants.

1.3 PREINSTALLATION MEETINGS

- ##### A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- ##### A. Product Data: For each type of product.
- ##### B. Sustainable Design Submittals:

1.5 INFORMATIONAL SUBMITTALS

- ##### A. Material Certificates: For each paving material. Include statement that mixes containing recycled materials will perform equal to mixes produced from all new materials.

1.6 QUALITY ASSURANCE

- ##### A. Manufacturer Qualifications: A paving-mix manufacturer registered with and approved by N.
- ##### B. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of NYSDOT for asphalt paving work.
1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

PART 2 - PRODUCTS

2.1 ASPHALT MATERIALS

- A. Asphalt Concrete Paving: Conform to NYSDOT Section 400 Hot Mix Asphalt.
 - 1. Top Coarse: NYSDOT, Table 403-1, Type 7.
 - 2. Binder Course: NYSDOT, Table 403-1, Type 3.
- B. Asphalt Cement Tack Coat
 - 1. Diluted Type, complying with NYSDOT Section 407, or approved equivalent.
- C. Stabilization/Separation Geotextile Fabric: Woven geotextile fabric, manufactured for separation applications, made from polypropylene, complying with AASHTO M 288.
 - 1. Mirafi 600X or approved equivalent.
- D. Asphalt Filler
 - 1. NYSDOT Table 702-2 Asphalt Cements, Material Designation 702-0700

2.2 AUXILIARY MATERIALS

- A. Recycled Materials for Hot-Mix Asphalt Mixes: Reclaimed asphalt pavement; reclaimed, unbound-aggregate base material; and recycled tires, asphalt shingles, or glass from sources and gradations that have performed satisfactorily in previous installations, equal to performance of required hot-mix asphalt paving produced from all new materials.
- B. Herbicide: Commercial chemical for weed control, registered by the EPA, and not classified as "restricted use" for locations and conditions of application. Provide in granular, liquid, or wettable powder form.

PART 3 - EXECUTION

3.1 COLD MILLING

- A. Clean existing pavement surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement by cold milling to grades and cross sections indicated.
 - 1. Mill to a depth of 1-1/2 inches or as indicated on Drawings.
 - 2. Patch surface depressions deeper than 1 inch after milling, before wearing course is laid.

3.2 PATCHING/PAVEMENT REPAIRS

- A. Asphalt Pavement Replacement: Saw cut perimeter of patch, providing adequate space to allow for a pavement key transition as indicated on Drawings. Excavate existing layers of asphalt pavement to existing subbase. Excavate rectangular or trapezoidal patches, extending 12 inches into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated asphalt layers and leave existing subbase in place. Regrade and compact existing subbase material as required to achieve proposed grades, adding additional, compacted subbase material, as required.
- B. Full Depth Asphalt Pavement Replacement: Saw cut perimeter of patch, providing adequate space to allow for a pavement key transition as indicated on Drawings. Excavate existing pavement section to sound subgrade. Excavate rectangular or trapezoidal patches, extending 12 inches into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically, remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
- C. Tack Coat: Before placing patch material, apply tack coat uniformly to vertical asphalt surfaces abutting the patch. Apply at a rate of 0.05 to 0.15 gal./sq. yd..
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- D. Placing Patch Material: Fill excavated pavement areas with hot-mix asphalt for full thickness of patch and, while still hot, compact flush with adjacent surface.

3.3 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
- B. Proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
- C. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.
- D. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd..
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.4 PLACING HOT-MIX ASPHALT

- A. Construct asphalt pavement in accordance with NYSDOT Section 402-3

- B. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
 - 1. Spread mix at a minimum temperature of 250 deg F.
 - 2. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- C. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
- D. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.5 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
 - 1. Clean contact surfaces and apply tack coat to joints.
 - 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
 - 3. Offset transverse joints, in successive courses, a minimum of 24 inches.
 - 4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."

3.6 COMPACTION

- A. General: Compact in accordance with NYSDOT Standard Specification referenced.
- B. Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
 - 1. Complete compaction before mix temperature cools to 185 deg F.
- C. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- D. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:

- E. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- F. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.7 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 - 1. Binder Course: Plus or minus 1/2 inch.
 - 2. Top Course: Plus 1/4 inch, no minus.
- B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
 - 1. Base Course: 1/4 inch.
 - 2. Top Course: 1/8 inch
 - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

3.8 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Replace and compact hot-mix asphalt where core tests were taken.
- C. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

3.9 WASTE HANDLING

- A. General: Handle asphalt-paving waste according to approved waste management plan and as specified in the Contract Documents.

END OF SECTION 321216

SECTION 321300: CONCRETE WALKS

PART 1 – GENERAL

1.1 SUMMARY

A. Work includes:

1. Concrete Paving.

1.2 RELATED WORK

- A. Section 312000: Earthwork.
- B. Section 321373: Concrete Paving Joint Sealants.

1.3 REFERENCES

- A. Comply with American Concrete Institute, ACI 301-05, for the Work of this Section unless otherwise indicated on the drawings or specified.

1.4 ACTION SUBMITTALS

A. Product Data:

1. Concrete Design Mix: Submit proposed concrete design mix together with name and location of batching plant at least 28 days prior to the start of concrete work.
2. Portland Cement: Brand and Manufacturer's name.
3. Air-entraining Admixture: Brand and manufacturer's name.
4. Water-reducing or High Range Water-reducing Admixture: Brand and manufacturer's name.
5. Curing and Anti-Spalling Compound: Manufacturer's specifications and application instructions.
6. Steel reinforcement and reinforcement accessories.

1.5 QUALITY ASSURANCE

- A. Concrete batching plants shall be currently approved as concrete suppliers by the New York State Department of Transportation.
- B. Performance Criteria: The following criteria are required for the products included in this section:

1. Cast-in-place Concrete shall contain post-industrial and/or post-consumer recycled content as follows:
 - a. Fly Ash: ASTM C618, including Table 1, except for footnote A, Class F, except loss on ignition shall not exceed 4.0 percent. Concrete shall incorporate fly ash as a replacement for 15 percent (by weight) of the Portland cement. All design mixes are subject to review and approval by the Director.
 - b. GGBF (Ground Granulated Blast Furnace) Slag: Concrete shall incorporate GGBF slag as a replacement for at least 20 percent (by weight) of the Portland cement. All design mixes are subject to review and approval by the Director.
 - c. Certification of recycled content shall be in accordance with the SUBMITTALS Article above.
 - d. Recycled Steel: Reinforcing bar, steel wire, welded wire fabric, and miscellaneous steel accessories shall contain a minimum of 35 percent (combined) post-industrial/post-consumer recycled content (the percentage of recycled content is based on the weight of the component materials).
2. Concrete manufactured within 500 miles (by air) of the project site shall be documented in accordance with the SUBMITTALS Article above.
3. Steel reinforcement manufactured within 500 miles (by air) of the project site shall be documented in accordance with SUBMITTALS Article above.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Cast-In-Place Concrete: Normal weight, air entrained concrete with a minimum compressive strength of 4,500 psi with a minimum of 611 pounds of cement per cubic yard, at the end of 28 days.
 1. Design Air Content: ASTM C 260, and on the New York State Department of Transportation's current "Approved List"; 6 percent by volume plus or minus 1.5 percent.
 2. Cement: ASTM C 150 Type I or II Portland cement. Minimum 6.5 bags or 611 pounds per cubic yard.
 3. Water: Potable.
 4. Slump: Maximum 4 inches; minimum 2 inches before the addition of any water-reducing admixtures or high-range water-reducing admixtures (superplasticizers) at the site. Except when a water-reducing admixture is used, maximum slump shall be 6 inches and when a high range water reducing admixture is used maximum slump shall be 8 inches.

5. Water-reducing Admixture: ASTM C 494 / C 494M-04 Type A and on the New York State Department of Transportation's current "Approved List".
 6. High Range Water-reducing Admixture: ASTM C 494 / C 494M-04 Type F and on the New York State Department of Transportation's current "Approved List".
 7. Retarding Admixture: ASTM C 494, Type D, Water-reducing and retarding, for use in hot weather concreting, and on the New York State Department of Transportation's current "Approved List".
- B. Chemical Curing and Anti-Spalling Compound: ASTM C-309, Type 1D, Class B, with minimum 18 percent total solids content. No thinning of material allowed. The volatile organic compound (VOC) content of concrete curing compounds shall meet requirements of the EPA national AIM VOC regulations.
1. Surebond SB700 by Surebond, Inc., 3925 Stern Ave., St. Charles, IL 60174 (800) 932-3343.
 2. SureCure Emulsion, Kaufman Products, Inc. 3811 Curtis Avenue, Baltimore, MD 21226, (800) 637-6372.
 3. Cure & Seal by Symons Corp., 200 East Touhy Ave., PO Box 5018, Des Plaines, IL 60017-5018, (847) 298-3200.
 4. Kure-N-Seal by Sonneborn/ BASF Building Systems, 889 Valley Park Dr., Shakopee, MN 55379, (800) 433-9517.
 5. Day-Chem Cure & Seal UV 26 percent (J-22 UV) by Dayton Superior Corp., 721 Richard St., Miamisburg, OH 45342, (800) 745-3700.
 6. Acrylseal HS by Master Builders/ BASF Building Systems, 23700 Chagrin Blvd., Cleveland, OH 44122, (800) 628-9990.
- C. Fabric Reinforcement: Flat sheets of 6 x 6 – W2.9 x W2.9 ASTM A 185, welded wire fabric, or as indicated on contract drawings.
- D. Type 1 Expansion Joint Filler: Preformed, resilient, nonextruding cork units complying with ASTM D 1752, Type II.

2.2 STEEL REINFORCEMENT

- A. Plain steel welded wire reinforcement: ASTM A 185/A185M, fabricated from as-drawn steel wire into flat sheets.
- B. Reinforcing bars: ASTM A 615/A615M, Grade 60; deformed.
- C. Plain Steel wire: ASTM A 82/A82M, as drawn.

- D. Epoxy coated, joint dowel bars: ASTM A 775/A 775M; with ASTM A 615/A 615M, Grade 60, plain steel bars.
- E. Tie bars: ASTM A 615/A 615M, Grade 60, deformed
- F. Bar Supports: Bolster, chairs, spacers, and other devices for spacing, supporting and fastening reinforcing bars, welded wire reinforcement, and dowel in place. Manufacturer bar supports according to CRSI's "Manual of Standard practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:
 - 1. For epoxy coated reinforcement, use epoxy coated or other dielectric polymer coated wire bar supports.
- G. Epoxy repair coating: liquid, two part epoxy repair coating, compatible with epoxy coating on reinforcement.
- H. Zinc repair materials: ASTM A 780.

2.3 JOINTS AND EMBEDDED ITEMS (Amendments to ACI 301, Section 5.3.2.6):

- A. Obtain bond at construction joints by the use of bonding agent (adhesive) or the use of cement grout.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Do not use items of aluminum for mixing, chuting, conveying, forming, or finishing concrete. However, magnesium alloy tools may be used for finishing.
- B. Set forms true to line and grade and anchor rigidly in position.
- C. Space expansion joints equally at not more than 20'-0" on center unless otherwise indicated. Place expansion joints to isolate sidewalk from other structures and fixed objects.
- D. Place joint filler at expansion joints and where new concrete abuts existing concrete paving and fixed structures or appurtenances. Protect the top edge of the joint filler during concrete placement with a temporary cap and remove after concrete has been placed.

3.2 PLACING REINFORCEMENT (Amendments to ACI 301, Section 3):

- A. At the time concrete is placed, reinforcement shall be free of mud, oil, loose rust, loose mill scale, and other materials or coatings that may adversely affect or reduce the bond.

- B. Unless otherwise shown differently on the Drawings, all reinforcement to be placed per ACI 301-05.

3.3 PLACING CONCRETE

- A. Consolidate concrete by spading, rodding, forking, or using an approved vibrator eliminating all air pockets, stone pockets, and honeycombing. Work and float concrete surface so as to produce a uniform texture.
- B. Locate construction joints, if any, at expansion joints.

