



**Facilities Planning, Design and
Construction Office**

Date: December 19, 2025
Subject: SUNY Cortland
Project Title: South Campus Parking Lot
Project # 20240058

The State University of New York College at Cortland is soliciting sealed proposals for the subject project.

A virtual non-mandatory pre-bid meeting will be held on **January 5, 2026**, at **10:00AM**. A meeting request will be emailed to all attendees requesting a link to the meeting. Please email Kristi.Hughston@Cortland.edu **AND** Dillon.Young@Cortland.edu. Contractors are welcome to walk the site following the virtual pre-bid meeting.

Sealed bids will be publicly opened at **2:00 P.M.** local time on **January 15, 2026**, in the Office of Facilities Planning, Design & Construction, located in Whitaker Hall, Room 201, 4 Pashley Drive, Cortland, NY 13045.

Please submit the following **in a sealed envelope**. Bids cannot be considered without proper execution of these documents.

- a. Proposal
- b. Bid Bond

As of the date hereof, Kristi Hughston and Dillon Young are the **Designated Contacts** for SUNY Cortland pursuant to New York State Finance Law §§139-j and 139-k. However, any questions regarding the subject construction documents shall be submitted to the Consultant (with a copy thereof to the University).

Sincerely,

Juanita Larrabee
Director

Enclosures

PC: Dodge Reports	Construction Industry Exchange
Syracuse Builder's Exchange	Builder's Exchange of Rochester
Associated Building Contractors	Mohawk Valley Builder's Exchange



The State University
of New York

Project Manual

South Campus Parking Lot

20240058

12/19/2025

SUNY Cortland
Facilities, PDC
Whitaker Hall, Room 219
4 Pashley Drive
Cortland, NY 13045

Directions and Parking

The Office of Facilities Planning, Design and Construction is located in Whitaker Hall, middle campus on the corner of Broadway and Pashley Drive. Please refer to the map located on the back cover of the project manual. The best available parking will be in the Park Center or Tennis Court lots.

Parking permits are issued via email through the Parking Operations and Security Services Office, and you must email Kristi.hughston@cortland.edu and specify what email address you would like to receive your parking pass invitation. You must complete the process with accurate information to avoid citation. If vehicle use changes prior to permit date, please be sure to update the information.

Requests should be emailed at least two days prior to self-guided on-site walk-through **AND** the Bid-Opening meeting for those interested in both. We request only one vehicle per company. If you have extenuating circumstances, you will need to submit a special request for additional permits.

The parking permits do not give authorization to park in designated parking spaces, such as Admissions Parking, Service Vehicles, Visitor Parking, etc. **The parking permit is only valid for non-designated parking spaces on the date specified.** If you choose to park in a designated parking space, you may be issued a citation.

Please plan 30 minutes for parking and commute to the designated meeting area to ensure on-time arrival. Should you have any questions, please contact our office at 607-753-2214.

Project Number: 20240058 Date: 12/19/2025
 Project Name: South Campus Parking Lot
 Agency/Div Code: 28170 Contract No.: _____

Bidding Documents

Section Title **Page #**

Notice to Bidders NB-1

Information for Bidders

1	Definitions	IB-1
2	Issuance of Bidding and Contract Documents	IB-1
3	Proposals.....	IB-1, IB-2
4	Examination of Bidding and Contract Documents	IB-2
5	Computation of Bid	IB-2, IB-3
6	Payment of Security	IB-3
7	Qualification of Bidders	IB-3, IB-4
8	Submission of Post-Bid Information	IB-4,IB-5, IB-6, IB-7
9	Award of Contract	1B-7, IB-8
10	Required Bonds and Insurance	IB-8 IB-9
11	Minority and Women-Owned Business Enterprises.....	IB-9,IB-10
12	Equal Employment Opportunity Requirements.....	IB-10, IB-11
13	Executive Order 162 (EO162)	IB-11
14	Executive Order 177 (EO177)	IB-11, IB-12
15	Service-Disabled Veteran Owned Business Enterprises.....	IB-12
16	Encouraging Use of New York State Business Businesses in Contract Performance	IB-12
17	Single Contract Responsibility	IB-13
18	Examination of Site and Conditions of Work.....	IB-13
19	General Terms and Conditions	IB-13,IB-14, IB-15
20	Additional Terms and Conditions.....	IB-15, IB-16
21	Public Work Contractor and Subcontractor Registry	IB-16, IB-17

Proposal 1 to 6

Technical Specifications

Division 1 - General Requirements

Section A - Description of Work.....	0100-1
Section B - Alternates.....	0100-1
Section C - Special Conditions.....	0100-1 - 0100-9

- Division 1 – Time Progress Schedule
- Division 2 – Cutting and Patching
- Division 3 – Clean Up
- Division 4 - Temporary Access and Parking
- Division 5 – Field meetings
- Division 6 – Operating Instructions and Manuals
- Division 7 – Utility Shutdowns and Cut Overs

Division 8 – Temporary Power for Construction Activities
Division 9 – Sanitary Facilities
Division 10 – Temporary Heat
Division 11 – Temporary Light
Division 12 – Temporary Water for Construction Purposes
Division 13 – Conducting Work
Division 14 – Safety and Protective Facilities
Division 15 – Protection of Existing Structures, Vegetation and Utilities
Division 16 – Abbreviations and References
Division 17 – Use of Elevators
Division 18- Salvage of Materials
Division 19- Storage of Materials
Division 20- Shop Drawings and Samples
Division 21- U.S. Steel
Division 22- Non-Asbestos Products
Division 23- Safety Data Sheet
Division 24- Architect’s/Engineer’s Seal
Division 25- Construction Permit
Division 26- Other Contracts
Division 27- Asbestos
Division 28- Sustainable Design Reporting
Division 29- Low Embodied Concrete
Division 30- Construction Waste Management
Division 31- Wage Rates and Supplements

Tech Sections

Section 01010- Summary of Work
Section 01026- Payment and Completion Procedures
Section 01040- Coordination
Section 01300- Submittals

TECHNICAL SITE SPECS

Electrical Specifications N.I.C. (Included for Coordination Only)

260000	General Requirements for Division 26
260519	Wires
260526	Grounding and Bonding
260543	Underground Conduit System
260553	Electrical Identification
265113	Lighting

Bid Specifications

311201	Site Preparation
312201	Site Earthwork
312501	Erosion, Sediment, and Pollution Control
321201	Asphalt Paving
321202	Inlaid Thermoplastic Asphalt Pavement Marking System
321301	Site Concrete Work
321601	Granite Curb
323001	Bus Shelter(s)
323002	Traffic Signs

- 329001 Planting
- 329201 Sodded Lawns
- 334001 Storm Drainage

Unit Prices

List of Bid Drawings

- Site Development
 - L0 Site Survey
 - L1 Site Plan Notes
 - L2 Site Preparation Plan
 - L3 Stormwater Pollution Prevention Plan
 - L4 SWPPP Notes and Details
 - L5 Grading, Drainage, and Utility Plan
 - L6 Layout Plan
 - L7 Site Details
 - L8 Site Details
 - L9 Lacrosse Wall Relocation Plan

List of Electrical Drawings N.I.C. (Included for Coordination Only)

- ES100 Site Plan - Lighting
- E500 Details
- E900 Schedule and Symbols

State University of New York Construction Agreement

Summary

Article I

General Provisions

Section 1.01	Definitions	1, 2
Section 1.02	Captions	2
Section 1.03	Nomenclature	2
Section 1.04	Entire Agreement	2
Section 1.05	Successors, Assigns and Agents	3
Section 1.06	Accuracy and Completeness of Contract Documents	3
Section 1.07	Organization of Contract Documents	3
Section 1.08	Furnishing of Contract Documents	3
Section 1.09	Examination of Contract Documents and Site	3
Section 1.10	Invalid Provisions	3, 4
Section 1.11	No Collusion or Fraud	4
Section 1.12	Notices	4
Section 1.13	Singular-Plural; Male-Female	4

Article II

Contract Administration and Conduct

Section 2.01	Consultant's Status	4, 5
Section 2.02	Finality of Decisions	5
Section 2.03	Claims and Disputes	5, 6
Section 2.04	Omitted Work	6

Section 2.05	Extra Work.....	6, 7
Section 2.06	Contractor to Give Personal Attention.....	7
Section 2.07	Employment of Workers.....	7
Section 2.08	Detailed Drawings and Instructions.....	7
Section 2.09	Contract Documents to Be Kept at Site.....	7
Section 2.10	Permits and Building Codes.....	8
Section 2.11	Surveys.....	8
Section 2.12	Site Conditions.....	8
Section 2.13	Right to Change Location.....	8
Section 2.14	Unforeseen Difficulties.....	8, 9
Section 2.15	Moving Materials and Equipment.....	9
Section 2.16	Other Contracts.....	9
Section 2.17	Inspection and Testing.....	9, 10
Section 2.18	Subcontractors.....	10, 11
Section 2.19	Shop Drawings and Samples.....	11, 12, 13
Section 2.20	Equivalents - Approved Equal.....	13, 14
Section 2.21	Patents, Trademarks and Copyrights.....	14
Section 2.22	Possession Prior to Completion.....	14
Section 2.23	Completion and Acceptance.....	14, 15
Section 2.24	Record Drawings.....	15, 16
Section 2.25	Guarantees.....	16
Section 2.26	Default of Contractor.....	16, 17, 18
Section 2.27	Termination for Convenience.....	18, 19

Article III

Time of Performance

Section 3.01	Commencement, Prosecution and Completion of Work.....	20
Section 3.02	Time Progress Schedule.....	20
Section 3.03	Time Schedule for Shop Drawings and Samples.....	20
Section 3.04	Notice of Conditions Causing Delay.....	20, 21
Section 3.05	Extension of Time.....	21
Section 3.06	Contractor's Progress Reports.....	21, 22

Article IV

Payment

Section 4.01	Compensation to Be Paid Contractor.....	22
Section 4.02	Value of Omitted and Extra Work.....	22, 23
Section 4.03	Adjustment for Bond and Insurance Premiums.....	23
Section 4.04	Unit Prices.....	23, 24
Section 4.05	Allowances.....	24
Section 4.05A	Field Orders.....	24
Section 4.06	Deductions for Unperformed and/or Uncorrected Work.....	24, 25
Section 4.07	Liquidated Damages.....	25
Section 4.08	Contract Breakdown.....	25
Section 4.09	Prompt Payment Requirements.....	25
Section 4.10	Progress Payments.....	25, 26
Section 4.11	Applications for Progress Payments.....	26
Section 4.12	Progress Payments for Materials Delivered to Site.....	26
Section 4.13	Transfer of Title to Materials Delivered to Site.....	26
Section 4.14	Progress Payments for Materials Stored Off Site.....	26, 27
Section 4.15	Withholding of Progress Payments.....	27, 28
Section 4.16	Lien Law.....	28
Section 4.17	Substitution of Securities for Retainage.....	28

Section 4.18 Final Payment 28
 Section 4.19 Acceptance of Final Payment 28, 29
 Section 4.20 Guarantee Payment 29
 Section 4.21 Acceptance of Guarantee Payment 29
 Section 4.22 Contractor Limited to Money Damages 29
 Section 4.23 No Estoppel or Waiver 29, 30
 Section 4.24 Limitation of Actions 30
 Section 4.25 Electronic Payments 30

**Article V
 Protection of Rights and Property**

Section 5.01 Accidents and Accident Prevention 31
 Section 5.02 Adjoining Property 31
 Section 5.03 Emergencies 31
 Section 5.04 Fire Safety 31
 Section 5.05 Risks Assumed by Contractor 31, 32
 Section 5.06 Insurance Requirements 32, 33, 34, 35, 36
 Section 5.07 Builder's Risk Insurance 36, 37
 Section 5.08 Effect of Procurement of Insurance 37
 Section 5.09 No Third Party Rights 37

**Article VI 37
 Minority and Women’s Business Enterprises (MWBEs) / Equal Employment Opportunities (EEO) Provisions**

**Article VII
 Provisions Required by Law**

Section 7.01 Provisions Deemed Inserted 38
 Section 7.02 Wage Rates 38
 Section 7.03 Governing Law 38

**Article VIII
 Vendor Responsibility 38**

**Article IX
 Use of Service-Disabled Veteran-Owned Business Enterprises in Contract Performance 38, 39**

Signature of Parties and Governmental Approvals 40

Acknowledgments 41

Schedule I, II, III 42

Schedule A – Insurance Requirements 43, 44

Attachments – Terms, Conditions

1. Schedule I, II, III (Schedule I Unit Prices, Schedule II Allowances, Schedule III Field Order Allowances)
2. [Exhibit A Standard Contract Clauses](#)
3. [Exhibit A-1 Affirmative Action Clauses](#)

Attachments – Contractor Documentation

4. [Form 7554-07](#) – Contractor Proposal
5. [Form 7554-10](#) - Bid Bond and Acknowledgement (*required with bid*)
6. Affirmative Action and Minority & Women Owned Business Enterprises *from SUNY Procedure Item #7557 “Participation by Minority Group Members and Women (MWBEs) with Respect to State University of New York Contract” (applies >\$100,000)*
 - a. [Form 7557-121b](#) – MWBE Prospective Bidders Notice
 - b. [Form 7557-107](#) - M/WBE Utilization Plan (*required within seven days of the bid*)
 - c. The Contractor’s EEO Policy Statement or [Form 7557-104](#) (*required within seven days of the bid*)
 - d. [7557-108](#) - M/WBE-EEO Work Plan or EEO Staffing Plan (*required within seven days of the bid*)

Note: In accordance Procedure Item #7557 MWBE Utilization Plans, EEO policy statements and EEO Work Plans are due within seven days of submittal of the bid.

7. Service Disabled Owned Business Enterprise *from SUNY Procedure Item #7564 “Participation by Service-Disabled Veteran-Owned Business (SDVOBs) with Respect to State University of New York Contracts” (applies >\$100,000)*
 - a. [Form 7564-121b](#) – SDVOB Prospective Bidders Notice
 - b. [Form 7564-107](#) - SDVOB Utilization Plan (*required within seven days of the bid*)

Attachments – Additional Contractor Documentation (required after bid opening from the low bidder)

8. State Finance Law §§139-j and 139-k *from SUNY Procedure Item #7552 “Procurement Lobbying Procedure for State University of New York” (applies >\$15,000)*
 - a. [Form A](#) - Summary: Policy and Procedure of the State University of New York Relating to State Finance Law §§139-j and 139-k
 - b. [Form B](#) - Affirmation with respect to State Finance Law §§139-j and 139-k
 - c. [Form C](#) - Disclosure and Certification with respect to State Finance Law §§139-j and 139-k
9. Bidder’s Certifications (State Finance Law §139-l, Non-collusive bidding, Executive Order 177) *from SUNY Procedure Item #7554 “Construction Contracting Procedures*
 - a. [Form 7554-20](#) Bidder’s Certifications
10. Procurement Forms *from SUNY Procedure Item #7553 “Purchasing and Contracting (Procurement)*
 - a. [Form I](#) Omnibus Procurement Act of 1992 (*applies >\$1,000,000*)
 - b. [Form II](#) Omnibus Procurement Act of 1992, Out of state firms (*applies >\$1,000,000*)
 - c. [Form XIII](#) Public Officers Law Compliance
11. Bonds and Certificate of Insurance *from SUNY Procedure Item #7554 “Construction Contracting Procedures*
 - a. [Form 7554-11](#) Labor & Materials and Performance Bonds (*applies >\$50,000*)
 - b. [Form 7554-12](#) Certificate of Insurance (*applies to all contracts*)
 - c. NYS Workers Compensation and Disability Insurance (*applies all contracts*)
12. Vendor Responsibility
 - a. OSC’s [Vendrep - Online System](#) or [Link to paper forms](#) (*form applies ≥ \$100,000*)
13. NYS Labor Law, Section 220-a
 - a. [Form 7554-13](#)
 - i. Form AC 2947, Prime Contractor's Certification
 - ii. Form AC 2948, Subcontractor's Certification
 - iii. Form AC 2958, Sub-subcontractor's Certification

SUNY Cortland Professional Studies Parking Lot Replacement

Project No. 20240058

Specifications N.I.C. (Included for Coordination Only)

260000	General Requirements for Division 26
260519	Wires
260526	Grounding and Bonding
260543	Underground Conduit System
260553	Electrical Identification
265113	Lighting

Bid Specifications

311201	Site Preparation
312201	Site Earthwork
312501	Erosion, Sediment, and Pollution Control
321201	Asphalt Paving
321202	Inlaid Thermoplastic Asphalt Pavement Marking System
321301	Site Concrete Work
321601	Granite Curb
323001	Bus Shelter(s)
323002	Traffic Signs
329001	Planting
329201	Sodded Lawns
334001	Storm Drainage

Drawing N.I.C. (Included for Coordination Only)

E900	Schedule and Symbols
ED100	Site Plan – Lighting Removals
ES100	Site Plan - Lighting

Bid Drawing List

L0	Site Survey
L1	Site Plan Notes
L2	Site Preparation Plan
L3	Stormwater Pollution Prevention Plan
L4	SWPPP Notes and Details
L5	Grading, Drainage, and Utility Plan
L6	Layout Plan
L7	Site Details
L8	Site Details
L9	Lacrosse Wall Relocation Plan

Notice to Bidders and Newspaper Advertisement

The State University of New York at Cortland will receive sealed bids for project number **20240058** titled **South Campus Parking Lot** until 2:00PM local time on **1/15/2026** at Whitaker Hall, Room 201, 4 Pashley Drive, Cortland NY 13045 where such proposals will be publicly opened and read aloud. Attendees should request a parking permit no later than two days prior, by email to Kristi.Hughston@Cortland.edu.

Final date for questions and clarifications is **January 8, 2026, by 2:00PM** to allow for addendum response.

All work on this Contract is to be completed by **July 31, 2026**.

Bidding and Contract Documents may be examined free of charge at the campus and at the following locations.

Associated Building Contractors: 15 Belden St. Binghamton, New York 13903

Builders Exchange of Rochester: 180 Linden Oaks #100, Rochester, NY 14625

Dodge Reports c/o Dataflow: 318-320 Columbia Street, Utica, NY 13502

Mohawk Valley Builders Exchange: 10 Main Street, Suite 202, Whitesboro, NY 13492

Syracuse Builders Exchange: 6563 Ridings Road, Syracuse, NY 13206

Complete sets of Contract Documents for bidding may be obtained from Syracuse Blueprint Co. 825 Genesee St. Syracuse, NY 13210, 315-476-4084.

Section 143 of the State Finance Law requires payment of a deposit to receive these documents. Accordingly, a deposit check of \$45.00, made payable to Syracuse Blueprint, is required. Deposits less than \$50.00 are nonrefundable. Deposits will be waived for certified Minority and Women Owned and Service-Disabled Veteran Owned Businesses.

A virtual non-mandatory pre-bid meeting will be held on **January 5, 2026**, at **10:00AM**. A meeting request will be emailed to all attendees requesting a link to the meeting. Please email Kristi.Hughston@Cortland.edu AND Dillon.Young@Cortland.edu. Contractors are welcome to walk the site following the virtual pre-bid meeting.

Pursuant to State Finance Law §139-j and §139-k, this solicitation includes and imposes certain restrictions on communications between the University and potential bidders during the procurement process. Failure to adhere to this provision may result in the disqualification under the NYS Procurement Lobbying Act. The designated contacts for this procurement are:

- Kristi.Hughston@Cortland.edu AND Dillon.Young@Cortland.edu

Bids must be submitted in duplicate in accordance with the instructions contained in the

Information for Bidders. Security will be required for each bid in an amount not less than five (5) percent of the Total Bid.

It is the policy of the State of New York and the State University of New York to encourage minority business enterprise participation in this project by contractors, subcontractors and suppliers, and all bidders are expected to cooperate in implementing this policy.

The State University of New York reserves the right to reject any or all bids.

INFORMATION FOR BIDDERS

Section 1 Definitions

All definitions set forth in the Agreement are applicable to the Notice to Bidders, Information for Bidders and the Proposal, all of which documents are hereinafter referred to as the Bidding Documents.

Section 2 Issuance of Bidding and Contract Documents

Drawings and Specifications will be issued by the Consultant upon request after payment of the deposit specified in the Notice to Bidders. Deposits will be waived for NYS Certified MWBE and SDVOB bidders.

Section 3 Proposals

- (1) Proposals must be submitted on the forms provided by the University. They shall be addressed to the University in a sealed envelope, marked with the name and address of the bidder, the title of the Project and the Project number. The University accepts no responsibility for Proposals that may be delivered by any courier or other messenger service that does not contain all of the above-noted information on the outside of a sealed envelope. Facsimile or email copies of the Proposal will not be accepted.
- (2) All blank spaces in the Proposal must be filled in and, except as otherwise expressly provided in the Bidding Documents; no change is to be made in the phraseology of the Proposal or in the items mentioned therein.
- (3) Proposals that are illegible or that contain omissions, alterations, additions or items not called for in the Bidding Documents may be rejected as informal. In the event any bidder modifies, limits or restricts all or any part of its Proposal in a manner other than that expressly provided for in the Bidding Documents, its Proposal may be rejected as informal.
- (4) Any Proposal may be considered informal which does not contain prices in words and figures in all of the spaces provided or which is not accompanied by a bid security in proper form. In case any price shown in words and its equivalent shown in figures do not agree, the written words shall be binding upon the bidder. In case of a discrepancy in the prices contained in the Proposal forms submitted in duplicate by the bidder, the Proposal form which contains the lower bid shall be deemed the bid of the bidder; provided, however, the University at its election may consider the Proposal of such bidder informal.
- (5) If the Proposal is made by a corporation, the names and places of residence of the president, secretary and treasurer shall be given. If by a partnership, the names and places of residence of the partners shall be given. If by a joint venture, the names and addresses of the members of the joint venture shall be given. If by an individual, the name and place of residence shall be given.
- (6) No Proposal will be considered which has not been deposited with the University at the location designated in and prior to the time of opening of bids designated in the Bidding and Contract Documents or prior to the time of opening as extended by Addendum.
- (7) Bids may be modified, withdrawn or canceled only in writing or by email notice received by the University prior to the time of opening of bids designated in the Bidding and Contract Documents. A written or email notice of modification, withdrawal or cancellation shall be marked by the bidder with the name and address of the bidder, the title of the Project and the Project number. Upon

receipt by the University a duly authorized employee of the University, who shall note thereon the date and time of receipt and shall thereupon attach said written or email notice of modification, withdrawal or cancellation to the envelope submitted by the bidder pursuant to subdivision (1) of this

- (8) Permission will not be given to modify, explain, withdraw or cancel any Proposal or part thereof after the time designated in the Bidding and Contract Documents for the opening of bids, unless such modification, explanation, withdrawal or cancellation is permitted by law and the University is of the opinion that it is in the public interest to permit the same.

Section 4 Examination of Bidding and Contract Documents

- (1) Prospective bidders shall examine the Bidding and Contract Documents carefully and, before bidding, shall make written request to the Consultant (with a copy thereof to the University) for an interpretation or correction of any ambiguity, inconsistency or error therein which should be discovered by a reasonably prudent bidder. Such interpretation or correction as well as any additional Contract provision the University shall decide to include will be issued in writing by the Consultant as an Addendum, which will be sent to each person recorded as having received a copy of the Bidding and Contract Documents from the Consultant, and which also will be available at the places where the Bidding and Contract Documents are available for inspection by prospective bidders. Upon such emailing or delivery and making available for inspection, such Addendum will become a part of the Bidding and Contract Documents and will be binding on all bidders whether or not the bidder receives or acknowledges the actual notice of it. Prospective bidders are responsible for ensuring that all addenda have been incorporated into the bid. The requirements contained in all Bidding and Contract Documents shall apply to all Addenda.
- (2) Only the written interpretation or correction so given by Addendum shall be binding. Prospective bidders are warned that no trustee, officer, agent or employee of the University or the Consultant is authorized to explain or interpret the Bidding and Contract Documents by any other method, and any such explanation or interpretation, if given, must not be relied upon.

Section 5 Computation of Bid

- (1) In computing their bids, bidders are not to include the sales and compensating use taxes of the State of New York or of any city and county in the State of New York for any supplies or materials which are incorporated into the completed Project as the University is exempt from such taxes.
- (2) Unit prices may be inserted in the Proposal by the University or the bidder at the discretion of the University. Any unit prices listed in the Proposal by the University are based upon the Consultant's appraisal of a fair cost for the work involved. Such listed prices will be binding upon both the bidder and the University unless the bidder wishes to change any of such unit prices by crossing out the listed unit price and inserting a revised unit price. Such revised unit price shall not be binding upon the University unless it accepts the same, in writing, before it issues a Notice of Award. In the event the Proposal contains blank spaces for unit prices or the bidder revises any stated unit price, the amount of such unit prices for additions shall not vary by more than 15 percent from the prices inserted by the bidder for deductions, and, if the variance of such prices exceeds 15 percent, the University may adjust the deduction price inserted by the bidder so that it is only 15 percent lower than the addition price inserted by the bidder. In addition, the University may adjust any unit price filled in by a bidder to an amount agreeable to both the bidder and the University or it may reject any unit prices.

- (3) Alternates, if any, listed in the Proposal shall be accepted in the order indicated and will be used in combination with the Base Bid to determine the low bidder. Unit prices will not be used to determine the low bidder.
- (4) If a tie bid should occur the University reserves the right to use one of the following methods to determine the successful bidder. For tie bids between two contractors the University representative shall flip a coin, both affected contractors must be present for the coin toss. For tie bids between three or more contractors the University representative shall pull names from a bowl, hat or other container. The affected contractors must be present for the drawing.

Section 6 Payment of Bid Security

- (1) Each Proposal must be accompanied by the required amount of the bid security, which is 5% of the Total Bid, in the form of a bank draft or certified check, payable at sight to the University and drawn on a bank authorized to do business in the United States, or by a Bid Bond, on a form approved by the University, duly executed by the bidder as principal and having as surety thereon a surety company or companies, approved by the University, authorized to do business in the State of New York as a surety. Attorneys-in-fact who execute a Bid Bond on behalf of a surety must affix thereto a certified and effectively dated copy of their power of attorney.
- (2) The University will return, without interest, bid securities in accordance with the following procedure:
 - a. To all bidders except the apparent three (3) lowest bidders within two (2) working days after the opening of bids.
 - b. To any bidder submitting a Bid Bond as a replacement for a previously provided bank draft or certified check, within two (2) working days after the University's approval of such Bid Bond.
 - c. To the apparent three (3) lowest bidders, unless their bid security was previously returned, within two (2) working days after delivery to the University by the successful bidder of the executed Agreement and required Bonds, or within two (2) working days of the University's rejection of all bids or within two (2) working days after the expiration of forty-five (45) calendar days after the bid opening, whichever event shall occur first.
 - d. Bid Bonds, due to their nature, will not be returned.
- (3) The University reserves the right to deposit bid security drafts or checks pending final disposal of them.

Section 7 Qualifications of Bidders

- (1) A bidder must demonstrate, to the satisfaction of the University, that it has successfully completed three (3) contracts similar in size, scope and complexity to this contract within the last five (5) years.
 - a. For scope and complexity, similar work is defined as site work, asphalt paving work, site utility and drainage work, of as further described in the General Requirements, Description of Work.

- b. The determination of relevant contract experience in terms of size, scope and complexity will be at the sole discretion of the University.
 - c. The above three projects shall be submitted on Attachment A of the Proposal (Form 7554-07), "List of Completed Similar Construction Projects" (the List). If the List is not provided or is missing information, and/or is found to have erroneous information or information that is no longer current, a Proposal may be rejected as not responsive. If requested by the University, the bidder may be permitted to add missing information, modify and/or explain erroneous information or information that is no longer current on the List. Modifications and/or explanations of the List must be received within 48 hours of receipt of the University's request.
- (2) All prospective bidders must demonstrate to the satisfaction of the University that they have the skill and experience, as well as the necessary facilities, ample financial resources, ability to manage staff and subcontractors effectively, ability to anticipate and plan construction work for optimal progress, ability to create, strive for and maintain working environments and relationships that are constructive, communicative and cooperative, organization and general reliability to do the work to be performed under the provisions of the Contract in a satisfactory manner and within the time specified.
- (3) Each bidder must demonstrate to the satisfaction of the University that it has working capital available for the Project upon which it is bidding in an amount equal to 15 percent of the first \$100,000 of the amount of its Base Bid plus 10 percent of the next \$900,000 plus 5 percent of the remainder of its Base Bid. Working capital is defined as the excess of current assets over current liabilities. The University defines current assets as assets which can be reasonably expected to be converted into cash within a year, and current liabilities as debts which will have to be paid within a year.
- (4) The University may make such investigation as the University deems necessary to determine the ability of any bidder to perform the Work. Bidders shall furnish to the University all information and data required by the University, including complete financial data, within the time and in the form and manner required by the University. The University reserves the right to reject any bid if the evidence submitted by or an investigation of such bidder fails to satisfy the University that such bidder is properly qualified to carry out its obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.
- (5) At the time of the bid opening, all bidders and subcontractors, domestic and foreign, must be in compliance with New York State business registration requirements. Contact the NYS Department of State regarding compliance.

Section 8 Submission of Post-Bid Information

- (1) Within forty-eight (48) hours after the opening of bids, each of the apparent three lowest bidders, unless otherwise directed by the University or otherwise provided in the Bidding and Contract Documents, shall submit to both the University and the Consultant:
- a. Evidence of a completed New York State Uniform Contracting Questionnaire (Vendor Responsibility Questionnaire For-Profit Construction (CCA-2)). Either email confirmation that the bidder's CCA-2 is current and certified in the New York State VendRep System (VendRep) within the last six months from the bid date, or deliver a certified paper format CCA-2, including all attachments, to the University.

The University recommends that vendors file the required CCA-2 online via the VendRep. To enroll in and use the VendRep, see the VendRep Instructions at https://www.osc.state.ny.us/vendrep/info_vrsystem.htm or go directly to the VendRep online at <https://portal.osc.state.ny.us>. To request assistance, contact the Office of the State Comptroller's ("OSC") Help Desk at 866-370-4672 or 518- 408-4672 or by email at ciohelpdesk@osc.state.ny.us.

The paper format CCA-2 and accompanying definitions are available on the OSC website at the following location:

http://www.osc.state.ny.us/vendrep/forms_vendor.htm

- b. A working plan and schedule showing clearly, in sequence and time-scale, all significant activities of the work. The working plan and schedule shall be in the form of suitable charts, diagrams or bar graphs and shall be based on the Contractor's logic and time estimates for the anticipated time of commencement and completion of the work and its significant phases and activities and the interrelationship between such significant activities and other items pertinent to the work. This requirement is in addition to and not a substitute for the schedule requirements of section 3.02 (Time Progress Schedule) of the Agreement. Although the working plan and schedule submitted shall not be used in determining the lowest responsible bidder, failure to submit the working plan and schedule may result in the rejection of the Proposal as not responsive.
- c. The names and addresses of the bidder's proposed subcontractor for the Asbestos Abatement work of any value, and proposed subcontractors for Electrical Work, the Heating, Ventilating and Air-Conditioning Work and the Plumbing Work for each of said work categories valued at \$100,000 or more.
 - i. For each proposed subcontractor named, provide a completed "List of Completed Similar Construction Projects (the List)." If the List is not provided or is missing information, and/or is found to have erroneous information or information that is no longer current, a proposed subcontractor may be rejected. If requested by the University, the bidder may be permitted to add missing information, modify and/or explain erroneous information or information that is no longer current on the List; modifications and/or explanations of the List must be received promptly after receipt of the University's request.
 - ii. Only one proposed subcontractor should be named for each of such trades. Proposed subcontractors of the bidder may not be changed except with the specific written approval of the University.
 - iii. The naming of the bidder itself for any of such work is not acceptable and may result in rejection of the bidder unless the bidder can demonstrate to the University that it has successfully completed or substantially completed three (3) contracts similar in size, scope and complexity for the designated work within the last five (5) years. The determination of relevant contract experience in terms of size, scope and complexity will be at the sole discretion of the University.
 - iv. The bidder will be required to establish, to the satisfaction of the Consultant and the University, the reliability and responsibility of each of their said proposed

- subcontractors to furnish and perform the work described in the sections of the Specifications pertaining to each of such proposed subcontractors' respective trades. By submission of the "List of Completed Similar Construction Projects," a proposed subcontractor must be able to demonstrate that they have successfully completed or substantially completed three (3) contracts similar in size, scope and complexity for the designated work within the last five (5) years. The determination of relevant contract experience in terms of size, scope and complexity will be at the sole discretion of the University.
- v. For each of the proposed subcontractors, the bidders must submit to the University, within seven (7) calendar days after the bid opening, evidence of a completed New York State Uniform Contracting Questionnaire (Vendor Responsibility Questionnaire For-Profit Construction (CCA-2)). Either email confirmation that the subcontractor's CCA-2 is current and certified in the New York State VendRep System (VendRep) within the last six months from the bid date, or deliver a certified paper format CCA-2, including all attachments, to the University.
 - vi. In the event that the University and the Consultant reject any of said proposed subcontractors, the bidder, within two (2) working days after receipt of notification of such rejection, shall again submit to the University and the Consultant the name of another proposed subcontractor in place of the one rejected and it will be required to establish to the satisfaction of the University and the Consultant the reliability and responsibility of said proposed subcontractor; When naming another proposed subcontractor, the bidder must promptly submit the proposed subcontractor's completed "List of Completed Similar Construction Projects" and their completed CCA-2.
 - vii. The bidder will not be permitted to submit another proposed subcontractor if it designated itself for any of the aforesaid categories of work.
 - viii. Proposed subcontractors of the bidder, approved by the University and the Consultant, must be used on the work for which they were proposed and approved, and they may not be changed except with the specific written approval of the University.
- d. A breakdown of the amount of the bidder's Proposal. Such breakdown shall be prepared in accordance with industry standards. No bidder shall be barred from revising, in the Contract breakdown required under the provisions of Section 4.08 of the Agreement, the various amounts listed in the bid breakdown required under the provisions of this Section. The amount set forth in said bid breakdown will not be considered as fixing the basis for additions to or deductions from the Contract consideration.
- (2) Except for Contracts of \$100,000 or less, within seven (7) calendar days after the opening of bids, unless otherwise directed by the University, the three low bidders shall submit to the University for its approval, a Minority and Women-owned Business Enterprise Utilization Plan ([Form 7557-107](#)).
 - (3) Except for contracts of \$100,000 or less, within seven (7) calendar days after the opening of bids, the three low bidders shall submit to the University for its approval, an Equal Employment Opportunity Statement and EEO Staffing Plan ([Form 7557-108](#)) to ensure equal employment opportunities without discrimination because of race, creed, color, sex or national origin. Such Statement and plan should demonstrate the bidder's intent to comply with the provisions of Article VI of the Agreement. The EEO plan should include the methods that the bidder will use to address

nondiscrimination and affirmative action so that minorities and women will be included in the work force. The Equal Employment Opportunity ("EEO") Policy Statement that shall contain, but not necessarily be limited to, a provision that the bidder, as a precondition to entering into a valid and binding Contract with the University, shall during the performance of the Contract, agree to the following:

- a. It 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 membership and women 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 the Contract.
 - b. It shall state in all solicitations or advertisements for employees that, in the performance of the 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.
 - c. At the request of the University, it shall request each employment agency, labor union or authorized representative of workers, with which it has 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 bidder's obligations herein.
 - d. After the award of the contract, it shall submit to the University a work force utilization report, in a form and manner required by the University, of the work force actually utilized on the Contract, broken down by specified ethnic background, gender and Federal occupational categories or other appropriate categories specified by the University.
- (4) The above information and such other information as the University or the Consultant may request or obtain will be used by the University in determining the reliability and responsibility of the bidder and any proposed subcontractors. Each bidder must comply promptly with all requests by the University and the Consultant for information and must actively cooperate with the University and the Consultant in their efforts to determine the qualifications of the bidder and any proposed subcontractors. Failure to comply with the latter may result in the rejection of the Proposal as not responsive. All information required to be furnished to the University under this Section shall be sent to the State University at {insert address or email address}.

Section 9 Award of Contract

- (1) The award of the Contract shall be made to the bidder submitting the lowest bid that is responsive to the solicitation and who, in the sole opinion of the University, is qualified to perform the work. The University shall determine the lowest bid by adding to or deducting from the Base Bid of the bidders the additive or deductive alternates, if any, the University elects to accept after the opening of the Proposals. Alternates will be accepted in the order they are set forth in the Proposal. The unit prices set forth in the Proposal for additions to or deductions from the work shall not be considered in determining the lowest bid.

The lowest base bid shall not exceed the amount of funds then estimated by the University as available to finance the contract. If the lowest bidder exceeds such amount, the University may

- reject all bids, or may award the contract on the base bid combined with deductive alternates applied in the order they are set forth in the Proposal as produces the net amount which is within the available funds.
- (2) The right is reserved, if, in the University's judgment, the public interest will be promoted thereby, to reject any or all Proposals, to waive any informality in any Proposal received or to afford any bidder an opportunity to remedy any deficiency resulting from a minor informality or irregularity. Without limiting the generality of the foregoing:
- a. A Proposal may be rejected as not responsive if the bidder fails to furnish the required bid security or to submit the data required with or after its Proposal and this Information for Bidders.
 - b. A Proposal may be rejected as not responsive if the bidder cannot show to the satisfaction of the University: (i) that it has the necessary qualifications and capital; or (ii) that it owns, controls or can procure the necessary plant and equipment to commence the work at the time prescribed in the Contract and thereafter to prosecute and complete the work at the rate, or within the time specified; or (iii) that it is not already obligated by the performance of so much other work as is likely to delay the commencement, prosecution or completion of the work contemplated by the Contract.
 - c. A Proposal will be rejected as not responsive if it does not provide for the completion of the work by the date of completion specified in the Proposal.
- (3) The University also expressly reserves the right to reject any Proposal as not responsive if, in its opinion, considering the work to be performed, the facts, as to the bidder's business or technical organization, plant, financial and other sources of business experience compared with the work bid upon, justify rejection.
- (4) The award of the Contract shall not be construed as a guarantee by the University that the plant, equipment and the general scheme of operations and other data submitted by the bidder with or after its Proposal is either adequate or suitable for the satisfactory performance of the work.