3.4 FINISHING AND CURING

- A. Wait until bleeding is stopped before final finishing operations.
- B. Keep surface damp but not wet between initial strike off and final finish.
 - 1. Utilize a fog spray, evaporative inhibitor, or midrange water reducer that is compatible with supplementary cementing materials to help control the amount of surface drying of the fresh concrete.
- C. Use minimal working of the surface during finishing.
- D. Utilize a magnesium or wood float.
- E. Avoid the use of steel finishing trowels and utilize a concrete finishing machine when possible.
- F. Finish edges of walk and expansion and control joints with a 1/4 inch radius edging tool.
- G. Provide broom finish for walk surfaces.
- H. Apply curing and anti-spalling compound in accordance with the manufacturer's printed instructions.
- I. Apply curing immediately after final finish.
- J. Hot Weather Concreting: Comply with ACI 305R whenever the atmospheric temperature or the form surface temperature is at or above 90 degrees F. or climatic conditions of wind and/or low humidity will cause premature drying of the concrete.
- K. Curing Temperature: Maintain the temperature of the concrete at 50 degrees F. or above during the curing period. Keep the concrete temperature as uniform as possible and protect from rapid atmospheric temperature changes. Avoid temperature changes in concrete which exceeds 5 degrees F. in any one hour and 50 degrees F. in any 24-hour period.

- L. Provide tooled control joints $\frac{3}{4}$ -inch deep. Space control joints equally between expansion joints approximately 8'-0" on center, except where a different spacing is shown on the drawings.

END OF SECTION 321300

SECTION 321373 - CONCRETE PAVING JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Work includes:

1. Concrete Paving Joint Sealants.

1.2 RELATED WORK

- A. Section 321300: Concrete Walks.

1.3 ACTION SUBMITTALS

- A. Product Data: Catalog sheets, specifications, and installation instructions for each product specified except miscellaneous materials.

1.4 QUALITY ASSURANCE

- A. Container Labels: Include manufacturer's name, trade name of product, kind of material, federal specification number (if applicable), expiration date (if applicable) and packaging date or batch number.

1.5 PROJECT CONDITIONS

A. Environmental Conditions:

1. Temperature: Unless otherwise approved or recommended in writing by the sealant manufacturer, do not install sealants at temperatures below 40 degrees F or above 85 degrees F.
2. Humidity and Moisture: Do not install the Work under this Section under conditions that are detrimental to the application, curing and performance of the specified materials.

B. Protection:

1. Protect all surfaces adjacent to sealants with non-staining removable tape or other approved covering to prevent soiling or staining

PART 2 - PRODUCTS

2.1 SEALANTS

A. Type 1B Sealant:

1. For Horizontal Joints: One-part, self-leveling silicone or polyurethane sealant for traffic bearing construction; Bostik Chem-Calk 955-SL, Tremco Vulkem 45, Pecora Urexpan NR-201, Pecora 300-SL, Pecora 310-SL, Sika Sikaflex-1CSL, Dow Corning CCS.
2. For Vertical Joints: One-part, non-sag silicone or polyurethane sealant; Tremco Vulkem 116, Pecora Dynatrol I, Sika Sikaflex Textured Sealant, Dow Corning CCS or CWS, Pecora 301-NS, Pecora 311-NS.

2.2 JOINT FILLERS

- A. Cork Joint Filler: Resilient, non-extruding type premoulded cork units; ASTM D 1752 Type II.
- B. Closed Cell Polyurethane Joint Filler: Resilient, compressible, semi-rigid; W.R. Meadows' Ceramar or A.C. Horn's Closed Cell Plastic Foam Filler, Code 5401.

2.3 MISCELLANEOUS MATERIALS

- A. Joint Primer/Sealer/Conditioner: As recommended by the sealant manufacturer for the particular joint surface materials and conditions.
- B. Backer Rod: Compressible rod stock or expanded, extruded polyethylene.
- C. Bond Breaker Tape: Polyethylene or other plastic tape as recommended by the sealant manufacturer; non-bonding to sealant.
- D. Cleaning Solvents: Oil free solvents as recommended by the sealant manufacturer. Do not use re-claimed solvents.
- E. Masking Tape: Removable paper or fiber tape, self-adhesive, non-staining.

2.4 COLOR OF MATERIALS

- A. For exposed materials furnish color as indicated, or if not indicated, as selected by the Director from the manufacturer's standard colors. For concealed materials, provide the natural color which has the best overall performance characteristics.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Clean joint surfaces immediately before installation of sealant and other materials specified in this Section.
 - 1. Remove all loose materials, dirt, dust, rust, oils and other foreign matter that will impair the performance of materials installed under this Section. When necessary or when directed, wire brush, grind, or acid etch to thoroughly clean joint surfaces.

3.2 JOINT FILLER INSTALLATION

- A. Set joint fillers at proper depth and position as required for installation of bond breakers, backer rods and sealants. Do not leave voids or gaps between the ends of joint filler units.
 - 1. Smooth Edged Joints: For joints between two concrete slabs or where new concrete abuts smooth edged materials use either filler as specified.
 - 2. Irregular Edged Joints: For joints where new concrete abuts granite curbs or other irregular edges use closed cell polyurethane joint filler

3.3 BACKER ROD AND BOND BREAKER TAPE INSTALLATION

- A. Install bond breaker tape in relaxed condition as it comes off the roll. Do not stretch the tape. Lap individual lengths.
- B. Provide backer rod of sufficient size to fill the joint width at all points in a compressed state. Compress backer rod at the widest part of the joint by a minimum of 25 percent. Do not cut or puncture the surface skin of the rod.

3.4 SEALANT INSTALLATION

- A. Except as shown or specified otherwise, install sealants in accordance with the manufacturer's printed instructions.
- B. Prime joint surfaces which are to receive Type 1A Sealant. Do not allow the primer to spill or migrate onto adjoining surfaces.
- C. Apply sealant with ratchet hand gun or other approved mechanical gun. Where gun application is impractical, apply sealant by knife or by pouring as applicable.
- D. Finishing: Tool all vertical, non-sag sealants so as to compress the sealant and eliminate air voids. Provide a neat smoothly finished joint with a slightly concave surface unless otherwise indicated or recommended by the manufacturer.
 - 1. Use tool wetting agents as recommended by the sealant manufacturer.

3.5 CLEANING

- A. Immediately remove misapplied sealant and drippings from metal surfaces with solvents and wiping cloths. On other materials, remove misapplied sealant and droppings by methods and materials recommended in writing by the manufacturer of the sealant material.
- B. After sealants are applied and before skin begins to form on sealant, remove all masking and other protection and clean up any remaining defacement caused by the Work.

END OF SECTION 321373

SECTION 321723 - PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes painted markings applied to asphalt and concrete pavement.
- B. Vehicle pavements requiring markings include but are not limited to the following:
 - 1. Parking lot layouts
 - 2. Student drop-off areas
 - 3. Campus roads

1.2 DEFINITIONS (Not Used)

1.3 RELATED WORK

- A. Section 321216: Asphalt Paving

1.4 INFORMATIONAL SUBMITTALS

- A. Provide material certificates for paint materials
- B. Submit shop drawings of the proposed pavement markings for all locations. Include layout drawing of markings, installed angle measurement when markings are installed different from a right angle or parallel, and spacing between stall markings.

1.5 QUALITY ASSURANCE

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver pavement-marking materials to Project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage. B. Store pavement-marking materials in a clean, dry, protected location within temperature range required by manufacturer. Protect stored materials from direct sunlight.

1.7 FIELD CONDITIONS

- A. Install pavement markings when pavement surface is dry and the surface temperature is within the manufacture's guidelines.

- B. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Owner's Representative.
- C. Allow paving to age for 30 days before starting pavement marking.
- D. Sweep and clean surface to eliminate loose material and dust.
- E. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils (0.4 mm).

1.8 PRE-INSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Paint: NYSDOT Section 640-2.
 - 1. Paint Manufacturers
 - a. Aexcel Corp., www.aexcelcorp.com,
 - b. Sherwin-Williams, www.swpavementmarkings.com,
 - c. Franklin Paint Company, Inc., www.franklinpaint.com, or
 - d. approved equivalent.
 - 2. Color: As indicated on Drawings.

2.2 PAVEMENT-MARKING PAINT

- A. Pavement-Marking Paint: MPI #32, alkyd traffic-marking paint.
 - 1. Color: As indicated on Drawings.
- B. Pavement-Marking Paint: MPI #97, latex traffic-marking paint.
 - 1. Color: As indicated on Drawings.

PART 3 - EXECUTION

3.1 PAVEMENT MARKING

- A. Mark layout of stripes and lines with chalk or other temporary marking, and notify Owner's Representative for approval.

- B. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Owner's Representative.
- C. Allow paving to age for a minimum of 30 days before starting pavement marking. Request approval from Owner's Representative if applying pavement paints before end of pavement aging period.
- D. Sweep and clean surface to eliminate loose material, dust, and other foreign material detrimental to paint adhesion.
- E. Follow NYSDOT Section 635 – Cleaning and Preparation of Pavement Surfaces For Pavement Markings to remove all types of pavement markings prior to application. Removal of existing pavement markings shall result in complete removal of the existing markings without physically damaging the existing pavement to remain.
- F. Apply paint in accordance with NYSDOT Section 640-3.02.
- G. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.
 - 1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils. Apply paint so that it cannot run beneath the stencil.

END OF SECTION 321723

SECTION 321726 - TACTILE WARNING SURFACING

PART 1 - GENERAL

1.1 SUMMARY

- A. Work includes:
 - 1. Detectable warning surfacing.

1.2 RELATED WORK

- A. Section 321216: Asphalt Paving.
- B. Section 321300: Concrete Walks

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for each type of exposed finish requiring color selection.

PART 2 - PRODUCTS

2.1 TACTILE WARNING SURFACING, GENERAL

- A. Accessibility Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for tactile warning surfaces.
 - 1. For tactile warning surfaces composed of multiple units, provide units that when installed provide consistent side-to-side and end-to-end dome spacing that complies with requirements.

2.2 DETECTABLE WARNING MAT

- A. Manufacturer: Neenah Enterprise Inc. Neenah WI. Or approved equivalent.

2.3 ACCESSORIES

- A. Sealant: As recommended by manufacturer for sealing perimeter of tactile warning surfacing unit.

PART 3 - EXECUTION

3.1 INSTALLATION OF TACTILE WARNING SURFACING

- A. General: Prepare substrate and install tactile warning surfacing according to manufacturer's written instructions unless otherwise indicated.
- B. Place tactile warning surfacing units in dimensions and orientation indicated. Comply with location requirements of AASHTO MP 12.
- C. Set each detectable warning unit accurately and firmly in place and completely seat tile back and embedments in wet concrete by tamping or vibrating. Set surface of tile flush with surrounding concrete and adjacent tiles. Remove concrete from tile surfaces and clean using methods recommended in writing by manufacturer.
- D. Remove and replace tactile warning surfacing that is broken or damaged or does not comply with requirements in this Section. Remove in complete sections from joint to joint unless otherwise approved by Architect. Replace using tactile warning surfacing installation methods acceptable to Architect.
- E. Protect tactile warning surfacing from damage and maintain free of stains, discoloration, dirt, and other foreign material.

END OF SECTION 321726

SECTION 323219 - UNIT MASONRY RETAINING WALL

PART 1 - GENERAL

1.1 SUMMARY

- A. This work consists of all labor, materials, and equipment necessary to provide for the unit masonry retaining wall construction and installation at the project site as shown on the drawings and in conformance with the project specifications.

1.2 RELATED WORK

- 1. Section 321000 - Earthwork
- 2. Section 329113 - Soil Preparation

1.3 REFERENCES (NOT USED)

1.4 DEFINITIONS (NOT USED)

1.5 SUBMITTALS

- A. Latest edition of manufacturer's specifications for proposed materials, method of installation and list of material proposed for use.
- B. The design of the wall stamped by a registered, licensed professional engineer.
- C. Color and finish option chart.
- D. Test Section
 - 1. A full height one (1) 8 foot long section mock-up section of wall shall be built and approved by the Owner's Representative prior to continuing with wall construction.

1.6 QUALITY ASSURANCE

- A. Reference Standards: The latest edition of the following standards shall be applicable. Where references conflict, the most restrictive or most costly standard shall apply.
 - 1. ASTM C90 – 85 Hollow Load Bearing Masonry Units.
 - 2. ASTM C140 – 75 Sampling and Testing Concrete Masonry Units
 - 3. ASTM C145 – 85 Solid Load Bearing Concrete Masonry Units
- B. The Contractor shall have a NYS licensed professional engineer provide stamped drawings of the proposed wall system for approval by Owner's Representative prior to construction.
- C. The Contractor shall identify and notify the Owner's Representative of any manufacturer's recommendations which deviate from the requirements of the Contract Documents.

- D. All activities, products, materials, fabrications and installation procedures, and operations are subject to inspection and test at the plant, fabrication shop and field. Testing shall be conducted by the Owner approved Testing and Inspection Agency. Inspections and testing that comply with the documents does not relieve Contractor of his responsibility for providing materials and fabrication procedures in compliance with Contract Documents.
- E. The methods, materials, and systems specified herein are required for installation, placement, and supplying of new systems, products and materials. All systems, materials and products specified are intended to be “new” systems, materials and products and not used or salvaged items, unless otherwise indicated herein.
- F. Where new products abut new and or existing surfaces, buildings and structures, the Contractor shall assure proper horizontal and vertical alignment are obtained. This may require that the Contractor obtain additional clarification and or coordination from the Owner’s Representative prior to any installation.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Contractor shall check the materials upon delivery to assure proper material has been received.
- B. Contractor shall prevent excessive mud, wet cement and like materials from coming in contact with the SRW units.
- C. Contractor shall protect the materials from damage. Damaged material shall not be incorporated in the project.

PART 2 - MATERIALS

2.1 WALL UNITS

- A. Wall units shall be the following:
 - 1. Company: Redi-Rock
Unit Type: R-419B, R-419M, R-41T
Supplier: Carroll Concrete / Redi-Rock Walls of New England
Reeds Mill Road
New Port New Hampshire, 03773
 - 2. Or Approved Equal
- B. Exterior face finish shall be textured
- C. Color: Cobblestone – Stacked Stone Texture
- D. Exterior block dimensions shall be uniform and consistent. Maximum dimensional deviations on the height of any two units shall be 0.125 in.
 - 1. TOP BLOCK (CAP)
Dimension = 18” (H) x 40-1/2” (D) x 46-1/8” (L)
Dimension = 18” (H) x 35-1/8” (D) x 46-1/8” (L)
Weight = +/- 1748 lbs

2. MIDDLE BLOCK(S)
 Dimension = 18" (H) x 40-1/2" (D) x 46-1/8" (L)
 Dimension = 18" (H) x 35-1/8" (D) x 46-1/8" (L)
 Weight = +/- 2319 lbs

3. BOTTOM BLOCK(S)
 Dimension = 18" (H) x 40-1/2" (D) x 46-1/8" (L)
 Dimension = 18" (H) x 35-1/8" (D) x 46-1/8" (L)
 Weight = +/- 2319 lbs

F. The block units are manufactured from structural-grade concrete mixes in accordance with ASTM C94 or ASTM C685 that produce a finished unit with excellent resistance to freeze-thaw, deicing chemical exposure, and submerged conditions in both fresh water and salt water applications.

1. Require a current passing ASTM C1262 or equivalent governing standard or public authority, test report from material supplier in northern or cold weather climates.

2. See the Best Practices for SRW Design document for detailed information on freeze thaw durability testing criteria and regional temperature and exposure severity figures and tables to define the appropriate zone and requirements for the project.

2.2 WALL ROCK

- A. Material must be well-graded compactable aggregate, 0.25 in. to 1.5 in., with no more than 10% passing the #200 sieve. (ASTM D422). Material behind and within the blocks may be the same material.

2.3 INFILL SOIL

- A. Infill material specified on the drawings. Unsuitable soils for backfill (heavy clays or organic soils) shall not be used in the reinforced soil mass. Fine grained cohesive soils with friction angle (ϕ) less than 31 degrees with a PI ranging between 6 and 20 and LL from 30 to 40, may be used in wall construction, but additional backfilling, compaction and water management efforts are required. Poorly graded sands, expansive clays and/or soils with a plasticity index (PI) greater than 20 or a liquid limit (LL) greater than 40 should not be used in wall construction.

- B. The infill soil used must meet or exceed the designed friction angle and description noted on the design cross sections, and must be free of debris and consist of one of the following inorganic USCS soil types: GP, GW, SW, SP, GP-GM or SP-SM meeting the following gradation as determined in accordance with ASTM D422.

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch (25 mm)	100 – 75
No. 4 (4.75 mm)	100 – 20
No. 40 (0.425 mm)	0 - 60
No. 200 (0.075 mm)	0 - 35

- C. Where additional fill is required, contractor shall submit sample and specifications to the wall design engineer or the onsite soils engineer for approval and the approving

engineer must certify that the soils proposed for use has properties meeting or exceeding original design standards.

2.4 LEVELING PAD AND FREE DRAINING BACKFILL

- A. Leveling pad shall be crushed stone. See detail sheet defining Leveling Pad options for drain placement in the bottom of the foundation leveling pad.
- B. Free Draining Backfill material shall be washed stone and shall be placed to a minimum of 1' width behind the back of the wall and shall extend vertically from the Leveling Pad to an elevation 4" below the top of wall.
- C. Backfill material shall be approved by the Engineer. Site excavated soils may be used if approved unless otherwise specified in the drawings. Unsuitable soils with a PL>6, organic soils and frost susceptible soils shall not be used within a 1 to 1 influence area.
- D. Non-woven geotextile cloth shall be placed between the Free Draining Backfill and retained soil.
- E. Where additional fill is needed, Contractor shall submit sample and specifications to the Engineer for approval.

2.5 DRAINAGE

- A. Internal and external drainage shall be evaluated by the Professional Engineer who is responsible for the final wall design.

PART 3 - CONSTRUCTION OF WALL SYSTEM

3.1 EXCAVATION

- A. Contractor shall excavate to the lines and grades shown on the construction drawings. Contractor shall verify locations of existing structures and utilities prior to excavation and ensure all surrounding structures are protected from the effects of wall excavation.

3.2 FOUNDATION SOIL PREPARATION

- A. Foundation soil shall be excavated as dimensioned on the plans and compacted to a minimum of 95% of Standard Proctor (ASTM D698) prior to placement of the base material.
- B. Native foundation soil shall be compacted in accordance with the Drawings and Section 310000 prior to placement of the Leveling Pad material.
- C. In-situ foundation soil shall be examined by the Engineer to ensure that the actual foundation soil strength meets or exceeds assumed design strength. Soil not meeting the required strength shall be removed and replaced with acceptable, compacted material.

3.3 LEVELING PAD PLACEMENT

- A. Base material shall be installed on undisturbed native soils or suitable replacement fills compacted to a minimum of 95% Standard Proctor (ASTM D698).
- B. Base shall be compacted at 95% Standard Proctor (ASTM D698) to provide a level hard surface on which to place the first course of blocks. The base shall be constructed to ensure proper wall embedment and the final elevation shown on the plans. Well-graded crushed stone can be used to smooth the top 3/8 in. (13 mm) on the base material.
- C. Base material shall be a 12 in. (100 mm) minimum depth for walls under 8 ft.
- D. Leveling Pad shall be placed as shown on the construction drawings.
- E. Leveling Pad shall be placed on undisturbed native soils or suitable replacements fills.
- F. Leveling Pad shall be compacted to ensure a level, hard surface on which to place the first course blocks. Pad shall be constructed to the proper elevation to ensure the final elevation shown on the plans.
- G. Leveling Pad shall have a 12 inch minimum depth for walls under 8 feet in height Pad dimensions shall extend beyond the blocks in all directions to a distance at least equal to the depth of the pad or as designed by Engineer.

3.4 UNIT INSTALLATION

- A. The first course of wall units shall be placed on the prepared Leveling Pad with the aesthetic surface facing out and the front edges tight together. All units shall be checked for level and alignment as they are placed.
- B. Ensure that units are in full contact with Leveling Pad. Proper care shall be taken to develop straight lines and smooth curves on base course as per wall layout.
- C. The backfill in front and back of entire base row shall be placed and compacted to firmly lock them in place. Check all units again for level and alignment. All excess material shall be swept from top of units.
- D. Install next course of wall units on top of base row. Blocks shall be placed fully forward so knob and groove are engaged. Check each block for proper alignment and level. Backfill to 24 inch width behind block with ¾" crushed stone. Employ methods using lightweight compaction equipment that will not disrupt the stability or batter of the wall. Hand-operated plate compaction equipment shall be used around the block and within 3 feet of the wall to achieve consolidation. Compact backfill to 95% of standard proctor (ASTM D 698, AASHTO T-99) density within 2% of its optimum moisture content.
- E. Install each subsequent course in like manner. Repeat procedure to the extent of wall height.
- F. All walls shall be installed in accordance with local building codes and requirements.

END OF SECTION 323219

SECTION 329113 - SOIL PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section for planting soil mixes.

1.2 RELATED WORK

- A. Section 311000: Site Clearing
- B. Section 329200: Turf and Grasses
- C. Section 329300: Plants

1.3 DEFINITIONS

- A. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.
- B. Imported Soil: Soil that is transported to Project site for use.
- C. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
- D. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- E. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- F. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- G. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- H. USCC: U.S. Composting Council.

1.4 PRE-INSTALLATION MEETINGS (NOT USED)

1.5 SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include test data substantiating that products comply with requirements.
 - 2. Include sieve analysis for aggregate materials.
- B. Samples: For each bulk-supplied material in sealed containers labeled with content, source, and date obtained; providing an accurate representation of composition, color, and texture.
- C. Soil Chemistry, Mechanics and Physical Analysis Test: Prior to mixing, take soil samples and have soil test performed for the proposed topsoil. Provide Owner's Representative with report of results of test as described herein.
 - 1. Required Tests: One Chemical Analysis, including PH, one Mechanical Analysis, and one Physical Test specified hereunder of each sample.
 - 2. Required Sample: Six total samples are required. Each sample shall be taken from three different locations of each proposed topsoil, whether imported and/or existing in stockpile on site. Retest imported topsoil until an acceptable topsoil is achieved.
 - a. Three samples of existing topsoil, whether in stockpile or in place on site.
 - b. Three samples of proposed supplemental topsoil to be imported to the site.
- D. Soil Test Results: Bind all test results into a report, label as existing or supplemental topsoil, label the source of the topsoil, and number of samples. Submit the following:
 - 1. Chemical Analysis: A full chemical analysis of the soil including the pH, cation exchange capacity, Organic Matter, phosphorous, total and available potassium, essential nutrients, trace elements, and any harmful residual chemicals.
 - a. On topsoil which has had crops grown on it at any time during the last two years, provide test result for triazine and di-nitro-aniline herbicides.
 - b. On soil which is taken from a location within 200 feet of a road, provide a test for soluble salts.
 - 2. Mechanical Analysis: A mechanical analysis giving content by percent of clay, silt, and sand.
 - 3. Soil Physical Analysis: A physical analysis giving bulk density, hydraulic conductivity, infiltration rate and moisture holding capacity.
 - 4. Lab Recommendations: Provide Testing Laboratory's recommendations for amending and fertilizing the soil, as well as any toxicity comments.
- E. Topsoil Data: Submit to the Owner's Representative location of all properties from which the topsoil is to be obtained, approximate quantities from each, crops grown on soil in prior 3 years, and name of herbicides used.
- F. Topsoil Sample: Prior to preparation of planting soil mix, the Landscape Architect may require the installer to provide a topsoil sample.
- G. Soil Mix Materials: Submit one-quart sized plastic container with specified soil mix ingredients, such as sand, organic matter, other soil conditioners, etc.

- H. Fill Material: Submit product data consisting of certification that each material proposed for use complies with specified requirements.
- I. Manufacture's Data and Installation Guidelines: Prior to preparation of soil mix, provide manufacture's data for fertilizers, amendments or adjusters, etc.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and 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. Do not move or handle materials when they are wet or frozen.
 - 4. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

1.7 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent, state-operated, or university-operated laboratory; experienced in soil science, soil testing, and plant nutrition; with the experience and capability to conduct the testing indicated; and that specializes in types of tests to be performed.