Section 10 Required Bonds and Insurance

- (1) Unless otherwise agreed to by the University, within ten (10) working days after the receipt of Letter of Intent, the Contractor shall procure, execute and deliver to the University and maintain, at its own cost and expense:
- a. A Performance Bond and a Labor and Material Bond, both of which bonds shall be on the form prescribed by the University and in an amount not less than 100 percent of the total amount of the Contract awarded to the Contractor by the University said bonds must be issued by a surety company approved by the University and authorized to do business in the State of New York as a surety.
 - b. Attorneys-in-fact who execute said Bonds on behalf of a surety must affix thereto a certified and effectively dated copy of their power of appointment.
- (2) Prior to the commencement of work the Successful Bidder will provide, at its sole cost and expense, Certificates of Insurance in accordance with Section 5.06 and 5.07 of the Construction Agreement, which shall remain in force throughout the term of the agreement, or any extension thereof.

- (3) Insurance shall be in accordance with the limits set forth in Schedule A of the Construction Agreement.
- (5) A 120-day schedule
 - a. After receipt of the Letter of Intent but before receipt of the Contract is Awarded, the Contractor, unless otherwise directed by the University, shall update the working plan and schedule previously submitted in accordance with the Information for Bidders to define the contractor's planned operations during the first 120 days and submit it to the University and the Consultant for their acceptance. The updated working plan and schedule shall be in the form of suitable charts, diagrams or bar graphs and shall be based on the Contractor's logic and time estimates. When updated, such plan and schedule shall be sufficiently detailed to show clearly, in sequence, all salient features of the work of each trade including: the anticipated time of commencement and completion of such work and the interrelationship between such work, submission of Shop Drawings and Samples for approval, approval of Shop Drawings and Samples, placing of orders of materials, fabrication and delivery of materials, installation and testing of materials, contiguous or related work under other contracts, and other items pertinent to the work. The Notice to Proceed may be withheld until this schedule is received and is deemed responsive to the project requirements.
 - b. After Contract Award, but before processing second progress payment application, the Contractor, unless otherwise directed by the University, shall submit to the University and the Consultant for their acceptance its proposed working plan and project time schedule for all the work covered by the Contract, and shall include activities for preparation and submission of all Shop Drawings and Samples. Said proposed working plan and schedule shall be prepared in accordance with the form and requirements set forth in the preceding paragraph.

Section 11 Minority and Women-Owned Business Enterprises

- (1) Pursuant to New York State Executive Law Article 15-A, the University recognizes its obligation under the law to promote opportunities for maximum feasible participation of certified Minority and Women-Owned Business Enterprises and the employment of minority group members and women in the performance of University contracts.
- (2) For purposes of this solicitation, the University hereby establishes an overall goal of **30%** for MWBE participation, **11%** for Minority-Owned Business Enterprises ("MBE") participation and **19%** for Women-Owned Business Enterprises ("WBE") participation (based on the current availability of qualified MBEs and WBEs). For additional information please refer to the MWBE requirements outlined in the Prospective Bidders Notice ([Form 7557-121b](#)) and Exhibit A-1.
- (3) For guidance on how the University will determine a Contractor's "good faith efforts," refer to 5 NYCRR §142.8.
- (4) Please note the forms identified in the Prospective Bidders Notice ([Form 7557-121b](#)) must be submitted within seven days of the bid opening. Required forms include the MWBE-EEO Policy Statement ([Form 7557-104](#) or equivalent), the MWBE Utilization Plan ([Form 7557-107](#)) and the EEO Staffing Plan ([Form 7557-108](#)).

- (5) Upon contract award and prior to contract execution the selected awardee will enter its Statewide Utilization Management Plan (SUMP) and document its good faith efforts to achieve the applicable MWBE participation goals by submitting evidence through the New York State Contract System, which can be viewed at: <http://ny.newycontracts.com>, provided however, that the selected awardee may arrange to provide such evidence via a non-electronic method by contacting the SUNY Office of Diversity, Equity, and Inclusion.
- (6) Any modifications or changes to the MWBE Utilization Plan after the Contract award and during the term of the Contract must be reported on a revised MWBE Utilization Plan and submitted to the University. The University will review the submitted MWBE Utilization Plan and advise the Bidder of the University's acceptance or issue a notice of deficiency within 30 days of receipt.
- (7) If a notice of deficiency is issued, Awardee agrees that it shall respond to the notice of deficiency within seven (7) business days of receipt by submitting to SUNY [address phone and fax information], a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by SUNY to be inadequate, SUNY shall notify the Awardee and direct the Awardee to submit, within five (5) business days, a request for a partial or total waiver of MWBE participation goals on [Form 7557-114](#). Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.

SUNY may disqualify a Bidder as being non-responsive under the following circumstances:

- i. If a Bidder fails to submit a MWBE Utilization Plan;
- ii. If a Bidder fails to submit a written remedy to a notice of deficiency;
- iii. If a Bidder fails to submit a request for waiver; or
- iv. If SUNY determines that the Bidder has failed to document good faith efforts.

Section 12 Equal Employment Opportunity Requirements

- (1) Pursuant to Article 15 of the Executive Law (the "Human Rights Law"), and all other State and Federal statutory and constitutional non-discrimination provisions, the Bidder will not discriminate against any employee or applicant for employment because of race, creed, color, sex, religion, national origin, military status, sexual orientation, gender identity or expression, age, disability, predisposing genetic characteristics, domestic violence victim status, familial status or marital status. The Bidder 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. The Bidder will state in all solicitations or advertisements for employees that, in the performance of this Contract, all qualified applicants will be afforded equal employment opportunities without discrimination.
- (2) The Bidder will undertake, or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination, and, if awarded a Contract pursuant to this solicitation, will make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force during its legal engagement with SUNY.
- (3) By submission of a bid or proposal in response to this solicitation, the Bidder agrees with all of the terms and conditions of SUNY Exhibit A including Clause 12 - Equal Employment Opportunities for Minorities and Women and acknowledges that, if the Bidder is awarded a Contract, The Contractor is required to ensure that it and any subcontractors awarded a subcontract over \$25,000 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, shall undertake or continue programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, equal opportunity shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, and rates of pay or other forms of compensation. This requirement does not apply to: (i) work, goods, or services unrelated to the Contract; or (ii) employment outside New York State.

- (4) The Bidder further agrees, where applicable, to submit with the bid a staffing plan ([Form 7557-108](#)) identifying the anticipated work force to be utilized on the Contract and, if awarded a Contract, will, upon request, submit to SUNY a workforce utilization report identifying the workforce actually utilized on the Contract if known. Forms are available in SUNY Procurement Policies and Procedures Document 7557 online at: http://www.suny.edu/sunypp/documents.cfm?doc_id=611.

Please Note: Failure to comply with the foregoing requirements may result in a finding of non-responsiveness, non-responsibility and/or a breach of the Contract, leading to the withholding of funds, suspension or termination of the Contract or such other actions or enforcement proceedings as allowed by the Contract.

Section 13 Executive Order 162 (EO162)

- (1) Governor Cuomo's Executive Order 162 requires state contractors to disclose data on the gender, race, ethnicity, job title, and salary of employees performing work on state contracts.
- (2) Bidder agrees to submit Workforce Utilization Report ([Form 7557-110](#)) and to require the same information to be submitted by any of their subcontractors on the state contract, in such format as shall be required by SUNY on a monthly basis for all construction contracts and quarterly basis for all other contracts during the term of the contract. Empire State Development has provided specific details on this requirement at <https://esd.ny.gov/doing-business-ny/mwbe/mwbe-executive-order-162>.

Section 14 Executive Order 177 (EO177)

- (1) The New York State Human Rights Law, Article 15 of the Executive Law, prohibits discrimination and harassment based on age, race, creed, color, national origin, sex, sexual orientation, gender identity, disability, marital status, military status, or other protected status.
- (2) The Human Rights Law may also require reasonable accommodation for persons with disabilities and pregnancy-related conditions. A reasonable accommodation is an adjustment to a job or work environment that enables a person with a disability to perform the essential functions of a job in a reasonable manner. The Human Rights Law may also require reasonable accommodation in employment on the basis of Sabbath observance or religious practices.
- (3) Generally, the Human Rights Law applies to: (i) all employers of four or more people, employment agencies, labor organizations and apprenticeship training programs in all instances of discrimination or harassment; (ii) employers with fewer than four employees in all cases involving sexual harassment; and (iii) any employer of domestic workers in cases involving sexual harassment or harassment based on gender, race, religion or national origin.
- (4) In accordance with Executive Order No. 177, prior to contract award, selected Awardee must submit a certification that it does not have institutional policies or practices that fail to address

harassment and discrimination as described above. SUNY is electing to obtain the certification with the bid documents to avoid unnecessary delay in the contract award process. All Bidders must sign and submit the certification attached to this IFB, SUNY [Form 7554-20](#).

Section 15 Service-Disabled Veteran Owned Business Enterprises

- (1) Consistent with the State University of New York's commitment to, and in accordance with, Article 17-B of the New York State Executive Law, contractors are required to ensure that good faith efforts are made to include meaningful participation by Service Disabled Veteran-Owned Business in SUNY's MWBE Program. The requirements apply to contracts in excess of \$100,000.
- (2) To ensure that SDVOB Enterprises are afforded the opportunity for meaningful participation in the performance of the University's contracts, and to assist in achieving the SDVOB Act's statewide goal for participation on state contracts the University hereby establishes an overall goal of **6%** for SDVOB participation for this solicitation.
- (3) For additional information please refer to the SDVOB requirements outlined in the Prospective Bidders Notice ([Form 7564-121b](#)). Please note the SDVOB Utilization Plan ([Form 7564-107](#)) must be submitted within seven days of the bid opening.

Section 16 Encouraging Use of New York State Business Businesses in Contract Performance

- (1) New York State businesses have a substantial presence in State contracts and strongly contribute to the economies of the state and the nation. In recognition of their economic activity and leadership in doing business in New York State, bidders/proposers for this contract for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the contract. Such partnering may be as subcontractors, suppliers, protégés or other supporting roles.
- (2) Bidders/proposers need to be aware that all authorized users of this contract will be strongly encouraged, to the maximum extent practical and consistent with legal requirements, to use responsible and responsive New York State businesses in purchasing commodities that are of equal quality and functionality and in utilizing services and technology. Furthermore, bidders/proposers are reminded that they must continue to utilize small, minority and women-owned businesses, consistent with current State law.
- (3) Utilizing New York State businesses in State contracts will help create more private sector jobs, rebuild New York's infrastructure, and maximize economic activity to the mutual benefit of the contractor and its New York State business partners. New York State businesses will promote the contractor's optimal performance under the contract, thereby fully benefiting the public sector programs that are supported by associated procurements.
- (4) Public procurements can drive and improve the State's economic engine through promotion of the use of New York businesses by its contractors. The State therefore expects bidders/proposers to provide maximum assistance to New York businesses in their use of the contract. The potential participation by all kinds of New York businesses will deliver great value to the State and its taxpayers.
- (5) Information on the availability of New York State subcontractors and suppliers is available from: New York State Department of Economic Development, Procurement Assistance Unit, One Commerce Plaza, Albany, New York 12245, Phone: (518) 474-7756, Fax: (518) 486-7577.

Section 17 Single Contract Responsibility

This is a single bid general construction project. The Contractor submitting the bid is responsible for all work associated with this Project.

Section 18 Examination of Site and Conditions of Work

- (1) A virtual non-mandatory pre-bid meeting will be held on January 5, 2026, at 10:00AM. A meeting request will be emailed to all attendees requesting a link to the meeting. Please email Kristi.Hughston@Cortland.edu AND Dillon.Young@Cortland.edu. Contractors are welcome to walk the site following the virtual pre-bid meeting. Failure to attend the pre-bid meeting shall not be the cause for extra payment.
- (2) Each bidder must inform itself fully of the conditions relating to the construction of the project and the employment of labor on the project. Failure to do so will not relieve a successful bidder of their obligation to furnish all material and labor necessary to carry out the provisions of their contract. To the extent possible, the contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

Section 19 General Terms and Conditions

- (1) The following items will be incorporated into, and made part of, the formal agreement: (1) the University's Invitation for Bid; (2) the Successful Bidder's proposal; (3) Exhibit A, Standard Contract Clauses; (4) Exhibit A-1, Affirmative Action Clauses; and, (5) Forms A and B Procurement Lobbying Forms.
- (2) In the event of any inconsistency in or conflict among the document elements of the agreement described above, such inconsistency or conflict shall be resolved by giving precedence to the document elements in the following order: (1) Exhibits A and A-1; (2) Forms A and B Procurement Lobbying Forms, (3) the Agreement; (4) this IFB; and (5) the Successful Bidder's proposal.

Section 19.1 Vendor Debriefing and Contract Award Protest Procedure

- (1) Upon being notified of their unsuccessful bids, unsuccessful bidders may request in writing a debriefing within 15 calendar days of such notice. The 15 day period starts once unsuccessful bidders are notified. Once a request is made by the bidder, the University must schedule a debriefing within a reasonable time of such request. Unless the campus and bidder mutually agree to use another method such as by telephone, video conference or another type of electronic communication the debriefing must be conducted in person with the bidder.
- (2) This procurement is subject to SUNY Procedure Item 7561, Contract Award Protest Procedure.

Section 19.2 Proposal Confidentiality

- (1) All proposals and qualifications submitted for the University's consideration will be held in confidence. However, the resulting contract is subject to the New York State Freedom of Information Law (FOIL). Therefore, if a Bidder believes that any information in its proposal constitutes a trade secret or should otherwise be treated as confidential and wishes such information not to be disclosed the Bidder shall submit with its proposal a separate letter to the

designated contact. The letter shall specifically identify the page number(s), line(s) or other appropriate designation(s) containing such information, explaining in detail why such information is a trade secret and formally requesting that such information be kept confidential. Failure by an Bidder to submit such a letter will constitute a waiver by the Bidder of any rights it may have under Section 89(5) of the Public Officers' Law relating to protection of trade secrets.

- (2) The proprietary nature of the information designated confidential by the Bidder may be subject to disclosure if ordered by a court of competent jurisdiction. A request that an entire proposal be kept confidential is not advisable since a proposal cannot reasonably consist of all data subject to FOIL proprietary status.

Section 19.3 Information Security Breach and Notification Act

- (1) The Bidder shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law Section 899-aa and State Technology Law, Section 208). The Bidder shall be liable for the costs associated with such breach if caused by its negligent or willful acts or omissions, or the negligent or willful acts or omissions of its agents, officers, employees or subcontractors.

Section 19.4 State Finance Law §§ 139-j and 139-k

- (1) State Finance Law §§139-j and 139-k imposes certain restrictions on communications between the University and a Bidder during the procurement process. During the restricted period the Bidder is restricted from making contacts to other than designated contact unless it is a contact that is included among certain statutory exceptions set forth in State Finance Law §139-j(3)(a). The restricted period is from the earliest notice of intent to solicit offers through final award and approval of the Contract.
- (2) University employees and their designated representatives are also required to obtain certain information when contacted during the restricted period and make a determination of the responsibility of the Bidder pursuant to these two statutes. Certain findings of non-responsibility can result in rejection for contract award and in the event of two findings within a 4 year period the Bidder is debarred from obtaining government procurement contracts.

The designated contacts for this procurement are: Kristi.Hughston@Cortland.edu and Dillon.Young@Cortland.edu

Section 19.5 State Finance Law §§ 139-l

- (1) Pursuant to N.Y. State Finance Law §139-l, every bid made on or after January 1, 2019 to the State of any public department or agency thereof, where competitive bidding is required by statute, rule or regulation, for work or services performed or to be performed or goods sold or to be sold, and where otherwise required by such public department or agency, shall contain a certification that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. Such policy shall, at a minimum, meet the requirements of N.Y. State Labor Law §201-g.
- (2) N.Y. State Labor Law §201-g provides requirements for such policy and training and directs the Department of Labor, in consultation with the Division of Human Rights, to create and publish a

model sexual harassment prevention guidance document, sexual harassment prevent policy and sexual harassment training program that employers may utilize to meet the requirements of N.Y. State Labor Law §201-g. The model sexual harassment prevention policy, model sexual harassment training materials, and further guidance for employers, can be found online at the following URL: <https://www.ny.gov/combating-sexual-harassment-workplace/employers>.

- (3) Pursuant to N.Y. State Finance Law §139-l, any bid by a corporate bidder containing the certification required above shall be deemed to have been authorized by the board of directors of such bidder, and such authorization shall be deemed to include the signing and submission of such bid and the inclusion therein of such statement as the act and deed of the bidder.
- (4) If the bidder cannot make the required certification, such bidder shall so state and shall furnish with the bid a signed statement that sets forth in detail the reasons that the bidder cannot make the certification. After review and consideration of such statement, SUNY may reject the bid or may decide that there are sufficient reasons to accept the bid without such certification.
- (5) All Bidders must sign and submit the certification attached to this IFB, SUNY [Form 7554-20](#).

Section 20 Additional Terms and Conditions

- (1) The terms and conditions of the State University of New York Construction Agreement (Form 7554-09) shall apply and is provided as an attachment to this IFB.
- (2) The resulting agreement shall be binding upon its execution by both parties and, if required by New York State law, upon the approval of the Attorney General and the Office of the State Comptroller.
- (3) The agreement may be revised at any time upon mutual consent of the parties in writing. Such written consent will not be effective until signed by both parties and, if required by New York State law, approved by the Attorney General and the Office of the State Comptroller.
- (4) The relationship of the Successful Bidder to the University shall be that of independent contractor.
- (5) Compliance with the post-employment restrictions of the Ethics in Government Act is required.
- (6) The submission of a proposal constitutes a binding offer to perform and provide said services.
- (7) In the event the Successful Bidder uses partners, subcontracts or subcontractors, the Successful Bidder will remain responsible for compliance with all specifications and performance of all obligations under the contract resulting from this IFB. For the resulting agreement, the Successful Bidder will be the prime contractor.
- (8) The University will not be liable for any costs associated with the preparation, transmittal, or presentation of any proposals or materials submitted in response to this IFB.
- (9) Public announcements or news releases regarding this IFB or any subsequent award of a contract must not be made by any Bidder without the prior written approval of SUNY.
- (10) The Successful Bidder is responsible for compliance with all applicable rules and regulations pertaining to cities, towns, counties and State where the services are provided, and all other laws applicable to the performance of the resulting contract. The Successful Offeror shall provide all

necessary safeguards for safety and protection as set forth by the United States Department of Labor, Occupational Safety and Health Administration.

- (11) The Successful Bidder will be responsible for the work, direction and compensation of its employees, consultants, agents and contractors. Nothing in the resulting agreement or the performance thereof by the Successful Bidder will impose any liability or duty whatsoever on the University including, but not limited to, any liability for taxes, compensation, commissions, Workers' Compensation, disability benefits, Social Security, or other employee benefits for any person or entity.
- (12) In the event the Successful Bidder is required to be reimbursed for travel, Bidder shall be reimbursed at rates not to exceed the current NYS Schedule of Allowable Reimbursable Travel Expenses. Refer to the U.S. Government Administration Rates for Travel at: <http://www.gsa.gov>
- (13) In addition, the University reserves the right to:
 - a. Not accept any and all proposals received in response to this IFB, waive requirements or amend this IFB upon notification to all bidders, waive minor irregularities or adjust or correct cost or cost figures with the concurrence of the bidder if mathematical or typographical errors exist.
 - b. To terminate any resulting contract for: (1) unavailability of funds; (2) cause; (3) convenience; (4) in the event it is found that the certification filed by the Bidder in accordance with State Finance Law §§139-j and 139-k are found to be intentionally false or intentionally incomplete; and if applicable, the Department of Taxation and Finance Contractor Certification Form ST-220CA was false or incomplete. Upon such finding the University may exercise its termination right by providing written notification to the Bidder in accordance with the written notification terms of the contract.
 - c. Request certified audited financial statements for the past three (3) completed fiscal years and/or other appropriate supplementation including, but not limited to, interim financial statements and credit reports.
 - d. Contact any or all references.
 - e. Request clarifications from Bidders for purposes of assuring a full understanding of responsiveness, and further to permit revisions from all Bidders determined to be susceptible to being selected for contract award, prior to award.
 - e. Advise Bidder of any objectionable employee(s) and/or subcontractor(s) and request their removal from the project. Such removal shall not be reasonably withheld by the Bidder.

Section 21 Public Work Contractor and Subcontractor Registry

- (1) Starting December 30, 2024, all contractors and subcontractors submitting bids or performing construction work on public work projects covered by [Article 8 of the Labor Law](#) are required to register with the New York State Department of Labor (NYSDOL) under [Labor Law Section 220-j](#).
- (2) Contractors must submit their certificate of registration at the time the bid is made.
- (3) Contractors are responsible for verifying that subcontractors are registered. Subcontractors must be registered prior to commencing any work on a covered project.

- (4) Contractors need to register before submitting any new bids or commencing new work on a covered project on or after December 30, 2024. Subcontractors need to register before commencing new work on a covered project on or after December 30, 2024.



NAME OF BIDDER

ADDRESS OF BIDDER

EMAIL ADDRESS OF BIDDER

PROPOSAL FOR

Project Number: 20240058 Date: 12/19/2025
Project Name: South Campus Parking Lot

TO THE STATE UNIVERSITY OF NEW YORK:

1. The Work Proposed Herein Will Be Completed Within the timeframe stated on page one of the Agreement. In the event the bidder fails to complete such work by said date or dates, or within the time to which such completion may have been extended in accordance with the Contract Documents, the bidder agrees to pay the University liquidated damages in an amount equal to the values indicate in the Liquidated Damages Schedule below for each calendar day of delay in completing the work.

LIQUIDATED DAMAGES SCHEDULE

<u>Contract Amount</u>	<u>Liquidated Damages</u>
Under \$100,000.....	\$100/day
\$100,000-\$499,999.....	\$200/day
\$500,000-\$999,999.....	\$300/day
\$1MM-\$1,999,999.....	\$400/day
\$2MM-\$3,499,999.....	\$500/day
\$3.5MM-\$5MM.....	\$700/day
Over \$5MM (to be determined by the University in each instance)	\$ ___/day

- The bidder hereby declares that it has carefully examined all Bidding and Contract Documents and that it has personally inspected the actual location of the work, together with the local sources of supply, has satisfied itself as to all the quantities and conditions, and understands that in signing this Proposal, it waives all right to plead any misunderstanding regarding the same.
- The bidder further understands and agrees that it is to do, perform and complete all work in accordance with the Contract Documents and to accept in full compensation therefore the amount of the Total Bid, modified by such additive or deductive alternates, if any, as are accepted by the University.
- The bidder further agrees to accept the unit prices, if any, set forth in paragraph (5) of this proposal, except as the same may be modified pursuant to the provisions of Section (5) of the Information to Bidders, as full payment for the amount of the credit to the University for any deletions, additions, modifications or changes to the portion or portions of work covered by said unit prices.

5. BID CALCULATION

a. **BASE BID** (*does not include allowances*)

\$ _____
(in numbers)

_____ (in words)

b. **ALLOWANCES:** In accordance with the Schedule II and Section 4.05 of Agreement, the bidder further agrees to the following additions to the Base Bid:

Work or Materials Description	Amount in Words	Amount in Figures
Field Order Allowance	3.5% X Base Bid=	

c. **TOTAL BID** (*base bid + allowances = total bid*)

\$ _____ (in numbers)

\$ _____ (in words)

d. **ALTERNATES:** In accordance with Section B of the General Requirements the bidder proposes the following additions to or deductions from the Total Bid for the alternates listed below:

Alternate Number	Add/Deduct	Amount in Words	Amount in Figures
1 Additional Sidewalk			
2 Bus shelter and concrete pads			

- e. **UNIT PRICES:** In accordance with Section (5) paragraph (2) of the Information to Bidders and Section 4.04 of the Agreement the bidder or the University may insert unit prices for the work or materials listed below for clarification.

Work or Materials Description	Amount in Words	Amount in Figures
L-1 Undercutting		
L-2 Soil Stabilization Fabric		
L-3 Medium Duty Asphalt		
L-4 Standard Concrete Sidewalk		
L-5 Sodded Lawn		
L-6 Rock Excavations		

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

A bid shall not be considered for award nor shall any award be made where (a), (b) and (c) above have not been complied with; provided, however, that if in any case the bidder cannot make the foregoing certification the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefor. Where (a), (b), and (c) above shall have not been complied with, the bid shall not be considered for award nor shall any award be made unless the Campus President, or designee, or Vice Chancellor for Capital Facilities, or designee, determines that such disclosure was not made for purposes of restricting competition.

The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of this Section.

7. The bidder agrees that if awarded the Contract, it will commence work within (10) calendar days after date of receipt of a fully executed Agreement and that it will fully complete the work by the date stated herein.

8. The bidder acknowledges the receipt of the following addenda, but agrees that it is bound by all addenda whether or not listed herein.

Addendum Number	Date	Addendum Number	Date
_____	___/___/___	_____	___/___/___
_____	___/___/___	_____	___/___/___
_____	___/___/___	_____	___/___/___

9. The bidder submits herewith bid security in an amount not less than five (5) percent of the Total Bid. In the event that (a) the bidder's Total Bid is the lowest one submitted and the bidder does not timely provide the Post-Bid Information required by the Information for Bidders or (b) this Proposal is accepted by the University and the bidder shall refuse or neglect, within ten (10) calendar days after date of receipt of Agreement, to execute and deliver said Agreement in the form provided herein, or to execute and deliver a Performance Bond and a Labor and Material Bond in the amounts required and in the form prescribed, the bidder shall be liable to the University, as liquidated damages, for the amount of the bid security or the difference between the Total Bid of the bidder and the Total Bid of the bidder submitting the next lowest bid, whichever sum shall be higher, otherwise the total amount of the bid security will be returned to the bidder in accordance with the provisions set forth in the Information for Bidders. The University may apply the bid security in full or partial payments, as the case may be, of said liquidated damages and in the event the bid security is less than the amount of liquidated damages to which the University is entitled, the bidder shall pay the difference, upon demand, to the University.

10. The bidder certifies that all wood products that are to be used in the performance of this Contract shall be in accordance with the Specifications and provisions of Section 167 b. of the State Finance Law which Section prohibits the purchase and use of tropical hardwoods.

11. The bidder affirms that it understands and agrees to comply with the procedures of the Fund relative to permissible contacts as required by Sections 139-j(3) and 139-j-(6)(b) of the State Finance Law.

12. The bidder certifies that all information provided or to be provided to the University in connection with this procurement is, as required by Section 139-k of the State Finance Law, complete, true and accurate.

Dated ___/___/___

Firm's Federal ID Number or Social Security Number as applicable _____

Legal name of person, partnership, joint venture or corporation:

By _____
(signature)

Title _____

ACKNOWLEDGMENT FOR THE PROPOSAL

THE LEGAL ADDRESS OF THE BIDDER

Telephone No. _____ Facsimile No. _____

If a Corporation

Name _____ Address _____

PRESIDENT _____

SECRETARY _____

TREASURER _____

If a Partnership

Name of Partners _____ Address _____

If a Joint Venture

Name of Members _____ Address _____

If an Individual

Name of Individual _____ Address _____



Bidder Name:

Project No.:

Bidders must provide three (3) example projects completed in the past five (5) years in which the Bidder served as the prime contractor. **Example projects must be of similar size, scope and complexity to the project currently being bid, as further described in the Description of Work.** Each project must include the Owner/Agency, Award Date, Contract Amount, Date Completed, Contact Person, Telephone number of the contact, Architect and/or Engineer's Name, Contract Number, Contact Email, and the Project Title and a brief scope description. Reference contacts may be used to verify project size, scope, dollar value, percentages and quality of performance.

1.	Agency/Owner		Award Date	Contract Amount	Date Completed
	Agency/Owner Contact Person		Email	Designer Architect and /or Design Engineer	
	Contract No.	Contact Email	Project Title & Scope		
2.	Agency/Owner		Award Date	Contract Amount	Date Completed
	Agency/Owner Contact Person		Email	Designer Architect and /or Design Engineer	
	Contract No.	Contact Email	Project Title & Scope		
3.	Agency/Owner		Award Date	Contract Amount	Date Completed
	Agency/Owner Contact Person		Email	Designer Architect and /or Design Engineer	
	Contract No.	Contact Email	Project Title & Scope		
Completed By:			Phone Number: Email: Date:		

STATE UNIVERSITY OF NEW YORK

SUBCONTRACTING – APPENDIX “A”

Note: Effective September 5, 2008, all Bidders must submit within 48 hours of the bid opening, a list that names each subcontractor that the bidder will use to perform the work on the contract; and the agreed-upon amount to be paid to each of the different trades. Without this form, the Bidder’s proposal may be considered “unresponsive.”

CONTRACTOR'S NAME	BID PROPOSAL DATE	PROJECT NUMBER
ADDRESS	PROJECT NAME AND/OR DESCRIPTION OF WORK	
TELEPHONE NUMBER ()	TOTAL AMOUNT OF BID	

1. Is the Prime Contractor a certified minority/women-owned controlled firm? Yes No

Specify: MBE WBE Federal ID No. _____

Name Complete Address Telephone	Federal ID Number	Value of Subcontractor or Supply Order	Scope of Work	MBE/ WBE

	NAME OF COMPANY DESIGNEE (PRINT/TYPE)	
	SIGNATURE	
	DATE	TELEPHONE NUMBER ()

Certified Business shall mean a business verified as a minority or women-owned business enterprise pursuant to Section 314 of the Executive Law. If you need additional space to provide information, please include attachments.

STATE UNIVERSITY OF NEW YORK

SUBCONTRACTING – APPENDIX “B”

ENCOURAGING USE OF NEW YORK STATE BUSINESSES IN CONTRACT PERFORMANCE

New York State businesses have a substantial presence in SUNY contracts and strongly contribute to the economies of New York and the nation. In recognition of their economic activity and leadership in doing business in New York State, bidders/proposers/contractors for this contract for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the contract. Such partnering may be as subcontractors, suppliers, protégés or other supporting roles.

Bidders/proposers/contractors need to be aware that to the maximum extent practical and consistent with legal requirements, they are strongly encouraged to use responsible and responsive New York State businesses in purchasing commodities that are of equal quality and functionality and in utilizing services and technology. Furthermore, bidders/proposers/contractors are reminded that they must continue to utilize small, minority and women-owned businesses, consistent with current State law.

Utilizing New York State businesses in SUNY contracts will help create more private sector jobs, rebuild New York’s infrastructure, and maximize economic activity to the mutual benefit of the contractor and its New York State business partners. New York State businesses will promote the contractor’s optimal performance under this contract, thereby fully benefiting the public sector programs that are supported by associated procurements.

Public procurements can drive and improve the State’s economic engine through promotion of the use of New York businesses by its contractors. SUNY therefore expects bidders/proposers to provide maximum assistance to New York businesses in their use of the contract. The potential participation by all kinds of New York businesses will deliver great value to New York State and its taxpayers.

Bidders/proposers can demonstrate their commitment to the use of New York State businesses by responding to the question below:

Will New York State Businesses be used in the performance of this contract?

Yes No

If yes, identify New York State Business(es) that will be used; (Provide identifying information below. If you need additional space, please include attachments.)

Name of Subcontractor / Supply Vendor	Federal ID Number	Value of Subcontractor or Supply Order	Scope of Work

BID BOND

BOND NO. _____

KNOW ALL PERSONS BY THESE PRESENTS, that _____

having an office at
_____(hereinafter called the "Principal") and the

(hereinafter called the "Surety") are held and firmly bound unto the State University of New York (hereinafter called the University) in the full and just sum of

_____ dollars (\$ _____)

*(in words)**(in figures)*

good and lawful money of the United States of America, or in the full and just sum of the difference between the Total Bid of the Principal and the Total Bid of the bidder submitting the next lowest bid, whichever sum shall be higher, for the payment of which said sum of money, well and truly to be made and done, the Principal binds itself, its heirs, executors, administrators, successors and assigns and the Surety binds itself, its successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted to the University a Proposal for Project No. _____

Titled _____

which Proposal is incorporated herein by reference and made a part hereof as fully and to the same extent as if set forth at length herein;

NOW, THEREFORE, the condition of this obligation is such that in the event (1) the Principal's Total Bid is the lowest one submitted and the Principal timely provides the Post-Bid Information required under Section 8 of the Information for Bidders or (2) the University shall accept the Proposal of the Principal and the Principal shall enter into a Contract with the University in accordance with the terms of such Proposal and/or enter into certain prescribed subcontracts in accordance with the terms of such Proposal and give such Bond or Bonds as may be specified in the Bidding or Contract Documents, then this obligation shall be null and void, otherwise to remain in full force and effect.

BID BOND

The Surety, for value received, hereby stipulates and agrees that the obligation of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the University may accept the Proposal of the Principal and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal has hereunto set its hand and seal and caused this instrument to be signed by its

_____ on this

_____ day of _____, 20_____

_____ Principal _____ By _____

IN WITNESS WHEREOF, the Surety has hereunto set its hand and seal and caused this instrument to be signed by its

_____ on this

_____ day of _____, 20_____

_____ Surety _____ By _____

ACKNOWLEDGMENTS FOR BID BOND

(Acknowledgment by Principal, unless it is 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(s) described in and who
executed the foregoing instruments and acknowledged that he / she executed the same.

Notary Public

(Acknowledgment by Principal, if a Corporation)

STATE OF NEW YORK)
) ss.:
COUNTY OF)

On this _____ day of _____, 20____, before me personally came _____
_____, to me known, who, being duly sworn, did depose and say
that he / she resides in _____;
that he / she is the _____
of the _____
the corporation described in and which executed the foregoing instruments; that he / she knows the seal of said corporation; that the seal
affixed to said instruments is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that he / she
signed their name thereto by like order.

Notary Public

(Acknowledgment by Surety Company)

STATE OF)
) ss.:
COUNTY OF)

On this _____ day of _____, 20____, before me personally came _____
_____, to me known, who, being by me duly sworn, did depose and say
that he / she resides in _____;
that he / she is the _____
of the _____
the corporation described in and which executed the foregoing instruments; that he / she knows the seal of said corporation; that the
seal affixed to said instruments is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation, and that
he / she signed their name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner
provided by the laws of the State of New York.

Notary Public

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "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 or State University of New York, whether a Contractor, licensor, licensee, lessor, lessee or any other party; the State University of New York shall hereinafter be referred to as "SUNY"):

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. **PROHIBITION AGAINST ASSIGNMENT.** 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 SUNY 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. SUNY retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with SUNY. The Contractor may, however, assign its right to receive payments without SUNY'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.** (a) In accordance with Section 112 of the State Finance Law, the State Comptroller's approval is required for the following contracts: (i) goods, services, construction, and construction-related services for State University hospital or healthcare facilities which exceed \$150,000; (ii) purchases utilizing an Office of General Services (OGS) centralized contract which exceed \$200,000 (iii) goods, services, construction, and construction-related services not described in (i) or (ii) and which exceed \$75,000;

(b) If this contract exceeds the threshold amounts listed above in Paragraph 3(a), or, if this is an amendment for any amount to a contract which, as so amended, exceeds said threshold amounts, 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 \$25,000, it shall not be valid, effective or binding upon the State, and the State shall bear no liability, until it has been approved by the State Comptroller and filed in his or her office.

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, nor subject any individual to harassment, because of age, race, creed, color, national origin, citizenship or immigration status, sexual orientation, gender identity or expression, military status, sex, disability, predisposing genetic characteristics, familial status, marital status, or domestic violence victim status or because the individual has opposed any practices forbidden under the Human Rights Law or has filed a complaint, testified, or assisted in any proceeding under the Human Rights Law. 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 competitive 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 SUNY 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 (2 NYCRR § 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 SUNY, 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 SUNY and any other 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. SUNY 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 SUNY 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, SUNY's or 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 SUNY 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 SUNY or 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 SUNY 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 Part 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 workforce 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, upgrading, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) at SUNY's request, 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 sub-contractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this clause. SUNY 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, SUNY 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 Exhibit A, the terms of this Exhibit 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 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 Section 165 of the 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 and Technology Development
625 Broadway
Albany, NY 12245
Telephone: 518-292-5100

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 33rd Floor
New York, NY 10017
646-846-7364
email: mwbebusinessdev@esd.ny.gov
<https://ny.newnycontracts.com/FrontEnd/searchcertifieddirectory.asp>

The Omnibus Procurement Act of 1992 (Chapter 844 of the Laws of 1992, codified in State Finance Law § 139-i and Public Authorities Law § 2879(3)(n)-(p)) 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 SUNY;

(b) The Contractor has complied with the Federal Equal Employment 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 of 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively, codified in State Finance Law § 165(6) and Public Authorities Law § 2879(5))

require that they be denied contracts which they would otherwise obtain.
NOTE: As of May 2023, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii.

22. COMPLIANCE WITH BREACH NOTIFICATION AND DATA SECURITY LAWS. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law § 899-aa, § 899-bb, and State Technology Law § 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 SUNY, the Department of Civil Service and the State Comptroller.

24. PURCHASES OF APPAREL AND SPORTS EQUIPMENT. In accordance with State Finance Law Section 165(7), SUNY may determine that a bidder on a contract for the purchase of apparel or sports equipment is not a responsible bidder as defined in State Finance Law Section 163 based on (a) the labor standards applicable to the manufacture of the apparel or sports equipment, including employee compensation, working conditions, employee rights to form unions and the use of child labor; or (b) bidder's failure to provide information sufficient for SUNY to determine the labor conditions applicable to the manufacture of the apparel or sports equipment.

25. PROCUREMENT LOBBYING. To the extent this contract is a "procurement contract" as defined by State Finance Law §§ 139-j and 139-k, by signing this contract the Contractor certifies and affirms that all disclosures made in accordance with State Finance Law §§ 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 contract by providing written notification to the Contractor in accordance with the terms of the contract.

26. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS. To the extent this contract is a contract as defined by Tax Law § 5-a, if the Contractor fails to make the certification required by Tax Law § 5-a or if

during the term of the contract, the Department of Taxation and Finance or SUNY 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 contract, if SUNY determines that such action is in the best interests of the State.

27. IRAN DIVESTMENT ACT. By entering into this contract, 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: <https://ogs.ny.gov/iran-divestment-act-2012>.

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 SUNY receive information that a person (as defined in State Finance Law §165-a) is in violation of the above-referenced certifications, SUNY 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 SUNY 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.

SUNY 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.

28. ADMISSIBILITY OF REPRODUCTION OF CONTRACT. Notwithstanding the best evidence rule or any other legal principle or rule of evidence to the contrary, the Contractor acknowledges and agrees that it waives any and all objections to the admissibility into evidence at any court proceeding or to the use at any examination before trial of an electronic reproduction of this contract, in the form approved by the State Comptroller, if such approval was required, regardless of whether the original of said contract is in existence.