PART 2 - PRODUCTS

2.1 PLANTING SOILS SPECIFIED BY COMPOSITION

- A. Supplemental Topsoil: A sandy loam (According to USDA Textures), fertile natural topsoil, from A Horizon or Stratum 1, typically of the locality and without mixture of subsoil, having a pH of 6.3 to 7.0. Clay soils shall not be acceptable. Soil shall be free of lumps, stones, debris, foreign material and noxious weeds. "Supplemental Topsoil" means all topsoil imported to the site which is required to meet finish grades shown. Supplemental Topsoil shall be pulverized prior to spreading.
 - 1. Sources: Take imported, unamended soil from sources that are naturally well-drained sites where topsoil occurs at least 4 inches deep, not from bogs or marshes; and that do not contain undesirable organisms; disease-causing plant pathogens; or obnoxious weeds and invasive plants including, but not limited to, quackgrass, johnsongrass, poison ivy, nutsedge, nimblewill, Canada thistle, bindweed, bentgrass, wild garlic, ground ivy, perennial sorrel, and bromegrass.

2. Additional Properties of Imported Soil before Amending: Soil reaction of pH 6.3 to 7 and a range of 4 to 6 percent organic-matter content, friable, and with sufficient structure to give good tilth and aeration.
 3. Unacceptable Properties: Clean soil of the following:
 - a. Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
 - b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of 6 percent by dry weight of the imported soil.
 - c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 2 inches in any dimension.
 4. If soil test results for Supplemental Topsoil do not meet the above requirements, provide test results for alternate soils.
 5. If soil test results for accepted soil do not meet the above requirements, provide all amendments specified by Landscape Architect, including sand, pH adjusters, fertilizer, gypsum, organic matter and all other amendments according to the Landscape Architect's recommendation.
- B. Stockpiled and On-Site Topsoil: Soil shall be free of lumps, stones, debris and noxious weeds. Meet above requirements for Supplemental Topsoil by amending soil prior to placement.
- C. Subgrade Fill Material: Suitable subgrade fill material shall be used only if required to fill in voids left by the Contractor.
1. Suitable Subgrade Fill Material: See Earthwork Specification 312000
- D. Topsoil for Turf Areas: Topsoil amended for texture, pH and fertility after analysis by Landscape Architect of soil test results and laboratory recommendations.
- E. Planting Soil Mix: All planting beds shall be backfilled with one the planting soil mix specified herein. All the specified soil mixes shall be adjusted with soil amendments to adjust pH and thoroughly mixed by hand or mechanical means prior to placement.
1. Soil Mix #1: Use a soil mix of three parts Stockpile and On-site or Supplemental Topsoil, and one-part coarse sand. Add 1-inch pine bark organic matter after placement, and rake into top layer of soil.
 2. Rain Garden Mix: For plants within limits of the rain garden, use 50% to 70% sand, 30% to 50% Supplemental Topsoil.

2.2 INORGANIC SOIL AMENDMENTS

- A. pH Adjustment: Adjustments to soil pH shall be pursuant to soil test results to achieve a slightly acid soil. Multiple applications may be required.
- B. 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 a No. 8 sieve and a minimum of 75 percent passing through a No. 60 sieve.

- C. Sulfur: Granular, biodegradable, and containing a minimum of 90 percent elemental sulfur, with a minimum of 99 percent passing through a No. 6 sieve and a maximum of 10 percent passing through a No. 40 sieve.
 - 1. Do not apply more than 5 pounds per 1000 square feet in any one application.
 - 2. Follow manufacturer's instructions, including for temperature at time of application.
 - 3. When applying to turf which is in place, provide core aeration prior to treatment.
- D. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through a No. 50 sieve.
 - 1. Gypsum may be required for heavy clay soils or those with high sodium content and low organic matter. The minimum application allowed is 175 pounds per 1,000 square feet. If possible, apply gypsum to subgrade surface and lower lift of topsoil and mix with topsoil as it is being placed.
- G. Sand: Clean, washed, natural or manufactured, free of toxic materials, and according to ASTM C 33, with a pH of 6.0 to 6.5.

2.3 ORGANIC SOIL AMENDMENTS

- A. Organic Matter: One of the following soil amendments, mixed so that the finished soil mix, after the addition of sand, contain organic matter of at least 5% and no more than 10%. In most instances, the added organic matter shall be pine bark fines.
 - 1. Pine Bark Fines: Horticultural grade, finely shredded southern pine bark fines with particle size varying between 3/8" to 3/4" with cambium and wood fiber removed.
 - 2. One-Step Soil Conditioner: A soil conditioner consisting of mycorrhizae, ground southern yellow pine bark fines, composted rice hulls and organic compost with nutrients and supplements to improve soil condition. Apply soil conditioner at the rate of 3" deep across surface of all plant beds and tree pits and work into soil.
 - 3. Sphagnum Peat: Finely shredded, homogenous, partially decomposed fibrous or cellular stem and leaves, consisting of 90% organic peat moss, brown in color and suitable for horticultural purposes, free of decomposed colloidal residue lumps, roots, stones and other foreign matter. Shredded particles shall not exceed 1/4" in diameter. Peat shall be measured in air dry condition, containing not more than 35% moisture by weight. Ash content shall not exceed 10%.

2.4 FERTILIZERS

- A. 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: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.

- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.

PART 3 - EXECUTION

3.1 GENERAL

- A. Place planting soil and fertilizers according to requirements in other Specification Sections.
- B. 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 planting soil.
- C. Proceed with placement only after unsatisfactory conditions have been corrected
- D. Follow recommendations in “Specifications for Subsoil Preparation Where Topsoil Is To Be Added”, Specifications for Topsoil Material and Application, and “Specifications for Fertilizer pH Correction Materials and Final Soil Preparation” sections in TPI’s “Guideline Specifications to Turfgrass Sodding.”

3.2 PLACING AND MIXING PLANTING SOIL OVER EXPOSED SUBGRADE

- A. General: Apply and mix unamended soil with amendments on-site to produce required planting soil mixes. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. Subgrade Preparation: Till subgrade to a minimum depth of 4 inches. Remove stones larger than 2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off site.
- C. Mixing: Spread unamended soil to total depth of 4 inches, but not less than required to meet finish grades after mixing with amendments and natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
 - 1. Amendments: Apply soil amendments and fertilizer, if required, evenly on surface, and thoroughly blend them with unamended soil to produce planting soil.
 - a. Mix lime and or sulfur with dry soil before mixing fertilizer.
 - b. Mix fertilizer with planting soil no more than seven days before planting.
 - 2. Lifts: Apply and mix unamended soil and amendments in lifts not exceeding 4 inches in loose depth for material compacted by compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.
- D. Placing Topsoil for Turf Areas and Planting Soil Mixes: See plans for locations and conditions.

1. Install Stockpiled, On-site or Supplemental Topsoil to the following depths:
 - a. Landscape Areas: 4-inch compacted depth
 2. Install amended Planting Soil Mix to the following depths:
 - a. Shrubs: Backfill material
 - b. Perennial Beds: 6-inch minimum
 - c. Tree Pits: Backfill material
- E. Compaction: Compact each blended lift of planting soil to 85 percent of maximum Standard Proctor density according to ASTM D 698 and tested in-place.
- F. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Perform the following tests and inspections:
1. Compaction: Test planting-soil compaction after placing each lift and at completion using a densitometer or soil-compaction meter calibrated to a reference test value based on laboratory testing according to ASTM D 698. Space tests at no less than one for each 2000 sq. ft. of in-place soil or part thereof.
 2. Perform Testing: For each amended planting-soil type, demonstrating compliance with specified performance requirements. Perform testing according to “Soil-Sampling Requirements” and “Testing Requirements” articles.
- C. Soil will be considered defective

3.4 PROTECTION AND CLEANING

- A. Tree Protection Zone: Tree protection zones shall be established from the base of the tree by measuring the diameter at breast height (DBH), times 12 inches. (DBH x 12”)
- B. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
1. Storage of construction materials, debris, or excavated material.
 2. Parking vehicles or equipment.
 3. Vehicle traffic.
 4. Foot traffic.
 5. Erection of sheds or structures.
 6. Impoundment of water.
 7. Excavation or other digging unless otherwise indicated.
- C. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.

1. Dispose of excess subsoil and unsuitable materials off-site in an approved landfill.

END OF SECTION 329113

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 SUMMARY

- A. Work includes:
 - 1. Seeding.
 - 2. Sodding.
 - 3. Erosion Control Blankets.

1.2 RELATED WORK

- A. Section 329113: Soil Preparation.
- B. Section 310101: Site Restoration
- C. Section 312500: Erosion and Sediment Control.

1.3 DEFINITIONS

- A. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- B. 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. See Section 329113 "Soil Preparation" and drawing designations for planting soils.

1.4 PRE-INSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.

1.5 INFORMATIONAL SUBMITTALS

- A. Certification of grass seed.
 - 1. Certification of each seed mixture for turfgrass sod.

- B. Product certificates.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful turf establishment.
 - 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
 - 2. Personnel Certifications: Installer's field supervisor shall have certification in one of the following categories from the Professional Landcare Network:
 - a. Landscape Industry Certified Technician - Exterior.
 - b. Landscape Industry Certified Lawncare Manager.
 - c. Landscape Industry Certified Lawncare Technician.
 - 3. Pesticide Applicator: State licensed, commercial.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other 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, as applicable.
- B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding". Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.

1.8 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 SEED

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.

B. Grass-Seed Mix:

1. 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.
2. 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.
3. Provide the following seed mixture:

A = Min. Percentage of Germination

B = Min. Purity Percentage

C = Weight Pure Live Seed in Mixture

SEED MIX "A"

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	55
Perennial Ryegrass ** (Lolium perenne)	Manhattan II, Pennfine, York- town II, or an approved equal.	90	98	20

SEED MIX "F" - WILDFLOWER/RESTORATION EROSION MIX

Name	Variety	A	B	C
Red Fescue (Festuca rubra)	Commercial	92	98	42
Annual Ryegrass (Lolium multiflorum)	Commercial	98	97	41
Queen Anne's Lace ** (Daucus carota)	Commercial	---	---	1
Yarrow ** (Achillea millefolium)	Commercial	---	---	1
Ox-eye Daisy ** (Chrysanthemum leucanthemum)	Commercial	78	99	1
Smartweed ** (Polygonum pensylvanicum)	Commercial	---	---	1
Red Top (Agrostis alba)	Commercial	93	98	4
Bird's-foot Trefoil * (Lotus corniculatus)	Commercial	67	95	8
New England Aster ** (Aster novae-angliae)	Commercial	82	95	1

2.2 TURFGRASS SOD

- A. Turfgrass Sod: Certified, complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture that is strongly rooted and capable of vigorous growth and development when planted.

- B. Sod: Turf sod containing 95 percent pure permanent dense growth Kentucky Blue and fine leaved Fescue grasses. Color, leaf texture, and density shall be uniform. Sod shall be free of diseases, nematodes, and insects.
 - 1. Mowed Height When Harvested: 1-1/2 to 2-1/2 inches.
 - 2. Thatch: Maximum 1/2 inch.
 - 3. Weeds:

- a. Free of Bermuda grass, quack grass, Johnson grass, poison ivy, nut sedge, nimble will, Canada thistle, bind weed, bent grass, wild garlic, ground ivy, perennial sorrel, and brome grass.
- b. Containing less than 5 jimson weed, mustard, lamb's quarter, chick weed, cress, or crab grass plants per 100 sq ft.

2.3 FERTILIZERS

- A. 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: 10 percent nitrogen, 6 percent phosphorous, and 4 percent potassium, by weight.
 2. Apply at rate of 40 lbs per 1,000 sq. ft.

2.4 MULCHES

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.
- B. Sphagnum Peat Mulch: Partially decomposed sphagnum peat moss, finely divided or of granular texture, and with a pH range of 3.4 to 4.8.

2.5 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.