THE FOLLOWING PROVISIONS SHALL APPLY ONLY TO THOSE CONTRACTS TO WHICH A HOSPITAL OR OTHER HEALTH SERVICE FACILITY IS A PARTY

29. Notwithstanding any other provision in this contract, the hospital or other health service facility remains responsible for insuring that any service provided pursuant to this contract complies with all pertinent provisions of Federal, state and local statutes, rules and regulations. In the foregoing sentence, the word "service" shall be construed to refer to the health care service rendered by the hospital or other health service facility.

30. (a) In accordance with the 1980 Omnibus Reconciliation Act (Public Law 96-499), Contractor hereby agrees that until the expiration of four years after the furnishing of services under this agreement, Contractor shall make available upon written request to the Secretary of Health and Human Services, or upon request, to the Comptroller General of the United States or any of their duly authorized representatives, copies of this contract, books, documents and records of the Contractor that are necessary to certify the nature and extent of the costs hereunder.

(b) If Contractor carries out any of the duties of the contract hereunder, through a subcontract having a value or cost of \$10,000 or more over a twelve-month period, such subcontract shall contain a clause to the effect that, until the expiration of four years after the furnishing of such services pursuant to such subcontract, the subcontractor shall make available upon written request to the Secretary of Health and Human Services or upon request to the Comptroller General of the United States, or any of their duly authorized representatives, copies of the subcontract and books, documents and records of the subcontractor that are necessary to verify the nature and extent of the costs of such subcontract.

(c) The provisions of this section shall apply only to such contracts as are within the definition established by the Health Care Financing Administration, as may be amended or modified from time to time.

31. Hospital Retained Authority: Hospital Retained Authority: The Hospital retains direct, independent authority over the appointment and/or dismissal, in its sole discretion, of the facility's management level employees (including but not limited to, the Facility/Service Administrator/Director, the Medical Director, the Director of Nursing, the Chief Executive Officer, the Chief Financial Officer and the Chief Operating Officer) and all licensed or certified health care staff. The Hospital retains the right to adopt and approve, at its sole discretion, the facility's operating and capital budgets. The Hospital retains independent control over and physical possession of the facility's books and records. The Hospital retains independent control over and physical possession of the facility's operating policies and procedures. The Hospital retains full authority and responsibility for, and control over, the operations and management of the facility. The Hospital retains the right and authority to independently adopt, approve and enforce, in its sole discretion, policies affecting the facility's delivery of health care services. The Hospital retains the right to independently adopt, approve and enforce, at its sole discretion, the disposition of assets and authority to incur debts. The Hospital retains the right to approve, at its sole discretion, contracts for administrative services, management and/or clinical services. The Hospital retains the right to approve, at its sole discretion, any facility debt. The Hospital retains the right to approve, at its sole discretion, settlements of administrative proceeding or litigation to which the facility is a party. No powers specifically reserved to the Hospital may be delegated to, or shared by, the Contractor or any other person. In addition, if there is any disagreement between the parties to this Agreement regarding control between the Hospital and the Contractor, the terms of this Section shall control.

1. **DEFINITIONS.** The following terms shall be defined in accordance with Section 310 of the Executive Law:

STATE CONTRACT herein referred to as "State Contract", shall mean: (a) a written agreement or purchase order instrument, providing for a total expenditure in excess of twenty-five thousand dollars (\$25,000.00), whereby the State University of New York ("University") is committed to expend or does expend funds in return for labor, services including but not limited to legal, financial and other professional services, supplies, equipment, materials or a combination of the foregoing, to be performed for, or rendered or furnished to the University; (b) a written agreement in excess of one hundred thousand dollars (\$100,000.00) whereby the University is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; (c) and (d) a written agreement in excess of one hundred thousand dollars (\$100,000.00) whereby the University as an 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.

SUBCONTRACT herein referred to as "Subcontract", shall mean any agreement for a total expenditure in excess of \$25,000 providing for services, including non-staffing expenditures, supplies or materials of any kind between a State agency and a prime contractor, in which a portion of the prime contractor's obligation under the State contract is undertaken or assumed by a business enterprise not controlled by the prime contractor.

WOMEN-OWNED BUSINESS ENTERPRISE herein referred to as "WBE", shall mean a business enterprise, including a sole proprietorship, partnership or corporation that is: (a) at least fifty-one percent (51%) owned by one or more United States citizens or permanent resident aliens who are women; (b) an enterprise in which the ownership interest of such women is real, substantial and continuing; (c) an enterprise in which such women ownership has and exercises the authority to control independently the day-to-day business decisions of the enterprise; (d) an enterprise authorized to do business in this state and independently owned and operated; (e) an enterprise owned by an individual or individuals, whose ownership, control and operation are relied upon for certification, with a personal net worth that does not exceed fifteen million dollars (\$15,000,000), as adjusted annually on the first of January for inflation according to the consumer price index of the previous year; and (f) an enterprise that is a small business pursuant to subdivision twenty of this section.

A firm owned by a minority group member who is also a woman may be certified as a minority-owned business enterprise, a women-owned business enterprise, or both, and may be counted towards either a minority-owned business enterprise goal or a women-owned business enterprise goal, in regard to any Contract or any goal, set by an agency or authority, but such participation may not be counted towards both such goals. Such an enterprise's participation in a Contract may not be divided between the minority-owned business enterprise goal and the women-owned business enterprise goal.

MINORITY-OWNED BUSINESS ENTERPRISE herein referred to as

"MBE", shall mean a business enterprise, including a sole proprietorship, partnership or corporation that is: (a) at least fifty-one percent (51%) owned by one or more minority group members; (b) an enterprise in which such minority ownership is real, substantial and continuing; (c) an enterprise in which such minority ownership has and exercises the authority to control independently the day-to-day business decisions of the enterprise; (d) an enterprise authorized to do business in this state and independently owned and operated; (e) an enterprise owned by an individual or individuals, whose ownership, control and operation are relied upon for certification, with a personal net worth that does not exceed fifteen million dollars (\$15,000,000.00) as adjusted annually on the first of January for inflation according to the consumer price index of the previous year; and (f) an enterprise that is a small business pursuant to subdivision twenty of this section.

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: (a) Black persons having origins in any of the Black African racial groups; (b) Hispanic persons of Mexican, Puerto Rican, Dominican, Cuban, Central or South American of either Indian or Hispanic origin, regardless of race; (c) Native American or Alaskan native persons having origins in any of the original peoples of North America. (d) Asian and Pacific Islander persons having origins in any of the Far East countries, South East Asia, the Indian Subcontinent or Pacific Islands.

CERTIFIED ENTERPRISE OR BUSINESS shall mean a business verified as a minority or women-owned business enterprise pursuant to section 314 of the Executive Law. A business enterprise which has been

approved by the New York Division of Minority & Women Business Development ("DMWBD") for minority or women-owned enterprise status subsequent to verification that the business enterprise is owned, operated, and controlled by minority group members or women, and that also meets the financial requirements set forth in the regulations.

2. TERMS. The parties to the attached State Contract agree to be bound by the following provisions which are made a part hereof (the word "Contractor" herein refers to any party other than the University:

1(a) Contractor and its Subcontractors shall undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. For these purposes, affirmative action shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation.

(b) Prior to the award of a State Contract, the Contractor shall submit an equal employment opportunity (EEO) policy statement to the University within the time frame established by the University.

(c) As part of the Contractor's EEO policy statement, the Contractor, as a precondition to entering into a valid and binding State Contract, shall agree to the following in the performance of the State Contract: (i) The Contractor will not discriminate against any employee or applicant for employment, will undertake or continue existing programs of affirmative action to ensure that minority group members and women 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; (ii) 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; (iii) At the request of the University 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, and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein.

(d) Form 108 - Staffing Plan To ensure compliance with this Section, the Contractor shall submit a staffing plan to document the composition of the proposed workforce to be utilized in the performance of the Contract by the specified categories listed, including ethnic background, gender, and Federal occupational categories. Contractors shall complete the Staffing plan form and submit it as part of their bid or proposal or within a reasonable time, but no later than the time of award of the contract.

(e) Form 112 - Workforce Employment Utilization Report ("Workforce Report")

(i) Once a contract has been awarded and during the term of Contract, Contractor is responsible for updating and providing notice to SUNY of any changes to the previously submitted Staffing Plan. This information is to be submitted on a quarterly basis during the term of the contract to report the actual workforce utilized in the performance of the contract by the specified categories listed including ethnic background, gender, and Federal occupational categories. The Workforce Report must be submitted to report this information.

(ii) Separate forms shall be completed by Contractor and any subcontractor performing work on the Contract.

(iii) In limited instances, Contractor may not be able to separate out the

workforce utilized in the performance of the Contract from Contractor's and/or subcontractor's total workforce. When a separation can be made, Contractor shall submit the Workforce Report and indicate that the information provided related to the actual workforce utilized on the Contract. When the workforce to be utilized on the contract cannot be separated out from Contractor's and/or subcontractor's total workforce, Contractor shall submit the Workforce Report and indicate that the information provided is Contractor's total workforce during the subject time frame, not limited to work specifically under the contract.

(f) 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.

(g) The Contractor shall include the provisions of this section in every Subcontract in such a manner that the requirements of the provisions will be binding upon each Subcontractor as to work in connection with the State Contract, including the requirement that Subcontractors shall undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination, and, when requested, provide to the Contractor information on the ethnic background, gender, and Federal occupational categories of the

employees to be utilized on the State Contract.

(h) To ensure compliance with the requirements of this paragraph, the University shall inquire of a Contractor whether the work force to be utilized in the performance of the State Contract can be separated out from the Contractor's and/or Subcontractors' total work force and where the work of the State Contract is to be performed. For Contractors who are unable to separate the portion of their work force which will be utilized for the performance of this State Contract, Contractor shall provide reports describing its entire work force by the specified ethnic background, gender, and Federal Occupational Categories, or other appropriate categories which the agency may specify.

(i) The University may require the Contractor and any Subcontractor to submit compliance reports, pursuant to the regulations relating to their operations and implementation of their affirmative action or equal employment opportunity program in effect as of the date the State Contract is executed.

(j) If a Contractor or Subcontractor does not have an existing affirmative action program, the University may provide to the Contractor or Subcontractor a model plan of an affirmative action program. Upon request, the Director of DMWBD shall provide a contracting agency with a model plan of an affirmative action program.

(k) Upon request, DMWBD shall provide the University with information on specific recruitment sources for minority group members and woman, and contracting agencies shall make such information available to Contractors

3. Contractor must provide the names, addresses and federal identification numbers of certified minority- and women-owned business enterprises which the Contractor intends to use to perform the State Contract and a description of the Contract scope of work which the Contractor intends to structure to

increase the participation by Certified minority- and/or women-owned business enterprises on the State Contract, and the estimated or, if known, actual dollar amounts to be paid to and performance dates of each component of a State Contract which the Contractor intends to be performed by a certified minority- or woman-owned business enterprise. In the event the Contractor responding to University solicitation is joint venture, teaming agreement, or other similar arrangement that includes a minority- and women owned business enterprise, the Contractor must submit for review and approval: i. the name, address, telephone number and federal identification of each partner or party to the agreement; ii. the federal identification number of the joint venture or entity established to respond to the solicitation, if applicable; iii. A copy of the joint venture, teaming or other similar arrangement which describes the percentage of interest owned by each party to the agreement and the value added by each party; iv. A copy of the mentor-protégé agreement between the parties, if applicable, and if not described in the joint venture, teaming agreement, or other similar arrangement.

4. PARTICIPATION BY MINORITY GROUP MEMBERS AND WOMEN. The University shall determine whether Contractor has made conscientious and active efforts to employ and utilize minority group members and women to perform this State Contract based upon an analysis of the following factors:

(a) Whether Contractor established and maintained a current list of recruitment sources for minority group members and women, and whether Contractor provided written notification to such recruitment sources that contractor had employment opportunities at the time such opportunities became available.

(b) Whether Contractor sent letters to recruiting sources, labor unions, or authorized representatives of workers with which contractor has

a collective bargaining or other agreement or understanding requesting assistance in locating minority group members and women for employment.

(c) Whether Contractor disseminated its EEO policy by including it in any advertising in the news media, and in particular, in minority and women news media.

(d) Whether Contractor has attempted to provide information concerning its EEO policy to Subcontractors with which it does business or had anticipated doing business.

(e) Whether internal procedures exist for, at a minimum, annual dissemination of the EEO policy to employees, specifically to employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions. Such dissemination may occur through distribution of employee policy manuals and handbooks, annual reports, staff meetings and public postings.

(f) Whether Contractor encourages and utilizes minority group members and women employees to assist in recruiting other employees.

(g) Whether Contractor has apprentice training programs approved by the N.Y.S. Department of Labor which provides for training and hiring of minority group members and women.

(h) Whether the terms of this section have been incorporated into each Subcontract which is entered into by the Contractor.

5. PARTICIPATION BY MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES. Based upon an analysis of the following factors, the University shall determine whether Contractor has made good faith efforts to provide for meaningful participation by minority-owned and women-owned business enterprises which have been certified by DMWBD:

(a) Whether Contractor has actively solicited bids for Subcontracts from qualified

M/WBEs, including those firms listed on the Directory of Certified Minority and Women-Owned Business Enterprises, and has documented its good faith efforts towards meeting minority and women owned business enterprise utilization plans by providing, copies of solicitations, copies of any advertisements for participation by certified minority- and women-owned business enterprises timely published in appropriate general circulation, trade and minority- or women-oriented publications, together with the listing(s) and date(s) of the publications of such advertisements; dates of attendance at any pre-bid, pre-award, or other meetings, if any, scheduled by the University, with certified minority- and women-owned business enterprises, and the reasons why any such firm was not selected to participate on the project.

(b) Whether Contractor has attempted to make project plans and specifications available to firms who are not members of associations with plan rooms and reduce fees for firms who are disadvantaged.

(c) Whether Contractor has utilized the services of organizations which provide technical assistance in connection with M/WBE participation.

(d) Whether Contractor has structured its Subcontracts so that opportunities exist to complete smaller portions of work.

(e) Whether Contractor has encouraged the formation of joint ventures, partnerships, or other similar arrangements among Subcontractors.

(f) Whether Contractor has requested the services of the Department of Economic Development (DED) to assist Subcontractors' efforts to satisfy bonding requirement.

(g) Whether Contractor has made progress payments promptly to its Subcontractors.

(h) Whether the terms of this section have been incorporated into each Subcontract which is entered into by the Contractor. It shall be the responsibility of Contractor to

ensure compliance by every Subcontractor with these provisions.

6. MWBE Utilization Plan.

(a) The Contractor represents and warrants that Contractor has submitted an MWBE Utilization Plan prior to the execution of the contract.

(b) MWBE Utilization Plan (Form 7557-107).

Contractors are required to submit a Utilization Plan on Form 7557-107 with their bid or proposal. Complete the following steps to prepare the Utilization Plan:

- i. list NYS Certified minority- and women-owned business enterprises which the Contractor intends to use to perform the State contract;
- ii. insert a description of the contract scope of work which the Contractor intends to structure to increase the participation by NYS Certified minority- and women-owned enterprises on the State contract;
- iii. insert the estimated or, if known, actual dollar amounts to be paid to and performance dates of each component of a State contract which the Contractor intends to be performed by a NYS Certified minority- or women-owned business; and

(c) Any modifications or changes to the agreed participation by NYS Certified MWBEs after the Contract Award and during the term of the contract must be reported on a revised MWBE Utilization Plan and submitted to the SUNY University-wide MWBE Program Office.

(d) The University will review the MWBE Utilization Plan and will issue the Contractor a written notice of acceptance or deficiency within twenty (20) day of its receipt. A notice of deficiency shall include the:

- i. list NYS Certified minority- and women-owned business enterprises which the

- ii. Contractor intends to use to perform the State contract; name of any MWBE which is not acceptable for the purpose of complying with the MWBE participation goals;
- iii. reasons why it is not an acceptable element of the Contract scope of work which the MWBE Program Office has determined can be reasonably structured by the Contractor to increase the likelihood of participation in the Contract by MWBEs; and
- iv. other information which the MWBE Program Office determines to be relevant to the MWBE Utilization Plan.

(e) The Contractor shall respond to the notice of deficiency within seven (7) business days of receipt by submitting to the University a written remedy in response to the notice of deficiency.

- i. If the written remedy that is submitted is not timely or is found to be inadequate, the University-wide MWBE Program Office shall notify the Contractor and direct the Contractor to submit, within five (5) business days, a request for partial or total waiver of MWBE participation goals on forms provided by the University-wide MWBE Program Office.
- ii. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.

(f) The University may disqualify a Contractor as being non-responsive under the following circumstances:

- i. If a Contractor fails to submit a MWBE Utilization Plan;
- ii. If a Contractor fails to submit a written remedy to a notice of deficiency in a MWBE Utilization Plan;
- iii. If a Contractor fails to submit a request for waiver; or

iv. If the MWBE Program Office determines that the Contractor has failed to document Good Faith Efforts.

(g) Contractor agrees to use such MWBE Utilization Plan for the performance of MWBEs on the Contract pursuant to the prescribed MWBE goals set forth in Section III-A of this Appendix.

(h) Contractor further agrees that a failure to submit and/or use such MWBE Utilization Plan shall constitute a material breach of the terms of the Contract. Upon the occurrence of such a material breach, SUNY shall be entitled to any remedy provided herein, including but not limited to, a finding of Contractor non-responsiveness.

7. Waivers.

(a) For Waiver Requests Contractor should use (Form 7557-114) – Waiver Request.

(b) If the Contractor, after making good faith efforts, is unable to comply with MWBE goals, the Contractor may submit a Request for Waiver form documenting good faith efforts by the Contractor to meet such goals. If the documentation included with the waiver request is complete the University shall evaluate the request and issue a written notice of acceptance or denial within twenty (20) days of receipt.

(c) If University, upon review of the MWBE Utilization Plan and updated Quarterly MWBE Contractor Compliance Reports determines that Contractor is failing or refusing to comply with the Contract goals and no waiver has been issued in regards to such non-compliance, the University may issue a notice of deficiency to the Contractor. The contractor must respond to the notice of deficiency within seven (7) business days of receipt. Such response may include a request for partial or total waiver of MWBE Contract Goals.

8. MWBE Contractor Compliance Report.

Contractor is required to submit an MWBE Contractor Compliance Report (Form 7557-112) to the University by the 5th day following each end of quarter over the term of the Contract documenting the progress made towards achievement of the MWBE goals of the Contract. Compliance Reports for construction contracts (Form 7557-110) must be submitted on a monthly basis.

9. GOALS. (a) GOALS FOR MINORITY AND WOMEN WORK FORCE PARTICIPATION.

(i) The University shall include relevant work force availability data, which is provided by the DMWBD, in all documents which solicit bids for State Contracts and shall make efforts to assist Contractors in utilizing such data to determine expected levels of participation for minority group members and women on State Contracts.

(ii) Contractor shall exert good faith efforts to achieve such goals for minority and women's participation. To successfully achieve such goals, the employment of minority group members and women by Contractor must be substantially uniform during the entire term of this State Contract. In addition, Contractor should not participate in the transfer of employees from one employer or project to another for the sole purpose of achieving goals for minority and women's participation.

(b) GOALS FOR MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISES PARTICIPATION.

For all State Contracts in excess of \$25,000.00 whereby the University is committed to expend or does expend funds in return for labor, services including but not limited to legal, financial and other professional services, supplies, equipment, materials or a combination of the foregoing or all State Contracts in excess of \$100,000.00 whereby the University is committed to expend or does expend funds for the acquisition,

construction, demolition, replacement, major repair or renovation of real property and improvements thereon, Contractor shall exert good faith efforts to achieve a participation goal of _____ percent (____%) for Certified Minority-Owned Business Enterprises and _____ percent (____%) for Certified Women-Owned Business Enterprises.

10. ENFORCEMENT. The University will be responsible for enforcement of each Contractor's compliance with these provisions. Contractor, and each Subcontractor, shall permit the University access to its books, records and accounts for the purpose of investigating and determining whether Contractor or Subcontractor is in compliance with the requirements of Article 15-A of the Executive Law. If the University determines that a Contractor or Subcontractor may not be in compliance with these provisions, the University may make every reasonable effort to resolve the issue and assist the Contractor or Subcontractor in its efforts to comply with these provisions. If the University is unable to resolve the issue of noncompliance, the University may file a complaint with the DMWBD.

Failure to comply with all of the requirements herein may result in a finding of non-responsiveness, non-responsibility and/or a breach of contract, leading to the withholding of funds or such other actions, remedies or enforcement proceedings as allowed by the Contract.

11. DAMAGES FOR NON COMPLIANCE.

Where the University determines that Contractor is not in compliance with the requirements of the Contract and Contractor refuses to comply with such requirements, or if Contractor is found to have willfully and intentionally failed to comply with the MWBE participation goals, Contractor shall be obligated to pay

liquidated damages to the University. Such liquidated damages shall be calculated as an amount equaling the difference between:

- a. All sums identified for payment to MWBEs had the Contractor achieved the contractual MWBE goals; and
- b. All sums actually paid to MWBEs for work performed or materials supplied under the Contract.

In the event a determination has been made which requires the payment of liquidated damages and such identified sums have not been withheld by the University, Contractor shall pay such liquidated damages to the University within sixty (60) days after such damages are assessed, unless prior to the expiration of such sixtieth day, the Contractor has filed a complaint with the Director of the

Division of Minority and Woman Business Development pursuant to Subdivision 8 of Section 313 of the Executive Law in which event the liquidated damages shall be payable if Director renders a decision in favor of the University.

FIELD ORDER PROPOSAL

Project No: _____

No overhead or profit is to be included for field orders in accordance with Section 4.05 of the Construction Agreement

CHANGE DESCRIPTION:

Contractor Name: _____	Date: _____
Address: _____	Contract No.: _____
Telephone No.: _____	Field Order No.: _____
	Change Proposal No.: _____

SECTION A: CONTRACTOR WORK	<i>SUNY Revisions</i>
	Round Totals to Nearest Dollar
1. Total Contractor Labor	
2. Total Contractor Material	
3. Total Contractor Equipment	
4. Total Unit Price Costs	
5. SUBTOTAL (Total lines 1 thru 4)	\$ -
6. Total Premium Portion of Contractor Labor	
7. CONTRACTOR TOTAL (Total lines 5 & 6)	\$ -

SECTION B: SUBCONTRACTOR WORK	(Provide a separate form for each Subcontractor.)
8. Names of Subcontractors:	Round Totals to Nearest Dollar
A. _____	
B. _____	
C. _____	
D. _____	
E. _____	
F. _____	
9. TOTAL SUBCONTRACTOR PROPOSALS (Total lines A thru F)	\$ -
10. Contractor's Override on Subs' Proposals:	
11a. 10% of first \$10,000 of line 10 (\$1,000 maximum)	\$ -
11b. 5% of next \$90,000 of line 10 (\$4,500 maximum)	\$ -
11c. 3% of sum in excess of \$100,000 of line 10	\$ -
11. Total Premium Portion of Subcontractor Labor	
12. SUBCONTRACTOR TOTAL	12. \$ -

SECTION C: TOTAL CONTRACT UNIT PRICE(S)	13.

SECTION D: CONTRACTOR'S REQUESTED TOTAL	Round Totals to Nearest Dollar
AMOUNT REQUESTED (Total lines 7, 12, and 13)	14. \$ -

Contractor's Signature _____	Date _____
Print Name of Authorized Representative _____	Print name of Contact Person (if different) _____
Print Title _____	Phone No. (if different from above) _____

SECTION E: PROJECT COORDINATOR'S COMMENTS:

Contractor Instructions: Complete fields shaded in red. If a detailed change description is requested attach one to this form. Sign and date the form and submit to your Campus Representative.



PROSPECTIVE BIDDERS NOTICE MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISE REQUIREMENTS: CONSTRUCTION CONTRACTS

To Prospective Bidders:

Consistent with the State University of New York (SUNY)'s commitment and in accordance with Article 15-A of the New York State Executive Law, contractors are required to ensure that good faith efforts are made to include meaningful participation by Minority and Women-Owned Business Enterprises (MWBE). These requirements apply to all SUNY construction contracts in excess of \$100,000.

Receipt of the MWBE utilization plan is required *within seven (7) business days after the bid opening, for construction contracts only.* The Contract Administrator shall provide MWBE Utilization Plan Form (107) to the campus MWBE Program Coordinator for review and approval for the three apparent low bidders ("Contractor"). The MWBE forms identified below shall be submitted by all bidders.

- a. MWBE Utilization Plan ([7557-107](#))
- b. MWBE-EEO Staffing Plan ([7557-108](#))
- c. MWBE-EEO Policy ([7557-104](#)) or the vendor/contractor's own EEO Policy Statement

If the Contractor's MWBE participation rate shown on its MWBE Utilization Plan is below 30%, the campus MWBE Program Coordinator will provide a written notice of deficiency of the Utilization Plan within twenty (20) business days of its submission to the contractor, as required under 5 NYCRR §142.4.

The notice will include, but not be limited to the following:

- a. A list of NYS certified MWBEs that the contractor could potentially use within the contract scope of work;
- b. The name of any MWBE which is not acceptable for the purpose of complying with the MWBE participation goals; and
- c. Any other information which the MWBE Program Coordinator determines to be relevant to develop an approvable MWBE Utilization Plan.

The contractor shall respond to the notice of deficiency by submitting a revised MWBE Utilization Plan within seven (7) business days, as required by 5 NYCRR Part §142.6 (e) to the MWBE Program Coordinator.

If the deficiency is not corrected and the MWBE participation rate on the MWBE Utilization Plan is still below 30%, the contractor should request a waiver.

The Waiver Request Form submitted by the Contractor will include, but not be limited to, the following:

- a. A request for partial or total waiver of MWBE goals as required by 5 NYCRR Part §142.6 (f) on Request for Waiver Form ([Form 7557-114](#)) provided by the University-wide MWBE Program Office.
- b. Copy of the deficient Utilization Plan.
- c. Work Scope of this contract. If there are subcontracting opportunities, please provide documentation d, e, and f.
- d. Screenshot of searching results for available MWBEs in [NYS M/WBE Directory](#).
- e. Copy of email messages containing the request for quote, along with the responses from MWBEs.
- f. Forms required to obtain this information are:
[7557-101](#) – MWBE Contractor Solicitation Letter
[7557-102](#) – MWBE Participation Quote

7557-103 – MWBE Contractor Unavailability Certification

Please submit the above documentations by mail, fax, or email:

SUNY Cortland
Kristi Hughston, MWBE Program Coordinator
Miller Building, Room 309
PO Box 2000
Cortland, NY 13045
Fax: 607-753-5486
Tel: 607-753-2582
Email: Kristi.Hughston@cortland.edu

- OR - IF APPLICABLE

Please submit the above documentation to the University-wide MWBE Program Office:

SUNY System Administration at State University Plaza,
Office of Diversity, Equity and Inclusion
University-wide MWBE Program
Albany, NY 12246
Fax: (518)-320-1548
Tel: (518)-320-1452
Email: MWBEProgram@suny.edu

Information regarding this legislation may be found at: [Participation by Minority Group Members and Women \(MWBEs\) with Respect to State University of New York Contracts on the State University of New York web site.](#)

STATE UNIVERSITY OF NEW YORK MWBE UTILIZATION PLAN INSTRUCTIONS (FOR ALL CONTRACT TYPES)

A letter of explanation and documentation of efforts should accompany any MBE/WBE Utilization Plan that falls short of the stated goals. Without an approved MBE/WBE Utilization Plan, SUNY's Notice of Award and Contract may be withheld.

If you have questions or need assistance related to the SUNY's Minority and Women's Business requirements call the University-wide MWBE Program Office at 518-320-1189 or email MWBEprogram@suny.edu.

1. The three low bidding contractors ("Contractors") are required to submit a Utilization Plan (107) to the MWBE Program Coordinator within seven (7) calendar days after the opening of bids for construction contracts exceeding \$100,000.
2. The MWBE Program Coordinator is required to submit the mandatory MWBE documentation to the University-wide MWBE Program Office web based contract management system for commodity, service and construction related consultant service contracts exceeding \$25,000 for construction project exceeding \$100,000 upon contract execution.
3. The MBE and WBE goals are separate and not to be treated as one combined goal.
4. The MBE and WBE firms included are businesses the bidder *seriously expects* to include in the project activity.
5. The contractor reasonably commits to the dollar values included in the plan for participation by MBE and WBE subcontractors and suppliers.
6. MBE and WBE firms **must be certified** by the New York State Department of Economic Development, Division of Minority and Women Business Development. A directory of certified minority and women-owned business enterprises is available on the internet at <https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp>.
7. Contractors utilizing MWBE firms for supplies/materials/equipment whose NYS certification profile designates them as Broker will receive an MWBE utilization credit for the actual monetary value of the broker fees or the actual markup percentage of the items brokered.
8. MBE and WBE Participation:

The actual services provided by the MBE or WBE must be essential in the performance of the scope of work for the applicable contract. Utilization of a certified MBE or WBE as a conduit or pass through for participation credit is **strictly prohibited**. It is the discretion of University-wide MWBE Program to determine whether services are essential in the performance of the scope of work and offer a determination of the appropriateness of work allowed for lower tier subcontracting in accordance with practices generally accepted in the construction industry. The services the MBE or WBE will provide must be among those explicitly identified in the profile (codes) of firm as listed in the NYS Empire State Development Directory of Certified MWBEs. Firms submitted or who participate in the project outside of these conditions and without specific prior approval by SUNY will not be credited toward the MWBE Utilization Plan and goals for the contract.

9. Prior to submitting the Plan, the bidders should confirm the following:
 - a. MBE and WBE firms are NYS certified;
 - b. MBE **or** WBE designation ~ Dual certified firms may be used as *either* but **not** both;
 - c. MBE and WBE firms are being used for item(s) within their certification product codes;
 - d. MBE and WBE firms will perform work for which they have been submitted; and
 - e. 2nd tier subcontractors and/or suppliers are noted as such and the purchaser of the product identified (i.e. purchase by electrical sub)

The prime Contractor is responsible for ensuring participation provided by subcontractors for 2nd and 3rd tier MBE and WBE participation.

Submission of a Utilization Plan which fails to meet or exceed each goal shall be accompanied by documentation of specific efforts undertaken both pre and post bid. The campus MWBE Program Coordinator will review and notify Contractor of its assessment.

The University-wide MWBE Program Office in collaboration with the campus MWBE Program Coordinator will review the Utilization Plan and notify the contractor of any deficiencies and determine necessary actions to bring the Utilization Plan into compliance. The University-wide MWBE Program Office reserves the right to require the contractor to provide sufficient documentation of the efforts made in the development of the Plan. The documentation should meet the good faith efforts standard under 5 NYCRR Part §141.6, and demonstrate the contractor's commitment to providing opportunities for MBE and WBE firms in the development of the plan.

A copy of the approved Utilization Plan will be provided to the contractor after issuance of Notice of Award.

MWBE FORM (107) INSTRUCTIONS

Requested information must be completed and submitted within seven (7) days after the bid opening.

Subcontractor Name & Address

Name & Address of each MBE/WBE subcontractor or supplier

MBE or WBE

Minority (MBE) or Women (WBE) Designation

Federal ID

Provide accurate Federal ID number of each MBE/WBE subcontractor or supplier

Dollar Value of Subcontract or Purchase Order

This is the total value of the signed subcontract. If this value is different from the amount in the approved MBE/WBE utilization plan, an explanation should be provided.

Description of Work or Supplies

Brief description of work performed or supplies provided by the MBE/WBE subcontractor or supplier

Schedule

This is the anticipated start and completion dates for each MBE/WBE subcontractor or supplier.
Do not include the construction schedule for the life of the entire project.

Signature

To be signed by an Officer of the Company

- The information included on the form is subject to verification by the campus MWBE Program Coordinator.
- The campus MWBE Program Coordinator must be notified prior to changes made to the approved MBE/WBE Utilization Plan.

Questions regarding this form should **first** be directed to the [campus MWBE Program Coordinator](#) (click the link and be directed to the SUNY MWBE Campus Contacts directory on the University-wide MWBE web site).

Questions regarding this form should be directed to the University-wide MWBE Program Office at (518) 320-1189 or via e-mail: MWBEprogram@suny.edu.

Submit To:

**State University of New York
Office of Diversity, Equity and Inclusion University-wide MWBE Program
353 Broadway
Albany, NY 12246
Or MWBEProgram@suny.edu**

MBE/WBE CONTRACTOR PARTICIPATION QUOTE

Campus/Prime Contractor _____

Re: Contract # _____

Address _____

Recipient _____

TO: _____
(Name of Campus/Prime Contractor)

_____ proposes to perform the work as follows:
(Name of M/WBE Firm)

(Specify in detail the particular work items to be performed and associated dollar amounts):

TYPE OF WORK	UNIT PRICE	DOLLAR AMOUNT

NAME OF MBE/WBE COMPANY

SIGNATURE OF MBE/WBE REPRESENTATIVE

DATE

**MINORITY AND WOMEN'S BUSINESS - EQUAL EMPLOYMENT
OPPORTUNITY PROGRAM POLICY STATEMENT**

Policy Statement

The _____ commits to carrying out the intent of the New York State
(Name of Campus, Consultant, Contractor)
Executive Law, Article 15-A which assures the meaningful participation of minority and
women's business enterprises in contracting and the meaningful participation of minorities and
women in the workforce on activities financed by public funds.

Minority Business Officer

_____ is designated as the Minority Business Enterprise Officer
(Name of Designated Officer)
responsible for administering the Minority and Women's Business-Equal Employment
Opportunity (M/WBE-EEO) program. They can be reached at:

Phone: _____

Email: _____

M/WBE Contract Goals

_____ % Minority Business Enterprise Participation

_____ % Women's Business Enterprise Participation

EEO Contract Goals

10% Minority Labor Force Participation

10% Female Labor Force Participation

(Authorized Representative)

Title: _____

Date: _____

M/WBE UTILIZATION PLAN

INSTRUCTIONS: This form must be submitted with any bid, proposal, or proposed negotiated contract or within a reasonable time thereafter, but prior to contract award. This Utilization Plan must contain a detailed description of the supplies and/or services to be provided by each certified Minority and Women-owned Business Enterprise (M/WBE) under the contract. Attach additional sheets if necessary.

Offeror's Name: _____

Federal Identification No.: _____

Address: _____

Location of Work: SUNY at _____

City, State, Zip Code: _____

Project No.: _____

Telephone No.: _____

M/WBE Goals in the Contract: MBE % WBE %

Authorized Representative: _____

EEO Goals in the Contract: MBE % WBE %

Authorized Signature: _____

1. Certified M/WBE Subcontractors/Suppliers Name, Address, Email Address, Telephone No.	2. Classification	3. Federal ID No.	4. Detailed Description of Work (Attach additional sheets, if necessary)	5. Dollar Value of Subcontracts/ Supplies/Services and intended performance dates of each component of the contract.
1.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			
2.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			
3.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			
4.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			
5.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			
6.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			

7.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			
8.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			
9.	NYS ESD CERTIFIED <input type="checkbox"/> MBE <input type="checkbox"/> WBE			

6. IF UNABLE TO FULLY MEET THE MBE AND WBE GOALS SET FORTH IN THE CONTRACT, OFFEROR MUST SUBMIT A REQUEST FOR WAIVER FORM (M/WBE 104).

PREPARED BY (Signature): DATE: NAME AND TITLE OF PREPARER (Print or Type): SUBMISSION OF THIS FORM CONSTITUTES THE OFFEROR'S ACKNOWLEDGEMENT AND AGREEMENT TO COMPLY WITH THE M/WBE REQUIREMENTS SET FORTH UNDER NYS EXECUTIVE LAW, ARTICLE 15-A, 5 NYCRR PART 143, AND THE ABOVE-REFERENCED SOLICITATION. FAILURE TO SUBMIT COMPLETE AND ACCURATE INFORMATION MAY RESULT IN A FINDING OF NONCOMPLIANCE AND POSSIBLE TERMINATION OF YOUR CONTRACT.	TELEPHONE NO.:	EMAIL ADDRESS:
--	-----------------------	-----------------------

	FOR M/WBE USE ONLY	
	REVIEWED BY:	DATE:
	UTILIZATION PLAN APPROVED: <input type="checkbox"/> YES <input type="checkbox"/> NO Date: _____ Contract No.: _____ Project No. (if applicable): _____ Contract Award Date: _____ Estimated Date of Completion: _____ Amount Obligated Under the Contract: _____ Description of Work: _____ NOTICE OF DEFICIENCY ISSUED: <input type="checkbox"/> YES <input type="checkbox"/> NO Date: _____ NOTICE OF ACCEPTANCE ISSUED: <input type="checkbox"/> YES <input type="checkbox"/> NO Date: _____	

EEO STAFFING PLAN

Instructions on page 2

Solicitation No.:	Reporting Entity:	Report includes Contractor's/Subcontractor's: <input type="checkbox"/> Work force to be utilized on this contract <input type="checkbox"/> Total work force
Offeror's Name:		<input type="checkbox"/> Offerer <input type="checkbox"/> Subcontractor Subcontractor's name _____
Offeror's Address:		

Enter the total number of employees for each classification in each of the EEO-Job Categories identified

EEO-Job Category	Total Work force	Work force by Gender		Work force by Race/Ethnic Identification								Disabled		Veteran			
		Total Male (M)	Total Female (F)	White (M) (F)		Black (M) (F)		Hispanic (M) (F)		Asian (M) (F)		Native American (M) (F)		(M)	(F)	(M)	(F)
Officials/Administrators																	
Professionals																	
Technicians																	
Sales Workers																	
Office/Clerical																	
Craft Workers																	
Laborers																	
Service Workers																	
Temporary /Apprentices																	
Totals																	

PREPARED BY (Signature):	TELEPHONE NO.:	DATE:
	EMAIL ADDRESS:	
NAME AND TITLE OF PREPARER (Print or Type):		Submit completed with bid or proposal

General instructions: All Offerors and each subcontractor identified in the bid or proposal must complete an EEO Staffing Plan (ADM/EEO 100) and submit it as part of the bid or proposal package. For construction, except for contracts of \$100,000 or less, the three lowest bidders shall submit to the University for its approval an EEO Staffing Plan within seven (7) calendar days after the opening of bids. Where the work force to be utilized in the performance of the State contract can be separated out from the contractor's and/or subcontractor's total work force, the Offeror shall complete this form only for the anticipated work force to be utilized on the State contract. Where the work force to be utilized in the performance of the State contract cannot be separated out from the contractor's and/or subcontractor's total work force, the Offeror shall complete this form for the contractor's and/or subcontractor's total work force.