PART 2 - EXECUTION

3.1 TURF AREA PREPARATION

- A. General: Prepare planting area for soil placement and mix planting soil according to Section 329113 "Soil Preparation."
- B. Reduce elevation of planting soil to allow for soil thickness of sod.
- C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

- D. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.2 SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.
 - 1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
 - 2. Do not use wet seed or seed that is moldy or otherwise damaged.
 - 3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.
- B. Application Rates:
 - 1. Seed Mix A: 5 lbs. per 1,000 sq. ft.
 - 2. Seed Mix F: 47 lbs per acre @ ration of 42 pounds grass seed mix; 4 pounds legume, 1-pound perennial wildflowers.
- C. Dry Application: Sow seed evenly by hand or seed spreader on dry or moderately dry soil. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.
 - 1. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly to form a continuous blanket 2 inches in loose thickness over seeded areas.
 - 2. Anchor straw mulch by crimping into soil with suitable mechanical equipment.
- D. Hydro Application:
 - 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 of material remaining in tank.
 - 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.
 - 4. Apply approved mulch in accordance with the manufacturer's written instructions and recommended rates of application.

- E. Protect seeded areas from hot, dry weather or drying winds by applying peat mulch within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch, and roll surface smooth.

3.3 EROSION CONTROL BLANKET

- A. Erosion Control Blanket: Within one day after seeding, cover sloped areas with a uniform blanket of erosion control blanket. Apply approved blanket in accordance with the manufacturer's written instructions and where indicated on the Drawings. Do not apply straw mulch in area that erosion control blanket will be covering.
- B. Stakes: Install approved stakes in accordance with the manufacturer's written instructions.

3.4 SODDING

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Protect sod against dehydration, contamination, and heating during transportation and delivery.
- C. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
 - 1. Lay sod as indicated on Drawings.
 - 2. Anchor sod on slopes exceeding 1:6 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than two anchors per sod strip to prevent slippage.
- D. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.
- E. Protect newly installed sod against vehicular traffic.
- F. Maintain the sod at heights between 1-1/2 and 2-1/2 inches.
- G. Replace sod in areas which show bare spots, deterioration, or is otherwise deemed unacceptable by the Owner's Representative.

3.5 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll,

regrade, and replant bare or eroded areas and mulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.

- B. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings.

3.6 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by Owner's Representative:
 - 1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
 - 2. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.
- B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

END OF SECTION 329200

SECTION 329300 - PLANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Work includes:
 - 1. Plants, mulch, edging material and other landscape planting support items.
 - 2. Landscape edgings.

1.2 RELATED WORK

- A. Section 329200: Turf and Grasses
- B. Section 329113: Soil Preparation.

1.3 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. 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.
- C. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and fertilizers to produce a soil mixture suitable for plant growth. See Section 329113 "Soil Preparation for drawing designations for planting soils.
- D. 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.

1.4 PRE-INSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples of each type of mulch.

1.6 INFORMATIONAL SUBMITTALS

- A. Product certificates for fertilizer and nutrient additives

1.7 CLOSEOUT SUBMITTALS (NOT USED)

1.8 QUALITY ASSURANCE

- A. Pesticide Applicator: New York State licensed commercial applicators certificate required
- B. Provide documentation of quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver bare-root stock plants within 72 hours of digging. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting. Transport in covered, temperature-controlled vehicles, and keep plants cool and protected from sun and wind at all times.
- B. Do not prune trees and shrubs 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 or shrubs 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.
- C. Handle planting stock by root ball.
- D. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F until planting.
- E. 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.

1.10 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 Substantial Completion.

- a. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
- b. Ground Covers, Biennials, Perennials, and Other Plants: 12 months.
- c. Annuals: 3 months.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- C. Annuals and Biennials: Provide healthy, disease-free plants of species and variety shown or listed, with well-established root systems reaching to sides of the container to maintain a firm ball, but not with excessive root growth encircling the container. Provide only plants that are acclimated to outdoor conditions before delivery and that are in bud but not yet in bloom.

2.2 FERTILIZERS

- A. Planting Tablets: Tightly compressed chip-type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.
 1. Size: 5-gram tablets.
 2. Nutrient Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight plus micronutrients.

2.3 MULCHES

- A. Organic Mulch: Shredded bark
 1. Size Range: Maximum piece length 6"

2.4 WEED-CONTROL BARRIERS

- A. Nonwoven Geotextile Filter Fabric: Polypropylene or polyester fabric, 3 oz./sq. yd. minimum, composed of fibers formed into a stable network so that fibers retain their relative position.

Fabric shall be inert to biological degradation and resist naturally encountered chemicals, alkalis, and acids.

2.5 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.

2.6 LANDSCAPE EDGINGS

- B. Steel Edging: Standard commercial-steel edging, fabricated in sections of standard lengths, with loops stamped from or welded to face of sections to receive stakes.
 - 1. Edging Size: 1/4 inch thick by 5 inches deep.
 - 2. Finish: Manufacturer's standard paint.
 - 3. Color: Black and as approved by Owner's Representative.
- C. Plastic Edging: Standard black polyethylene or vinyl edging, V-lipped bottom, extruded in standard lengths, with 9-inch steel angle stakes.
 - 1. Edging Size: 0.1 inch thick by 5 inches deep
 - 2. Color: Black and as approved by Owner's Representative.

PART 3 - EXECUTION

3.1 PLANTING AREA ESTABLISHMENT

- A. General: Prepare planting area for soil placement and mix planting soil according to Section 329113 "Soil Preparation."
- B. Install Planting Soil
- C. Before planting, obtain Owner's Representative acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.2 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits.

1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
 2. Excavate approximately three times as wide as ball diameter or as indicated on Drawings.
 3. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
 4. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
- B. Backfill Soil: Subsoil and topsoil removed from excavations to be used as backfill soil unless otherwise indicated.

3.3 TREE, SHRUB, AND VINE PLANTING

- A. Inspection: At time of 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. Set each plant plumb and in center of planting pit or trench with root flare 1 inch above adjacent finish grades unless otherwise indicated on Drawings.
 1. Backfill: Planting soil. For trees, use excavated soil for backfill.
 2. Balled and Burlapped Stock: After placing 1/3 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. Balled and Potted and Container-Grown Stock: Carefully remove root ball from container without damaging root ball or plant.
 4. Fabric Bag-Grown Stock: Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 5. Bare-Root Stock: Support stem of each plant and spread roots without tangling or turning toward surface. Plumb before backfilling, and maintain plumb while working. Work backfill around roots and compact.

6. 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.
 7. Place planting tablets equally distributed around each planting pit when pit is approximately one-half filled. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
 - a. Bare-Root Stock: Place tablets beside soil-covered roots; do not place tablets touching the roots.
 - b. Quantity: Three for each caliper inch of plant.
 8. Continue backfilling process. Water again after placing and tamping final layer of soil.
- D. Slopes: When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.4 TREE, SHRUB, AND VINE PRUNING

- A. Prune, thin, and shape trees, shrubs, and vines according to industry accepted horticultural and arboricultural practices. Unless otherwise indicated by Owner's Representative, 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.

3.5 GROUND COVER AND PLANT PLANTING

- A. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated on Drawings in even rows with triangular spacing.
- B. Use planting soil for backfill.
- C. Dig holes large enough to allow spreading of roots.
- D. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- E. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- F. Protect plants from heat of sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.6 PLANTING AREA MULCHING

- A. Install weed-control barriers before mulching according to manufacturer's instructions. Completely cover area to be mulched, overlapping edges a minimum of 12 inches and secure seams with galvanized pins.
- B. Mulch backfilled surfaces of planting areas and other areas indicated.
 - 1. Trees and 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.

3.7 EDGING INSTALLATION

- A. Steel Edging: Install steel edging where indicated according to manufacturer's written instructions. Anchor with steel stakes spaced approximately 30 inches, driven below top elevation of edging.
- B. Plastic Edging: Install plastic edging where indicated according to manufacturer's written instructions. Anchor with steel stakes spaced approximately 36 inches apart, driven through upper base grooves or V-lip of edging.
- C. Shovel-Cut Edging: Separate mulched areas from turf areas with a 45-degree, 4- to 6-inch-deep, shovel-cut edge where indicated on Drawings.

3.8 PLANT MAINTENANCE

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, 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.
- D. Apply pesticides and other biological control agents according to authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- E. 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.

3.9 MAINTENANCE

- A. Maintenance: Provide maintenance by landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are established.

END OF SECTION 329300

SECTION 330500 – COMMON WORK RESULTS FOR UTILITIES

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. Installation of buried piping.
 - 2. Piping joining materials.
 - 3. Sleeves.
 - 4. Grout.
 - 5. Piping system common requirements.
 - 6. Equipment installation common requirements.
 - 7. Closing abandoned storm drainage systems
- B. Related Sections:
 - 1. Section 312000 “Earthwork” for excavation, filling, backfilling and rough grading.
 - 2. Section 312333 “Trenching and Backfilling” for trenching, backfilling, compacting, excavation support and disposal for utility installation.

1.3 DEFINITIONS

- A. Exposed Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions.
- B. Concealed Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.

1.4 REFERENCES

- A. Comply with the latest edition of the following standards, as referenced herein.
 - 1. American Society of Testing and Materials (ASTM).
 - 2. American National Standards Institute (ANSI).

1.5 ACTION SUBMITTALS

- A. Submit for approval a schedule for all proposed testing. Include proposed testing procedures indicating the sequence in which pipe sections will be tested and description of methods and equipment to be used.
- B. Field Test Reports: Submit results of field testing directly to Engineer with copy to Contractor.
- C. Waste Water Disposal Method: Submit proposed disposal method to be utilized for disinfection of potable water mains.
- D. Product Data: For the following:
 - 1. Each product specified.

1.6 QUALITY ASSURANCE

- A. Comply with ASME A13.1 for lettering size, length of color field, colors, and viewing angles of identification devices.

1.7 PROJECT CONDITIONS

- A. Deliver and store materials within the Contract limits, as approved by Engineer.
- B. Handle materials carefully with approved handling devices in accordance with manufacturer's recommendations. Special care shall be exercised during delivery and storage to avoid damage to the materials.
- C. Do not drop or roll products off trucks. Products are not to be otherwise dragged, rolled, or skidded.
- D. Materials shall be stored on heavy wood blocking or platforms in accordance with the manufacturer's instructions and recommendations. Materials shall not be in contact with the ground and their interiors shall be maintained free from dirt and other foreign matter.
- E. Products cracked, gouged, chipped, dented, or otherwise damaged will not be approved and are to be removed and replaced at the Contractor's expense, unless the product can be repaired in a manner acceptable to the manufacturer and the Engineer. All repairs shall be at the Contractor's expense.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Conform to individual pipe specifications.

- B. Pipe transition fittings: Shall be as indicated on the drawings. If not specifically indicated selection shall be based on pressure requirements of the system and types of materials being joined. Product selection shall be approved by the Engineer.

2.2 PIPING JOINING MATERIALS

- A. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer, unless otherwise indicated.
- B. Solvent Cements for Joining Plastic Piping:
 - 1. PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.

2.3 SLEEVES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized, plain ends.
- B. PVC Pipe Sleeves: ASTM D 1785, Schedule 40.

2.4 GROUT

- A. Description: ASTM C 1107, Grade B, nonshrink and nonmetallic, dry hydraulic-cement grout.
 - 1. Characteristics: Post hardening, volume adjusting, nonstaining, noncorrosive, nongaseous, and recommended for interior and exterior applications.
 - 2. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.
 - 3. Packaging: Premixed and factory packaged.

2.5 FLOWABLE FILL

- A. Description: Low-strength-concrete, flowable-slurry mix.
 - 1. Cement: ASTM C 150, Type I, portland.
 - 2. Density: 115- to 145-lb/cu. ft.
 - 3. Aggregates: ASTM C 33, natural sand, fine and crushed gravel or stone, coarse.
 - 4. Water: Comply with ASTM C 94/C 94M.
 - 5. Strength: 100 to 200 psig at 28 days.

PART 3 - EXECUTION

3.1 UTILITY DEMOLITION, GENERAL

- A. Disconnect, demolish, and remove piped utility systems, equipment, and components indicated to be removed.
 - 1. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.