Instructions for completing:

1. Enter the Solicitation number that this report applies to along with the name and address of the Offeror.
2. Check off the appropriate box to indicate if the Offeror completing the report is the contractor or a subcontractor.
3. Check off the appropriate box to indicate work force to be utilized on the contract or the Offerors' total work force.
4. Enter the total work force by EEO job category.
5. Break down the anticipated total work force by gender and enter under the heading 'Work force by Gender'
6. Break down the anticipated total work force by race/ethnic identification and enter under the heading 'Work force by Race/Ethnic Identification'. Contact the M/WBE Permissible contact(s) for the solicitation if you have any questions.
7. Enter information on disabled or veterans included in the anticipated work force under the appropriate headings.
8. Enter the name, title, phone number and email address for the person completing the form. Sign and date the form in the designated boxes.

RACE/ETHNIC IDENTIFICATION

Race/ethnic designations as used by the Equal Employment Opportunity Commission do not denote scientific definitions of anthropological origins. For the purposes of this form, an employee may be included in the group to which he or she appears to belong, identifies with, or is regarded in the community as belonging. However, no person should be counted in more than one race/ethnic group. The race/ethnic categories for this survey are:

- **WHITE** (Not of Hispanic origin) All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.
- **BLACK** a person, not of Hispanic origin, who has origins in any of the black racial groups of the original peoples of Africa.
- **HISPANIC** a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race.
- **ASIAN & PACIFIC ISLANDER** a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent or the Pacific Islands.
- **NATIVE INDIAN (NATIVE AMERICAN/ ALASKAN NATIVE)** a person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

OTHER CATEGORIES

- **DISABLED INDIVIDUAL** any person who:
 - has a physical or mental impairment that substantially limits one or more major life activity(ies)
 - has a record of such an impairment; or
 - is regarded as having such an impairment.
- **VIETNAM ERA VETERAN** a veteran who served at any time between and including January 1, 1963 and May 7, 1975.
- **GENDER** Male or Female

EEO-1 JOB CLASSIFICATION GUIDE, 2014

(Effective beginning with the 2014 EEO-1 survey)

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Exec/Senior Offs & Mgrs.	Chief Executives *** (See Details in Bottom Note)	11-1011	0010
First/Mid Offs & Mgrs.	General and Operations Managers	11-1021	0020
First/Mid Offs & Mgrs.	Advertising and Promotions Managers	11-2011	0040
First/Mid Offs & Mgrs.	Marketing Managers	11-2021	0050
First/Mid Offs & Mgrs.	Sales Managers	11-2022	0050
First/Mid Offs & Mgrs.	Public Relations and Fundraising Managers	11-2031	0060
First/Mid Offs & Mgrs.	Administrative Services Managers	11-3011	0100
First/Mid Offs & Mgrs.	Computer and Information Systems Managers	11-3021	0110
First/Mid Offs & Mgrs.	Financial Managers	11-3031	0120
First/Mid Offs & Mgrs.	Industrial Production Managers	11-3051	0140
First/Mid Offs & Mgrs.	Purchasing Managers	11-3061	0150
First/Mid Offs & Mgrs.	Transportation, Storage, and Distribution Managers	11-3071	0160
First/Mid Offs & Mgrs.	Compensation and Benefits Managers	11-3111	0135
First/Mid Offs & Mgrs.	Human Resources Managers	11-3121	0136
First/Mid Offs & Mgrs.	Training and Development Managers	11-3131	0137
First/Mid Offs & Mgrs.	Farmers, Ranchers, and Other Agricultural Managers	11-9013	0205
First/Mid Offs & Mgrs.	Construction Managers	11-9021	0220
First/Mid Offs & Mgrs.	Education Administrators, Preschool and Childcare Center/Program	11-9031	0230
First/Mid Offs & Mgrs.	Education Administrators, Elementary and Secondary School	11-9032	0230
First/Mid Offs & Mgrs.	Education Administrators, Postsecondary	11-9033	0230
First/Mid Offs & Mgrs.	Education Administrators, All Other	11-9039	0230
First/Mid Offs & Mgrs.	Architectural and Engineering Managers	11-9041	0300
First/Mid Offs & Mgrs.	Food Service Managers	11-9051	0310
First/Mid Offs & Mgrs.	Funeral Service Managers	11-9061	0430
First/Mid Offs & Mgrs.	Gaming Managers	11-9071	0330
First/Mid Offs & Mgrs.	Lodging Managers	11-9081	0340
First/Mid Offs & Mgrs.	Medical and Health Services Managers	11-9111	0350
First/Mid Offs & Mgrs.	Natural Sciences Managers	11-9121	0360
First/Mid Offs & Mgrs.	Postmasters and Mail Superintendents	11-9131	0430
First/Mid Offs & Mgrs.	Property, Real Estate, and Community Association Managers	11-9141	0410
First/Mid Offs & Mgrs.	Social and Community Service Managers	11-9151	0420
First/Mid Offs & Mgrs.	Emergency Management Directors	11-9161	0425
First/Mid Offs & Mgrs.	Managers, All Other	11-9199	0430
First/Mid Offs & Mgrs.	Morticians, Undertakers, and Funeral Directors	39-4031	4465
Professionals	Agents and Business Managers of Artists, Performers, and Athletes	13-1011	0500
Professionals	Buyers and Purchasing Agents, Farm Products	13-1021	0510
Professionals	Wholesale and Retail Buyers, Except Farm Products	13-1022	0520
Professionals	Purchasing Agents, Except Wholesale, Retail, and Farm Products	13-1023	0530

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Professionals	Claims Adjusters, Examiners, and Investigators	13-1031	0540
Professionals	Insurance Appraisers, Auto Damage	13-1032	0540
Professionals	Compliance Officers	13-1041	0565
Professionals	Cost Estimators	13-1051	0600
Professionals	Human Resources Specialists	13-1071	0630
Professionals	Farm Labor Contractors	13-1074	0630
Professionals	Labor Relations Specialists	13-1075	0630
Professionals	Logisticians	13-1081	0700
Professionals	Management Analysts	13-1111	0710
Professionals	Meeting, Convention, and Event Planners	13-1121	0725
Professionals	Fundraisers	13-1131	0726
Professionals	Compensation, Benefits, and Job Analysis Specialists	13-1141	0640
Professionals	Training and Development Specialists	13-1151	0650
Professionals	Market Research Analysts and Marketing Specialists	13-1161	0735
Professionals	Business Operations Specialists, All Other	13-1199	0740
Professionals	Accountants and Auditors	13-2011	0800
Professionals	Appraisers and Assessors of Real Estate	13-2021	0810
Professionals	Budget Analysts	13-2031	0820
Professionals	Credit Analysts	13-2041	0830
Professionals	Financial Analysts	13-2051	0840
Professionals	Personal Financial Advisors	13-2052	0850
Professionals	Insurance Underwriters	13-2053	0860
Professionals	Financial Examiners	13-2061	0900
Professionals	Credit Counselors	13-2071	0910
Professionals	Loan Officers	13-2072	0910
Professionals	Tax Examiners and Collectors, and Revenue Agents	13-2081	0930
Professionals	Tax Preparers	13-2082	0940
Professionals	Financial Specialists, All Other	13-2099	0950
Professionals	Computer and Information Research Scientists	15-1111	1005
Professionals	Computer Systems Analysts	15-1121	1006
Professionals	Information Security Analysts	15-1122	1007
Professionals	Computer Programmers	15-1131	1010
Professionals	Software Developers, Applications	15-1132	1020
Professionals	Software Developers, Systems Software	15-1133	1020
Professionals	Web Developers	15-1134	1030
Professionals	Database Administrators	15-1141	1060
Professionals	Network and Computer Systems Administrators	15-1142	1105
Professionals	Computer Network Architects	15-1143	1106
Professionals	Computer User Support Specialists	15-1151	1050
Professionals	Computer Network Support Specialists	15-1152	1050
Professionals	Computer Occupations, All Other	15-1199	1107

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Professionals	Actuaries	15-2011	1200
Professionals	Mathematicians	15-2021	1240
Professionals	Operations Research Analysts	15-2031	1220
Professionals	Statisticians	15-2041	1240
Professionals	Mathematical Technicians	15-2091	1240
Professionals	Mathematical Science Occupations, All Other	15-2099	1240
Professionals	Architects, Except Landscape and Naval	17-1011	1300
Professionals	Landscape Architects	17-1012	1300
Professionals	Cartographers and Photogrammetrists	17-1021	1310
Professionals	Surveyors	17-1022	1310
Professionals	Aerospace Engineers	17-2011	1320
Professionals	Agricultural Engineers	17-2021	1340
Professionals	Biomedical Engineers	17-2031	1340
Professionals	Chemical Engineers	17-2041	1350
Professionals	Civil Engineers	17-2051	1520
Professionals	Computer Hardware Engineers	17-2061	1400
Professionals	Electrical Engineers	17-2071	1410
Professionals	Electronics Engineers, Except Computer	17-2072	1410
Professionals	Environmental Engineers	17-2081	1420
Professionals	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	17-2111	1430
Professionals	Industrial Engineers	17-2112	1430
Professionals	Marine Engineers and Naval Architects	17-2121	1440
Professionals	Materials Engineers	17-2131	1450
Professionals	Mechanical Engineers	17-2141	1460
Professionals	Mining and Geological Engineers, Including Mining Safety Engineers	17-2151	1520
Professionals	Nuclear Engineers	17-2161	1530
Professionals	Petroleum Engineers	17-2171	1520
Professionals	Engineers, All Other	17-2199	1530
Professionals	Animal Scientists	19-1011	1600
Professionals	Food Scientists and Technologists	19-1012	1600
Professionals	Soil and Plant Scientists	19-1013	1600
Professionals	Biochemists and Biophysicists	19-1021	1610
Professionals	Microbiologists	19-1022	1610
Professionals	Zoologists and Wildlife Biologists	19-1023	1610
Professionals	Biological Scientists, All Other	19-1029	1610
Professionals	Conservation Scientists	19-1031	1640
Professionals	Foresters	19-1032	1640
Professionals	Epidemiologists	19-1041	1650
Professionals	Medical Scientists, Except Epidemiologists	19-1042	1650
Professionals	Life Scientists, All Other	19-1099	1650
Professionals	Astronomers	19-2011	1700

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Professionals	Physicists	19-2012	1700
Professionals	Atmospheric and Space Scientists	19-2021	1710
Professionals	Chemists	19-2031	1720
Professionals	Materials Scientists	19-2032	1720
Professionals	Environmental Scientists and Specialists, Including Health	19-2041	1740
Professionals	Geoscientists, Except Hydrologists and Geographers	19-2042	1740
Professionals	Hydrologists	19-2043	1740
Professionals	Physical Scientists, All Other	19-2099	1760
Professionals	Economists	19-3011	1800
Professionals	Survey Researchers	19-3022	1860
Professionals	Clinical, Counseling, and School Psychologists	19-3031	1820
Professionals	Industrial-Organizational Psychologists	19-3032	1820
Professionals	Psychologists, All Other	19-3039	1820
Professionals	Sociologists	19-3041	1860
Professionals	Urban and Regional Planners	19-3051	1840
Professionals	Anthropologists and Archeologists	19-3091	1860
Professionals	Geographers	19-3092	1860
Professionals	Historians	19-3093	1860
Professionals	Political Scientists	19-3094	1860
Professionals	Social Scientists and Related Workers, All Other	19-3099	1860
Professionals	Substance Abuse and Behavioral Disorder Counselors	21-1011	2000
Professionals	Educational, Guidance, School, and Vocational Counselors	21-1012	2000
Professionals	Marriage and Family Therapists	21-1013	2000
Professionals	Mental Health Counselors	21-1014	2000
Professionals	Rehabilitation Counselors	21-1015	2000
Professionals	Counselors, All Other	21-1019	2000
Professionals	Child, Family, and School Social Workers	21-1021	2010
Professionals	Healthcare Social Workers	21-1022	2010
Professionals	Mental Health and Substance Abuse Social Workers	21-1023	2010
Professionals	Social Workers, All Other	21-1029	2010
Professionals	Health Educators	21-1091	2025
Professionals	Probation Officers and Correctional Treatment Specialists	21-1092	2015
Professionals	Community Health Workers	21-1094	2025
Professionals	Community and Social Service Specialists, All Other	21-1099	2025
Professionals	Clergy	21-2011	2040
Professionals	Directors, Religious Activities and Education	21-2021	2050
Professionals	Religious Workers, All Other	21-2099	2060
Professionals	Lawyers	23-1011	2100
Professionals	Judicial Law Clerks	23-1012	2105
Professionals	Administrative Law Judges, Adjudicators, and Hearing Officers	23-1021	2100
Professionals	Arbitrators, Mediators, and Conciliators	23-1022	2100

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Professionals	Judges, Magistrate Judges, and Magistrates	23-1023	2100
Professionals	Business Teachers, Postsecondary	25-1011	2200
Professionals	Computer Science Teachers, Postsecondary	25-1021	2200
Professionals	Mathematical Science Teachers, Postsecondary	25-1022	2200
Professionals	Architecture Teachers, Postsecondary	25-1031	2200
Professionals	Engineering Teachers, Postsecondary	25-1032	2200
Professionals	Agricultural Sciences Teachers, Postsecondary	25-1041	2200
Professionals	Biological Science Teachers, Postsecondary	25-1042	2200
Professionals	Forestry and Conservation Science Teachers, Postsecondary	25-1043	2200
Professionals	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	25-1051	2200
Professionals	Chemistry Teachers, Postsecondary	25-1052	2200
Professionals	Environmental Science Teachers, Postsecondary	25-1053	2200
Professionals	Physics Teachers, Postsecondary	25-1054	2200
Professionals	Anthropology and Archeology Teachers, Postsecondary	25-1061	2200
Professionals	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	25-1062	2200
Professionals	Economics Teachers, Postsecondary	25-1063	2200
Professionals	Geography Teachers, Postsecondary	25-1064	2200
Professionals	Political Science Teachers, Postsecondary	25-1065	2200
Professionals	Psychology Teachers, Postsecondary	25-1066	2200
Professionals	Sociology Teachers, Postsecondary	25-1067	2200
Professionals	Social Sciences Teachers, Postsecondary, All Other	25-1069	2200
Professionals	Health Specialties Teachers, Postsecondary	25-1071	2200
Professionals	Nursing Instructors and Teachers, Postsecondary	25-1072	2200
Professionals	Education Teachers, Postsecondary	25-1081	2200
Professionals	Library Science Teachers, Postsecondary	25-1082	2200
Professionals	Criminal Justice and Law Enforcement Teachers, Postsecondary	25-1111	2200
Professionals	Law Teachers, Postsecondary	25-1112	2200
Professionals	Social Work Teachers, Postsecondary	25-1113	2200
Professionals	Art, Drama, and Music Teachers, Postsecondary	25-1121	2200
Professionals	Communications Teachers, Postsecondary	25-1122	2200
Professionals	English Language and Literature Teachers, Postsecondary	25-1123	2200
Professionals	Foreign Language and Literature Teachers, Postsecondary	25-1124	2200
Professionals	History Teachers, Postsecondary	25-1125	2200
Professionals	Philosophy and Religion Teachers, Postsecondary	25-1126	2200
Professionals	Graduate Teaching Assistants	25-1191	2200
Professionals	Home Economics Teachers, Postsecondary	25-1192	2200
Professionals	Recreation and Fitness Studies Teachers, Postsecondary	25-1193	2200
Professionals	Vocational Education Teachers, Postsecondary	25-1194	2200
Professionals	Postsecondary Teachers, All Other	25-1199	2200
Professionals	Preschool Teachers, Except Special Education	25-2011	2300
Professionals	Kindergarten Teachers, Except Special Education	25-2012	2300

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Professionals	Elementary School Teachers, Except Special Education	25-2021	2310
Professionals	Middle School Teachers, Except Special and Career/Technical Education	25-2022	2310
Professionals	Career/Technical Education Teachers, Middle School	25-2023	2310
Professionals	Secondary School Teachers, Except Special and Career/Technical Education	25-2031	2320
Professionals	Career/Technical Education Teachers, Secondary School	25-2032	2320
Professionals	Special Education Teachers, Preschool	25-2051	2330
Professionals	Special Education Teachers, Kindergarten and Elementary School	25-2052	2330
Professionals	Special Education Teachers, Middle School	25-2053	2330
Professionals	Special Education Teachers, Secondary School	25-2054	2330
Professionals	Special Education Teachers, All Other	25-2059	2330
Professionals	Adult Basic and Secondary Education and Literacy Teachers and Instructors	25-3011	2340
Professionals	Self-Enrichment Education Teachers	25-3021	2340
Professionals	Teachers and Instructors, All Other	25-3099	2340
Professionals	Archivists	25-4011	2400
Professionals	Curators	25-4012	2400
Professionals	Museum Technicians and Conservators	25-4013	2400
Professionals	Librarians	25-4021	2430
Professionals	Audio-Visual and Multimedia Collections Specialists	25-9011	2550
Professionals	Farm and Home Management Advisors	25-9021	2550
Professionals	Instructional Coordinators	25-9031	2550
Professionals	Education, Training, and Library Workers, All Other	25-9099	2550
Professionals	Art Directors	27-1011	2600
Professionals	Craft Artists	27-1012	2600
Professionals	Fine Artists, Including Painters, Sculptors, and Illustrators	27-1013	2600
Professionals	Multimedia Artists and Animators	27-1014	2600
Professionals	Artists and Related Workers, All Other	27-1019	2600
Professionals	Commercial and Industrial Designers	27-1021	2630
Professionals	Fashion Designers	27-1022	2630
Professionals	Floral Designers	27-1023	2630
Professionals	Graphic Designers	27-1024	2630
Professionals	Interior Designers	27-1025	2630
Professionals	Merchandise Displayers and Window Trimmers	27-1026	2630
Professionals	Set and Exhibit Designers	27-1027	2630
Professionals	Designers, All Other	27-1029	2630
Professionals	Actors	27-2011	2700
Professionals	Producers and Directors	27-2012	2710
Professionals	Athletes and Sports Competitors	27-2021	2720
Professionals	Coaches and Scouts	27-2022	2720
Professionals	Umpires, Referees, and Other Sports Officials	27-2023	2720
Professionals	Dancers	27-2031	2740
Professionals	Choreographers	27-2032	2740

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Professionals	Music Directors and Composers	27-2041	2750
Professionals	Musicians and Singers	27-2042	2750
Professionals	Entertainers and Performers, Sports and Related Workers, All Other	27-2099	2760
Professionals	Radio and Television Announcers	27-3011	2800
Professionals	Public Address System and Other Announcers	27-3012	2800
Professionals	Broadcast News Analysts	27-3021	2810
Professionals	Reporters and Correspondents	27-3022	2810
Professionals	Public Relations Specialists	27-3031	2825
Professionals	Editors	27-3041	2830
Professionals	Technical Writers	27-3042	2840
Professionals	Writers and Authors	27-3043	2850
Professionals	Interpreters and Translators	27-3091	2860
Professionals	Media and Communication Workers, All Other	27-3099	2860
Professionals	Photographers	27-4021	2910
Professionals	Camera Operators, Television, Video, and Motion Picture	27-4031	2920
Professionals	Film and Video Editors	27-4032	2920
Professionals	Chiropractors	29-1011	3000
Professionals	Dentists, General	29-1021	3010
Professionals	Oral and Maxillofacial Surgeons	29-1022	3010
Professionals	Orthodontists	29-1023	3010
Professionals	Prosthodontists	29-1024	3010
Professionals	Dentists, All Other Specialists	29-1029	3010
Professionals	Dietitians and Nutritionists	29-1031	3030
Professionals	Optometrists	29-1041	3040
Professionals	Pharmacists	29-1051	3050
Professionals	Anesthesiologists	29-1061	3060
Professionals	Family and General Practitioners	29-1062	3060
Professionals	Internists, General	29-1063	3060
Professionals	Obstetricians and Gynecologists	29-1064	3060
Professionals	Pediatricians, General	29-1065	3060
Professionals	Psychiatrists	29-1066	3060
Professionals	Surgeons	29-1067	3060
Professionals	Physicians and Surgeons, All Other	29-1069	3060
Professionals	Physician Assistants	29-1071	3110
Professionals	Podiatrists	29-1081	3120
Professionals	Occupational Therapists	29-1122	3150
Professionals	Physical Therapists	29-1123	3160
Professionals	Radiation Therapists	29-1124	3200
Professionals	Recreational Therapists	29-1125	3210
Professionals	Respiratory Therapists	29-1126	3220
Professionals	Speech-Language Pathologists	29-1127	3230

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Professionals	Exercise Physiologists	29-1128	3245
Professionals	Therapists, All Other	29-1129	3245
Professionals	Veterinarians	29-1131	3250
Professionals	Registered Nurses	29-1141	3255
Professionals	Nurse Anesthetists	29-1151	3256
Professionals	Nurse Midwives	29-1161	3258
Professionals	Nurse Practitioners	29-1171	3258
Professionals	Audiologists	29-1181	3140
Professionals	Health Diagnosing and Treating Practitioners, All Other	29-1199	3260
Professionals	Animal Trainers	39-2011	4340
Professionals	Sales Engineers	41-9031	4930
Professionals	Agricultural Inspectors	45-2011	6010
Professionals	Construction and Building Inspectors	47-4011	6660
Professionals	Airline Pilots, Copilots, and Flight Engineers	53-2011	9030
Professionals	Commercial Pilots	53-2012	9030
Professionals	Transportation Inspectors	53-6051	9410
Technicians	Architectural and Civil Drafters	17-3011	1540
Technicians	Electrical and Electronics Drafters	17-3012	1540
Technicians	Mechanical Drafters	17-3013	1540
Technicians	Drafters, All Other	17-3019	1540
Technicians	Aerospace Engineering and Operations Technicians	17-3021	1550
Technicians	Civil Engineering Technicians	17-3022	1550
Technicians	Electrical and Electronics Engineering Technicians	17-3023	1550
Technicians	Electro-Mechanical Technicians	17-3024	1550
Technicians	Environmental Engineering Technicians	17-3025	1550
Technicians	Industrial Engineering Technicians	17-3026	1550
Technicians	Mechanical Engineering Technicians	17-3027	1550
Technicians	Engineering Technicians, Except Drafters, All Other	17-3029	1550
Technicians	Surveying and Mapping Technicians	17-3031	1560
Technicians	Agricultural and Food Science Technicians	19-4011	1900
Technicians	Biological Technicians	19-4021	1910
Technicians	Chemical Technicians	19-4031	1920
Technicians	Geological and Petroleum Technicians	19-4041	1930
Technicians	Nuclear Technicians	19-4051	1930
Technicians	Social Science Research Assistants	19-4061	1965
Technicians	Environmental Science and Protection Technicians, Including Health	19-4091	1965
Technicians	Forensic Science Technicians	19-4092	1965
Technicians	Forest and Conservation Technicians	19-4093	1965
Technicians	Life, Physical, and Social Science Technicians, All Other	19-4099	1965
Technicians	Audio and Video Equipment Technicians	27-4011	2900
Technicians	Broadcast Technicians	27-4012	2900

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Technicians	Radio Operators	27-4013	2900
Technicians	Sound Engineering Technicians	27-4014	2900
Technicians	Media and Communication Equipment Workers, All Other	27-4099	2900
Technicians	Medical and Clinical Laboratory Technologists	29-2011	3300
Technicians	Medical and Clinical Laboratory Technicians	29-2012	3300
Technicians	Dental Hygienists	29-2021	3310
Technicians	Cardiovascular Technologists and Technicians	29-2031	3320
Technicians	Diagnostic Medical Sonographers	29-2032	3320
Technicians	Nuclear Medicine Technologists	29-2033	3320
Technicians	Radiologic Technologists	29-2034	3320
Technicians	Magnetic Resonance Imaging Technologists	29-2035	3320
Technicians	Emergency Medical Technicians and Paramedics	29-2041	3400
Technicians	Dietetic Technicians	29-2051	3420
Technicians	Pharmacy Technicians	29-2052	3420
Technicians	Psychiatric Technicians	29-2053	3420
Technicians	Respiratory Therapy Technicians	29-2054	3420
Technicians	Surgical Technologists	29-2055	3420
Technicians	Veterinary Technologists and Technicians	29-2056	3420
Technicians	Ophthalmic Medical Technicians	29-2057	3420
Technicians	Licensed Practical and Licensed Vocational Nurses	29-2061	3500
Technicians	Medical Records and Health Information Technicians	29-2071	3510
Technicians	Opticians, Dispensing	29-2081	3520
Technicians	Orthotists and Prosthetists	29-2091	3535
Technicians	Hearing Aid Specialists	29-2092	3535
Technicians	Health Technologists and Technicians, All Other	29-2099	3535
Technicians	Occupational Health and Safety Specialists	29-9011	3540
Technicians	Occupational Health and Safety Technicians	29-9012	3540
Technicians	Athletic Trainers	29-9091	3540
Technicians	Genetic Counselors	29-9092	3540
Technicians	Healthcare Practitioners and Technical Workers, All Other	29-9099	3540
Technicians	Air Traffic Controllers	53-2021	9040
Technicians	Airfield Operations Specialists	53-2022	9040
Sales Workers	First-Line Supervisors of Retail Sales Workers	41-1011	4700
Sales Workers	First-Line Supervisors of Non-Retail Sales Workers	41-1012	4710
Sales Workers	Cashiers	41-2011	4720
Sales Workers	Gaming Change Persons and Booth Cashiers	41-2012	4720
Sales Workers	Counter and Rental Clerks	41-2021	4740
Sales Workers	Parts Salespersons	41-2022	4750
Sales Workers	Retail Salespersons	41-2031	4760
Sales Workers	Advertising Sales Agents	41-3011	4800
Sales Workers	Insurance Sales Agents	41-3021	4810

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Sales Workers	Securities, Commodities, and Financial Services Sales Agents	41-3031	4820
Sales Workers	Travel Agents	41-3041	4830
Sales Workers	Sales Representatives, Services, All Other	41-3099	4840
Sales Workers	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	41-4011	4850
Sales Workers	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	41-4012	4850
Sales Workers	Demonstrators and Product Promoters	41-9011	4900
Sales Workers	Models	41-9012	4900
Sales Workers	Real Estate Brokers	41-9021	4920
Sales Workers	Real Estate Sales Agents	41-9022	4920
Sales Workers	Telemarketers	41-9041	4940
Sales Workers	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	41-9091	4950
Sales Workers	Sales and Related Workers, All Other	41-9099	4965
Administrative Support Workers	Social and Human Service Assistants	21-1093	2016
Administrative Support Workers	Paralegals and Legal Assistants	23-2011	2145
Administrative Support Workers	Court Reporters	23-2091	2160
Administrative Support Workers	Title Examiners, Abstractors, and Searchers	23-2093	2160
Administrative Support Workers	Legal Support Workers, All Other	23-2099	2160
Administrative Support Workers	Library Technicians	25-4031	2440
Administrative Support Workers	Teacher Assistants	25-9041	2540
Administrative Support Workers	Medical Transcriptionists	31-9094	3646
Administrative Support Workers	First-Line Supervisors of Office and Administrative Support Workers	43-1011	5000
Administrative Support Workers	Switchboard Operators, Including Answering Service	43-2011	5010
Administrative Support Workers	Telephone Operators	43-2021	5020
Administrative Support Workers	Communications Equipment Operators, All Other	43-2099	5030
Administrative Support Workers	Bill and Account Collectors	43-3011	5100
Administrative Support Workers	Billing and Posting Clerks	43-3021	5110
Administrative Support Workers	Bookkeeping, Accounting, and Auditing Clerks	43-3031	5120
Administrative Support Workers	Gaming Cage Workers	43-3041	5130
Administrative Support Workers	Payroll and Timekeeping Clerks	43-3051	5140
Administrative Support Workers	Procurement Clerks	43-3061	5150
Administrative Support Workers	Tellers	43-3071	5160

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Administrative Support Workers	Financial Clerks, All Other	43-3099	5165
Administrative Support Workers	Brokerage Clerks	43-4011	5200
Administrative Support Workers	Correspondence Clerks	43-4021	5350
Administrative Support Workers	Court, Municipal, and License Clerks	43-4031	5220
Administrative Support Workers	Credit Authorizers, Checkers, and Clerks	43-4041	5230
Administrative Support Workers	Customer Service Representatives	43-4051	5240
Administrative Support Workers	Eligibility Interviewers, Government Programs	43-4061	5250
Administrative Support Workers	File Clerks	43-4071	5260
Administrative Support Workers	Hotel, Motel, and Resort Desk Clerks	43-4081	5300
Administrative Support Workers	Interviewers, Except Eligibility and Loan	43-4111	5310
Administrative Support Workers	Library Assistants, Clerical	43-4121	5320
Administrative Support Workers	Loan Interviewers and Clerks	43-4131	5330
Administrative Support Workers	New Accounts Clerks	43-4141	5340
Administrative Support Workers	Order Clerks	43-4151	5350
Administrative Support Workers	Human Resources Assistants, Except Payroll and Timekeeping	43-4161	5360
Administrative Support Workers	Receptionists and Information Clerks	43-4171	5400
Administrative Support Workers	Reservation and Transportation Ticket Agents and Travel Clerks	43-4181	5410
Administrative Support Workers	Information and Record Clerks, All Other	43-4199	5420
Administrative Support Workers	Cargo and Freight Agents	43-5011	5500
Administrative Support Workers	Couriers and Messengers	43-5021	5510
Administrative Support Workers	Police, Fire, and Ambulance Dispatchers	43-5031	5520
Administrative Support Workers	Dispatchers, Except Police, Fire, and Ambulance	43-5032	5520
Administrative Support Workers	Meter Readers, Utilities	43-5041	5530
Administrative Support Workers	Postal Service Clerks	43-5051	5540
Administrative Support Workers	Postal Service Mail Carriers	43-5052	5550
Administrative Support Workers	Postal Service Mail Sorters, Processors, and Processing Machine Operators	43-5053	5560
Administrative Support Workers	Production, Planning, and Expediting Clerks	43-5061	5600

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Administrative Support Workers	Shipping, Receiving, and Traffic Clerks	43-5071	5610
Administrative Support Workers	Stock Clerks and Order Fillers	43-5081	5620
Administrative Support Workers	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	43-5111	5630
Administrative Support Workers	Executive Secretaries and Executive Administrative Assistants	43-6011	5700
Administrative Support Workers	Legal Secretaries	43-6012	5700
Administrative Support Workers	Medical Secretaries	43-6013	5700
Administrative Support Workers	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	43-6014	5700
Administrative Support Workers	Computer Operators	43-9011	5800
Administrative Support Workers	Data Entry Keyers	43-9021	5810
Administrative Support Workers	Word Processors and Typists	43-9022	5820
Administrative Support Workers	Desktop Publishers	43-9031	5940
Administrative Support Workers	Insurance Claims and Policy Processing Clerks	43-9041	5840
Administrative Support Workers	Mail Clerks and Mail Machine Operators, Except Postal Service	43-9051	5850
Administrative Support Workers	Office Clerks, General	43-9061	5860
Administrative Support Workers	Office Machine Operators, Except Computer	43-9071	5900
Administrative Support Workers	Proofreaders and Copy Markers	43-9081	5910
Administrative Support Workers	Statistical Assistants	43-9111	5920
Administrative Support Workers	Office and Administrative Support Workers, All Other	43-9199	5940
Craft Workers	First-Line Supervisors of Construction Trades and Extraction Workers	47-1011	6200
Craft Workers	Boilermakers	47-2011	6210
Craft Workers	Brickmasons and Blockmasons	47-2021	6220
Craft Workers	Stonemasons	47-2022	6220
Craft Workers	Carpenters	47-2031	6230
Craft Workers	Carpet Installers	47-2041	6240
Craft Workers	Floor Layers, Except Carpet, Wood, and Hard Tiles	47-2042	6240
Craft Workers	Floor Sanders and Finishers	47-2043	6240
Craft Workers	Tile and Marble Setters	47-2044	6240
Craft Workers	Cement Masons and Concrete Finishers	47-2051	6250
Craft Workers	Terrazzo Workers and Finishers	47-2053	6250
Craft Workers	Paving, Surfacing, and Tamping Equipment Operators	47-2071	6300
Craft Workers	Pile-Driver Operators	47-2072	6320
Craft Workers	Operating Engineers and Other Construction Equipment Operators	47-2073	6320

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Craft Workers	Drywall and Ceiling Tile Installers	47-2081	6330
Craft Workers	Tapers	47-2082	6330
Craft Workers	Electricians	47-2111	6355
Craft Workers	Glaziers	47-2121	6360
Craft Workers	Insulation Workers, Floor, Ceiling, and Wall	47-2131	6400
Craft Workers	Insulation Workers, Mechanical	47-2132	6400
Craft Workers	Painters, Construction and Maintenance	47-2141	6420
Craft Workers	Paperhangers	47-2142	6430
Craft Workers	Pipelayers	47-2151	6440
Craft Workers	Plumbers, Pipefitters, and Steamfitters	47-2152	6440
Craft Workers	Plasterers and Stucco Masons	47-2161	6460
Craft Workers	Reinforcing Iron and Rebar Workers	47-2171	6500
Craft Workers	Roofers	47-2181	6515
Craft Workers	Sheet Metal Workers	47-2211	6520
Craft Workers	Structural Iron and Steel Workers	47-2221	6530
Craft Workers	Solar Photovoltaic Installers	47-2231	6765
Craft Workers	Elevator Installers and Repairers	47-4021	6700
Craft Workers	Fence Erectors	47-4031	6710
Craft Workers	Hazardous Materials Removal Workers	47-4041	6720
Craft Workers	Highway Maintenance Workers	47-4051	6730
Craft Workers	Rail-Track Laying and Maintenance Equipment Operators	47-4061	6740
Craft Workers	Septic Tank Servicers and Sewer Pipe Cleaners	47-4071	6765
Craft Workers	Segmental Pavers	47-4091	6765
Craft Workers	Construction and Related Workers, All Other	47-4099	6765
Craft Workers	Derrick Operators, Oil and Gas	47-5011	6800
Craft Workers	Rotary Drill Operators, Oil and Gas	47-5012	6800
Craft Workers	Service Unit Operators, Oil, Gas, and Mining	47-5013	6800
Craft Workers	Earth Drillers, Except Oil and Gas	47-5021	6820
Craft Workers	Explosives Workers, Ordnance Handling Experts, and Blasters	47-5031	6830
Craft Workers	Continuous Mining Machine Operators	47-5041	6840
Craft Workers	Mine Cutting and Channeling Machine Operators	47-5042	6840
Craft Workers	Mining Machine Operators, All Other	47-5049	6840
Craft Workers	Rock Splitters, Quarry	47-5051	6940
Craft Workers	Roof Bolters, Mining	47-5061	6940
Craft Workers	Roustabouts, Oil and Gas	47-5071	6800
Craft Workers	Helpers--Extraction Workers	47-5081	6940
Craft Workers	Extraction Workers, All Other	47-5099	6940
Craft Workers	First-Line Supervisors of Mechanics, Installers, and Repairers	49-1011	7000
Craft Workers	Computer, Automated Teller, and Office Machine Repairers	49-2011	7010
Craft Workers	Radio, Cellular, and Tower Equipment Installers and Repairs	49-2021	7020
Craft Workers	Telecommunications Equipment Installers and Repairers, Except Line Installers	49-2022	7020

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Craft Workers	Avionics Technicians	49-2091	7030
Craft Workers	Electric Motor, Power Tool, and Related Repairers	49-2092	7040
Craft Workers	Electrical and Electronics Installers and Repairers, Transportation Equipment	49-2093	7100
Craft Workers	Electrical and Electronics Repairers, Commercial and Industrial Equipment	49-2094	7100
Craft Workers	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	49-2095	7100
Craft Workers	Electronic Equipment Installers and Repairers, Motor Vehicles	49-2096	7110
Craft Workers	Electronic Home Entertainment Equipment Installers and Repairers	49-2097	7120
Craft Workers	Security and Fire Alarm Systems Installers	49-2098	7130
Craft Workers	Aircraft Mechanics and Service Technicians	49-3011	7140
Craft Workers	Automotive Body and Related Repairers	49-3021	7150
Craft Workers	Automotive Glass Installers and Repairers	49-3022	7160
Craft Workers	Automotive Service Technicians and Mechanics	49-3023	7200
Craft Workers	Bus and Truck Mechanics and Diesel Engine Specialists	49-3031	7210
Craft Workers	Farm Equipment Mechanics and Service Technicians	49-3041	7220
Craft Workers	Mobile Heavy Equipment Mechanics, Except Engines	49-3042	7220
Craft Workers	Rail Car Repairers	49-3043	7220
Craft Workers	Motorboat Mechanics and Service Technicians	49-3051	7240
Craft Workers	Motorcycle Mechanics	49-3052	7240
Craft Workers	Outdoor Power Equipment and Other Small Engine Mechanics	49-3053	7240
Craft Workers	Bicycle Repairers	49-3091	7260
Craft Workers	Recreational Vehicle Service Technicians	49-3092	7260
Craft Workers	Tire Repairers and Changers	49-3093	7260
Craft Workers	Mechanical Door Repairers	49-9011	7300
Craft Workers	Control and Valve Installers and Repairers, Except Mechanical Door	49-9012	7300
Craft Workers	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	49-9021	7315
Craft Workers	Home Appliance Repairers	49-9031	7320
Craft Workers	Industrial Machinery Mechanics	49-9041	7330
Craft Workers	Maintenance Workers, Machinery	49-9043	7350
Craft Workers	Millwrights	49-9044	7360
Craft Workers	Refractory Materials Repairers, Except Brickmasons	49-9045	7330
Craft Workers	Electrical Power-Line Installers and Repairers	49-9051	7410
Craft Workers	Telecommunications Line Installers and Repairers	49-9052	7420
Craft Workers	Camera and Photographic Equipment Repairers	49-9061	7430
Craft Workers	Medical Equipment Repairers	49-9062	7430
Craft Workers	Musical Instrument Repairers and Tuners	49-9063	7430
Craft Workers	Watch Repairers	49-9064	7430
Craft Workers	Precision Instrument and Equipment Repairers, All Other	49-9069	7430
Craft Workers	Maintenance and Repair Workers, General	49-9071	7340
Craft Workers	Wind Turbine Service Technicians	49-9081	7630
Craft Workers	Coin, Vending, and Amusement Machine Servicers and Repairers	49-9091	7510
Craft Workers	Commercial Divers	49-9092	7630

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Craft Workers	Fabric Menders, Except Garment	49-9093	7630
Craft Workers	Locksmiths and Safe Repairers	49-9094	7540
Craft Workers	Manufactured Building and Mobile Home Installers	49-9095	7550
Craft Workers	Riggers	49-9096	7560
Craft Workers	Signal and Track Switch Repairers	49-9097	7630
Craft Workers	Installation, Maintenance, and Repair Workers, All Other	49-9099	7630
Craft Workers	Structural Metal Fabricators and Fitters	51-2041	7740
Craft Workers	Machinists	51-4041	8030
Craft Workers	Model Makers, Metal and Plastic	51-4061	8060
Craft Workers	Patternmakers, Metal and Plastic	51-4062	8060
Craft Workers	Tool and Die Makers	51-4111	8130
Craft Workers	Prepress Technicians and Workers	51-5111	8250
Craft Workers	Print Binding and Finishing Workers	51-5113	8256
Craft Workers	Shoe and Leather Workers and Repairers	51-6041	8330
Craft Workers	Sewers, Hand	51-6051	8350
Craft Workers	Tailors, Dressmakers, and Custom Sewers	51-6052	8350
Craft Workers	Upholsterers	51-6093	8450
Craft Workers	Cabinetmakers and Bench Carpenters	51-7011	8500
Craft Workers	Furniture Finishers	51-7021	8510
Craft Workers	Model Makers, Wood	51-7031	8550
Craft Workers	Patternmakers, Wood	51-7032	8550
Craft Workers	Woodworkers, All Other	51-7099	8550
Craft Workers	Nuclear Power Reactor Operators	51-8011	8600
Craft Workers	Power Distributors and Dispatchers	51-8012	8600
Craft Workers	Power Plant Operators	51-8013	8600
Craft Workers	Stationary Engineers and Boiler Operators	51-8021	8610
Craft Workers	Water and Wastewater Treatment Plant and System Operators	51-8031	8620
Craft Workers	Jewelers and Precious Stone and Metal Workers	51-9071	8750
Craft Workers	Dental Laboratory Technicians	51-9081	8760
Craft Workers	Medical Appliance Technicians	51-9082	8760
Craft Workers	Ophthalmic Laboratory Technicians	51-9083	8760
Craft Workers	Etchers and Engravers	51-9194	8910
Craft Workers	Crane and Tower Operators	53-7021	9510
Craft Workers	Dredge Operators	53-7031	9520
Craft Workers	Excavating and Loading Machine and Dragline Operators	53-7032	9520
Craft Workers	Loading Machine Operators, Underground Mining	53-7033	9520
Operatives	Graders and Sorters, Agricultural Products	45-2041	6040
Operatives	First-Line Supervisors of Production and Operating Workers	51-1011	7700
Operatives	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	51-2011	7710
Operatives	Coil Winders, Tapers, and Finishers	51-2021	7720
Operatives	Electrical and Electronic Equipment Assemblers	51-2022	7720

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Operatives	Electromechanical Equipment Assemblers	51-2023	7720
Operatives	Engine and Other Machine Assemblers	51-2031	7730
Operatives	Fiberglass Laminators and Fabricators	51-2091	7750
Operatives	Team Assemblers	51-2092	7750
Operatives	Timing Device Assemblers and Adjusters	51-2093	7750
Operatives	Assemblers and Fabricators, All Other	51-2099	7750
Operatives	Bakers	51-3011	7800
Operatives	Butchers and Meat Cutters	51-3021	7810
Operatives	Meat, Poultry, and Fish Cutters and Trimmers	51-3022	7810
Operatives	Slaughtering and Meat Packers	51-3023	7810
Operatives	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	51-3091	7830
Operatives	Food Batchmakers	51-3092	7840
Operatives	Food Cooking Machine Operators and Tenders	51-3093	7850
Operatives	Food Processing Workers, All Other	51-3099	7855
Operatives	Computer-Controlled Machine Tool Operators, Metal and Plastic	51-4011	7900
Operatives	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	51-4012	7900
Operatives	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	51-4021	7920
Operatives	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	51-4022	7930
Operatives	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	51-4023	7940
Operatives	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	51-4031	7950
Operatives	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4032	7960
Operatives	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4033	8000
Operatives	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4034	8010
Operatives	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	51-4035	8220
Operatives	Metal-Refining Furnace Operators and Tenders	51-4051	8040
Operatives	Pourers and Casters, Metal	51-4052	8040
Operatives	Foundry Mold and Coremakers	51-4071	8100
Operatives	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	51-4072	8100
Operatives	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4081	8220
Operatives	Welders, Cutters, Solderers, and Brazers	51-4121	8140
Operatives	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	51-4122	8140
Operatives	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	51-4191	8150
Operatives	Layout Workers, Metal and Plastic	51-4192	8220
Operatives	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	51-4193	8200
Operatives	Tool Grinders, Filers, and Sharpeners	51-4194	8210
Operatives	Metal Workers and Plastic Workers, All Other	51-4199	8220
Operatives	Printing Press Operators	51-5112	8255
Operatives	Laundry and Dry-Cleaning Workers	51-6011	8300
Operatives	Pressers, Textile, Garment, and Related Materials	51-6021	8310
Operatives	Sewing Machine Operators	51-6031	8320

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Operatives	Shoe Machine Operators and Tenders	51-6042	8340
Operatives	Textile Bleaching and Dyeing Machine Operators and Tenders	51-6061	8400
Operatives	Textile Cutting Machine Setters, Operators, and Tenders	51-6062	8400
Operatives	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	51-6063	8410
Operatives	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	51-6064	8420
Operatives	Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers	51-6091	8460
Operatives	Fabric and Apparel Patternmakers	51-6092	8460
Operatives	Textile, Apparel, and Furnishings Workers, All Other	51-6099	8460
Operatives	Sawing Machine Setters, Operators, and Tenders, Wood	51-7041	8530
Operatives	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	51-7042	8540
Operatives	Chemical Plant and System Operators	51-8091	8630
Operatives	Gas Plant Operators	51-8092	8630
Operatives	Petroleum Pump System Operators, Refinery Operators, and Gaugers	51-8093	8630
Operatives	Plant and System Operators, All Other	51-8099	8630
Operatives	Chemical Equipment Operators and Tenders	51-9011	8640
Operatives	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	51-9012	8640
Operatives	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	51-9021	8650
Operatives	Grinding and Polishing Workers, Hand	51-9022	8650
Operatives	Mixing and Blending Machine Setters, Operators, and Tenders	51-9023	8650
Operatives	Cutters and Trimmers, Hand	51-9031	8710
Operatives	Cutting and Slicing Machine Setters, Operators, and Tenders	51-9032	8710
Operatives	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	51-9041	8720
Operatives	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	51-9051	8730
Operatives	Inspectors, Testers, Sorters, Samplers, and Weighers	51-9061	8740
Operatives	Packaging and Filling Machine Operators and Tenders	51-9111	8800
Operatives	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	51-9121	8810
Operatives	Painters, Transportation Equipment	51-9122	8810
Operatives	Painting, Coating, and Decorating Workers	51-9123	8810
Operatives	Semiconductor Processors	51-9141	8965
Operatives	Photographic Process Workers and Processing Machine Operators	51-9151	8830
Operatives	Adhesive Bonding Machine Operators and Tenders	51-9191	8850
Operatives	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	51-9192	8860
Operatives	Cooling and Freezing Equipment Operators and Tenders	51-9193	8965
Operatives	Molders, Shapers, and Casters, Except Metal and Plastic	51-9195	8920
Operatives	Paper Goods Machine Setters, Operators, and Tenders	51-9196	8930
Operatives	Tire Builders	51-9197	8940
Operatives	Production Workers, All Other	51-9199	8965
Operatives	Aircraft Cargo Handling Supervisors	53-1011	9000
Operatives	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	53-1021	9000
Operatives	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	53-1031	9000

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Operatives	Flight Attendants	53-2031	9050
Operatives	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	53-3011	9110
Operatives	Bus Drivers, Transit and Intercity	53-3021	9120
Operatives	Bus Drivers, School or Special Client	53-3022	9120
Operatives	Driver/Sales Workers	53-3031	9130
Operatives	Heavy and Tractor-Trailer Truck Drivers	53-3032	9130
Operatives	Light Truck or Delivery Services Drivers	53-3033	9130
Operatives	Taxi Drivers and Chauffeurs	53-3041	9140
Operatives	Motor Vehicle Operators, All Other	53-3099	9150
Operatives	Locomotive Engineers	53-4011	9200
Operatives	Locomotive Firers	53-4012	9200
Operatives	Rail Yard Engineers, Dinkey Operators, and Hostlers	53-4013	9200
Operatives	Railroad Brake, Signal, and Switch Operators	53-4021	9230
Operatives	Railroad Conductors and Yardmasters	53-4031	9240
Operatives	Subway and Streetcar Operators	53-4041	9260
Operatives	Rail Transportation Workers, All Other	53-4099	9260
Operatives	Sailors and Marine Oilers	53-5011	9300
Operatives	Captains, Mates, and Pilots of Water Vessels	53-5021	9310
Operatives	Motorboat Operators	53-5022	9310
Operatives	Ship Engineers	53-5031	9300
Operatives	Bridge and Lock Tenders	53-6011	9420
Operatives	Parking Lot Attendants	53-6021	9350
Operatives	Traffic Technicians	53-6041	9420
Operatives	Transportation Attendants, Except Flight Attendants	53-6061	9415
Operatives	Transportation Workers, All Other	53-6099	9420
Operatives	Conveyor Operators and Tenders	53-7011	9560
Operatives	Hoist and Winch Operators	53-7041	9560
Operatives	Industrial Truck and Tractor Operators	53-7051	9600
Operatives	Packers and Packagers, Hand	53-7064	9640
Operatives	Gas Compressor and Gas Pumping Station Operators	53-7071	9650
Operatives	Pump Operators, Except Wellhead Pumpers	53-7072	9650
Operatives	Wellhead Pumpers	53-7073	9650
Operatives	Mine Shuttle Car Operators	53-7111	9750
Operatives	Tank Car, Truck, and Ship Loaders	53-7121	9750
Operatives	Material Moving Workers, All Other	53-7199	9750
Labors and Helpers	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	37-1012	4210
Labors and Helpers	Landscaping and Groundskeeping Workers	37-3011	4250
Labors and Helpers	Pesticide Handlers, Sprayers, and Applicators, Vegetation	37-3012	4250
Labors and Helpers	Tree Trimmers and Pruners	37-3013	4250
Labors and Helpers	Grounds Maintenance Workers, All Other	37-3019	4250
Labors and Helpers	Nonfarm Animal Caretakers	39-2021	4350

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Labors and Helpers	First-Line Supervisors of Farming, Fishing, and Forestry Workers	45-1011	6005
Labors and Helpers	Animal Breeders	45-2021	6050
Labors and Helpers	Agricultural Equipment Operators	45-2091	6050
Labors and Helpers	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	45-2092	6050
Labors and Helpers	Farmworkers, Farm, Ranch, and Aquacultural Animals	45-2093	6050
Labors and Helpers	Agricultural Workers, All Other	45-2099	6050
Labors and Helpers	Fishers and Related Fishing Workers	45-3011	6100
Labors and Helpers	Hunters and Trappers	45-3021	6100
Labors and Helpers	Forest and Conservation Workers	45-4011	6120
Labors and Helpers	Fallers	45-4021	6130
Labors and Helpers	Logging Equipment Operators	45-4022	6130
Labors and Helpers	Log Graders and Scalers	45-4023	6130
Labors and Helpers	Logging Workers, All Other	45-4029	6130
Labors and Helpers	Construction Laborers	47-2061	6260
Labors and Helpers	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	47-3011	6600
Labors and Helpers	Helpers--Carpenters	47-3012	6600
Labors and Helpers	Helpers--Electricians	47-3013	6600
Labors and Helpers	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	47-3014	6600
Labors and Helpers	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	47-3015	6600
Labors and Helpers	Helpers--Roofers	47-3016	6600
Labors and Helpers	Helpers, Construction Trades, All Other	47-3019	6600
Labors and Helpers	Helpers--Installation, Maintenance, and Repair Workers	49-9098	7610
Labors and Helpers	Helpers--Production Workers	51-9198	8950
Labors and Helpers	Automotive and Watercraft Service Attendants	53-6031	9360
Labors and Helpers	Cleaners of Vehicles and Equipment	53-7061	9610
Labors and Helpers	Laborers and Freight, Stock, and Material Movers, Hand	53-7062	9620
Labors and Helpers	Machine Feeders and Offbearers	53-7063	9630
Labors and Helpers	Refuse and Recyclable Material Collectors	53-7081	9720
Service Workers	Home Health Aides	31-1011	3600
Service Workers	Psychiatric Aides	31-1013	3600
Service Workers	Nursing Assistants	31-1014	3600
Service Workers	Orderlies	31-1015	3600
Service Workers	Occupational Therapy Assistants	31-2011	3610
Service Workers	Occupational Therapy Aides	31-2012	3610
Service Workers	Physical Therapist Assistants	31-2021	3620
Service Workers	Physical Therapist Aides	31-2022	3620
Service Workers	Massage Therapists	31-9011	3630
Service Workers	Dental Assistants	31-9091	3640
Service Workers	Medical Assistants	31-9092	3645
Service Workers	Medical Equipment Preparers	31-9093	3655
Service Workers	Pharmacy Aides	31-9095	3647

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Service Workers	Veterinary Assistants and Laboratory Animal Caretakers	31-9096	3648
Service Workers	Phlebotomists	31-9097	3649
Service Workers	Healthcare Support Workers, All Other	31-9099	3655
Service Workers	First-Line Supervisors of Correctional Officers	33-1011	3700
Service Workers	First-Line Supervisors of Police and Detectives	33-1012	3710
Service Workers	First-Line Supervisors of Fire Fighting and Prevention Workers	33-1021	3720
Service Workers	First-Line Supervisors of Protective Service Workers, All Other	33-1099	3730
Service Workers	Firefighters	33-2011	3740
Service Workers	Fire Inspectors and Investigators	33-2021	3750
Service Workers	Forest Fire Inspectors and Prevention Specialists	33-2022	3750
Service Workers	Bailiffs	33-3011	3800
Service Workers	Correctional Officers and Jailers	33-3012	3800
Service Workers	Detectives and Criminal Investigators	33-3021	3820
Service Workers	Fish and Game Wardens	33-3031	3840
Service Workers	Parking Enforcement Workers	33-3041	3840
Service Workers	Police and Sheriff's Patrol Officers	33-3051	3850
Service Workers	Transit and Railroad Police	33-3052	3850
Service Workers	Animal Control Workers	33-9011	3900
Service Workers	Private Detectives and Investigators	33-9021	3910
Service Workers	Gaming Surveillance Officers and Gaming Investigators	33-9031	3930
Service Workers	Security Guards	33-9032	3930
Service Workers	Crossing Guards	33-9091	3940
Service Workers	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	33-9092	3955
Service Workers	Transportation Security Screeners	33-9093	3945
Service Workers	Protective Service Workers, All Other	33-9099	3955
Service Workers	Chefs and Head Cooks	35-1011	4000
Service Workers	First-Line Supervisors of Food Preparation and Serving Workers	35-1012	4010
Service Workers	Cooks, Fast Food	35-2011	4020
Service Workers	Cooks, Institution and Cafeteria	35-2012	4020
Service Workers	Cooks, Private Household	35-2013	4020
Service Workers	Cooks, Restaurant	35-2014	4020
Service Workers	Cooks, Short Order	35-2015	4020
Service Workers	Cooks, All Other	35-2019	4020
Service Workers	Food Preparation Workers	35-2021	4030
Service Workers	Bartenders	35-3011	4040
Service Workers	Combined Food Preparation and Serving Workers, Including Fast Food	35-3021	4050
Service Workers	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	35-3022	4060
Service Workers	Waiters and Waitresses	35-3031	4110
Service Workers	Food Servers, Nonrestaurant	35-3041	4120
Service Workers	Dining Room and Cafeteria Attendants and Bartender Helpers	35-9011	4130
Service Workers	Dishwashers	35-9021	4140

EEO-1 Job Group	Job Title/Description of Standard Occupational Classification (SOC)	Six-Level SOC Job Code	Four-Digit Census Code
Service Workers	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	35-9031	4150
Service Workers	Food Preparation and Serving Related Workers, All Other	35-9099	4130
Service Workers	First-Line Supervisors of Housekeeping and Janitorial Workers	37-1011	4200
Service Workers	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	37-2011	4220
Service Workers	Maids and Housekeeping Cleaners	37-2012	4230
Service Workers	Building Cleaning Workers, All Other	37-2019	4220
Service Workers	Pest Control Workers	37-2021	4240
Service Workers	Gaming Supervisors	39-1011	4300
Service Workers	Slot Supervisors	39-1012	4300
Service Workers	First-Line Supervisors of Personal Service Workers	39-1021	4320
Service Workers	Gaming Dealers	39-3011	4400
Service Workers	Gaming and Sports Book Writers and Runners	39-3012	4400
Service Workers	Gaming Service Workers, All Other	39-3019	4400
Service Workers	Motion Picture Projectionists	39-3021	4410
Service Workers	Ushers, Lobby Attendants, and Ticket Takers	39-3031	4420
Service Workers	Amusement and Recreation Attendants	39-3091	4430
Service Workers	Costume Attendants	39-3092	4430
Service Workers	Locker Room, Coatroom, and Dressing Room Attendants	39-3093	4430
Service Workers	Entertainment Attendants and Related Workers, All Other	39-3099	4430
Service Workers	Embalmers	39-4011	4460
Service Workers	Funeral Attendants	39-4021	4460
Service Workers	Barbers	39-5011	4500
Service Workers	Hairdressers, Hairstylists, and Cosmetologists	39-5012	4510
Service Workers	Makeup Artists, Theatrical and Performance	39-5091	4520
Service Workers	Manicurists and Pedicurists	39-5092	4520
Service Workers	Shampooers	39-5093	4520
Service Workers	Skincare Specialists	39-5094	4520
Service Workers	Baggage Porters and Bellhops	39-6011	4530
Service Workers	Concierges	39-6012	4530
Service Workers	Tour Guides and Escorts	39-7011	4540
Service Workers	Travel Guides	39-7012	4540
Service Workers	Childcare Workers	39-9011	4600
Service Workers	Personal Care Aides	39-9021	4610
Service Workers	Fitness Trainers and Aerobics Instructors	39-9031	4620
Service Workers	Recreation Workers	39-9032	4620
Service Workers	Residential Advisors	39-9041	4640
Service Workers	Personal Care and Service Workers, All Other	39-9099	4650

*** NOTE: Executive/Senior Level Officials and Managers include individuals who plan, direct and formulate policies, set strategy and provide the overall direction of enterprises/organizations for the development and delivery of products or services, within the parameters approved by boards of directors or other governing bodies. Residing in the highest levels of organizations, these executives plan, direct or coordinate activities with the support of subordinate executives and staff managers. They include, in larger organizations, those individuals within two reporting levels of the CEO. Examples

of these kinds of managers are: chief executive officers, chief operating officers, chief financial officers, line of functional areas or operating groups, chief information officers, chief human resources officers, chief marketing officers, chief legal officers, management directors and managing partners.



PROSPECTIVE BIDDERS NOTICE
SERVICE DISABLED VETERAN-OWNED BUSINESS ENTERPRISE REQUIREMENTS:
CONSTRUCTION CONTRACTS

To Prospective Bidders:

Consistent with the State University of New York (SUNY) 's commitment and in accordance with Article 17-B of the New York State Executive Law and its implementing regulations, state agencies and contractors are required to ensure that good faith efforts are made to include meaningful participation by Service Disabled Veteran-Owned Business (SDVOB). The requirements apply to all SUNY construction contracts in excess of \$100,000.

Receipt of the SDVOB Utilization Plan is required *within seven (7) business days after the bid opening, for construction contracts.* The SDVOB Utilization Plan Form No. 7654-107 shall be submitted by the three apparent low bidders ("Contractor") to the campus MWBE Program Coordinator.

If the Contractor's SDVOB participation rate shown on its SDVOB Utilization Plan is below 6%, the campus MWBE Program Coordinator will provide a written notice of deficiency of the Utilization Plan within twenty (20) business days of its submission to the Contractor, as required under 9 NYCRR § 252.2(1)(4).

The notice will include but not be limited to the following:

- a. A list of NYS certified SDVOBs that the Contractor could potentially use within the contract scope of work;
- b. The name of any SDVOB that is not acceptable for the purpose of complying with the SDVOB participation goals; and
- c. Any other information which the MWBE Program Coordinator determines to be relevant to developing an approvable Utilization Plan.

The Contractor shall respond to the notice of deficiency by submitting a revised SDVOB Utilization Plan within seven (7) business days, as required by 9 NYCRR § 252.2(1) (5) to the MWBE Program Coordinator.

If the deficiency is not corrected and the SDVOB participation rate on the SDVOB Utilization Plan remains below 6%, the Contractor should request a waiver.

The Waiver Request Form submitted by the Contractor will include but not limited to the following:

- a. A request for partial or total waiver of SDVOB goals are required by (9 NYCRR § 252.2(m) (2) on Request for Waiver Form ([Form 7564-114](#)) provided by the University-wide MWBE Program Office.
- b. Copy of the deficient Utilization Plan.
- c. Work Scope of this contract. If there are subcontracting opportunities, please provide documentation d, e, and f.
- d. Screenshot of searching result for available SDVOBs in [Directory of NYS Certified SDVOBs](#).
- e. Copy of email messages containing the request for quote along with the responses from MWBEs.
- f. Forms required to obtain this information are:
[7564-101](#) – SDVOB Contractor Solicitation Letter
[7564-102](#) – SDVOB Participation Quote
[7564-103](#) – SDVOB Contractor Unavailability Certification

Please submit the above documentations by mail, fax, or email:

Please submit the above documentation to the campus MWBE Program Coordinator:

SUNY Cortland
Kristi Hughston, MWBE Program Coordinator
Miller Building, Room 309
PO Box 2000
Cortland, NY 13045
Fax: 607-753-5486
Tel: 607-753-2582
Email: Kristi.Hughston@cortland.edu

- OR - IF APPLICABLE

SUNY System Administration at State University Plaza,
Office of Diversity, Equity and Inclusion
University-wide MWBE Program
Albany, NY 12246
Fax: (518)-320-1548
Tel: (518)-320-1452
Email: MWBEProgram@suny.edu

Information regarding this legislation may be found at: [Division of Service-Disabled Veterans' Business Development](#) on the New York State Office General Services web site.

STATE UNIVERSITY OF NEW YORK SDVOB UTILIZATION PLAN

A letter of explanation and documentation of efforts must accompany any SDVOB Utilization Plan that falls short of the stated goals. Without an approved SDVOB Utilization Plan, SUNY's Notice of Award and Contract may be withheld.

If you have questions or need assistance related to the SUNY's Service-Disabled Veteran-Owned Business requirements call the University-wide MWBE Program Office at 518-320-1452 or email MWBEprogram@sunv.edu.

1. The three low bidding contractors ("Contractors") are required to submit a Utilization Plan (Form 7564-107) to the MWBE Program Coordinator within seven (7) calendar days after the opening of bids for construction contracts exceeding \$100,000.
2. The MWBE Program Coordinator is required to submit the mandatory SDVOB documentation to the University-wide MWBE Program Office web based contract management system for commodity, service and construction related consultant service contracts exceeding \$25,000 and for construction project exceeding \$100,000 upon contract execution .
3. The SDVOB firms included are businesses the Contractor *seriously expects* to include in the project activity.
4. The Contractor must reasonably commit to the dollar values included in the Utilization Plan for participation by SDVOB subcontractors and suppliers.
5. SDVOB firms **must be certified** by the Division of Service-Disabled Veterans' Business Development. A directory of certified minority and women-owned business enterprises is available on the internet at http://ogs.ny.gov/Core/Docs/CertifiedNYS_SDVOB.pdf. If you would like to receive an excel file containing the current the List of NYS Certified Service-Disabled Veteran-Owned Businesses and sign up to receive updates whenever we certify new businesses, please send a request to veteransdevelopment@ogs.ny.gov.
6. Contractors utilizing SDVOB firms for supplies/materials/equipment whose NYS certification profile designates them as Broker will receive an SDVOB utilization credit for the actual monetary value of the broker fees or the actual markup percentage of the items brokered.

7. SDVOB Participation:

The actual services provided by the SDVOB must be essential in the performance of the scope of work for the applicable contract. Utilization of a certified SDVOB as a conduit or pass through for participation credit is strictly prohibited. It is the discretion of SUNY University-wide MWBE Program to determine whether services are essential in the performance of the scope of work and to offer a determination of the appropriateness of work allowed for lower tier subcontracting, in accordance with practices generally accepted in the construction industry. The services the SDVOB will provide must be among those explicitly identified in the profile (codes) of the firm as listed in the SDVOB directory [Division of Service-Disabled Veterans' Business Development](#). Firms submitted or firms that participate in the project outside of these conditions and without specific prior approval by SUNY will not be credited toward the SDVOB Utilization Plan and goals for the contract.

8. Prior to submitting the Utilization Plan, the bidders should confirm the following:
 - a. SDVOB firms are NYS certified;
 - b. SDVOB firms are being used for item(s) within their certification product codes as indicated in their SDVOB Directory firm profile;
 - c. SDVOB firms will perform work for which they have been submitted; and
 - d. 2nd tier subcontractors and/or suppliers are identified as such and SDVOB Utilization credit shall be given for 60% of the total contract value of supply purchases or services rendered (for example, when an electrical subcontractor purchases from a 3rd party supplier an SDVOB utilization credit will be given for 60% of the total contract value).

The prime Contractor is responsible for ensuring participation provided by subcontractors for 2nd and 3rd tier SDVOB participation.

Submission of a Utilization Plan which fails to meet or exceed each goal shall be accompanied by documentation of specific efforts undertaken both pre- and post-bid. The campus MWBE Program Coordinator will review and notify Contractor of its assessment.

The University-wide MWBE Program Office in collaboration with the campus MWBE Program Coordinator will review the Utilization Plan and notify the Contractor of any deficiencies and determine necessary actions to bring the Plan into compliance. The University-wide MWBE Program Office reserves the right to require the Contractor to provide sufficient documentation of the efforts made in the development of the Utilization Plan. The documentation should meet the good faith efforts standard under 9 NYCRR § 252.2, and demonstrate the Contractor's commitment to providing opportunities for SDVOB firms in the development of the Utilization Plan.

A copy of the approved Utilization Plan will be provided to the Contractor after issuance of Notice of Award.

SDVOB FORM (7564-107) UTILIZATION PLAN INSTRUCTIONS

Requested information must be completed and submitted within seven (7) days after the bid opening.

Subcontractor Name & Address

Name & Address of each SDVOB subcontractor or supplier.

Federal ID

Provide accurate Federal ID number of each SDVOB subcontractor or supplier.

Dollar Value of Subcontract or Purchase Order

This is the total value of the signed subcontract. If this value is different from the amount in the approved SDVOB Utilization Plan, an explanation should be provided.

Description of Work or Supplies

Brief description of work performed or supplies provided by the SDVOB subcontractor or supplier.

Schedule

This is the anticipated start and completion dates for each SDVOB subcontractor or supplier. Do not include the construction schedule for the life of the entire project.

Signature

To be signed by an Officer of the Company.

- The information included on the Form 7564-107 is subject to verification by the campus MWBE Program Coordinator.
- The campus MWBE Program Coordinator must be notified prior to changes made to the approved SDVOB Utilization Plan.

Questions regarding this form should **first** be directed to the [campus MWBE Program Coordinator](#) (click the link and be directed to the SUNY MWBE Campus Contacts directory on the University-wide MWBE web site).

Questions regarding this form should be directed to the University-wide MWBE Program Office at (518) 320- 1340 or via e-mail: MWBEprogram@sunv.edu.

Submit To:

**State University of New York
Office of Diversity, Equity and Inclusion University-wide MWBE Program
353 Broadway
Albany, NY 12246
Or MWBEProgram@sunv.edu**



Attachment

Use of Service-Disabled Veteran-Owned Business Enterprises in Contract Performance

Article 17-B of the Executive Law enacted in 2014 acknowledges that Service-Disabled Veteran-Owned Businesses (SDVOBs) strongly contribute to the economies of the State and the nation.

http://ogs.ny.gov/Core/docs/CertifiedNYS_SDVOB.pdf

Bidders/proposers need to be aware that all authorized users of this contract will be strongly encouraged to the maximum extent practical and consistent with legal requirements of the State Finance Law and the Executive Law to use responsible and responsive SDVOBs in purchasing and utilizing commodities, services and technology that are

of equal quality and functionality to those that may be obtained from non-SDVOBs. Furthermore, bidders/proposers are reminded that they must continue to utilize small, minority and women-owned businesses consistent with current State law.

Utilizing SDVOBs in State contracts will help create more private sector jobs, rebuild New York State's infrastructure, and maximize economic activity to the mutual benefit of the contractor and its SDVOB partners.

Public procurements can drive and improve the State's economic engine through promotion of the use of SDVOBs by its contractors. The State, therefore, expects bidders/proposers to provide maximum assistance to SDVOBs in their contract performance.

Bidders/proposers can demonstrate their commitment to the use of SDVOBs by responding to the questions below and including the responses with their bid/proposal:

Bidder/Proposer Name Solicitation #

Bidder/Proposer Address

Are you a bidder/proposer that is a NYS-certified SDVOB? Yes No If yes, what is your DSDVBD Control #?

Will NYS-certified SDVOBs be used in the performance of this contract? Yes No

If yes, identify the NYS-certified SDVOBs that will be used below (if more than 4 identified, please attach an additional form):

NYS-Certified SDVOB 1:

Name Address Control # Contract # Total % Work Performed \$ Amount Nature of Participation

NYS-Certified SDVOB 2:

Name Address Control # Contract # Total % Work Performed \$ Amount Nature of Participation

NYS-Certified SDVOB 3:

Name Address Control # Contract # Total % Work Performed \$ Amount Nature of Participation

NYS-Certified SDVOB 4:

Name Address Control # Contract # Total % Work Performed \$ Amount Nature of Participation

Authorized Signature Date

Contractor will report on actual participation by each SDVOB during the term of the contract to the contracting agency/authority on a quarterly basis according to policies and procedures set by the contracting agency/authority.

NOTE: Information about set asides for SDVOB participation in public procurement can be found at: http://www.ogs.ny.gov/Core/SDVOBA.asp, which provides guidance for State agencies in making determinations and administering set asides for procurements from SDVOBs.



UNIVERSITY-WIDE SDVOB PROGRAM UTILIZATION PLAN

SUNY Project No. _____
 Contractor: _____
 Address: _____
 Phone Number: _____

Bid Date: [Click here to enter a date.](#) Agreement/Contract Value: _____
 Primary Contact: _____
 City: _____ State: _____ Zip Code: _____
 Fax Number: _____ E-Mail: _____

GOALS: SDVOB _____ %

Campus: _____

SUBCONTRACTOR	FEDERAL ID #	DOLLAR VALUE OF CONTRACT OR PURCHASE ORDER	DESCRIPTION OF WORK OR SUPPLIES	SUBCONTRACTOR/SUPPLIER SCHEDULE	
				START DATE	COMPLETION DATE
Company Name: _____ Street Address: _____ Contact Name: _____ E-Mail Address: _____				Click here to enter a date.	Click here to enter a date.
Company Name: _____ Street Address: _____ Contact Name: _____ E-Mail Address: _____				Click here to enter a date.	Click here to enter a date.
Company Name: _____ Street Address: _____ Contact Name: _____ E-Mail Address: _____				Click here to enter a date.	Click here to enter a date.
Company Name: _____ Street Address: _____ Contact Name: _____ E-Mail Address: _____				Click here to enter a date.	Click here to enter a date.

In accordance with the SUNY Contract Documents and Executive Law Article 17-B, my firm seriously expects to use the NYS certified SDVOB firms listed above. The Contractor shall immediately notify and request approval prior to any changes to this Utilization Plan from the Campus MWBE Program Coordinator.

NAME: _____ TITLE: _____ COMPANY OFFICER'S SIGNATURE _____ DATE: [Click here to enter a date.](#)

APPROVED: DEFICIENT: MWBE PROGRAM COORDINATOR: _____ DATE: _____



UNIVERSITY-WIDE SDVOB PROGRAM UTILIZATION PLAN SDVOB FORM (107) INSTRUCTIONS

A letter of explanation and documentation of efforts must accompany any SDVOB Utilization Plan that falls short of the stated goals. Without an approved SDVOB Utilization Plan, SUNY's Notice of Award and Contract may be withheld.

If you have questions or need assistance related to the SUNY's Service-Disabled Veteran-Owned Business requirements call the University-wide MWBE Program Office at 518-320-1340 or email MWBEprogram@suny.edu.

1. The three low bidding contractors ("Contractors") are required to submit an SDVOB Utilization Plan (Form 7465-107) to the MWBE Program Coordinator within seven (7) calendar days after the opening of bids for construction contracts exceeding \$100,000.
2. The MWBE Program Coordinator is required to submit the mandatory SDVOB documentation to the University-wide MWBE Program Office after the opening of bids for commodity, service and construction related consultant service contracts exceeding \$25,000 for the lowest bidding Contractor.
3. The SDVOB goals are not related to any other goals. Dual certified firms may be used to meet both MBE and SDVOB or WBE and SDVOB goals.
4. The SDVOB firms included are businesses the bidder *seriously expects* to include in the project activity.
5. The Contractor must reasonably commit to the values included in the Utilization Plan for participation by SDVOB subcontractors and suppliers.
6. SDVOB firms must be certified by the New York State Office of General Services Division of Service-Disabled Veterans' Business Development. A directory of NYS Certified Service-Disabled Veteran-Owned Businesses is available on the internet at <http://ogs.ny.gov/Core/SDVOBA.asp>.
7. Contractors utilizing SDVOB firms for supplies/materials/equipment whose NYS certification profile designates them as a Broker will receive an SDVOB utilization credit for the actual monetary value of the broker fees or the actual markup percentage of the items brokered.
8. SDVOB Participation:

The actual services provided by the SDVOB must be essential in the performance of the scope of work for the applicable contract. Utilization of a certified SDVOB as a conduit or pass through for participation credit is strictly prohibited. It is the discretion of the SUNY to determine whether services are essential in the performance of the scope of work and to offer a determination of the appropriateness of work allowed for lower tier subcontracting, in accordance with practices generally accepted in the construction industry. The services the SDVOB will provide must be among those explicitly identified in the profile (codes) of the firm as listed in the NYS Office of General Services Directory of Certified SDVOBs. Firms submitted or firms that participate in the project outside of these conditions and without specific prior approval by SUNY will not be credited toward the SDVOB Utilization Plan and goals for the contract.

9. Prior to submitting the Utilization Plan, the bidders should confirm the following:
 - a. SDVOB firms are NYS certified;
 - b. SDVOB designation ~ Dual certified firms may be used as *MBE/SDVOB and/or WBE/SDVOB*;
 - c. SDVOB firms are being used for item(s) within their certification product codes as indicated in their SDVOB Directory firm profile;
 - d. SDVOB firms will perform work for which they have been submitted; and
 - e. 2nd tier subcontractors and/or suppliers are identified as such and SDVOB Utilization credit shall be given for 60% of the total contract value of supply purchases or services rendered (for example, when an electrical subcontractor purchases from a 3rd party supplier an SDVOB utilization credit will be given for 60% credit of the total contract value).



UNIVERSITY-WIDE SDVOB PROGRAM UTILIZATION PLAN

The prime Contractor is responsible for ensuring participation provided by subcontractors for 2nd and 3rd tier SDVOB participation.

Submission of a Utilization Plan which fails to meet or exceed each goal shall be accompanied by documentation of specific efforts undertaken both pre and post bid. The campus MWBE Program Coordinator will review and notify Contractor of its assessment.

The University-wide MWBE Program Office in collaboration with the campus MWBE Program Coordinator will review the Utilization Plan and notify the Contractor of any deficiencies and determine necessary actions to bring the Utilization Plan into compliance. The University-wide MWBE Program Office reserves the right to require the Contractor to provide sufficient documentation of the efforts made in the development of the Utilization Plan. The documentation should be responsive to good faith efforts and demonstrate the Contractor's commitment to providing opportunities for SDVOB firms in the development of the Utilization Plan.

A copy of the approved Utilization Plan will be provided to the Contractor after issuance of Notice of Award.



UNIVERSITY-WIDE SDVOB PROGRAM UTILIZATION PLAN

Requested information must be completed and submitted within seven (7) days after the bid opening.

Subcontractor Name & Address

Name & Address of each SDVOB subcontractor or supplier.

SDVOB

Service-Disabled Veteran-Owned Designation.

Federal ID

Provide accurate Federal ID number of each SDVOB subcontractor or supplier.

Dollar Value of Subcontract or Purchase Order

This is the total value of the signed subcontract. If this value is different from the amount in the approved SDVOB Utilization Plan, an explanation should be provided.

Description of Work or Supplies

Brief description of work performed or supplies provided by the SDVOB subcontractor or supplier.

Schedule

This is the anticipated start and completion dates for each SDVOB subcontractor or supplier. Do not include the construction schedule for the life of the entire project.

Signature

To be signed by an Officer of the Company.

- The information included on the form is subject to verification by the University-wide MWBE Program Office.
- The University-wide MWBE Program Office must be notified prior to changes made to the approved SDVOB Utilization Plan.

Questions regarding this form should be directed to the University-wide MWBE Program Office at (518) 320- 1452 or via e-mail: mwbeprogram@suny.edu.

Submit To:

State University of New York
Office of Diversity, Equity and Inclusion University-wide MWBE Program
353 Broadway
Albany, NY 12246
or MWBEProgram@sunv.edu

PROCUREMENT LOBBYING ACT PROCEDURE

State Finance Law §§139-j and 139-k, enacted by Ch. 1 L. 2005, as amended by Ch. 596 L. 2005, effective January 1, 2006, regulate lobbying on government procurement, including procurements by State University to obtain commodities and services and to undertake real estate transactions.