2. Piping to Be Abandoned in Place: Drain piping. Fill abandoned piping with flowable fill, and cap or plug piping with same or compatible piping material.
3. Equipment to Be Removed: Disconnect and cap services and remove equipment.
4. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make operational.
5. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

3.2 CLOSING ABANDONED STORM DRAINAGE SYSTEMS

- A. Abandoned Piping: Close open ends of abandoned underground piping indicated to remain in place. Include closures strong enough to withstand hydrostatic and earth pressures that may result after ends of abandoned piping have been closed. Use either procedure below:
 1. Close open ends of piping with at least 8-inch-thick, brick masonry bulkheads.
 2. Close open ends of piping with threaded metal caps, plastic plugs, or other acceptable methods suitable for size and type of material being closed. Do not use wood plugs.
- B. Abandoned Manholes and Structures: Excavate around manholes and structures as required and use one procedure below:
 1. Remove manhole or structure and close open ends of remaining piping.
 2. Remove top of manhole or structure down to at least 48 inches below final grade. Fill to within 12 inches of top with stone, rubble, gravel, or compacted dirt. Fill to top with flowable fill.
- C. Backfill to grade according to Section 312000 "Earthwork."

3.3 BURIED PIPE INSTALLATION

- A. General:
 1. Installation of all pipe, fittings, valves, specials and appurtenances shall be subject to the review and/or approval of the Engineer.
 2. Install piping valves and fittings as shown, specified and as recommended by the manufacturer and in conformance with referenced standards, and approved Shop Drawings.
 3. Request instructions from Engineer before proceeding if there is a conflict between the manufacturer's recommendations and the Contract Drawings or Specifications.
 4. Present all conflicts between piping systems and equipment, structures or facilities to Engineer for determination of corrective measures before proceeding.
 5. Take field measurements prior to installation to ensure proper fitting of Work. Uncover the existing pipelines sufficiently in advance of the proposed Work in order that the type and location of the existing pipes and joints and other information required to fabricate the proposed piping can be determined. Obtain whatever information is required to complete the connections of the proposed pipelines to the existing pipelines.
 6. Carefully examine all piping for cracks, damage or other defects before installation. Immediately remove defective materials from the site, unless the defective materials can

- be repaired in a manner acceptable to the manufacturer and Engineer. Remove, replace or repair at the Contractor's expense piping found to be broken or defective.
7. Inspect interior of all piping and mating surfaces and remove all dirt, gravel, sand, debris or other foreign material before installation. Maintain the interior of all piping clean until acceptance of the completed Work. Prevent foreign matter from entering joint space.
 8. Install buried piping accurately to line and grade shown, specified or directed, unless otherwise approved by the Engineer. Use accurate means of determining and checking the alignment and grade subject to the approval of the Engineer. Remove and relay piping that is incorrectly installed at Contractor's expense.
 9. Do not lay piping in water, unless approved by the Engineer. Ensure that the water level in the trench is at least 6 inches below the bottom of piping. Maintain a dry trench until jointing and backfilling are complete, unless otherwise specified in these Specifications or approved by the Engineer.
 10. Pipe laying work shall be conducted so that trenching operations are not advanced too far ahead of the pipe laying operation resulting in excessive lengths of open trench. In general, open trench ahead of pipe laying shall not exceed 50 feet.
 11. Start laying piping at lowest point and proceed toward the higher elevations, unless otherwise approved by the Engineer. Slope piping uniformly between elevations shown on the Drawings or as otherwise provided by the Engineer. Install piping free of sags and bends.
 12. Where pipe crossings occur, the lower pipe shall be laid first and all backfill thoroughly compacted to the level of the higher pipe before the higher pipe is installed. Backfill material under such conditions may be earth, broken stone, or 2,500 psi concrete.
 13. Install piping so that the barrel of the piping and not the joints receives the bearing pressure from the trench bottom, or other bedding condition.
 14. No piping shall be brought into position until the preceding length, valve, fitting, or other specialty appurtenances has been bedded and secured in place.
 15. Whenever pipe laying is not actively in progress, the open ends of the piping shall be closed by a temporary plug or cap to prevent soil, water and other foreign matter from entering the piping.
 16. Where required for inserting valves, fittings, special appurtenances, and closures, shall be made with a machine specially designed for cutting piping and in accordance with the manufacturer's instructions for field cutting of pipe. Make cuts carefully, without damage to piping, so as to leave a smooth end at right angles to the axis of the piping. Taper cut ends and file off sharp edges until smooth. Flame cutting will not be permitted. Replace and repair damaged piping.
 17. Blocking under piping will not be permitted unless specifically approved by Engineer for special conditions.
 18. Touch up protective coatings and linings prior to installation.
 19. Rotate piping as required to place outlets in proper position.
 20. Install piping to permit valve servicing.
 21. Install fittings for changes in direction and branch connections.
 22. Select system components with pressure rating equal to or greater than system operating pressure.
 23. Permanent sleeves are not required for core-drilled holes or holes formed by removable PE sleeves.
 24. Install sleeves for pipes passing through concrete and masonry walls and concrete floor and roof slabs.
 - a. Cut sleeves to length for mounting flush with both surfaces.
 - b. Install sleeves in new walls and slabs as new walls and slabs are constructed.

25. Verify final equipment locations for roughing-in.
26. Refer to equipment specifications in other Sections for roughing-in requirements.

B. Bedding and Backfilling:

1. Bedded and installed piping in conformance with Section 312333 “Trenching and Backfilling” and as shown, except as otherwise specified.
2. No piping shall be laid until Engineer approves the bedding condition.
3. Excavation in excess of that required as shown on the Drawings or specified, which is not authorized by the Engineer, shall be at the Contractor’s expense. Backfilling and compaction of the over-excavated areas shall be at the Contractor’s expense.
4. Carefully and thoroughly compact all pipe bedding and fill up to the pipe centerline with hand-held pneumatic compactors.
5. Contractor shall install bedding and backfill material such that migration of soil fines into surrounding soil materials is prevented.
6. Install utility detector tape as indicated on Contract Drawings.

C. Transitions From One Type of Pipe to Another:

1. Provide all necessary adapters, special appurtenances and connection pieces required when connecting different types and sizes of pipe or connecting pipe made by different manufacturers.

D. Work Affecting Existing Piping:

1. Location of Existing Piping:
 - a. Locations of existing piping shown shall be considered approximate. Contractor shall perform all necessary subsurface investigation to verify actual locations in the field.
 - b. Determine exact location of existing piping to make connections, relocate, replace or which may be disturbed during earth moving operations, or which may be affected by work in any way.
 - c. Coordinate all excavations with utility companies, Owner and Engineer.
 - d. Perform test holes to determine exact locations of underground piping and structures.
2. Taking Existing Pipelines Out of Service:
 - a. Do not take pipelines out of service unless specifically approved by Engineer.
 - b. Notify Engineer at least 48 hours prior to taking any pipeline out of service.

3.4 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and utilities Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- D. Plastic Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
 - 1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
 - 2. PVC Pressure Piping: Join schedule number ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
 - 3. PVC Nonpressure Piping: Join according to ASTM D 2855.
- E. Plastic Pressure Piping Gasketed Joints: Join according to ASTM D 3139.
- F. High Density Polyethylene (HDPE) Butt Fusion: Join ASTM F 2620.
- G. Plastic Nonpressure Piping Gasketed Joints: Join according to ASTM D 3212.

3.5 EQUIPMENT INSTALLATION

- A. Install equipment level and plumb, unless otherwise indicated.
- B. Install equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference with other installations. Extend grease fittings to an accessible location.
- C. Install equipment to allow right of way to piping systems installed at required slope.

3.6 GROUTING

- A. Mix and install grout for equipment base bearing surfaces, pump and other equipment base plates, and anchors.
- B. Clean surfaces that will come into contact with grout.
- C. Provide forms as required for placement of grout.
- D. Avoid air entrapment during placement of grout.
- E. Place grout, completely filling equipment bases or annular space as indicated on Drawings.
- F. Place grout on concrete bases and provide smooth bearing surface for equipment.
- G. Place grout around anchors.
- H. Cure placed grout.

3.7 FIELD QUALITY CONTROL

A. General:

1. Notify Engineer at least 48 hours in advance of all testing.
2. Provide all testing apparatus including pumps, hoses, gauges, fittings, temporary bulkheads, plugs, compressors and miscellaneous other required items.
3. Provide temporary blocking and bracing or approved thrust and joint restraint to prevent joint separation and pipe movement during testing.
4. Unless otherwise approved, conduct all tests in the presence of the Engineer and in the presence of local authorities having jurisdiction.
5. Water Source:
 - a. Provide all water for testing, flushing and other water uses. The source of the water shall be subject to the approval of the Engineer.
 - b. The point of introduction of water for conducting tests shall be subject to the approval of the Engineer.
6. All costs for tests shall be included in the Contractor's bid.
7. Locate, and repair or replace, section of piping which fail the test and retest until acceptance.

END OF SECTION 330500

SECTION 334100 – STORM UTILITY DRAINAGE PIPING

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.
- B. Section 312000: Earthwork
- C. Section 334913: Manholes and Drainage Structures

1.2 SUMMARY

- A. Section Includes:
 - 1. Pipe and fittings.
 - 2. Pipe inlets/outlets (flared end sections).

1.3 DEFINITIONS

- A. FRP: Fiberglass-reinforced plastic.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings:
 - 1. Certificates, pipe line testing, soil density and water tight joints.
 - 2. Flared End Sections: Include details of end section and connection materials

1.5 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of pipe, fitting, and stormwater piping component from manufacturer.
- B. Field quality-control reports.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect pipe, pipe fittings, and seals from dirt and damage.

1.7 PROJECT CONDITIONS

- A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
1. Notify Construction Manager no fewer than two (2) days in advance of proposed interruption of service.
 2. Do not proceed with interruption of service without Construction Manager's written permission.

PART 2 - PRODUCTS

2.1 HDPE PIPE AND FITTINGS

- A. High Density Polyethylene (HDPE) Drainage Piping:
1. Corrugated, solid or perforated as noted on plans: AASHTO M 252 Type S, for 3 inch to 10 inch diameter, AASHTO M 294 Type S, for 12 inch to 48 inch diameter.
 2. Couplings: ASTM D 3350 and AASHTO M294, high density polyethylene sleeve with ASTM D 1056 Type 2, Class A, Grade 2 gasket material that mates with pipe and fitting for silt-tight joints.
 3. Perforated Pipe: Conform to AASHTO M-252 or AASHTO M-294, Type SP with Class I perforations.
 4. Manufacturers:
 - a. Advanced Drainage Systems, Inc., 3300 Riverside Dr., Columbus, OH 43221; (614) 457-3051;
 - b. Hancor, Inc., 401 Olive St., Findlay, OH 45840; (800) 847-5880., or;
 - c. Approved equivalent.

2.2 PVC PIPE AND FITTINGS

- A. PVC Drainage Piping:
1. Pipe and Fittings: ASTM F 679, T-1 wall thickness, PVC gravity sewer pipe with bell-and-spigot ends and with integral ASTM F 477, elastomeric seals for gasketed joints.

PART 3 - EXECUTION

3.1 CLOSING ABANDONED STORM DRAINAGE SYSTEMS

- A. Abandoned Piping: Abandon piping and structures in accordance with Section 330500 "Common Work Results for Utilities."

3.2 EARTHWORK

- A. Trenching and backfilling as specified in Section 312333 "Trenching and Backfilling."

3.3 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of microtunneling.
- F. Install gravity-flow, nonpressure drainage piping according to the following:
 - 1. Install piping pitched down in direction of flow.
 - 2. Install piping with 24-inch minimum cover.
 - 3. Install PVC profile gravity sewer piping according to ASTM D 2321 and ASTM F 1668.
 - 4. Install reinforced-concrete sewer piping according to ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."
- G. Provide deflection and leakage testing.
- H. Backfill trenches according to Section 312333 "Trenching and Backfilling and 312000 "Earthwork."

3.4 PIPE JOINT CONSTRUCTION

- A. Join gravity-flow, nonpressure drainage piping according to the following:
 - 1. Join corrugated HDPE piping according to ASTM D 3212 for push-on joints.
 - 2. Join PVC profile gravity sewer piping according to ASTM D 2321 for elastomeric-seal joints or ASTM F 794 for gasketed joints.
 - 3. Join dissimilar pipe materials with nonpressure-type flexible couplings.