Generally, the law restricts communications between a potential vendor or a person acting on behalf of the vendor, including its lobbyist, to communications with the officers and employees of the procuring agency designated in each solicitation to receive such communications. Further, the law prohibits a communication (a "Contact") which a reasonable person would infer as an attempt to unduly influence the award, denial or amendment of a contract. These restrictions apply to each contract in excess of \$15,000 during the "restricted period" (the time commencing with the earliest written notice of the proposed procurement and ending with the later of approval of the final contract by the agency, or, if applicable, the State Comptroller). The agency must record all Contacts, and, generally, must deny an award of contract to a vendor involved in a knowing and willful Contact. Each agency must develop guidelines and procedures regarding Contacts and procedures for the reporting and investigation of Contacts. The agency's procurement record must demonstrate compliance with these new requirements.

Accordingly, neither a potential vendor nor a person acting on behalf of the vendor should contact any individual at State University other than the person designated in this solicitation as State University's Designated Contact, nor attempt to unduly influence award of the contract. State University will make a record of all Contacts, and such records of Contact will become part of the procurement record for this solicitation. A determination that a vendor or a person acting on behalf of the vendor has made intentionally a Contact or provided inaccurate or incomplete information as to its past compliance with State Finance Law §§139-j and 139-k is likely to result in denial of the award of contract under this solicitation. Additional sanctions may apply.

The University's Procedures are available at:

http://www.suny.info/policies/groups/public/documents/policies/pub_suny_pp_039630.htm

Please complete the following:

1. As defined in State Finance Law §§ 139-j (1)(a), has a governmental agency made a determination of non-responsibility with respect to the Offeror within the previous four years where such a finding was due to a violation of State Finance Law §§ 139-j or the intentional provision of false or incomplete information with respect to previous determinations of non-responsibility? NO YES If yes, attach explanation

2. Has a governmental entity terminated or withheld a procurement contract with the Offeror because of violations of State Finance Law §§ 139-j or the intentional provision of false or incomplete information with respect to previous determinations of non-responsibility? NO YES If yes, attach explanation

CERTIFICATION:

By signing below the Bidder affirms and certifies that it: (1) has reviewed and understands the Policy and Procedure of SUNY, related to SFL §§ 139-j and 139-k, (2) agrees to comply with SUNY's procedure relating to Contacts with respect to this procurement, and (3) has provided information that is complete, true, and accurate with respect to SFL §§ 139-j and 139-k. Bidder understands that SUNY reserves the right to terminate any resulting contract in the event it is found that the certification filed by the Bidder in accordance State Finance Law §§139-j and 139-k was intentionally false or intentionally incomplete. Upon such finding, SUNY may exercise its termination right by providing written notification to the Bidder in accordance with the written notification terms of the contract.

Firms Name and Address:	
FEIN #:	
Telephone Number: () -	
Fax Number: () -	
Email Address:	
Bidder's Name and Title:	
Bidder's Signature:	
Date:	

Bidder's Certifications

NY HUMAN RIGHTS LAW EXECUTIVE ORDER 177 CERTIFICATION

In accordance with Executive Order No. 177, the Bidder hereby certifies that it does not have institutional policies or practices that fail to address the harassment and discrimination of individuals on the basis of their age, race, creed, color, national origin, sex, sexual orientation, gender identity, disability, marital status, military status, or other protected status under the Human Rights Law.

Executive Order No. 177 and this certification do not affect institutional policies or practices that are protected by existing law, including but not limited to the First Amendment of the United States Constitution, Article 1, Section 3 of the New York State Constitution, and Section 296(11) of the New York State Human Rights Law.

Bidder Name: _____

By (signature): _____

Name: _____

Title: _____

Date: _____, 20__

Bidder's Certifications

NEW YORK STATE FINANCE LAW 139-L CERTIFICATION

By submission of this bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that the Bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. Such a policy shall, at a minimum, meet the requirements of section two hundred one-g of the Labor Law.

If the Bidder cannot make the foregoing certification, such Bidder shall so state and shall furnish with the bid a signed statement that sets forth in detail the reasons that the Bidder cannot make the certification.

Bidder Name: _____

By (signature): _____

Name: _____

Title: _____

Date: _____, 20__

Bidder's Certifications

Gender-Based Violence and the Workplace Certification

New York State Finance Law §139-M requires bidders on competitive state procurements to certify that they have a written policy addressing gender-based violence and the workplace and that such policy meets the following minimum requirements:

- **Share Information:** Employers must provide information regarding gender-based violence where employees can see and access it, including displaying the NYS Domestic and Sexual Violence Hotline information and a gender-based violence and the workplace poster.
- **Refer Employee-Survivors to Services:** The policy must require that the employer refer employees who disclose current or past victim status to the NYS Domestic and Sexual Violence Hotline and/or a local service provider. For bidders outside of New York State, referrals should be made to a local provider or statewide hotline. While referrals are required to be provided by the employer, it is not required for the employee to access services.
- **Prohibit Retaliation:** The policy must clearly state that discrimination or retaliation against employees who identify as victims or survivors of gender-based violence is prohibited.
- **Comply with Laws:** Ensure your policy follows State law. For employers based in New York State, this means that the policy must follow the SAFE Leave Act, New York State Human Rights Law, and any other relevant laws and regulations.
- **Offer Implementation Support:** OPDV is able to assist employers in developing and implementing this policy. Employers must provide information to supervisors and human resources, where available, about this technical assistance from OPDV. OPDV can be contacted at workplace@opdv.ny.gov.

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing gender-based violence and the workplace and has provided such policy to all of its employees, directors and board members. Such policy shall, at a minimum, meet the requirements of subdivision 11 of section five hundred seventy-five of the executive law.

Organization's signature below certifies its compliance with State Finance Law

§139-M. Organization: _____

By (signature): _____ Name (Please Print): _____

Title: _____ Date: ____

This form must be signed by an authorized executive or legal representative.

If the organization cannot make the above certification, they must provide an attached statement with their bid detailing the reasons therefor.

Bidder's Certifications

NON-COLLUSIVE BIDDING CERTIFICATION

By submission of this bid, Bidder and each person signing on behalf of Bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief:

1. The prices of this bid have been arrived at independently, without collusion, consultation, communication, or agreement, for the purposes of restricting competition, as to any matter relating to such prices with any other Bidder or with any competitor;
2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and
3. No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

A bid shall not be considered for award nor shall any award be made where [1], [2], [3] above have not been complied with; provided however, that if in any case the Bidder(s) cannot make the foregoing certification, the Bidder shall so state and shall furnish below a signed statement which sets forth in detail the reasons therefor:

Subscribed to under penalty of perjury under the laws of the State of New York, this _____ day of _____, 20____ as the act and deed of said corporation or partnership.

IF BIDDER IS A SOLE PROPRIETER OR PARTNERSHIP, COMPLETE THE FOLLOWING:

NAMES OF PARTNERS OR PRINCIPALS	LEGAL RESIDENCE
_____	_____
_____	_____
_____	_____
_____	_____

IF BIDDER IS A CORPORATION, COMPLETE THE FOLLOWING:

NAME	LEGAL RESIDENCE
President: _____	_____
Secretary: _____	_____
Treasurer: _____	_____

Joint or combined bids by companies or firms must be certified separately on behalf of each participant.

Bidder's Certifications

Identifying Data:

Bidder	
Address	
Telephone	
Name of Responsible Corporate Officer	
Title of Responsible Corporate Officer	

Joint or combined bids by companies or firms must be certified separately on behalf of each participant.

Legal name of person, firm or corporation

By (signature): _____

Name: _____

Title: _____

Address: _____

**State University of New York
Public Officers Law**

Form XIII

Purchasing and Contracting Procedures
(Procurement)

Inquiry to determine compliance with the provisions of Public Officers Law
§ 73 (4)

Please indicate if you or any officer of your organization, or any party owning or controlling more than 10 percent of your stock if you are a corporation, or any member if you are a firm or association, is an officer or employee of the State of New York or of a public benefit corporation of the State of New York.

_____ Yes

_____ No

LABOR AND MATERIAL BOND

KNOW ALL PERSONS BY THESE PRESENTS, that _____

(hereinafter called the "Principal") and _____

(hereinafter called the "Surety") are held and firmly bound to the State University of New York (hereinafter called the University) in the full and just sum of:

_____ dollars (\$) _____
(in words) (in figures)

good and lawful money of the United States of America, for the payment of which sum of money, well and truly to be made and done, the Principal binds itself, its heirs, executors, administrators, successors and assigns and the Surety binds itself, its successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract bearing date on the _____ day of _____, 20____, with the University for the work contained in Project No. _____, a copy of which Contract is annexed to and hereby made a part of this Bond as though herein set forth in full; and

WHEREAS, the University has required this Bond guaranteeing prompt payment of monies due to all persons furnishing the Principal or any subcontractor of the Principal with labor or materials in the prosecution of the work provided in such Contract;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall promptly pay all monies due to all persons furnishing the Principal or any subcontractor of the Principal with labor or materials in the prosecution of the Contract, then this obligation shall be null and void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, the said Surety, for value received, hereby stipulates and agrees that no change, extension, alteration or addition to the terms of the said Contract or Specifications accompanying the same, shall in any way affect its obligations under this Bond, and it does hereby waive notice of any such change, extension, alteration or addition; and further.

PROVIDED, HOWEVER, the place of trial of any action on this Bond shall be in the county in which the said Contract was to be performed, or if said Contract was to be performed in more than one county, then in any such county, and not elsewhere; and further

PROVIDED, HOWEVER, this Bond shall be enforceable in accordance with the terms and provisions of Section 137 of the State Finance Law.

IN WITNESS WHEREOF, the Principal has hereunto set its hand and seal and the Surety has caused this instrument to be signed by its attorney
in fact on this _____ day of _____, 20__

Principal_____
By_____
Surety_____
By

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS, that _____

(hereinafter called the "Principal") and _____

(hereinafter called the "Surety") are held and firmly bound to the State University of New York (hereinafter called the University) in the full and just sum of:

_____ dollars (\$) _____
(in words) (in figures)

good and lawful money of the United States of America, for the payment of which sum of money, well and truly to be made and done, the Principal binds itself, its heirs, executors, administrators, successors and assigns and the Surety binds itself, its successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract bearing date on the _____ day of _____, 20____, with the University for the work contained in Project No. _____, a copy of which Contract is annexed to and hereby made a part of this Bond as though herein set forth in full; and

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, its representatives or assigns, shall well and faithfully comply with and perform all the terms, covenants and conditions of said Contract on its part to be kept and performed and all modifications, amendments, additions and alterations thereto that may hereafter be made, according to the true intent and meaning of said Contract, including repair and/or replacement of defective work and guarantees of maintenance for the periods stated in the Contract, and shall fully indemnify and save harmless the University from all cost and damage which it may suffer by reason of failure to do so, and shall fully reimburse and repay the University for all outlay and expense which the University may incur in making good any such default, and shall protect the said University against, and pay any and all amounts, damages, costs and judgments which may or shall be recovered against said University or its trustees, officers, agents or employees or which the said University may be called upon to pay to any person or corporation by reason of any damages arising or growing out of the doing of said work, or the repair of maintenance thereof, or the manner of doing the same, or the neglect of the said Principal, or its agents, or the improper performance of the said work by the said Principal, or its agents, or the infringement of any patent or patent rights by reason of the use of any materials furnished or work done as aforesaid or otherwise, then this obligation shall be null and void, otherwise to remain in full force and effect;

PROVIDED, HOWEVER, the said Surety, for value received, hereby stipulates and agrees, if requested to do so by the University, to fully perform and complete the work mentioned and described in said Contract, pursuant to the terms, conditions, and covenants thereof, if for any cause the Principal fails or neglects to so fully perform and complete such work and the Surety hereby further agrees to commence such work of completion within ten (10) calendar days after written notice thereof from the University and to complete such work within ten (10) calendar days from the expiration of the time allowed the Principal in the Contract for the completion thereof. The surety shall fully perform and complete said work on its own, or through a contractor approved by the University, according to the terms, conditions and covenants of said Contract and specifications.

PROVIDED, HOWEVER, the Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety and its Bond shall be in no way impaired or affected by an extension of time, modification, omission, addition, or change in or to the said Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer of any work to be performed or any monies due or to become due thereunder or by the University's takeover, use,

PERFORMANCE BOND (Page 2)

occupancy or operation of any part or all of the work covered by the Contract; and said Surety does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts, transfers, takeovers, uses, occupancies or operations, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety as though done or omitted to be done by or in relation to said Principal.

IN WITNESS WHEREOF, the Principal has hereunto set its hand and seal and the Surety has caused this instrument to be signed by its attorney-in-fact on this _____ day _____ of, 20__.

Principal

By

Surety

By

ACKNOWLEDGMENTS FOR LABOR AND MATERIAL BOND AND PERFORMANCE BOND

(Acknowledgment by Principal, unless it is 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(s) described in and who
executed the foregoing instruments and acknowledged that he / she executed the same.

Notary Public

(Acknowledgment by Principal, if a Corporation)

STATE OF NEW YORK)
) ss.:
COUNTY OF)

On this _____ day of _____, 20_____, before me personally came _____
_____, to me known, who, being duly sworn, did depose and say
that he / she resides in _____

that he / she is the _____
of the _____

the corporation described in and which executed the foregoing instruments; that he / she knows the seal of said corporation; that the seal affixed to said instruments is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that he / she signed their name thereto by like order.

Notary Public

(Acknowledgment by Surety Company)

STATE OF NEW YORK)
) ss.:
COUNTY OF)

On this _____ day of _____, 20_____, before me personally came _____
_____, to me known, who, being by me duly sworn, did depose and say
that he / she resides in _____

that he / she is the _____
of the _____

the corporation described in and which executed the foregoing instruments; that he / she knows the seal of said corporation; that the seal affixed to said instruments is such corporate seal; that it was so affixed by the order of the Board of Directors of said corporation, and that he / she signed their name thereto by like order; and that the liabilities of said company do not exceed its assets as ascertained in the manner provided by the laws of the State of New York.

Notary Public



STATE UNIVERSITY OF NEW YORK CERTIFICATE OF INSURANCE

This is to certify to the State University of New York that the insurance policies listed below have been issued by the undersigned and are in full force and effect on the date borne by this Certificate.

Name of Insured Contractor: _____

Address of Insured Contractor: _____

Project Location and Certificate Holder (Campus): _____

SUNY Project No.: _____

Project Title: _____

KIND OF INSURANCE	LIMITS OF LIABILITY	POLICY NO	EFFECTIVE	EXPIRATION
Workers' Compensation	As required by law			
		Carrier: _____		
Contractor's Comprehensive General Liability	\$ _____ Each Occurrence			
Bodily Injury Liability and Property Damage Liability	\$ _____ Aggregate			
	\$ _____ Combined Single Limit	Carrier: _____		
Contractor's Automobile Liability				
Bodily Injury Liability and Property Damage Liability	\$ _____ Each Accident or Occurrence			
	\$ _____ Combined Single Limit	Carrier: _____		
Owner's Protective Liability	\$ _____ Each Occurrence			
Bodily Injury Liability and Property Damage Liability	\$ _____ Aggregate			
	\$ _____ Combined Single Limit	Carrier: _____		
Asbestos Abatement Insurance (If Applicable)	\$ _____ Each Occurrence			
	\$ _____ Aggregate			
	\$ _____ Combined Single Limit	Carrier: _____		
Builder's Risk (See Page 2)	\$ _____			
		Carrier: _____		
Excess or Umbrella	\$ _____			
		Carrier: _____		

Name of Insurance Agency (if any)	Phone ()
Authorized Representative (Original Signature Required - No Stamp)	Date

As an inducement to the "University" to approve the above signed as an insurance company issuing the policies listed above and this Certificate as being in compliance with the construction contract between the "University" and the contractor named above, the above signed insurance company, duly licensed to do business in the State of New York, hereby agrees as follows:

- That the insurance policies listed above conform, with either the requirements set forth in Item 3 of the Request for Proposal for Contracts that do not exceed \$20,000, or set forth in Sections 5.06, 5.07, and 5.08 of Article V of the Agreement between the "University" and the Contractor for contracts that exceed \$20,000.
- That the insurance policies listed above shall not be changed or cancelled and that they will automatically be renewed upon expiration and continued in force until final acceptance by the "University" of all the work covered by the aforesaid construction contract unless the "University" is given fifteen (15) days written notice to the contrary.
- That the "University" shall not be liable for the payment of the premium on any of the insurance policies listed above and that such premium shall be payable by the Contractor named above who shall also receive any dividends or other refunds due under the above-listed insurance policies.
- The Insurer certifies that there is no inconsistency or conflict with or between any of the terms, provisions and conditions hereof and any of the terms, provisions and conditions of the policies listed above except for the following: _____

5. That without the above signed foregoing agreements neither it nor this Certificate of Insurance would be approved by the "University."

BUILDERS RISK INSURANCE BREAKDOWN

Date: _____

Title of Project:
Location of Project:
Project No.:

Name of Contractor:
Address of Contractor:
Estimated Completion Date:

Contract Amount: \$ _____
Non-insurable items
(amounts to be determined from Contractor's
approved breakdown):

- 1. Cost of the contractor's Performance and Labor and Materials Bonds \$ _____
- 2. Cost of trees, shrubbery, lawn grass, plants and the maintenance of same \$ _____
- 3. Cost of demolition \$ _____
- 4. Cost of excavation
- 5. Cost of foundations, piers or other supports which are below the undersurface of the lowest basement floors, or where there is no basement, which are below the surface of the ground. Concrete and Masonry Work \$ _____
- 6. Cost of Underground flues, pipes or wiring \$ _____
- 7. Cost of earthmoving, grading, and the cost of paving, roads, walks, parking lots and athletic fields \$ _____
- 8. Cost of bridges, tunnels, dams, piers, wharves, docks, retaining walls and radio and/or television towers and antennas \$ _____

Total Non-insurable items: \$ _____
Amount of Builder's Risk Insurance to be procured: \$ _____

Office of the State Comptroller
DIVISION OF PRE-AUDIT AND ACCOUNTING RECORDS
BUREAU OF STATE EXPENDITURES

New York State Labor Law, Section 220-a

Prime Contractor's Certification (AC 2947)

1. That I am an officer of _____
and am duly authorized to make this affidavit on behalf of the prime contractor on public contract
No. _____.
2. That I fully comprehend the terms and provisions of Section 220-a of the Labor Law.
3. That, except as herein stated, there are no amounts due and owing to or on behalf of laborers
employed on the project by the contractor. (Set forth any unpaid wages and supplements, if none,
so state).

Name

Amount

4. That the contractor hereby files every verified statement(s) required to be obtained by the
contractor from the subcontractor(s).
5. That, upon information and belief, except as stated herein, all laborers (exclusive of executive
or supervisory employees) employed on the project have been paid the prevailing wages and
supplements for their services through _____, (if more than one subcontractor
list name and date separately) the last day worked on the project by their subcontractor(s). (Set
forth any unpaid wages and supplements, if none, so state and utilize clause 5 (A)).

Name

Amount

- (5A) That the contractor has no knowledge of amounts owing to or on behalf of any laborers of its
subcontractor(s).

New York State Labor Law, Section 220-a

Prime Contractor's Certification (AC 2947) – page 2

6. In the event it is determined by the Commissioner of Labor that the wages or supplements or both of any such subcontractor(s) have not been paid or provided pursuant to the appropriate schedule of wages and supplements, then the contractor shall be responsible for payment of such wages and supplements pursuant to the provision of Section 223 of the Labor Law.

Signature

Print Name

Title

ACKNOWLEDGEMENT:

STATE OF NEW YORK
COUNTY OF _____ : SS.:

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 for foregoing instrument
and acknowledged that she/he executed the same

Notary Public

County

If this affidavit is verified by an oath administered by a notary public in a foreign country other than Canada, it must be accompanied by a certificate authenticating the authority of the notary who administers the oath. (See CPLR 2309(c); Real Property Law, 311, 312).

Office of the State Comptroller
DIVISION OF PRE-AUDIT AND ACCOUNTING RECORDS
BUREAU OF STATE EXPENDITURES

New York State Labor Law, Section 220-a

Subcontractor's Certification (AC 2948)

1. That I am an officer of _____
a subcontractor on public contract No. _____ and I am
duly authorized to make this affidavit on behalf of the firm.
2. That I make this affidavit in order to comply with the provisions of Section 220-a of the Labor Law.
3. That on _____ we received from _____
the prime contractor a copy of the initial/revised schedule of wages and supplements
Prevailing Wage Schedule Case Number _____ (PRC) specified in the public
improvement contract.
4. That I have reviewed such schedule(s), and agree to pay the applicable prevailing wages and
to pay or provide the supplements specified therein.

Signature

Print Name

Title

ACKNOWLEDGEMENT:

STATE OF NEW YORK
COUNTY OF _____: SS.:

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 for foregoing instrument and
acknowledged that she/he executed the same.

Notary Public

County

If this affidavit is verified by an oath administered by a notary public in a foreign country other than Canada, it must be accompanied by a certificate authenticating the authority of the notary who administers the oath. (See CPLR 2309(c); Real Property Law, 311, 312).

Office of the State Comptroller
DIVISION OF PRE-AUDIT AND ACCOUNTING RECORDS
BUREAU OF STATE EXPENDITURES

New York State Labor Law, Section 220-a

Sub-subcontractor's Certification (AC 2958)

1. That I am an officer of _____ a subcontractor to _____ a subcontractor of _____, the prime contractor on public improvement contract No. _____ and I am duly authorized to make this affidavit on behalf of the firm.
2. That I make this affidavit in order to comply with the provisions of Section 220-a of the Labor Law.
3. That on _____ we received from _____ the (subcontractor of the) (contractor) a copy of the (initial) (revised) schedule of wages and supplements Prevailing Rate Schedule Case Number _____ (PRC) specified in the public improvement contract.
4. That I have reviewed such schedule(s), and agree to pay the applicable prevailing wages and to pay or provide the supplements specified therein.

Signature

Print Name

Title

ACKNOWLEDGEMENT:

STATE OF NEW YORK
COUNTY OF _____ :SS.:

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 for foregoing instrument acknowledged that she/he executed the same.

Notary Public

County

If this affidavit is verified by an oath administered by a notary public in a foreign country other than Canada, it must be accompanied by a certificate authenticating the authority of the notary who administers the oath. (See CPLR 2309(c); Real Property Law, 311, 312).

Contractor:

Contractor's:

- ◆ Vendor Responsibility Construction Questionnaire
- ◆ Financial Statement
- ◆ Affidavit of No Change

State of New York / State University of New York

**NEW YORK STATE
VENDOR RESPONSIBILITY QUESTIONNAIRE
CONSTRUCTION**

For any competitively bid construction contract of \$100,000 or more, or when proposed for subcontract work valued at \$100,000 or more, complete and submit the appropriate Office of the State Comptroller's Vendor Responsibility Questionnaire:

- [Vendor Responsibility Questionnaire, Construction—For Profit Business Entity](#)
 - [Attachment A: Completed Construction Contracts](#)
 - [Attachment B: Uncompleted Construction Contracts](#)
 - [Attachment C: Financial Information](#)
- [Vendor Responsibility Questionnaire, Construction—Not For Profit Business Entity](#)
 - [Attachment A: Completed Construction Contracts](#)
 - [Attachment B: Uncompleted Construction Contracts](#)
 - [Attachment C: Financial Information](#)

All questions must be answered. Whenever more space is needed to answer any question, or you wish to give further explanation, attach additional pages.

If you have submitted one of the above forms within 12 months of the bid date with any contracting agency, as long as the information remains unchanged and accurate, you may submit a complete certified copy of the form, together with an Affidavit of No Change (see page 4 of 4 of this form), to the State University of New York campus with which you are bidding. A campus may require additional information deemed necessary for its review.

A link to the Financial Statement forms is provided above. For your convenience there is also a Financial Statement form in word format on pages 2 and 3 of this document.

Note, for construction related consultant projects the non-construction forms located on the [OSC website](#) should be used for Vendor Responsibility.

Note that your response to Form UF-15 must contain two parts:

1. Either one of the Vendor Responsibility Questionnaires indicated above, or an Affidavit of No Change
2. The Financial Statement

FINANCIAL STATEMENT

As of _____
(Date)

ASSETS

1. <u>Current Assets</u>		
2. Cash		\$ _____
3. Accounts receivable – less allowance for doubtful accounts		_____
Retainers included in accounts receivable	\$ _____	_____
Claims included in accounts receivable not yet approved or in litigation	_____	_____
4. Notes receivable – due within one year		_____
5. Inventory – materials		_____
6. Contract costs in excess of billings on uncompleted contracts		_____
7. Accrued income receivable		_____
Interest	_____	_____
Other (list) _____	_____	_____
Total accrued income receivable		_____
8. Deposits		_____
Bid and plan _____		_____
Other (list) _____	_____	_____
Total Deposits		_____
9. Prepaid Expenses		_____
Income Taxes	_____	_____
Insurance	_____	_____
Other (list) _____	_____	_____
Total Prepaid Expenses		_____
10. <u>Other Current Assets</u>		_____
(list) _____	_____	_____
Total other current assets		_____
11. Total current assets		_____
12. <u>Investments</u>		_____
Listed securities – present market value	_____	_____
Unlisted securities – present value	_____	_____
13. Total investments		_____
14. <u>Fixed Assets</u>		_____
Land	_____	_____
Building and Improvements	_____	_____
Leasehold improvements	_____	_____
Machinery and equipment	_____	_____
Automotive Equipment	_____	_____
Office furniture and fixtures	_____	_____
Other (list) _____	_____	_____
Total		_____
Less accumulated depreciation		_____
15. Total fixed assets – net		_____
16. <u>Other Assets</u>		_____
Loans receivable - officers	_____	_____
- employees	_____	_____
- shareholders	_____	_____
Cash surrender value of officers' life insurance	_____	_____
Organization expense – net of amortization	_____	_____
Notes receivable – due after one year	_____	_____
Other (list) _____	_____	_____
17. Total Other Assets		_____
18. TOTAL ASSETS		_____

LIABILITIES

19.	<u>Current Liabilities</u>			
20.	Accounts Payable		\$	_____
21.	Loans from shareholders – due within one year			_____
22.	Notes payable – due within one year			_____
23.	Mortgage payable – due within one year			_____
24.	Other payable – due within one year			_____
	(list) _____	\$		_____
	Total other payables – due within one year			_____
25.	Billings in excess of costs and estimated earnings			_____
26.	Accrued expenses payable - salaries and wages			_____
	- payroll taxes			_____
	- employees' benefits			_____
	- insurance			_____
	- other			_____
	Total accrued expenses payable			_____
27.	Dividends payable			_____
28.	Income taxes payable - state			_____
	- federal			_____
	- other			_____
	Total income expenses payable			_____
	Total current liabilities			_____
29.	<u>Deferred Income Taxes Payable</u> - state			_____
	- federal			_____
	- other			_____
	Total deferred income taxes			_____
30.	<u>Long Term Liabilities</u>			_____
	Loans from shareholders – due after one year			_____
	Notes payable – due after one year			_____
	Mortgage – due after one year			_____
	Other payables – due after one year			_____
	(list) _____			_____
	Total long term liabilities			_____
31.	<u>Other Liabilities</u>			_____
	(list) _____			_____
	Total other liabilities			_____
32.	Total Liabilities			_____

Net Worth

33.	Net Worth (if proprietorship or partnership)			
34.	Stockholders' Equity			_____
	Common stock issued and outstanding			_____
	Preferred stock issued and outstanding			_____
	Retained earnings			_____
	Total			_____
	Less: Treasury stock			_____
	Total stockholders' equity			_____
35.	TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY			_____

NOTE: IF ADDITIONAL SPACE IS REQUIRED, PLEASE NOTE AND ATTACH SCHEDULE TO STATEMENT

36. Dated this _____ day of _____, 20__

NAME OF ORGANIZATION	BY
	TITLE

**STATE UNIVERSITY OF NEW YORK
AFFIDAVIT OF NO CHANGE**

STATE OF NEW YORK)
) ss.:
COUNTY OF)

The undersigned, being duly sworn, deposes and says:

1. I am an officer/owner of _____ (hereinafter the "Contractor"), which is currently submitting a bid on a "University" Contract.
2. Contractor previously submitted a New York State Vendor Responsibility Questionnaire for Construction within one year prior to the date hereof to _____ in connection with a bid on another State or "University" Contract.
3. Attached is an accurate and true copy of such previously submitted New York State Vendor Responsibility Questionnaire for Construction.
4. I hereby certify that, with the exception of the information specified in Section III of the Questionnaire, there has been no material change in the information pertaining to the Contractor specified on such attached Questionnaire, except as follows:

5. I hereby certify that there has been no change in the information pertaining to the uncompleted construction contracts of the Contractor specified in Section III of the Questionnaire, except as follows:

Name:
Title:
Date:

Sworn to before me this _____ day
of _____, 20____

Notary Public

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

You have selected the For-Profit Construction questionnaire, commonly known as the “CCA-2,” 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 official must certify the questionnaire and the signature must be notarized.

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 <http://www.osc.state.ny.us/vendrep/documents/questionnaire/definitions.pdf>. These terms may not have their ordinary, common or traditional meanings. Each vendor is strongly encouraged to 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. Each response must provide all relevant information which can be obtained within the limits of the law. 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. Individuals and Sole Proprietors may use a Social Security Number but are encouraged to obtain and use a federal Employer Identification Number (EIN).

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

BUSINESS ENTITY INFORMATION				
<u>Legal Business 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
		Website		
Authorized Contact for this Questionnaire				
Name		Telephone ext.		Fax
Title		Email		
Additional <u>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, the state or county where filed and the status (active or inactive).				
Type	Name	EIN	State or County where filed	Status

I. BUSINESS CHARACTERISTICS		
1.0 <u>Business Entity</u> Type – Check appropriate box and provide additional information:		
a) <input type="checkbox"/> <u>Corporation</u> (including <u>PC</u>)	Date of Incorporation	
b) <input type="checkbox"/> <u>Limited Liability Company</u> (<u>LLC</u> or <u>PLLC</u>)	Date Organized	
c) <input type="checkbox"/> <u>Limited Liability Partnership</u>	Date of Registration	
d) <input type="checkbox"/> <u>Limited Partnership</u>	Date Established	
e) <input type="checkbox"/> <u>General Partnership</u>	Date Established	County (if formed in NYS)
f) <input type="checkbox"/> <u>Sole Proprietor</u>	How many years in business?	
g) <input type="checkbox"/> <u>Other</u>	Date Established	
If Other, explain:		
1.1 Was the <u>Business Entity</u> formed in New York State?		<input type="checkbox"/> Yes <input type="checkbox"/> No
If "No," indicate jurisdiction where the <u>Business Entity</u> was formed:		
<input type="checkbox"/> <u>United States</u>	State	
<input type="checkbox"/> <u>Other</u>	Country	

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

I. BUSINESS CHARACTERISTICS			
1.2 Is the <u>Legal Business Entity</u> publicly traded?			<input type="checkbox"/> Yes <input type="checkbox"/> No
If "Yes," provide the <u>CIK code</u> or Ticker Symbol:			
1.3 Is the <u>Business Entity</u> currently <u>registered to do business in New York State</u> ?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required
<i>Note: Select "Not Required" if the Business Entity is a Sole Proprietor or General Partnership</i>			
If "No," explain why the <u>Business Entity</u> is not required to be <u>registered to do business in New York State</u> :			
1.4 Is the responding <u>Business Entity</u> a <u>Joint Venture</u> ? Note: If the submitting <u>Business Entity</u> is a <u>Joint Venture</u> , also submit a separate questionnaire for each <u>Business Entity</u> comprising the <u>Joint Venture</u> .			<input type="checkbox"/> Yes <input type="checkbox"/> No
1.5 If the <u>Business Entity</u> 's <u>Principal Place of Business</u> is not in New York State, does the <u>Business Entity</u> maintain an office in New York State?			<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<i>(Select "N/A" if <u>Principal Place of Business</u> is in New York State.)</i>			
If "Yes," provide the address and telephone number for one office located in New York State.			
1.6 Is the Business Entity a New York State certified <u>Minority-Owned Business Enterprise</u> , or <u>Women-Owned Business Enterprise</u> , or <u>New York State Small Business</u> , or federally certified <u>Disadvantaged Business Enterprise</u> ?			<input type="checkbox"/> Yes <input type="checkbox"/> No
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"/> <u>New York State Small Business</u>			
<input type="checkbox"/> Federally certified <u>Disadvantaged Business Enterprise</u> (DBE)			
1.7 Identify each person or business entity that is, or has been within the past five (5) years, <u>Principal Owner</u> of 5.0% or more of the firm's shares; a Business Entity Official; or one of the five largest shareholders, if applicable. <i>(Attach additional pages if necessary.)</i>			
<u>Joint Ventures</u> : Provide information for all firms involved.			
Name <i>(For each person, include middle initial)</i>	Title	Percentage of ownership (Enter 0%, if not applicable)	Employment status with the firm
			<input type="checkbox"/> Current <input type="checkbox"/> Former
			<input type="checkbox"/> Current <input type="checkbox"/> Former
			<input type="checkbox"/> Current <input type="checkbox"/> Former
			<input type="checkbox"/> Current <input type="checkbox"/> Former

**NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT CONSTRUCTION (CCA-2)**

II. AFFILIATE and JOINT VENTURE RELATIONSHIPS		
2.0 Are there any other <u>construction</u> -related firms in which, now or in the past five years, the submitting <u>Business Entity</u> or any of the individuals or business entities listed in question 1.7 either owned or owns 5.0% or more of the shares of, or was or is one of the five largest shareholders or a director, officer, partner or proprietor of said other firm? <i>(Attach additional pages if necessary.)</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No
Firm/Company Name	Firm/Company EIN (If available)	Firm/Company's Primary Business Activity
Firm/Company Address		
Explain relationship with the firm and indicate percent of ownership, if applicable (enter N/A, if not applicable):		
Are there any shareholders, directors, officers, owners, partners or proprietors that the submitting <u>Business Entity</u> has in common with this firm?		<input type="checkbox"/> Yes <input type="checkbox"/> No
Individual's Name <i>(Include middle initial)</i>	Position/Title with Firm/Company	
2.1 Does the <u>Business Entity</u> have any <u>construction</u> -related <u>affiliates</u> not identified in the response to question 2.0 above? <i>(Attach additional pages if necessary.)</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No
Affiliate Name	Affiliate EIN (If available)	Affiliate's Primary Business Activity
Affiliate Address		
Explain relationship with the affiliate and indicate percent of ownership, if applicable <i>(enter N/A, if not applicable)</i> :		
Are there any shareholders, directors, officers, owners, partners or proprietors that the submitting <u>Business Entity</u> has in common with this affiliate?		<input type="checkbox"/> Yes <input type="checkbox"/> No
Individual's Name <i>(Include middle initial)</i>	Position/Title with Firm/Company	
2.2 Has the <u>Business Entity</u> participated in any <u>construction</u> -related <u>Joint Ventures</u> within the past three (3) years? <i>(Attach additional pages if necessary.)</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No
Joint Venture Name	Joint Venture EIN (If available)	Identify parties to the Joint Venture

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

III. CONTRACT HISTORY

3.0 Has the Business Entity completed any construction contracts? Yes No

If "Yes," list the ten most recent construction contracts the Business Entity has completed using Attachment A – Completed Construction Contracts, found at www.osc.state.ny.us/vendrep/documents/questionnaire/ac3294s.doc.

If less than ten, include most recent subcontracts on projects up to that number.

3.1 Does the Business Entity currently have uncompleted construction contracts? Yes No

If "Yes," list all current uncompleted construction contracts by using Attachment B – Uncompleted Construction Contracts, found at www.osc.state.ny.us/vendrep/documents/questionnaire/ac3295s.doc.

Note: Ongoing projects must be included.

IV. INTEGRITY – CONTRACT BIDDING

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

4.0 Been suspended or debarred from any government contracting process or been disqualified on any government procurement? Yes No

4.1 Been subject to a denial or revocation of a government prequalification? Yes No

4.2 Had any bid rejected by a government entity for lack of qualifications, responsibility or because of the submission of an informal, non-responsive or incomplete bid? Yes No

4.3 Had a proposed subcontract rejected by a government entity for lack of qualifications, responsibility or because of the submission of an informal, non-responsive or incomplete bid? Yes No

4.4 Had a low bid rejected on a government contract for failure to make good faith efforts on any Minority-Owned Business Enterprise, Women-Owned Business Enterprise or Disadvantaged Business Enterprise goal or statutory affirmative action requirements on a previously held contract? Yes No

4.5 Agreed to a voluntary exclusion from bidding/contracting with a government entity? Yes No

4.6 Initiated a request to withdraw a bid submitted to a government entity or made any claim of an error on a bid submitted to a government entity? Yes No

For each "Yes," provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, the government entity involved, project(s), relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

V. INTEGRITY – CONTRACT AWARD

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

5.0 Defaulted on or been suspended, cancelled or terminated for cause on any contract? Yes No

5.1 Been subject to an administrative proceeding or civil action seeking specific performance or restitution (except any disputed work proceeding) in connection with any government contract? Yes No

5.2 Entered into a formal monitoring agreement, consent decree or stipulation settlement as specified by, or agreed to with, any government entity? Yes No

5.3 Had its surety called upon to complete any contract whether government or private sector? Yes No

5.4 Forfeited all or part of a standby letter of credit in connection with any government contract? Yes No

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

V. INTEGRITY – CONTRACT AWARD

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

For each "Yes," provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, the government entity/owners involved, project(s), contract number(s), relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

VI. CERTIFICATIONS/LICENSES

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

- | | |
|--|--|
| 6.0 Had a revocation or <u>suspension</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> or a 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 of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, the government entity involved, relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

VII. LEGAL PROCEEDINGS/GOVERNMENT INVESTIGATIONS

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

- | | |
|--|--|
| 7.0 Been the subject of a criminal <u>investigation</u> , whether open or closed, or an indictment for any business-related conduct constituting a crime under local, state or <u>federal</u> law? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 7.1 Been the subject of: | |
| (i.) An indictment, grant of immunity, <u>judgment</u> or conviction (including entering into a plea bargain) for conduct constituting a crime; or | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| (ii.) Any criminal <u>investigation</u> , felony indictment or conviction concerning the formation of, or any business association with, an allegedly false or fraudulent <u>Minority-Owned Business Enterprise</u> , <u>Women-Owned Business Enterprise</u> , or a <u>Disadvantaged Business Enterprise</u> ? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 7.2 Received any <u>OSHA</u> citation, which resulted in a final determination classified as <u>serious</u> or <u>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? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 7.4 Had a New York State Labor Law violation deemed willful? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 7.5 Entered into a consent order with the New York State Department of Environmental Conservation, or a <u>federal</u> , state or local government enforcement determination involving a violation of <u>federal</u> , state or local environmental laws? | <input type="checkbox"/> Yes <input type="checkbox"/> No |

NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE FOR-PROFIT CONSTRUCTION (CCA-2)

VII. LEGAL PROCEEDINGS/GOVERNMENT INVESTIGATIONS

Within the past five (5) years, has the Business Entity, an affiliate, or any predecessor company or entity:

7.6 Other than previously disclosed, been the subject of any <u>citations</u> , notices or violation orders; a pending administrative hearing, proceeding or determination of a violation of: <ul style="list-style-type: none"> • <u>Federal</u>, state or local health laws, rules or regulations; • <u>Federal</u>, state or local environmental laws, rules or regulations; • Unemployment insurance or workers compensation coverage or <u>claim</u> requirements; • Any labor law or regulation, which was deemed willful; • Employee Retirement Income Security Act (ERISA); • <u>Federal</u>, state or local human rights laws; • <u>Federal</u>, state or local security laws? 	<input type="checkbox"/> Yes <input type="checkbox"/> No
--	--

For each "Yes," provide an explanation of the issue(s), the Business Entity involved, the relationship to the submitting Business Entity, the government entity involved, relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

Note: 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.

VIII. LEADERSHIP INTEGRITY

If the Business Entity is a Joint Venture Entity, answer "N/A - Not Applicable" to questions in this section.

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

8.0 <u>Sanctioned</u> relative to any business or professional permit and/or license?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
8.1 <u>Suspended</u> , <u>debarred</u> or <u>disqualified</u> from any <u>government contracting process</u> ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
8.2 The subject of a criminal <u>investigation</u> , whether open or closed, or an indictment for any business-related conduct constituting a crime under local, state or <u>federal</u> law?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
8.3 Charged with a misdemeanor or felony, indicted, granted immunity, convicted of a crime or subject to a judgment for: <ul style="list-style-type: none"> (i.) Any business-related activity, including but not limited to fraud, coercion, extortion, bribe or bribe-receiving, giving or accepting unlawful gratuities, immigration or tax fraud, racketeering, mail fraud, wire fraud, price-fixing or collusive bidding; or (ii.) Any crime, whether or not business-related, the underlying conduct of which related to truthfulness, including but not limited to the filing of false documents or false sworn statements, perjury or larceny 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

For each "Yes," provide an explanation of the issue(s), the individual involved, the relationship to the submitting Business Entity, the government entity involved, relevant dates, any remedial or corrective action(s) taken and the current status of the issue(s). Provide answer(s) below or attach additional sheets with numbered responses.

**NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT CONSTRUCTION (CCA-2)**

IX. FINANCIAL AND ORGANIZATIONAL CAPACITY		
9.0 Within the past five (5) years, has the <u>Business Entity</u> or any <u>affiliate</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
<i>If "Yes," provide an explanation of the issue(s), the <u>Business Entity</u> involved, the relationship to the submitting <u>Business Entity</u>, the <u>government entity</u> involved, relevant dates, 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.</i>		
9.1 Within the past five (5) years, has the <u>Business Entity</u> or any <u>affiliate</u> had any <u>liquidated damages</u> assessed over \$25,000?		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If "Yes," provide an explanation of the issue(s), the <u>Business Entity</u> involved, the relationship to the submitting <u>Business Entity</u>, relevant dates, the contracting party involved, the amount assessed and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.</i>		
9.2 Within the past five (5) years, has the <u>Business Entity</u> or any <u>affiliate</u> had any <u>liens, claims or judgments</u> over \$25,000 filed against the <u>Business Entity</u> which remain undischarged or were unsatisfied for more than 90 days? (Note: Including but not limited to tax warrants or liens. Do not include UCC filings.)		<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>If "Yes," provide an explanation of the issue(s), the <u>Business Entity</u> involved, the relationship to the submitting <u>Business Entity</u>, relevant dates, the Lien holder or Claimants' name(s), the amount of the <u>lien(s)</u> and the current status of the issue(s). Provide answer below or attach additional sheets with numbered responses.</i>		
9.3 In the last seven (7) years, has the <u>Business Entity</u> or any <u>affiliate</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
<i>If "Yes," provide the <u>Business Entity</u> involved, the relationship to the submitting <u>Business Entity</u>, 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.</i>		
9.4 What is the <u>Business Entity's</u> Bonding Capacity?		
a. Single Project	b. Aggregate (All Projects)	
9.5 List <u>Business Entity's</u> Gross Sales for the previous three (3) Fiscal Years:		
1st Year (Indicate year) Gross Sales	2nd Year (Indicate year) Gross Sales	3rd Year (Indicate year) Gross Sales
9.6 List <u>Business Entity's</u> Average Backlog for the previous three (3) fiscal years: (Estimated total value of uncompleted work on outstanding contracts)		
1st Year (Indicate year) Amount	2nd Year (Indicate year) Amount	3rd Year (Indicate year) Amount
9.7 Attach <u>Business Entity's</u> most recent annual <u>financial statement</u> and accompanying notes or complete Attachment C – Financial Information, found at www.osc.state.ny.us/vendrep/documents/questionnaire/ac3296s.xls . (This information must be attached.)		

**NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT CONSTRUCTION (CCA-2)**

X. FREEDOM OF INFORMATION LAW (FOIL)

10.0 Indicate whether any information provided herein is believed to be exempt from disclosure under the Freedom of Information Law (FOIL).

Yes No

Note: A determination of whether such information is exempt from FOIL will be made at the time of any request for disclosure under FOIL. Attach additional pages if necessary.

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

**NEW YORK STATE VENDOR RESPONSIBILITY QUESTIONNAIRE
FOR-PROFIT CONSTRUCTION (CCA-2)**

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.

The undersigned certifies that he/she:

- is knowledgeable about the submitting Business Entity’s business and operations;
- has read and understands all of the questions contained in the questionnaire;
- has not altered the content of the questionnaire in any manner;
- has reviewed and/or supplied full and complete responses to each question;
- to the best of his/her knowledge, information and belief, confirms that the Business Entity’s responses are true, accurate and complete, including all attachments, if applicable;
- understands 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
- is 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 _____

Sworn to before me this _____ day of _____, 20__;

_____ Notary Public



Gender-Based Violence and the Workplace Certification

New York State Finance Law §139-M requires bidders on competitive state procurements to certify that they have a written policy addressing gender-based violence and the workplace and that such policy meets the following minimum requirements:

- **Share Information:** Employers must provide information regarding gender-based violence where employees can see and access it, including displaying the NYS Domestic and Sexual Violence Hotline information and a gender-based violence and the workplace poster.
- **Refer Employee-Survivors to Services:** The policy must require that the employer refer employees who disclose current or past victim status to the NYS Domestic and Sexual Violence Hotline and/or a local service provider. For bidders outside of New York State, referrals should be made to a local provider or statewide hotline. While referrals are required to be provided by the employer, it is not required for the employee to access services.
- **Prohibit Retaliation:** The policy must clearly state that discrimination or retaliation against employees who identify as victims or survivors of gender-based violence is prohibited.
- **Comply with Laws:** Ensure your policy follows State law. For employers based in New York State, this means that the policy must follow the SAFE Leave Act, New York State Human Rights Law, and any other relevant laws and regulations.
- **Offer Implementation Support:** OPDV is able to assist employers in developing and implementing this policy. Employers must provide information to supervisors and human resources, where available, about this technical assistance from OPDV. OPDV can be contacted at workplace@opdv.ny.gov.

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing gender-based violence and the workplace and has provided such policy to all of its employees, directors and board members. Such policy shall, at a minimum, meet the requirements of subdivision 11 of section five hundred seventy-five of the executive law.

Organization’s signature below certifies its compliance with State Finance Law §139-M.

Organization: _____

By (signature): _____

Name (Please Print): _____

Title: _____

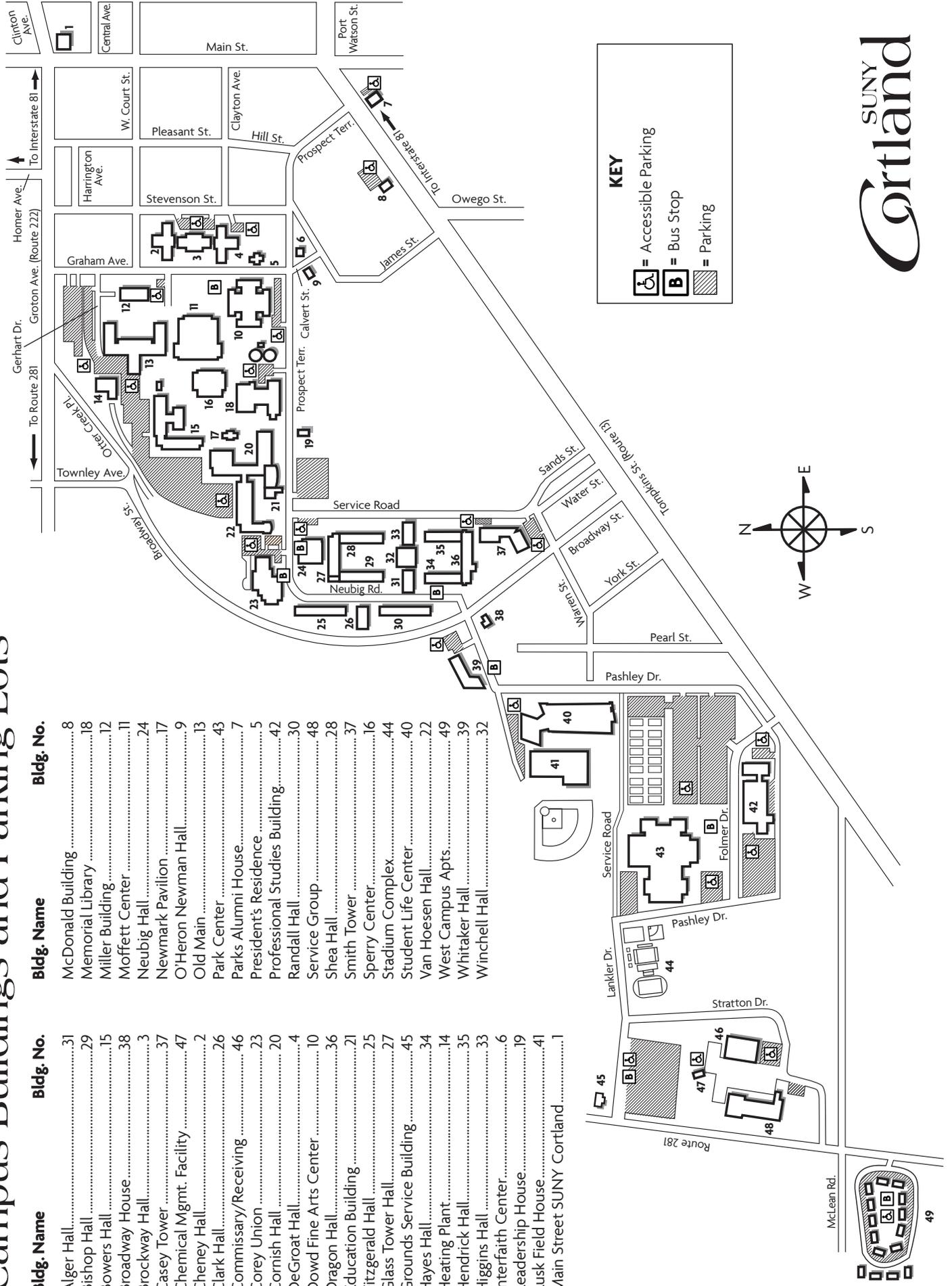
Date: _____

This form must be signed by an authorized executive or legal representative.

If the organization cannot make the above certification, they must provide an attached statement with their bid detailing the reasons therefor.

Campus Buildings and Parking Lots

Bldg. Name	Bldg. No.	Bldg. Name	Bldg. No.
Alger Hall.....	31	McDonald Building.....	8
Bishop Hall.....	29	Memorial Library.....	18
Bowers Hall.....	15	Miller Building.....	12
Broadway House.....	38	Moffett Center.....	11
Brockway Hall.....	3	Neubig Hall.....	24
Casey Tower.....	37	Newmark Pavilion.....	17
Chemical Mgmt. Facility.....	47	O'Heron Newman Hall.....	9
Cheney Hall.....	2	Old Main.....	13
Clark Hall.....	26	Park Center.....	43
Commissary/Receiving.....	46	Parks Alumni House.....	7
Corey Union.....	23	President's Residence.....	5
Cornish Hall.....	20	Professional Studies Building.....	42
DeGroat Hall.....	4	Randall Hall.....	30
Dowd Fine Arts Center.....	10	Service Group.....	48
Dragon Hall.....	36	Shea Hall.....	28
Education Building.....	21	Smith Tower.....	37
Fitzgerald Hall.....	25	Sperry Center.....	16
Glass Tower Hall.....	27	Stadium Complex.....	44
Grounds Service Building.....	45	Student Life Center.....	40
Hayes Hall.....	34	Van Hoesen Hall.....	22
Heating Plant.....	14	West Campus Apts.....	49
Hendrick Hall.....	35	Whitaker Hall.....	39
Higgins Hall.....	33	Winchell Hall.....	32
Interfaith Center.....	6		
Leadership House.....	19		
Lusk Field House.....	41		
Main Street SUNY Cortland.....	1		



Division 1 - General Requirements

SECTION A - Description of Work**1. Work to be Done**

The work to be done under the Contract, in accordance with the Contract Documents, consists of performing, installing, furnishing and supplying all materials, equipment, labor and incidentals necessary or convenient for the construction of Project Number 20240058, titled South Campus Parking Lot and carry out all of the duties and obligations imposed upon the Contractor by the Contract Documents.

The main features of the work shall include, but not be limited to the following:

Removal of existing grass athletic field and construction of a new paved parking lot, including but not limited to; site preparation, erosion + sediment control, grading, drainage, curbing, concrete walks, asphalt pavement, line striping / painting, traffic signage, lawn work, bus shelters, and plantings. Demolition of existing sports lighting, relocation of existing site lighting, trenching, backfill, and compaction of all electrical conduit runs, installing Owner provided new electrical site lighting bases, light poles, light fixtures, and handholes as indicated on the coordination drawings.

2. Work Not Included:

Work not included in the work of the Contract are those items marked "N.I.C"; movable furnishings, except those specifically specified or indicated on the Drawings; and items marked "by others".

SECTION B - Alternates**1. General**

- a. Refer to Proposal Form. State thereon the amount to be added to or deducted from the Total Bid for the Alternates described herein.
- b. Extent and details of the Alternates are indicated on the Drawings and described in the Specifications.
- c. Where reference is made in the description of the Alternate to products, materials, or workmanship, the specification requirements applicable to similar products, materials or workmanship in the Total Bid shall govern the products, materials, and workmanship of the Alternate as if these specification requirements were included in full in the description of the Alternates.

2. Alternates

- SC-1 Additional Sidewalk: The Bidder shall state the amount to be **ADDED** to the Base Bid to furnish and install the additional concrete sidewalk as shown on the drawings and specified.
- SC-2 Bus Shelters and Concrete Pads: The Bidder shall state the amount to be **ADDED** to the Base Bid to furnish and install the bus shelters and associated concrete pads as shown on the drawings and specified.

SECTION C - Special Conditions**1. Time Progress Schedule**

- a. The Contractor shall schedule the Work for expeditious completion in accordance with Section 3.01(2) of the Agreement. The proposed schedule must be established in cooperation with the Campus and account for Campus calendar restrictions listed in this section that affect the Contractor's access to the work areas and construction activities. At each periodic meeting, the Time Progress Schedule required by Section 3.02 of the Agreement shall be reviewed for compliance with phasing requirements. Revise and update the Time Progress Schedule to properly depict the work required to maintain continuity of campus operations.
- b. First phases of work shall include appropriate time in the schedule for: (1) understanding Campus operations, training crews, acclimating trades and Campus to sequence and apportionment of activities; (2) additional meetings (up to twice a week during the first twelve weeks after the Notice to Proceed) with the Owner, consultant and the Contractor's principals, project manager and those of its significant subcontractors; (3) re-sequencing activities to recover from start-up delays in the progressive operation of interrelated work and (4) other activities commonly associated with the start-up of field work.
- c. Academic Calendar: The Contractor is advised that the Campus intends to maintain a full institutional program throughout the Project duration. The Campus will make continuous use of adjacent spaces, buildings and site, except where work is scheduled or specified to occur. All Contract work must be scheduled and performed without causing unscheduled interruption of the normal institutional activities and processes. The Contractor shall coordinate his work with the following Campus Calendar, and No Utility shutdowns will be permitted during Registration, Study Periods, Exam Periods, or Commencement.

[SUNY Cortland Academic Calendar](#)

- d. The work site will be available to begin construction immediately upon Notice to Proceed or on date specified by Project Manager. Unless otherwise indicated, normal working hours on the campus are between 7:00 AM and 4:00 PM. Sequence the work in phases to meet the following interim milestones dates:
- e. On the Date of Substantial Completion in the Proposal, access to the work area for any uncompleted work and for punch list items shall be restricted to after 5:00 PM and prior to 7:00 AM and comply with the following:
 - 1. Methods of performing work shall not hinder or disrupt the Campus' occupancy, reduce Campus provided levels of cleanliness and ambient environmental conditions and affect building systems, services, and utilities serving the building unless, upon completion of each shift's work that is performed outside of normal Campus work hours, the Contractor provides cleaning to return the work areas to a similar level of cleanliness as normally provided by the Campus, returns spaces to their normal ambient environmental conditions and restores building systems, services, and utilities serving the occupancy.
 - 2. No material or equipment shall remain inside the building unless in the active use and control of Contractor personnel.
 - 3. The Contractor shall provide all utility relocations and re-routings necessary to maintain the existing utilities at their current level of service, including limiting their shutdowns for tie-ins and cutovers to those periods specified. All new work shall be in place, tested and accepted prior to performing a shutdown for the required tie in.
- f. Time Delay Allowance: In addition to the requirements of Article III of the Agreement, the base bid contract duration to perform the work specified in the proposal shall include not less than five (5) consecutive and/or non-consecutive eight hour working days in the Time Progress Schedule

for delays that are of no fault of the Contractor or any of its subcontractors or suppliers, or caused by events or conditions that could not be reasonably anticipated. Provide notice of delay per Section 3.04 and request use of this time allowance. When approved by Consultant, the time allowance is expended for each work day that the contractor is unable to work and all delay time used is tracked in the Time Progress Schedule. After this base bid time allowance for delay is expended, comply with the requirements of Article III for any additional delays.

2. Cutting and Patching

- a. The Contractor shall do all cutting, fitting, and patching of its work that may be required to make its several parts come together properly and fitted as shown upon or reasonably implied from the Drawings and Specifications for the completed project.
- b. Any cost caused by defective or ill-timed work shall be borne by the Contractor. Except as otherwise expressly provided in the Contract Documents, the Contractor shall not cut or alter the work of any other Contractor or existing work without the consent of the University.
- c. Existing construction, finishes, equipment, wiring, etc., that is to remain and which is damaged or defaced by reason of work done under this contract shall be restored by the Contractor to a condition satisfactory to the University, or replaced with new, at no additional cost.
- d. Existing surfaces, materials, and work shall be prepared as necessary to receive the new installations. Such preparatory work shall be as required by the conditions and in each case shall be subject to approval by the University.
- e. Newly exposed work or surfaces which are presently concealed shall be made to match existing corresponding or adjoining new surfaces as directed, and the materials and methods to be employed shall be subject to approval by the University.
- f. All new, altered, or restored work in the building shall match existing corresponding work in the material, construction finish, etc., unless otherwise specified or required by the drawings.

3. Clean-Up

- a. Periodic Cleaning: The Contractor shall at all times during the progress of the work keep the Site free from accumulation of waste matter or rubbish and shall confine its apparatus, materials and operations of its workmen to limits prescribed by law or by the Contract Limit Lines, except as the latter may be extended with the approval of the University. Cleaning of the structure(s), once enclosed, must be performed daily and removal of waste matter or rubbish must be performed at least once a week.
- b. Final Clean Up: Upon completion of the work covered by the Contract, the Contractor shall leave the completed project ready for use without the need of further cleaning of any kind and with all work in new condition and perfect order. In addition, upon completion of all work, the Contractor shall remove from the vicinity of the work and from the property owned or occupied by the State of New York, the State University of New York or the University, all plant, buildings, rubbish, unused materials, concrete forms and other materials belonging to it or used under its direction during construction or impairing the use or appearance of the property and shall restore such areas affected by the work to their original condition, and, in the event of its failure to do so, the same shall be removed by the University at the expense of the Contractor, and it and its surety shall be liable therefor.

4. Temporary Access and Parking

Parking permits will be issued electronically through the Parking Operations office at Whitaker Hall. Project Manager will work with successful Bidder to organize proper permitting.

5. Field Meetings

Periodic job meetings will be scheduled by the Consultant and the University during the course of construction. The Contractor, and, upon request of the Consultant and the University, its principal subcontractors and manufacturer's representatives, shall attend such meetings and be prepared to furnish answers to questions on progress, workmanship, or any other subject on which the Consultant and the University might reasonably require information.

6. Operating Instructions and Manuals

The Contractor shall furnish two (2) complete sets of operating instructions and manuals which shall include definite and specific instructions on all mechanical and electrical systems involved in the Project. Said instructions and manuals should set forth: (1) the manner of operation; (2) the necessary precautions and care to be followed; (3) periodic prevention maintenance requirements; and (4) a complete set of spare parts lists, catalogs, service manuals and manufacturing data on said systems. Said instructions and manuals are to be made available by the Contractor for review and comment by the University a minimum of six (6) weeks prior to the scheduled completion of the Project.

Products Containing Vermiculite

Consultant shall require for all new installations of materials that contain vermiculite (e.g. fireproofing, plasters, various insulations), documentation that the material is non-ACM, including submitted MSDS's indicating ACM content, or other verified testing documentation from the manufacturer that the ACM content is <1%, as determined by bulk testing and PLM analysis. This information should be submitted and reviewed with the product information, then provided in the Operation Manual to the campus at close-out.

O&M Manuals as specified below:

2 Hard Copy O&M File:

Within each folder/binder, each section should be clearly labeled, segregated using a stepped divider and cross-referenced back to an index.

The index should itemize the stepped segregation dividers, be numbered, and displayed at the beginning of the first binder.

Digital O&M Manual:

Formats will be like the 'hard copy' manual incorporating the same segregated information, but each section should be an individual PDF file.

Should be OCR searchable PDF files.

7. Utility Shutdowns and Cut Overs

- a. Except as otherwise expressly provided in the Contract Documents, the Contractor shall be responsible for submitting to the University, for its approval, a proposed schedule of all utility shutdowns and Cut overs of all types which will be required to complete the Project; said schedule should contain a minimum of two (2) week's advance notice prior to the time of the proposed shutdown and cut over. Most campuses of the State University of New York are in full operation 12 months of the year, and shutdowns and Cut overs, depending upon their type, generally must be scheduled on weekends, at night, or during holiday periods. The contract consideration is deemed to include all necessary overtime and all premium time, if any, that is required by the Contractor to complete the shutdowns or Cut overs.
- b. Temporary Connections: In the event the Contractor shall disrupt any existing services, the Contractor shall immediately make temporary connection to place such service back into operation and maintain the temporary connection until the Contractor makes the permanent connection. All work must be acceptable to the University.

8. Temporary Power for Construction Activities

Electrical energy will be available at no cost to the Contractor from existing outlets or panels from locations approved by the College. This power may be used for small power tools (not exceeding 1/2 HP), etc., and the Contractor shall not exceed the capacity of the existing circuits being used. The Contractor shall be responsible for providing all necessary connections, cables, etc. and removal of the same at completion of construction with approval from the University. The Contractor shall in no way modify the existing circuits at the panel boards to increase capacities of the circuits. If the required power load exceeds the capacities of the available power sources, the Contractor shall be responsible and pay for furnishing and installing all necessary temporary power poles, cables, fused disconnect switches, transformers and electric meters necessary to provide a temporary power system for the project, and remove the same at completion. Install all temporary wiring and equipment and make all connections in conformity with the National Electrical Code. Make all replacements required by temporary use of the permanent wiring system. Provide ground fault protection.

9. Sanitary Facilities

The Contractor will be permitted to use existing toilet and janitor closet facilities as designated by the College provided the existing facilities are not misused, defaced, or left in an unsanitary condition. If the University deems that the existing facilities have been subject to misuse or left unsanitary, the Contractor shall be informed and caused to install and maintain (at its own cost) temporary, sanitary facilities at approved locations. The Contractor shall also be held responsible for the cost of cleaning and repair of any damage to said existing facilities and adherence to health and sanitary codes of the State of New York.

10. Temporary Heat

- a. In those locations where it is required by the conditions of the work, the Contractor shall provide and pay for all temporary heating, coverings and enclosures necessary to properly protect all work and materials against damage by dampness and cold, dry out the work, and facilitate the completion thereof. Fuel, equipment, materials, operating personnel and the methods used therefor shall be at all times satisfactory to the University and adequate for the purpose intended. The Contractor shall maintain the critical installation temperatures, provided in the technical provisions of the specifications hereof, for all work in those areas where the same is being performed.
- b. Maintenance of proper heating, ventilation and adequate drying out of the work is the responsibility of the Contractor. Any work damaged by dampness, insufficient or abnormal heating shall be replaced to the satisfaction of the University by and at the sole cost and expense of the Contractor.
- c. The Contractor shall provide all necessary, temporary heating for the efficient and effective work by itself and all trades engaged in the work. Unless otherwise specified, the minimum temperature shall be 50 degrees F at all places where work is actually being performed within the project (where enclosed). Before and during the placing of wood finish and the application of other interior finishing, varnishing, painting, etc., and until final acceptance by the University of all work covered by the Contract, the Contractor shall, unless otherwise specified in the Contract Documents, provide sufficient heat to produce a temperature of not less than 68 degrees F nor more than 78 degrees F.

11. Temporary Light

The contractor shall install, maintain and remove Underwriter's Label temporary lighting sockets, light bulbs, and intermittent power sockets as approved by the University. The minimum temporary lighting to be provided is at the rate of 1/4 watt per square foot and be maintained for 24 hours, 7 days per week at stairs and exit corridors; in all other spaces, temporary lighting is to be maintained during working hours. Installation shall be in accordance with the National Electric Code.

12. Temporary Water for Construction Purposes

Water for construction is available through the campus system without charge to the Contractor from location designated by the College. The Contractor shall obtain the necessary permission, make all connections, as required, furnish and install all pipes and fittings, and remove the same at completion of work. The Contractor must provide for waste water discharge and shall take due care to prevent damage to existing structures or site and the waste of water. All pipes and fittings must be maintained in perfect condition at all times.

13. Conducting Work

- a. All work is to be conducted in such a manner as to cause a minimum degree of interference with the College's operation and academic schedule.
- b. Safe and direct entrance to and exiting from the existing buildings shall be maintained at all times during regular hours while construction is in progress.
- c. No construction work will start in any area until the Contractor has all the required materials on-site.
- d. The Contractor and its employees shall comply with College regulations governing conduct, access to the premises, and operation of equipment.
- e. The building shall not be left "open" overnight or during any period of inclement weather. Temporary weather tight closures shall be provided for/by the Contractor to protect the structure and its contents.

14. Safety and Protective Facilities

- a. The Contractor shall provide the necessary safeguards to prevent accidents, to avoid all necessary hazards and protect the public, the Staff, students, the work and property at all times, including Saturdays, Sundays, holidays and other times when no work is being done.
- b. The Contractor shall erect, maintain and remove appropriate barriers or other devices, including mechanical ventilation systems, as required by the conditions of the work for the protection of users of the project area, the protection of the work being done, or the containment of dust and debris. All such barriers or devices shall be provided in conformance with all applicable codes, laws and regulations, including OSHA and National Fire Prevention Association 241, for safeguarding of structures during construction.

15. Protection of Existing Structures, Vegetation and Utilities

The Contractor, during the course of its work, shall not damage any buildings, structures and utilities, public or private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, drains and electric power and lighting and telephone cables, lawns, curbs, plants and other improvements. Any damage resulting from the Contractor's operations shall be repaired or replaced at its expense.

16. Abbreviations and References

The following abbreviations may be used in these Specifications:

N.A.	Not Applicable
N.I.C	Not in Contract.
Fed. Spec. or F.S.	Federal Specifications

SUCF	State University Construction Fund
University or SUNY	State University of New York
College	A Campus of the State University of New York

17. Use of Elevators

The Contractor shall be permitted to make temporary use of elevators designated by the University and provided such use does not interfere with the normal activities of the College. Large and heavy items shall not be placed in elevators, and suitable padding shall be provided whenever a cab is used for construction purposes. Elevator pits shall be kept free of debris and dust by frequent cleaning out. The elevators shall be restored to original condition satisfactory to the University at the end of construction activities. Use of the top of the elevator may be permitted after obtaining approval of the University.

18. Salvage of Materials

Remove and legally dispose of all debris and other materials resulting from the alterations to State University property. The following items shall remain the property of the University and shall be stored at the site as directed by the University: **NONE**

19. Storage of Materials

- a. The Contractor shall store materials and equipment within the contract limits in areas on the site as designated by the University.
- b. All materials shall be stored in a neat and orderly manner, and shall be protected against the weather by raised floored weatherproof temporary storage facility or trailer.
- c. Security for stored materials shall be the responsibility of the Contractor.
- d. Storage of materials is not permitted on the roof of any building.

20. Shop Drawings and Samples - (Refer to Section 2.19 of the Agreement)

- a. The Contractor shall submit to the University for its approval five (5) sets of prints of all shop drawings required by the specifications. Those marked:
 - "REJECTED" are not in accordance with the Contract Documents and shall be resubmitted.
 - "REVISE AND RESUBMIT" Contractor shall correct and resubmit.
 - "MAKE CORRECTIONS NOTED": The contractor shall comply with corrections and may proceed.
Resubmittal is not required.
 - "APPROVED - NO EXCEPTIONS TAKEN": The contractor may proceed.
- b. All shop drawings and/or submittals used on the construction site must bear the impression of the consultant's review stamp as well as the General Contractor's review stamp, indicating the status of review and the date of review.
- c. All shop drawings shall reflect actual site conditions and accurate field dimensions. Dimensioned shop drawings shall be submitted for all fabricated items. Incomplete submittals will be rejected without review.
- d. All shop drawings, submittals and samples shall include:
 - 1). Date and revision dates.

- 2). Project title and number.
- 3). Names of:
 - a). Contractor
 - b). Subcontractor
 - c). Supplier
 - d). Manufacturer
- 4). Identification of products or materials: Include Department of State (DOS) file number, manufacturers' name and market name of all covered products and applicable materials in accordance with Part 1120 of the Code. This information may be obtained by contacting the DOS, Office of Fire Prevention and Control: 518 474-6746 [voice] and 518 474-3240 [FAX]

21. U.S. Steel

All structural steel, reinforcing steel, or other major steel items to be incorporated in the work shall, if this Contract is in excess of \$100,000, be produced or made in whole or substantial part in the United States, its territories or possessions.

22. Non-Asbestos Products

- a. All materials specified herein shall contain no asbestos.
- b. Provide "Contains No Asbestos" permanent labels applied to the exterior jacket of all pipe insulation at 20 foot intervals with a minimum of one (1) label for each service in each work area.

23. Safety Data Sheet

The contractor shall submit SDS (Safety Data Sheet) for all chemicals, solvents, and materials specified or proposed to be used on this project.

24. Architect's/Engineer's Seal

In accordance with Rules and Regulations of the New York State Education Law, Title 8, Part 69.5(b), to all plans, specifications and reports to which the seal of an architect has been applied, there shall also be applied a stamp with appropriate wording warning that it is a violation of the law for any person, unless acting under the direction of a licensed architect, to alter an item in any way. If an item bearing the seal of an architect is altered, the altering architect shall affix to his item the seal and the notation "altered by" followed by his signature and the date of such alteration, and a specific description of the alteration.

25. Construction Permit

The Code Compliance Manager for the State University Campus will, as required by law, issue a Construction Permit for this Project. The project is not subject to any local building code or permit requirements, except for work that the Contractor is to perform on property located outside of the boundaries of the campuses of the State University of New York.

26. Other Contracts

There may be other contracts let for work to be done in adjacent areas and, as such, this Contractor and such other contractors shall coordinate their work to conform with progressive operation of all the work covered by such contracts, and afford each other reasonable opportunities for the introduction and storage of their supplies, materials, equipment, and the execution of their work.

27. Asbestos

If the work to be done under this contract contains the abatement of asbestos the following shall apply:

- a. **Applicable Regulations** - All work to be done under this Contract shall be in compliance with Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York (cited as 12 NYCRR Part 56) as amended effective March 21, 2007.
- b. **Applicable Variance** - The abatement contractor is responsible for obtaining any variance not issued to date that he feels may be applicable to the policies/procedures as set forth in 12 NYCRR Part 56.
- c. **Owner Project Fact Sheet** -The Contractor shall complete and submit as much information as possible on the Asbestos Material Fact Sheet to the University in triplicate prior to the project startup completion of the Fact Sheet shall be submitted prior to acceptance.
- d. **Patent Infringement** - The State University of New York and the State University Construction Fund have been given notice by a law firm representing GPAC, Inc. that the use of its process/procedure for asbestos containment and removal constitutes a patent infringement. All potential contractors are hereby notified that they may have to obtain a license to use certain patented Negative Air Containment systems, and that any liability of the University in connection therewith is covered by Section 2.21 of the Agreement. Therefore, all potential contractors are hereby notified that after opening of the bids they must advise the University as to the system they intend to use for Negative Air Containment and provide the University with either a copy of their license to use the same or written documentation, signed by an authorized officer of their surety, that their performance bond guarantees the Contractor's indemnification covering patent claims.
- e. **Air Monitoring** - All work to be done under this Contract shall be in compliance with Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York (cited as 12 NYCRR Part 56), as currently amended, and applicable federal and state regulations.

The Owner shall be responsible for hiring and paying an independent third party firm to perform the requirements of air monitoring as called for in 12 NYCRR Part 56 and as permitted in Section 2.17 of the Agreement.
- f. **Testing** - The University and Campus reserve the right to employ an independent testing laboratory to perform testing on the work and air sampling. The Contractor shall be required to cooperate with the testing laboratory.
- g. **Disposal Procedures** - It is the responsibility of the asbestos contractor to determine current waste handling, transportation and disposal regulations for the work site and for each waste disposal landfill. The asbestos contractor must comply fully with these regulations, all appropriate U.S. Department of Transportation, EPA and Federal, State and local entities' regulations, and all other then current legal requirements. Submit originals or copies of all pertinent manifests in triplicate to the University.
- h. **Submittals** - Prior to commencement of the work on this project, the Contractor must submit the following to the University:

- 1). Copy of original insurance policy.
 - 2). Copy of Department of Labor notification.
 - 3). Owner Fact Sheet.
 - 4). Copy of EPA notification.
- i. Special Requirements -
- 1) Size, location, and quantities of all pipes, joints, ducts, valves, tees, etc. must be field verified by all prospective bidders. Information given on the drawings and specifications is for general orientation and information only.
 - 2) The Contractor shall have at least one English-speaking supervisor on the site at all times while the project is in progress.
 - 3) Prior to the commencement of work involving asbestos demolition, removal, renovation, the Contractor must submit to the University the name of its on-site asbestos supervisor responsible for such operations, together with documentation that such supervisor has completed an Environmental Protection Agency-approved training course for asbestos supervisors.

28. Sustainable Design Reporting

When submission of environmental product declarations (EPDs) is required by the technical specifications, in addition to the individual EPD submittals, submit a list summarizing the materials/products covered by each EPD submittal and the estimated total quantities used/installed of such covered materials during the Work completed to date. As directed by the Consultant, the list shall be submitted/updated annually and at Substantial Completion. If the submitted EPDs do not show the kgCO₂ per the quantity unit used/installed for a covered material, provide such information upon request of the Consultant. Using the list and other information, the Consultant will calculate the estimated total kgCO₂ (kilograms of carbon dioxide) emission equivalent for each covered material/product used/installed.

29. Low Embodied Concrete

In accordance with State Finance Law 136-d*2, Contractors shall certify for each of the low embodied concrete mixes utilized on the project that they comply with all the requirements listed in contract documents, and meets the minimum standards established under §136-d of the State Finance Law by the office of general services. Submit an environmental product declaration (EPD), and documentation identifying the Global Warming Potential (GWP) for each of the concrete mixes.

30. Construction Waste Management

a. Definitions:

- 1) Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- 2) Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- 3) Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- 4) Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- 5) Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

The contractor shall implement a construction and demolition (C&D) waste management plan which

recycles at least 50% of the non-hazardous building C&D waste generated.

- a. In conjunction with monthly payment applications, submit a waste management reporting form for all materials transferred from the project site for recycling or disposal. Reporting form shall:
 - i. Include receipts or other documentation from the disposal and/or recycling facility of the quantity and type of materials transferred.
 - ii. Provide the name and address of the disposal facilities and/or recycling facilities where materials will be disposed or recycled.
 - iii. Report all the material quantities either by weight or volume. To convert volume into weight use the US EPA conversion rates.
 - iv. Provide documentation for materials or equipment to be removed from the site for sale or reuse, or turned over to the Campus, which are classified as recycled materials. Documentation shall include the description of the materials or equipment, weight or quantity of materials or equipment, and a receipt for the sale, a letter on Contractor's letterhead indicating the reuse or the Campus' signed receipt of materials or equipment, and the applicable fee(s) paid or payment(s) received.
 - v. Show the percentage of recycling achieved to date.
- b. Within 30 days after Substantial Completion, submit the total quantities for all C&D and the percentage of materials which were recycled.
- c. Any money received by the Contractor for materials recycled, sold or reused off site was considered when the Bid Proposal submitted to the Campus and may be retained by the Contractor. The Contractor is solely responsible for the security of any materials that may be recycled, sold, or reused.