3.5 CONCRETE PLACEMENT

- A. Place cast-in-place concrete according to ACI 318.

3.6 CONNECTIONS

- A. Make connections to existing piping and underground manholes.
 - 1. Make branch connections to underground manholes and structures by cutting into existing unit and creating an opening large enough to allow 3 inches of concrete to be packed around entering connection. Cut end of connection pipe passing through pipe or structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering connection in 6 inches of concrete for minimum length of 12 inches to provide additional support of collar from connection to undisturbed ground.
 - a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi unless otherwise indicated.
 - b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.
 - 2. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.

3.7 IDENTIFICATION

- A. Materials and their installation are specified in Section 312000 "Earthwork." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
 - 1. Use non-detectable warning tape over piping.
 - 2. Use detectable warning tape over perimeter of underground stormwater facilities.

3.8 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.

1. Submit separate reports for each system inspection.
 2. Defects requiring correction include the following:
 - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
 - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
 - d. Infiltration: Water leakage into piping.
 - e. Exfiltration: Water leakage from or around piping.
 3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
 4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
1. Do not enclose, cover, or put into service before inspection and approval.
 2. Test completed piping systems according to requirements of authorities having jurisdiction.
 3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
 4. Submit separate report for each test.
 5. Gravity-Flow Storm Drainage Piping: Test according to requirements of authorities having jurisdiction, UNI-B-6, and the following:
 - a. Exception: Piping with soil tight joints unless required by authorities having jurisdiction.
 - b. Option: Test plastic piping according to ASTM F 1417.
 - c. Option: Test concrete piping according to ASTM C 924 (ASTM C 924M).
- C. Leaks and loss in test pressure constitute defects that must be repaired.
- D. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

3.9 CLEANING

- A. Clean interior of piping of dirt and superfluous materials. Flush with water.

END OF SECTION 334100

SECTION 334913 – MANHOLES AND DRAINAGE STRUCTURES

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.
- B. Section 312000, "Earthwork."
- C. Section 312333, "Trenching and Backfilling."
- D. Section 334100, "Storm Utility Drainage Piping."

1.2 SUMMARY

- A. Section Includes:
 - 1. Manholes
 - 2. Misc. Concrete
 - 3. Catch Basins
 - 4. Manholes
 - 5. PVC Area Drains

1.3 DEFINITIONS

- A. FRP: Fiberglass-reinforced plastic.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings:
 - 1. Manholes: Include plans, elevations, sections, details, frames, and covers.
 - 2. Catch basins: Include plans, elevations, sections, details, frames, and grates.
 - 3. Certificates, pipe line testing, soil density and water tight joints.
 - 4. Frame and grating load capacity.

1.5 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of structure, fitting, and PVC area drain from manufacturer.
- B. Field quality-control reports.

1.6 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of similar item from single source from single manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Handle manholes and catch basins according to manufacturer's written rigging instructions.
- B. Handle drainage structures according to manufacturer's written rigging instructions.
- C. Handle PVC area drains according to manufacturer's written rigging instructions.

1.8 PROJECT CONDITIONS

- A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
 - 1. Notify Construction Manager no fewer than two (2) days in advance of proposed interruption of service.
 - 2. Do not proceed with interruption of service without Construction Manager's written permission.

PART 2 - PRODUCTS

2.1 MANHOLES

- A. Standard Precast Concrete Manholes:
 - 1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.
 - 2. 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.
 - 3. Load Rating: AASHTO HS-20 with 25% impact and 130 lf/cf equivalent soil pressure.
 - 4. Dimensions: Round or Square where indicated on Drawings. Increase minimum dimensions shown below as required to facilitate proposed pipe connections shown on Drawings.
 - a. Inside Diameter: 48 inches (min.) unless otherwise indicated or required.
 - b. Inside Dimensions: 48 inches x 48 inches, square, unless otherwise indicated or required.
 - 5. Ballast: Increase thickness of precast concrete sections or add concrete to base section as required to prevent flotation.
 - 6. Base Section: 8-inch minimum thickness for floor slab and 5-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
 - 7. Riser Sections: 5-inch minimum thickness, and lengths to provide depth indicated.
 - 8. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated on Drawings, and top of cone of size that matches grade rings.
 - 9. Joint Sealant: 1 ½" butyl rope.

10. Steps: ASTM A 615, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of manhole to finished grade is less than 60 inches.
11. Adjusting Rings: Interlocking HDPE rings with level or sloped edge in thickness and diameter matching manhole frame and cover, and of height required to adjust manhole frame and cover to indicated elevation and slope. Include sealant recommended by ring manufacturer.
12. Grade Rings: Reinforced-concrete rings, 6- to 9-inch (150- to 225-mm) total thickness, to match diameter of manhole frame and cover, and height as required to adjust manhole frame and cover to indicated elevation and slope. Concrete shall be air-entrained 4,000 psi at 28 days, minimum.
13. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section. Grouted connections as approved by Owner's Representative.

B. Manhole Frames and Covers:

1. Description: Ferrous; 30-inch ID by 4- to 9-inch riser with 4-inch minimum width flange and 30-inch diameter cover. Include indented top design with lettering cast into cover using wording equivalent to "STORM SEWER."
2. Material: ASTM A 48, Class 30, designed for A-16 structural loading unless otherwise indicated.

2.2 CONCRETE

A. General: Cast-in-place concrete according to ACI 318, ACI 350/350R, and the following:

1. Cement: ASTM C 150, Type II.
2. Fine Aggregate: ASTM C 33, sand.
3. Coarse Aggregate: ASTM C 33, crushed gravel.
4. Water: Potable.

B. Ballast and Pipe Supports: Portland cement design mix, 3000 psi minimum, with 0.58 maximum water/cementitious materials ratio.

1. Reinforcing Fabric: ASTM A 185, steel, welded wire fabric, plain.
2. Reinforcing Bars: ASTM A 615, Grade 60 deformed steel.

2.3 CATCH BASINS

A. Standard Precast Concrete Catch Basins:

1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.
2. 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.
3. Load Rating: AASHTO HS-20 with 25% impact and 130 lf/cf equivalent soil pressure.
4. Dimensions: Round or Square where indicated on Drawings. Increase minimum dimensions shown below as required to facilitate proposed pipe connections shown on Drawings.

- a. Inside Diameter: 48 inches (min.) unless otherwise indicated or required.
 - b. Inside Dimensions: 48 inches x 48 inches, square, unless otherwise indicated or required.
5. Ballast: Increase thickness of precast concrete sections or add concrete to base section as required to prevent flotation.
 6. Base Section: 8-inch minimum thickness for floor slab and 5-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
 7. Riser Sections: 5-inch minimum thickness, matching structure diameter, and lengths to provide depth indicated.
 8. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated on Drawings. Top of cone of size that matches grade rings.
 9. Joint Sealant: ASTM C 990, 1 ½" butyl rope.
 10. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and shape matching catch basin frame and grate. Include sealant recommended by ring manufacturer.
 11. Grade Rings: Include two or three reinforced-concrete rings, of 6- to 9-inch total thickness, that match 30-inch diameter frame and grate.
 12. Steps: Individual FRP steps or FRP ladder, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of catch basin to finished grade is less than 60 inches.
 13. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section. Grouted connections as approved by Owner's Representative.
- B. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A-16, structural loading. Include flat grate with small square or short-slotted drainage openings.
1. Square, bicycle safe.
 2. Grate Free Area: Approximately 50 percent (min.).
 - a. Size: 24 x 24 inches, square, minimum unless otherwise indicated.
 - 1) Acceptable Models:
 - a) 5423Z Frame and 5423 Grate by EJ Group, Inc.;
 - b) V5626-1 Frame and V5726 Grate by EJ Group, Inc. or;
 - c) Approved equivalent.
 - b. Size: 30 x 30 inches, square, where indicated.
 - 1) Acceptable Models:
 - a) 5419Z Frame and 5419M Grate by EJ Group, Inc. or;
 - b) Approved equivalent.

2.4 PVC AREA DRAINS

A. Standard PVC Area Drawings:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. “Nyloplast” as manufactured by ADS, 4640 Trueman Blvd., Hillard, OH, 43026, (800) 821-6710
 - b. Or approved equivalent.
 - 2. Description: Surface area drain system, PVC pipe stock reformed utilizing a thermo-molding process with specified inlet and outlet pipe connection stubs (4”, 8”, 12”, or 18”) and risers sized to fit specified frame and grate.
 - 3. Joints: Fabricated fittings shall conform to ASTM D3212 for watertight connections.
- B. Frames and Grates (Light Duty): ASTM A536, Grade 70-50-05, H-10 Load Rating, ductile iron, size of openings to meet requirements of American Disability Act, painted black, lockable, manufactured to fit specified PVC riser fitting.
 - 1. Size: 12 by 12-inches or 15 by 15-inches as shown on Drawings.
 - 2. Size: 18-inches diameter as shown on Drawings.
 - 3. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. “Nyloplast” as manufactured by ADS, 4640 Trueman Blvd., Hillard, OH, 43026, (800) 821-6710
 - b. Or approved equivalent.
 - 4. Provide manufacturer’s standard dome top frates/grates where indicated on plans.
- C. Frames and Grates (Heavy Duty): ASTM A536, Grade 70-50-05, H-20 Load Rating, ductile iron, painted black, lockable, manufactured to fit specified PVC riser fitting.
 - 1. Size: 12 by 12-inches or 15 by 15-inches as shown on Drawings.
 - 2. Size: 18-inches diameter as shown on Drawings.
 - 3. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. “Nyloplast” as manufactured by ADS, 4640 Trueman Blvd., Hillard, OH, 43026, (800) 821-6710
 - b. Or approved equivalent.
- D. Outlet Hoods and Weir Plates: Corrosion resistant, hood or weir plate compatible with PVC Area Drain selected to prevent outflow of floating debris and oil or for flow diversion as indicated on Drawings.

2.5 GEOTEXTILE FILTER FABRIC FOR STORM DRAINAGE STRUCTURES

- A. Mirafi 140N, or equal.

PART 3 - EXECUTION

3.1 CLOSING ABANDONED STORM DRAINAGE SYSTEMS

- A. Abandoned Manholes and Structures: Abandon manholes and structures in accordance with Section 330500 "Common Work Results for Utilities."

3.2 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Section 312000 "Earthwork."

3.3 MANHOLE INSTALLATION

- A. General: Install manholes, complete with appurtenances and accessories indicated.
- B. Install precast concrete manhole sections with sealants according to ASTM C 891.
- C. Where specific manhole construction is not indicated, follow manhole manufacturer's written instructions.
- D. Set tops of frames and covers to elevations indicated. Make frames and covers flush with finished surface of manholes that occur in pavements. Set tops 3 inches above finished surface elsewhere unless otherwise indicated.

3.4 CATCH BASIN INSTALLATION

- A. Construct catch basins to sizes and shapes indicated.
- B. Set tops of frames and grates to elevations indicated. Make frames and grates flush with finished surface for catch basins that occur in pavements.
- C. Orient grates such that inlet openings are perpendicular to the direction of travel.
- D. For catch basins adjacent to curbs, set frame and grate adjacent to curb line. Provide sufficient grade adjustment to allow for uninterrupted curb installation above catch basin top slab.

3.5 PVC AREA DRAIN INSTALLATION

- A. Install type of drains in locations indicated.
 - 1. Use Heavy-Duty, top-loading classification drains in areas as indicated on the Drawings.
- B. Fasten grates to drains if indicated.
- C. Set tops of drain frames and covers or grates flush with finished grade unless otherwise indicated.

3.6 CONCRETE PLACEMENT

- A. Place cast-in-place concrete according to ACI 318.

3.7 CONNECTIONS

- A. Make connections to existing piping and underground manholes.
 - 1. Make branch connections to underground manholes and structures by cutting into existing unit and creating an opening large enough to allow 3 inches of concrete to be packed around entering connection. Cut end of connection pipe passing through pipe or structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering connection in 6 inches of concrete for minimum length of 12 inches to provide additional support of collar from connection to undisturbed ground.
 - a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi unless otherwise indicated.
 - b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.
 - 2. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.

3.8 REMOVE AND RESET EXISTING FRAMES AND GRATES OR COVERS

- A. Remove, store, clean and reset existing frames and grates or covers. The complete assemblies shall be reset on existing or newly constructed drainage structures as indicated on the Plans or where directed by the Owner's Representative.
- B. The existing frames, grates, covers and appurtenances shall be removed, stored if necessary, cleaned and reset to the line and grade indicated on the Plans or where directed by the Owner's Representative on existing or newly constructed drainage structures.
- C. Where the frame is to be reset on an existing structure, the existing structure masonry adjustment collar, or a portion of it, shall be removed where necessary for resetting of the frame. The frames shall be set to grade using concrete brick and mortar or cast-in-place concrete.
- D. Notify Owner's Representative of situations where existing frames cannot be reset as directed.

3.9 ADJUSTMENT OR RECONSTRUCTION TO EXISTING DRAINAGE STRUCTURES

- A. "Adjustment" to Drainage Structures
 - 1. To increase the rim elevation of a drainage structure between the limits of 0" and 15", measured from the top of the cone or top section to the bottom of the frame, shall be done with concrete adjustment rings. In no case shall the adjusting rings exceed 15".

2. To decrease the rim elevation of a drainage structure cover within the limits of existing adjusting rings or brickwork, remove the adjusting ring(s) or brick(s).

B. "Reconstruction" of Drainage Structures

1. To decrease the rim elevation of a drainage structure beyond the limits of existing brick or adjusting rings, or increase the rim elevation of a drainage structure beyond the limits of an "adjustment", change the elevation of the cone, tapered section, or top section.
 - a. Pre-cast structures are reconstructed by removing cone and/or straight section(s) and replacing with a section(s) of such length that the rim will be at the correct elevation, or can be raised to the correct elevation by the addition of adjusting rings. In the case of older brick-type top sections, replace with brickwork. The limit of such adjustment is 15".
 - b. Contractor to inspect drainage structure to determine proper dimensions and structural integrity of structure.
 - c. Brick manholes are to be removed and replaced by a new pre-cast drainage structure.

3.10 FIELD QUALITY CONTROL

A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.

1. Submit separate reports for each system inspection.
2. Defects requiring correction include the following:
 - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
 - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
 - d. Infiltration: Water leakage into piping.
 - e. Exfiltration: Water leakage from or around piping.
3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
4. Reinspect and repeat procedure until results are satisfactory.

B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.

1. Do not enclose, cover, or put into service before inspection and approval.
2. Test completed piping systems according to requirements of authorities having jurisdiction.
3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
4. Submit separate report for each test.
5. Gravity-Flow Storm Drainage Piping: Test according to requirements of authorities having jurisdiction, UNI-B-6, and the following:
 - a. Exception: Piping with soil tight joints unless required by authorities having jurisdiction.
 - b. Option: Test plastic piping according to ASTM F 1417.
 - c. Option: Test concrete piping according to ASTM C 924 (ASTM C 924M).

- C. Leaks and loss in test pressure constitute defects that must be repaired.
- D. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

END OF SECTION 334913

SECTION 334916 - HYDRODYNAMIC SEPARATORS

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. Hydrodynamic Separators (Stormwater Treatment Devices, SWTD).

- B. Related Sections:

- 1. Section 312000 "Earthwork"
 - 2. Section 312333 "Trenching and Backfilling" for utility installation.
 - 3. Section 330500 "Common Work Results for Utilities" for installation of buried piping.
 - 4. Section 334100 "Storm Utility Drainage Piping"

1.3 REFERENCES

- A. Comply with the latest edition of the following standards, as referenced herein:

- 1. New York State Department of Environmental Conservation Stormwater Management Design Manual.

1.4 ACTION SUBMITTALS

- A. Submit the following for approval:

- 1. Shop Drawings: The contractor shall prepare and submit shop drawings in accordance with the Contract Documents. The shop drawings shall include Illustrations, specifications, and engineering data including the following: dimensions, materials, size, model, elevations, inverts, frames and covers.
 - 2. Manufacturer's instructions and recommendations for installation and operational maintenance of SWTD.

1.5 QUALITY ASSURANCE

A. Inspection:

1. All components shall be subject to inspection by the Engineer at the place of manufacture and/or installation. All components are subject to be rejected or identified for repair if the quality of materials and manufacturing do not comply with the requirements of this specification. Components which have been identified as defective may be subject for repair. Final acceptance of the component is contingent upon the discretion of the Engineer.

B. Warranty:

1. The manufacturer shall guarantee the SWTD components against all manufacturer originated defects in materials or workmanship for a period of twelve (12) months from the date the components are delivered to the owner for installation. The manufacturer shall be notified of repair/replacement issues in writing within the referenced warranty period. The manufacturer shall, upon its determination of repair, correct or replace any manufacturer originated defects identified by written notice within the referenced warranty period. The use of SWTD components shall be limited to the application for which it was specifically designed.

C. Manufacturer's Performance Certificate:

1. The SWTD manufacturer shall submit to the Owner's Representative three (3) copies of a "Manufacturer's Performance Certification" certifying that each SWTD is capable of achieving the specified removal efficiencies as listed in these specifications. The certification shall be supported by independent third-party research.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Handle SWTD according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 MATERIALS AND BASIS OF DESIGN

- A. Precast Concrete Components: Precast concrete components shall conform to applicable sections of ASTM C 478, ASTM C 857 and ASTM C 858 and the following:

1. Concrete shall achieve a minimum 28-day compressive strength of 4,000 pounds per square-inch (psi);
2. Unless otherwise noted, the precast concrete sections shall be designed to withstand lateral earth and AASHTO H-20 traffic loads;
3. Cement shall be Type III Portland Cement conforming to ASTM C 150;
4. Aggregates shall conform to ASTM C 33;
5. Reinforcing steel shall be deformed billet-steel bars, welded steel wire or deformed welded steel wire conforming to ASTM A 615, A 185 or A 497, respectively;

6. Joints shall be sealed with preformed joint sealing compound conforming to ASTM C990.
 7. Shipping of components shall not be initiated until a minimum compressive strength of 4,000 psi is attained or five (5) calendar days after fabrication has expired, whichever occurs first.
- B. Internal Components and Appurtenances: Internal Components and appurtenances shall conform to the following:
1. Screen and support structure shall be manufactured of Type 316 and 316L stainless steel conforming to ASTM F 1267;
 2. Hardware shall be manufactured of Type 316 stainless steel conforming to ASTM A 320;
 3. Fiberglass components shall conform to ASTM D-4097
 4. Access system(s) conform to the following:
 - a. Manhole castings shall be designed to withstand AASHTO H-20 loadings and manufactured of cast-iron conforming to ASTM A48 Class 30.
 - b. Hatch systems shall be designed to withstand AASHTO H-20 loadings. Hatch systems not subject to direct traffic shall be manufactured of Grade 5086 aluminum. Hatch systems subject to direct traffic loads shall be manufactured of steel conforming to ASTM A36, supplied with a hot-dip galvanized finish conforming to ASTM A 123 and access doors bolted to the frame.

2.2 PERFORMANCE

A. Removal Efficiencies:

1. The SWTD shall be capable of achieving an 80 percent average annual reduction in the total suspended solid load.
2. The SWTD shall be capable of capturing and retaining 100 percent of pollutants greater than or equal to 2.4 millimeters (mm) regardless of the pollutant's specific gravity (i.e.: floatable and neutrally buoyant materials) for flows up to the device's rated-treatment capacity. The SWTD shall be designed to retain all previously captured pollutants addressed by this subsection under all flow conditions.
3. The SWTD shall be capable of capturing and retaining total petroleum hydrocarbons. The SWTD shall be capable of achieving a removal efficiency of 92 and 78 percent when the device is operating at 25 and 50 percent of its rated-treatment capacity. These removal efficiencies shall be based on independent third-party research for influent oil concentrations representative of storm water runoff (20 ± 5 mg/L). The SWTD shall be greater than 99 percent effective in controlling dry-weather accidental oil spills.
4. The SWTD shall be capable of utilizing sorbent media to enhance removal and retention of petroleum based pollutants.

B. Hydraulic Capacity:

1. The SWTD shall provide a rated-treatment capacity, which is consistent with governing water treatment regulations. At its rated-treatment capacity, the device shall be capable of achieving greater than 65 percent removal of particles typically found in roadside sediments. This removal efficiency shall be supported by independent third-party research utilizing samples consistent with the NURP gradation or finer.

2. The SWTD shall maintain the peak conveyance capacity of the drainage network as defined by the Engineer.

C. Storage Capacity:

1. The SWTD shall be designed with a sump chamber for the storage of captured sediments and other negatively buoyant pollutants in between maintenance cycles. The minimum storage capacity provided by the sump chamber shall be that required by the manufacturer to meet the removal efficiencies and hydraulic capacity specified above. The boundaries of the sump chamber shall be limited to that which do not degrade the SWTD's treatment efficiency as captured pollutants accumulate. The sump chamber shall be separate from the treatment processing portion(s) of the SWTD to minimize the probability of fine particle re-suspension. In order to not restrict the Owner's ability to maintain the SWTD, the minimum dimension providing access from the ground surface to the sump chamber shall be 20 inches in diameter.
2. The SWTD shall be designed to capture and retain Total Petroleum Hydrocarbons generated by wet-weather flow and dry-weather gross spills. The minimum storage capacity provided by the SWTD shall be that required by the manufacturer to meet the removal efficiencies and hydraulic capacity specified above.

Table 1

Device	Min. Treatment Capacity (cfs)	Min. Bypass Flow Rate (cfs)
Hydrodynamic Separator (HDS-1)	1.3	10.0

D. Alternate Treatment Technologies and Sizing Criteria: The sizing criteria for treatment systems must conform to the recommended loading rate and 3rd party testing data requirements as mentioned below:

1. Screening Systems – designed for full treatment of the runoff rate at a loading rate not to exceed the critical flow in the inlet, in order to achieve 80% TSS removal efficiency. (80% TSS removal based on a average particles size of 63 micron)
2. Vortex separation systems – designed for full treatment of the runoff rate at a loading rate not to exceed 24 gpm/ft², in order to achieve 80% TSS removal efficiency.
3. Gravity systems – designed for full treatment of the runoff rate at a loading rate not to exceeding 10 gpm/ft², in order to achieve 80% TSS removal efficiency.
4. Additionally, the performance of the unit must be evaluated by a third party and verified in a program that allows a more-or-less direct comparison to other technologies. Performance should be third party verified, and removal efficiencies across the spectrum of particle sizes reported, at a range of hydraulic loading rates varying over a range of at least 25 to 125% of the manufacturer's advertised 'water treatment' loading rate.

2.3 MANUFACTURERS

- A. The manufacturer of the SWTD shall be one that is regularly engaged in the engineering design and production of systems deployed for the treatment of stormwater runoff for at least five (5) years and which have a history of successful production, acceptable to the Engineer. In accordance with the Drawings, the SWTD(s) shall be a Hydrodynamic Separator that meets the stated Basis of Design.

PART 3 - EXECUTION

3.1 HANDLING AND STORAGE

- A. The contractor shall exercise care in the storage and handling of the SWTD components prior to and during installation. Any repair or replacement costs associated with events occurring after delivery is accepted and unloading has commenced shall be borne by the contractor.

3.2 INSTALLATION

- A. The SWTD shall be installed in accordance with the manufacturer's recommendations and related sections of the contract documents. The manufacturer shall provide the contractor installation instructions and offer onsite guidance during the important stages of the installation as identified by the manufacturer at no additional expense. A minimum of 72 hours notice shall be provided to the manufacturer prior to their performance of the services included under this subsection.
- B. The contractor shall fill all voids associated with lifting provisions provided by the manufacturer. These voids shall be filled with non-shrinking grout providing a finished surface consistent with adjacent surfaces. The contractor shall trim all protruding lifting provisions flush with the adjacent concrete surface in a manner which leaves no sharp points or edges.
- C. The contractor shall remove all loose material and pooling water from the SWTD prior to the transfer of operational responsibility to the Owner.

END OF SECTION 334916