For all construction and demolition waste that leaves Campus with a manifest, provide copies of manifests in the monthly reports. For each manifest that requires the Campus EPA ID number as the generator of the waste, submit a draft copy for the review by the Campus, make any reasonable corrections that the Campus requests, and allow one week for the Campus to review and sign each completed manifest.

b. Performance Goals:

- 1) Owner's goal is to salvage and recycle as much nonhazardous construction waste as possible but at least 50%, including the following materials:
 - a. Masonry and CMU
 - b. Lumber
 - c. Wood Sheet Materials
 - d. Wood Trim
 - e. Metals
 - f. Roofing
 - g. Insulation
 - h. Carpet and Pad
 - i. Gypsum Board
 - j. Piping
 - k. Electrical Conduit
 - l. Packaging: regardless of salvage/recycle goal indicated above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - i. Paper
 - ii. Cardboard
 - iii. Boxes
 - iv. Plastic sheet and film
 - v. Polystyrene packaging
 - vi. Wood crates
 - vii. Plastic pails

c. Waste Management Report

- 1) With each monthly payment application and concurrent with the Final Application for Payment, submit one copy of the Waste Management Report. Include separate reports for demolition and construction waste. Include the following information:
 - a. Material category

- b. Generation point of waste.
- c. Total quantity of waste recycled, actual in tons.
- d. Total quantity of waste deposited in landfill or incinerator, actual in tons.

Below is an example of an acceptable report: (notes can be included in an adjacent column)

In the table below, record the **Construction and Demolition (C&D) material** disposed of during project. This should include anything that your entity was responsible for disposing of, whether it was generated by your entity or not. If you disposed of any material that does not fit into one of the specified categories, please ensure it is captured in the "other" row.

Type	Recycled (tons)	Landfilled/Incinerated (tons)	Actual or Estimated
C&D Mixed			
C&D Wood			
C&D Asphalt			
C&D Concrete			
Scrap Metal Waste			
C&D Brick			
Other C&D Material(s) - specify			

In the table below, record material **SALVAGED** during the project. Include anything that your entity was responsible for salvaging, whether it was generated by your entity or not.

Type/Material	Salvaged and sold/reused in another facility	Salvaged and reused in project scope	Actual or Estimated

In the table below, record the **WASTE** disposed of during the project. Include anything that your entity was responsible for disposing of, whether it was generated by your entity or not.

Type/Material	Landfill/Incinerate (tons)	Actual or Estimated

31. Wage Rates and Supplements

The following are the rates of wages and supplements determined by the Industrial Commissioner of the State of New York as prevailing in the locality of the site at which the work will be performed:

Wage Schedules can be accessed online using PRC # [2025014807](https://labor.ny.gov/workerprotection/publicwork/OWSaccess.shtm) at <https://labor.ny.gov/workerprotection/publicwork/OWSaccess.shtm>. If the Contractor is unable to access the prevailing wage schedule for the PRC# listed above, please contact the University for a copy of the wage rate schedule.

SECTION 01010 - SUMMARY OF THE WORK

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- A. The title and location of the work is printed on the cover of this Project Manual.
- B. Type of Contract: Fixed price and unit pricing.
- C. Project work is described in Project Manual and drawings. The work generally consists of removal of existing grass athletic field and construction of a new paved parking lot, including but not limited to; site preparation, erosion + sediment control, grading, drainage, curbing, concrete walks, asphalt pavement, line striping / painting, traffic signage, lawn work, bus shelters, and plantings. Demolition of existing sports lighting, relocation of existing site lighting, trenching, backfill, and compaction of all electrical conduit runs, installing Owner provided new electrical site lighting bases, light poles, light fixtures, and handholes as indicated on the coordination drawings.

1.2 SEQUENCE OF WORK

- A. All shutdowns shall be scheduled and have prior approval through the Office of Facilities Planning, Design and Construction.
- B. All materials shall be on site for which work is to be progressed prior to starting any work.
- C. Two work crews may be utilized in the execution of this project if acceptable and deemed necessary.

1.3 REFERENCE SPECIFICATIONS AND STANDARDS

- A. Comply with the requirements of the various specifications and standards referred to in these specifications, except where they conflict with the requirements of these specifications. Such reference specifications and standards shall be the date of latest revision in effect at the time of receiving bids, unless the date is given.

1.4 LAYING OUT

- A. Examine the Contract Documents thoroughly and promptly; report any errors or discrepancies to the owner's project coordinator before commencing the work. Contractor is required to measure and field verify dimensions of the work area.
- B. Lay out the work in accordance with the Contract Documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01010

SECTION 01026 - PAYMENT AND COMPLETION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Schedule of values.
 - 2. Payment procedures.
 - 3. Completion procedures.

- B. Related Requirements Specified Elsewhere in the Project Manual:
 - 1. Retainage.
 - 2. Waivers of lien.

1.2 CONTRACT CONDITIONS

- A. See the conditions of the contract for additional requirements.

- B. No payment will be made for materials or equipment stored off site.

- C. Payments may be withheld if the contractor fails to make dated submittals within the time periods specified.

1.3 DEFINITIONS

- A. Final Completion: The stage at which all incomplete and incorrect work has been completed or corrected in accordance with the contract documents.

- B. List of Incomplete Work: A comprehensive list of items to be completed or corrected, prepared by the contractor for the purpose of obtaining certification of final completion. This list is also referred to as a "punchlist."

- C. Schedule of Values: A detailed breakdown of the contract sum into individual cost items, which will serve as the basis for evaluation of applications for progress payments during construction.

- D. Substantial Completion: The time at which the work, or a portion of the work which the owner agrees to accept separately, is sufficiently complete in accordance with the contract documents so that the owner can occupy or use the work for its intended purpose.

1.4 SUBMITTALS

- A. Schedule of Values: First application for payment will not be reviewed without schedule of values.

- B. Applications for Progress Payments: Submit sufficiently in advance of date established for the progress payment to allow for the processing indicated.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 SCHEDULE OF VALUES

- A. Prepare a schedule of values prior to the first application for payment.

3.2 APPLICATIONS FOR PAYMENT

- A. Application for Payment Forms: See the sample included in the project manual.
- B. Preparation of Applications for Payment: Complete form entirely.
 - 1. Make current application consistent with previous applications, certificates for payment, and payments made.
 - 2. Base application on current schedule of values and contractor's construction schedule.
 - 3. Include amounts of modifications issued before the end of the construction period covered by the application.
 - 4. Include signature by person authorized by the contractor to sign legal documents.
 - 5. Notarize each copy.
 - 4. Attach waivers of lien.
 - 7. Attach waste management reporting forms.
 - 8. Attach revised schedule of values, if changes have occurred, unless application forms already show entire schedule of values.

3.3 FIRST PAYMENT PROCEDURE

- A. The first application for payment will not be reviewed until the following submittals have been received:
 - 1. Schedule of values.
 - 2. All submittals specified to occur prior to first application for payment or prior to first payment.
 - a. First payment application may include general conditions, bonds, and insurance.

3.4 SUBSTANTIAL COMPLETION PROCEDURES

- A. Request for inspection and application for payment may coincide.
- B. The owner will perform inspection for substantial completion, upon request of the contractor.

3.5 FINAL COMPLETION PROCEDURES

- A. Request for final inspection and final application for payment may coincide.
- B. The owner will perform inspection for final completion, upon request of the contractor.
 - 1. Submit the following with request for inspection:
 - a. Previous inspection lists indicating completion of all items.
 - b. If any items cannot be completed, obtain prior approval of such delay.
- C. Submit the following with or prior to the final application for payment:
 - 1. Certified copy of the previous list of items to be completed or corrected, stating that each has been completed or otherwise resolved for acceptance.
 - 2. Products Containing Vermiculite- Consultant shall require for all new installations of materials that contain vermiculite (e.g. fireproofing, plasters, various insulations), documentation that the material is non-ACM, including submitted MSDS's indicating ACM content, or other verified testing documentation from the manufacturer that the ACM content is <1%, as determined by bulk testing and PLM analysis. This information should be submitted and reviewed with the product information, then provided in the Operation Manual to the campus at close-out.
 - 3. O&M Manuals as specified below:

2 Hard Copy O&M File:

- Within each folder/binder, each section should be clearly labeled, segregated using a stepped divider and cross-referenced back to an index.
- The index should itemize the stepped segregation dividers, be numbered, and displayed at the beginning of the first binder.

Digital O&M Manual:

- Formats will be like the 'hard copy' manual incorporating the same segregated information, but each section should be an individual PDF file.
- Should be OCR searchable PDF files.

4. Spare parts, tools, and maintenance stock as specified.
5. Final liquidated damages statement, if applicable.
6. As-built drawings if specified.
7. Specified warranties.
8. Other data required by the contract documents:
 - a. Form UF 4, Release.
 - b. Form AC 2947, New York State Labor Law, Section 220-a, Prime Contractor's Certification.
 - c. Form AC 2948, New York State Labor Law, Section 220-a, Sub-Contractor's Certification.
 - d. Form AC 2958, New York State Labor Law, Section 220-a, Sub-Sub-Contractor's Certification.

END OF SECTION 01026

SECTION 01040 - COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Permits and licenses.
 - 2. Contractor's use of the premises.
 - 3. Coordination requirements.
 - 4. Preconstruction meeting.

1.2 DEFINITIONS

- A. Furnish: To supply products to the project site, including delivering ready for unloading and replacing damaged and rejected products.
- B. Install: To put products in place in the work ready for the intended use including unloading, unpacking, handling, storing, assembling, installing, erecting, placing, applying, anchoring, working, finishing, curing, protecting, cleaning, and similar operations.
- C. Provide: To furnish and install products.
- D. Indicated: Shown, noted, scheduled, specified, or drawn, somewhere in the contract documents.

1.3 REGULATORY REQUIREMENTS

- A. Permits and Licenses: Obtain all permits and licenses required by the specifications and pay all fees, unless otherwise indicated.
 - 1. Do not include the cost of the following in the contract sum (the owner will secure and pay for them):
 - a. Building Permit.
 - b. Certificate of Compliance.
 - 2. At completion obtain releases, permits, operating certificates, etc., required by the specifications.

1.4 ACCESS TO THE SITE AND USE OF THE PREMISES

- A. The existing space will be accessible to the contractor for his use in executing the contract. The owner reserves the right to enter the property at any time for any purpose or to conduct work as necessary.
 - 1. The owner will endeavor to cooperate with the contractor's operations when the contractor has notified the owner in advance of need for changes in operations in order to accommodate construction operations.
 - 2. Conduct the work so as to cause the least interference with the owner's operations.
- B. Storage within the site for the contractor shall be allowed and shall be managed by the contractor. The contractor shall be responsible for their own security.
- C. Signs: Provide signs adequate to direct and warn visitors, staff, and students.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 PRE-CONSTRUCTION MEETING

- A. A virtual pre-construction meeting will be held at a time designated by the owner, for the purpose of identifying responsibilities of the owner, contractor and personnel and explanation of administrative procedures.
- B. The owner shall also use this meeting for any of the following agenda items:
 - 1. Construction schedule.
 - 2. Use of areas of the site; contractor parking.
 - 3. Delivery and storage.
 - 4. Safety.
 - 5. Access, security, and keys.
 - 6. Cleaning up.
 - 7. Subcontractor procedures relating to:
 - a. Submittals.
 - b. Change orders.
 - c. Applications for payment.
 - d. Record documents.
 - 8. Schedule of values.
 - 9. Temporary facilities.
 - 10. Coordination with owner's activities.
- C. Attendees may include:
 - 1. The owner.
 - 2. The architect, if applicable and any consultants.
 - 3. The contractor and superintendent.
 - 4. Major subcontractors, suppliers, and fabricators.
 - 5. Others interested in the work.

3.2 COORDINATION WITH OCCUPANTS

- A. No work may be performed between the hours of 6 p.m. and 8 a.m., or on Sundays or holidays without the express permission of the Office of Facilities Planning, Design & Construction.

3.3 SECURITY PROCEDURES

- A. Limit access to the site to persons involved in the work.
- B. Provide secure storage for materials for which the owner has made payment and which are stored on site.
- C. Secure completed work as required to prevent loss.

3.4 COORDINATION

- A. If necessary, inform each party involved, in writing, of procedures required for coordination; include requirements for giving notice, submitting reports, and attending meetings.
 - 1. Inform the owner when coordination of his work is required.
- B. See other requirements in other portions of the contract documents.

END OF SECTION 01040

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preparing and processing submittals for review and action.
 - 2. Preparing and processing of informational submittals.
- B. Submit the following for the owner's review and action:
 - 1. Shop drawings.
 - 2. Product data.
 - 3. Samples.
 - 4. Project Schedule
- C. Submit the following as informational submittals:
 - 1. Design information required by the contract documents.
 - 2. Certificates.
 - 3. Reports.
 - 4. Submittals for which procedures are not defined elsewhere.
- D. Specific submittals are described in individual sections.
- E. Do not commence work which requires review of any submittals until receipt of returned submittals with an acceptable action.
- F. Do not allow submittals without an acceptable action marking to be used for the project.
- G. Submit all submittals to the owner.
- H. Related Sections: The following are specified elsewhere in Division 1:
 - 1. Product submittals:
 - a. Operating and maintenance data.
 - b. Warranties.
 - c. Maintenance materials and tools.

1.2 DEFINITIONS

- A. "Shop drawings" are drawings and other data prepared, by the entity who is to do the work, specifically to show a portion of the work.
 - 1. Shop drawings also include:
 - a. Product data specifically prepared for this project.
- B. "Product data submittals" are standard printed data which show or otherwise describe a product or system, or some other portion of the work.
 - 1. Product data submittals also include:
 - a. Performance curves, when issued by the manufacturer for all products of that type.
 - b. Selection data showing standard colors.
 - c. Wiring diagrams, when standard for all products of that type.
- C. "Samples" are actual examples of the products or work to be installed.

- D. "Informational Submittals": Submittals identified in the contract documents as to be submitted for information only.

1.3 FORM OF SUBMITTALS

- A. All submittals are to be provided in electronic format.
- B. Samples: submit as described in individual sections.
 - 1. Architect will provide contractor written notification of approved samples and selected colors that will be retained by owner. All others will be returned.
- C. If additional sets are needed by other entities involved in work represented by the samples, submit with original submittal.
- D. All copies in excess of the number requested will be returned.

1.4 COORDINATION OF SUBMITTALS

- A. Coordinate submittals and activities that must be performed in sequence, so that the owner has enough information to properly review the submittals.
- B. Coordinate submittals of different types for the same product or system so that the owner has enough information to properly review each submittal.
- C. Submittal List: The list of submittals identified at the pre-construction meeting shows the submittals required, but it does not reflect the relative importance of each submittal.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 TIMING OF SUBMITTALS

- A. Deliver each submittal requiring approval in time to allow for adequate review and processing time, including resubmittals if necessary; failure of the contractor in this respect will not be considered as grounds for an extension of the contract time.
- B. Deliver each informational submittal prior to start of the work involved, unless the submittal is of a type which cannot be prepared until after completion of the work; submit promptly.
- C. If a submittal must be processed within a certain time in order to maintain the progress of the work, state so clearly on the submittal.
- D. If a submittal must be delayed for coordination with other submittals not yet submitted, the architect may at his option either return the submittal with no action or notify the contractor of the other submittals which must be received before the submittal can be reviewed.

3.2 SUBMITTAL PROCEDURES - GENERAL

- A. Contractor Review: Sign each copy of each submittal certifying compliance with the requirements of the contract documents.
- B. Notify the architect, in writing and at time of submittal, of all points upon which the submittal does not conform to the requirements of the contract documents, if any.

D. Transmittal of Submittals:

1. Submittals will be accepted from the contractor only. Submittals received from other entities will be returned without review or action.

3.3 SHOP DRAWINGS

A. Content: Include the following information:

1. Dimensions, at accurate scale.
2. All field measurements that have been taken, at accurate scale.
3. Names of specific products and materials used.
4. Coordination requirements; show relationship to adjacent or critical work.
5. Name of preparing firm.

B. Preparation:

1. Shop drawings are to be submitted in electronic format.

3.4 REVIEW OF SUBMITTALS

A. Submittals for approval will be reviewed, marked with appropriate action, and returned.

B. Informational submittals: Submittals will be reviewed.

3.7 RETURN, RESUBMITTAL, AND DISTRIBUTION

A. Submittals will be returned to the contractor by email.

B. Perform resubmittals in the same manner as original submittals.

END OF SECTION 01300

UNIT PRICES

A. UNIT PRICE NO. L-1 UNDERCUTTING:

1. Description: Undercutting where unsatisfactory soils are discovered. This includes excavation, removal and haul away of unsuitable material, backfill and compaction with imported granular material over stabilization fabric as specified in Section 311201. Note: 200 cubic yards to be included in Base Bid.
2. Unit of Measurement: Five (5) Cubic yards, installed.

B. UNIT PRICE NO. L-2 SOIL STABILIZATION FABRIC:

1. Description: Woven soil stabilization fabric furnished and installed as described in Section 321201.
2. Unit of Measurement: Five (5) Square yards, installed.

C. UNIT PRICE NO. L-3: MEDIUM DUTY ASPHALT:

1. Description: Medium duty asphalt, stabilization fabric and stone subbase as described in Section 321201. This includes excavation and removals for placement of medium duty asphalt.
2. Unit of Measurement: Five (5) Square yards, installed.

D. UNIT PRICE NO. L-3 STANDARD DUTY CONCRETE SIDEWALK:

1. Description: Furnish and install new standard duty concrete sidewalk as described in Section 321301 and as detailed. This includes excavation and removals for placement of standard concrete walks.
2. Unit of Measurement: Five (5) Square feet, installed.

E. UNIT PRICE NO. L-4 SODDED LAWN:

1. Description: Sodded lawn as described in Section 329201. This includes fine grading, sodding, and maintenance.
2. Unit of Measurement: Five (5) Square yards, installed.

F. UNIT PRICE NO. L-6: ROCK EXCAVATION(S):

1. Description: Rock excavation (trench or open) and removal off site as described in Section 312201. Note: 25 cubic yards to be included in Base Bid.
2. Unit of Measurement: Three (3) Cubic yards, removed.

SECTION 260000 - GENERAL REQUIREMENTS FOR DIVISION 26

PART 1 - GENERAL

1.1 BID AND CONTRACT DOCUMENTS

- A. All Work in this Division is subject to the provisions of the General Conditions, Supplementary General Conditions and Requirements of Division 1 General Requirements.

1.2 SCOPE OF WORK

- A. The scope of this Work includes lighting, power and communications systems for the project as indicated on the Contract Documents, including, but not limited to the following:
 - 1. Lighting system.
 - 2. Miscellaneous items shown and/or specified.

1.3 NEW YORK STATE LICENSE

- A. The Division 26 Contractor shall possess a license to specifically install fire alarm and security systems.

1.4 PERMITS AND INSPECTIONS

- A. Inspection Certificate: A third party independent electrical inspection and certificate is required. The independent electrical inspector shall be certified by the International Association of Electrical Inspectors.
 - 1. Commonwealth Electrical Inspection Service, Inc. (585-624-2380).
 - 2. Independent Consolidated Electrical Inspection Service, Inc. (315-735-5233).
 - 3. Middle Department Inspection Agency, Inc. (MDIA) (315-337-3480).
 - 4. New York Atlantic-Inland, Inc. (315-843-5155).
 - 5. The Inspector, LLC (315-247-9162).
- B. Permits: Contractor shall acquire all required permits required for execution of the Work of this Division and shall pay all fees and charges for same.

1.5 CODES AND STANDARDS

- A. Building Code of New York State: Provide all Work in compliance with and meet the requirements of the latest issue.
- B. National Electrical Code: All Work covered under these Contract Documents shall conform to the latest issue of the National Electrical Code.
- C. Standards: All equipment shall meet all the requirements of ANSI, NEMA, IES and IEEE standards.

- D. Listing: All equipment and devices for which Underwriters' Laboratory has a listing service, shall be UL listed and bear the UL listing label.
- E. All materials and installation shall comply with:
 - 1. Building Code of New York State.
 - 2. Energy Conservation Construction Code of New York State.
 - 3. Fire Code of New York State.
 - 4. National Fire Protection Association (NFPA).
 - 5. New York State Department of Labor Rules and Regulations.
 - 6. The Americans with Disabilities Act.
 - 7. Local Utilities.
 - 8. Authorities Having Jurisdiction.
 - 9. Federal and State Occupational Safety and Health Administration.
 - 10. Local Municipality/City Codes and Ordinances.
 - 11. F.G.I. (Facility Guidelines Institute) Guidelines for Design and Construction of Hospitals and Outpatient Facilities (2014 Edition).

1.6 LOCAL AUTHORITY HAVING JURISDICTION (AHJ)

- A. This Document does not supercede any Code, local or otherwise. All Contractors must be aware of any local requirements and Codes that may affect this project. The AHJ will make all final decisions concerning all code interpretations. Any discrepancies must be reported to the Architect or Engineer within 24 hours. Any code violations are the responsibility of the Contractor and the Contractor shall promptly make all required corrections.

1.7 QUALITY ASSURANCE

- A. All equipment shall be accessible for operation, service, etc.
- B. All equipment and material shall be new, unused and without any defects.

1.8 PROTECTION OF PERSONS AND PROPERTY

- A. Make provisions to prevent moisture and foreign matter from entering conduit, equipment, etc.
- B. Contractor shall be responsible for all damages until Work is fully accepted. Replace all damaged equipment and material.
- C. Assume responsibility for construction safety at all times. Include, as part of contract, all trench or building shoring, scaffolding, shielding, dust protection, mechanical/electrical protection, safety railings, barriers and other safety features required to provide safe conditions for all workmen and site visitors.

1.9 EXAMINATION OF SITE

- A. Examine all Drawings including other Divisions.
- B. Examine all existing conditions and ascertain access to site, available storage and delivery facilities.
- C. Verify all governing dimensions at site and building.

1.10 OBSTACLES, INTERFERENCE AND COOPERATION

- A. Drawings show general design and arrangement. Verify exact location and elevations at the job location. Do not scale plans and diagrams.
- B. Drawings do not show all offsets, fittings, interferences and elevation changes. Adjust installation of conduit, equipment location, etc. to accommodate Work with the obstacles and interferences. Where rearrangement is necessary, report same to Architect for review. Obtain written acceptance for all changes.
- C. Cooperate with all Contractors and Owner and determine the exact route of all conduit, raceway and location of all equipment.

1.11 COORDINATION

- A. Review all construction Drawings and coordinate all Shop Drawings with Work specified under all divisions of the specifications. Division 26-E is responsible to coordinate and cooperate with other Divisions' Work so that Work can be installed and maintained substantially as called for.

1.12 STORAGE AND PROTECTION OF MATERIALS

- A. Store materials on base, minimum 6" above ground or floor. Equip with waterproof or windproof cover for items subject to moisture damage.
- B. Store in orderly manner so as not to interfere with other Work or obstruct access to buildings or facilities.
- C. Replace items stolen or damaged at no cost to the Owner.

1.13 EQUIPMENT CONNECTIONS

- A. Provide complete conduit connections to all equipment as called for on Drawings and as specified.
- B. Obtain approved roughing diagrams and exact location of equipment for items furnished under other Divisions of the specifications. Do not rough without approved Drawings.

1.14 TESTS

- A. Perform operations required for the complete testing of all systems, equipment and related Work as called for.
- B. Perform all tests required by local municipalities, utilities, or other governing bodies, boards or agencies having jurisdiction. Contractor shall be responsible to notify the Owner and Owner's Representatives in writing, at least 72 hours prior to testing. Provide date and time of testing.

1.15 OWNER INSTRUCTIONS TESTS

- A. Instruct designated Owner's personnel on the proper operation and care of systems and equipment, before final acceptance of the Work. Obtain written acknowledgement from person instructed prior to final payment. Submit to Architect with final acceptance request.

1.16 CONTRACTOR'S CERTIFICATION

- A. All submittals shall bear the Contractor's stamp, certifying the review and approval of submittal, verification of field measurements and compliance with Contract Documents. It shall specifically be as follows:

Contractor acknowledges that all items submitted herein are provided for the base Contract Cost; and that he has reviewed the submittal information contained herein; and that he has determined and verified the materials, field measurements and field construction criteria related thereto, and that he has checked and coordinated the information contained in the submittal with the requirements of all Work in the Contract Documents and other Contracts in the Project.

Contractor's Signature

Date

- B. All submittals without the above certification will be returned, rejected.

END OF SECTION 260000

SECTION 260519 - WIRES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes building wires and wiring connectors and connections for power, lighting, signal, control and related systems rated 600 volts and less.
- B. Provide all labor and materials necessary to perform the Work required for the complete installation and operation of related Work on all Contract Documents.

1.2 REFERENCES

- A. National Fire Protection Association (NFPA):
 - No. 70 National Electrical Code; Article 310.
- B. Underwriters Laboratories, Inc. (UL):
 - UL 83 Thermoplastic-Insulated Wires and Cables.
 - UL 486A Wire Connectors and Soldering Lugs for use with Copper Conductors.
 - UL 493 Thermoplastic-Insulated Underground Feeder and Branch- Circuit Cables.
 - UL 2196 Standard for Tests for Fire Resistive Cables
- C. American Society for Testing and Materials:
 - Std B3 Standard Specification for Soft or Annealed Copper Wire
 - Std B8 Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard or Soft
 - Std B496 Standard Specification for Compact Round Concentric-Lay-Stranded Copper Conductors
- D. National Electrical Manufacturers Association (NEMA): Insulated Cable Engineers Association, Inc. (ICEA):
 - Std No. WC5 Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy. (ICEA S-61-402).
- E. Institute of Electrical and Electronic Engineers (IEEE):
 - Std 82 Test Procedure for Impulse Voltage Tests on Insulated Conductors.

1.3 SUBMITTALS

- A. Provide product data for electrical wires, and connectors.

1.4 QUALITY ASSURANCE

- A. Conform to applicable codes and regulations regarding toxicity of combustion products of insulating materials.
- B. Provide components that are listed and labeled by UL.

1.5 DELIVERY

- A. Mark and tag insulated conductors for delivery to the Site.

1.6 PROJECT CONDITIONS

- A. Verify that field measurements are as shown on Drawings.
- B. Wire routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required to meet Project Conditions.
- C. Where wire routing is not shown, and destination only is indicated, determine exact routing and lengths required.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - 1. Wire:
 - Cerro Wire LLC.
 - Colonial Wire & Cable Co.
 - Encore Wire Corporation.
 - Republic Wire, Inc.
 - Southwire Company.
 - United Copper Industries.
 - 2. Connectors for Wire Conductors:
 - AMP Special Industries
 - 3M Company
 - Burndy Corp.
 - Cooper Crouse Hinds
 - Dossert Mfg. Corp.
 - Hubbell Killark
 - Ideal Industries Inc.
 - O-Z/Gedney Co.
 - Thomas & Betts Corp.

2.2 WIRES

- A. Provide wire suitable for the temperature, conditions and location where installed.
- B. Use single conductor insulated wire, installed in raceway.
- C. Insulation Voltage Rating: 600 volts.

- D. Conductors: Provide solid conductors for power and lighting circuits No. 10 AWG and smaller. Provide stranded conductors for sizes No. 8 AWG and larger and for control circuits.
- E. Conductor Material: Annealed copper, 98 percent conductivity, for all wires and cables. Aluminum conductors prohibited.
- F. Insulation:
 - 1. Provide flame-retardant, heat-and moisture-resistant Polyvinyl Chloride THHN/THWN-2 insulation for all branch circuit conductor sizes, except as noted herein; General Cable Spec 5290 or accepted equal.
- G. Color coding for phase identification in accordance with the following table:

Phase	Single Phase 120/208 Volt	Three Phase 120/208 Volt	Three Phase 277/480 Volt
Ground	Green	Green	Green
Neutral	White	White	Gray
A or L1	Black	Black	Brown
B or L2	Red	Red	Orange
C or L3	---	Blue	Yellow

Where neutral conductors of different systems are installed in the same raceway or enclosure, each conductor shall have an outer covering of white with a readily distinguishable different colored stripe (not green) running along the insulation, or other and different means of identification as allowed by Section 200-6(a) or (b) of the National Electrical Code.

- H. Temperature Limitations: The temperature rating associated with the ampacity of a conductor shall be selected and coordinated so as not to exceed the lowest temperature rating of any connected termination, conductor, or device, per NEC 110.14.

2.3 CONNECTORS FOR CONDUCTORS

- A. Provide UL-listed factory-fabricated, solderless metal connectors of sizes, ampacity ratings, materials, types and classes for applications and for services indicated. Use connectors with temperature ratings equal to or greater than those of the wires upon which used.
- B. Connectors specified are part of a system. Furnish connectors and components, and use specific tools and methods as recommended by connector manufacturer to form complete connector system
- C. Splices:
 - 1. Spring Type: Amerace Corp. Elastimold Div.'s Buchanan B-Cap, Electrical Products Div./3M's Scotchlok Type Y, R, G, or B, Ideal Industries Inc.'s Wing Nuts or Wire Nuts, or Thomas & Betts Corp.'s Piggies.
 - 2. Indent Type with Insulating Jacket: Amerace Corp. Elastimold Div.'s Buchanan Pressure Connectors, Ideal Industries Inc.'s Crimp Connectors, or Thomas & Betts Corp.'s STA-KON.

3. Indent Type (Uninsulated): Burndy Corp.'s Hydent, or Thomas & Betts Corp.'s Compression Connectors.
- D. Terminals: Nylon insulated pressure terminal connectors as manufactured by Amp Special Industries, Burndy Corp., Ideal Industries Inc., Panduit Corp., Thomas & Betts Corp., or Wiremold Co.
- E. Lugs:
1. Single Conductor (Compression Type Lugs): Copper, one- or 2-hole style (to suit conditions), long barrel; Burndy Corp.'s Hylug YA, Ideal Industries Inc.'s CCB or CCBL, or Thomas & Betts Corp.'s 54930BE or 54850BE Series.
 2. Single Conductor (Mechanical Type Lugs): Copper, one- or 2-hole style (to suit conditions); Burndy Corp.'s Quicklug Series, or Thomas & Betts Corp.'s Locktite Series.
 3. Multiple Conductor (Mechanical Type Lugs): Copper, configuration to suit conditions; Burndy Corp.'s Quicklug Series, or Thomas & Betts Corp.'s Locktite Series.

2.4 TAPES

- A. Insulation Tapes:
1. Plastic Tape: Bishop Electric Corp.'s No. 85, Electrical Products Div./3M's Scotch 88, Plymouth Rubber Co.'s Premium CW.
 2. Rubber Tape: Bishop Electric Corp.'s No. W-963, Electrical Products Div./3M's Scotch 33, or Plymouth Rubber Co.'s Splicing Compound ASTM.
 3. Moisture Sealing Tape: Bishop Electric Corp.'s No. 4000T, Electrical Products Div./3M's Scotch 2200 or 2210, or Plymouth Rubber Co.'s Plyseal.
 4. Electrical Filler Tape: Bishop Electric Corp.'s No.125T, Electrical Products Div./3M's Scotchfil, or Plymouth Rubber Co.'s Slipknot Filler Tape.
 5. Color Coding Tape: Bishop Electric Corp.'s No. 112T, Electrical Products Div./3M's Scotch 35, or Plymouth Rubber Co.'s Slipknot 37.

2.5 WIRE-PULLING COMPOUNDS

- A. To suit type of insulation; American Polywater Corp.'s Polywater, Electro Compound Co.'s Y-Er-Ease, Greenlee Tool Div.'s Green 80, Gould Inc.'s Electrical Component Div.'s WGY, Hillcrest Laboratories Inc.'s Polylube 7, or Ideal Industries Inc.'s Aqua-Gel, Yellow 77 or Wire-Lube.

PART 3 - EXECUTION

3.1 GENERAL

- A. Install conductors in outside and underground raceways after raceway system is completed.
- B. No grease, oil, or lubricant other than wire-pulling compounds specified may be used to facilitate the installation of conductors.

WIRES

- C. Use nylon line, polyethylene line, or manila rope as pull-rope when installing conductors in conduits.

3.2 EXAMINATION

- A. Verify that Work likely to damage wire and cable has been completed.

3.3 WIRING METHODS

- A. Use building wire, Type THHN/THWN-2 insulation, in raceway:
 - 1. For wet or damp interior locations.
 - 2. For exterior locations.
 - 3. For underground installations.
- B. Use wiring methods indicated on Drawings.

3.4 INSTALLATION OF WIRES

- A. Install electrical wires and connectors in compliance with NEC and the manufacturers' Instructions.
- B. Completely and thoroughly swab raceway before installing wire.
- C. Pull conductors simultaneously where more than one is being installed in same raceway. Use UL listed pulling compound or lubricant for building wire No.4 AWG and larger, and for smaller conductors where approved.
- D. Use pulling means including fish tape, cable, rope, and basket weave wire grips which will not damage wire or raceways. Do not use rope hitches for pulling attachment to wire.
- E. Keep conductor splices to minimum.
- F. Install splice and tap connectors that possess equivalent or better mechanical strength and insulation rating than conductors being spliced.
- G. Use splice and tap connectors that are compatible with conductor material.
- H. Provide adequate length of conductors within electrical enclosures and train the conductors to terminal points with no excess. Bundle multiple conductors, with conductors larger than No. 10 AWG cabled in individual circuits. Make terminations so there is no bare conductor at the terminal.
- I. Neatly train and lace wiring inside boxes, equipment, and panelboards.

3.5 CIRCUITING

- A. Install a maximum of three (3) single phase circuits in a single raceway (six current carrying conductors' maximum plus three ground), unless otherwise specifically called for on the Drawings; no exceptions.

- B. Install a maximum of one (1) three phase circuit in a single raceway, unless otherwise specifically called for on the Drawings.
- C. Provide separate neutral and ground for every circuit; shared neutrals and grounds may not be used.
- D. Install conductors of size shown on Drawings. Where size is not indicated for branch circuit wiring, the minimum size allowed is No. 12 AWG.
- E. Use No. 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet.
- F. Maximum voltage drop permissible for any branch circuits or feeder circuits shall be limited to 3%.
- G. Install green copper grounding wire for every circuit.

3.6 INSTALLATION OF CONNECTORS

- A. Clean conductor surfaces before installing lugs and connectors.
- B. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
- C. Splices:
 - 1. Dry Locations:
 - a. For Conductors No. 8 AWG or Smaller: Use spring type pressure connectors or indent type pressure connectors with insulating jackets (except where special type splices are required).
 - b. For Conductors No. 6 AWG or Larger: Use uninsulated indent type pressure connectors. Fill indentations with electrical filler tape and apply insulation tape to insulation equivalent of the conductor, or insulate with heat shrinkable splices.
 - 2. Damp Locations: As specified for dry locations, except apply moisture sealing tape over the entire insulated connection (moisture sealing tape not required if heat shrinkable splices are used).
 - 3. Wet Locations: Use uninsulated indent type pressure connectors and insulate with resin splice kits or heat shrinkable splices.
- D. Terminations:
 - 1. For Conductors No. 10 AWG or Smaller: Use terminals for:
 - a. Connecting control and signal wiring to terminal strips.
 - b. Connecting wiring to equipment designed for use with terminals.
 - 2. For Conductors No. 8 AWG or Larger: Use compression or mechanical type lugs for:
 - a. Connecting cables to flat bus bars.

- b. Connecting cables to equipment designed for use with lugs.
 3. For conductor sizes larger than terminal capacity on Equipment: Reduce the larger conductor to the maximum conductor size that terminal can accommodate (reduced section not longer than one foot). Use compression or mechanical type connectors suitable for reducing connection.

3.7 FIELD QUALITY CONTROL

- A. Inspect wire for physical damage and proper connection.
- B. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.
- C. Prior to energizing, check installed wires with megohm meter to determine insulation resistance levels to assure requirements are fulfilled.
- D. Prior to energizing, test wires for electrical continuity and for short-circuits.
- E. Subsequent to wire hook-ups, energize circuits and demonstrate proper functioning. Correct malfunctioning units, and retest to demonstrate compliance.

END OF SECTION 260519

SECTION 260526 – GROUNDING AND BONDING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes general criteria required for grounding and bonding. Locations, details and extent of electrical grounding and bonding are as indicated on the Drawings and schedules and as specified herein.
- B. Provide all labor, materials and equipment necessary to perform the Work required for the complete installation and operation of Work.

1.2 REFERENCES

- A. Electrical Code Compliance: Comply with applicable local code requirements of the authority having jurisdiction and the applicable articles of NEC.
- B. UL Compliance: Comply with applicable requirements of UL Standards No.'s 467, "Electrical Grounding and Bonding Equipment", and 869, "Electrical Service Equipment", pertaining to grounding and bonding of systems, circuits and equipment.
- C. Federal Specifications: Comply with all applicable federal specifications.
- D. IEEE Compliance: Comply with applicable requirements and recommended installation practices of IEEE Standards 80, 81, 141 and 142 pertaining to grounding and bonding of systems, circuits and equipment.
- E. National Electrical Safety Code (NESC): Comply with all applicable section of the code.
- F. ANSI J-STD 607A: Commercial Building Grounding and Bonding Requirements for Telecommunications.

1.3 SYSTEM DESCRIPTION

- A. Provide all service grounding and bonding.

1.4 DEFINITIONS

- A. Ground: A conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth, or to some conducting body that serves in place of the earth.
- B. Grounded: Connected to earth or to some conducting body that serves in place of the earth.
- C. Grounded Conductor: A system or circuit conductor that is intentionally grounded.
- D. Grounding Conductor: A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.
- E. Grounding Conductor, Equipment: The conductor used to connect the noncurrent-carrying metal parts of equipment, raceways, and other enclosures to the system grounded conductor and/or the grounding electrode conductor at the service equipment or at the source of a separately derived system.

- F. Grounding Electrode Conductor: The conductor used to connect the grounding electrode to the equipment grounding conductor and/or to the grounded conductor of the circuit at the service equipment or at the source of a separately derived system.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, specifications and installation instructions.

1.6 QUALITY ASSURANCE

- A. Codes and Standards: As indicated in Article 1.2.
- B. Test the grounding resistance using an "Earth Megger", or accepted equal, per test equipment manufacturer's recommendations and submit test results for review. Submit equipment make and model with results.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver equipment in factory-fabricated containers or wrappings, which properly protect equipment from damage.
- B. Store equipment in original packaging. Store inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, humidity; laid flat and blocked off ground.
- C. Handle equipment carefully to prevent damage, breaking, and scoring of finishes. Do not install damaged units or components; replace with new.

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Ground Clamps (Cable to Pipe): Mechanical type of silicon bronze; Burndy GAR, GD, GP, GK; O-Z/Gedney ABG, CG, DG, EG, FG, HG; Thomas & Betts 3902, BU series, or accepted equal.
- B. Ground Clamp (Cable to Rod): Mechanical type of silicon bronze; Joslyn J8A92AB, McGraw Edison DN13G5, or accepted equal.
- C. Ground Lugs: Burndy Hylug YA-2L, YA-2LN, YA-2, YA-2N; Thomas & Betts 54204 series, 54850 series, or accepted equal.
- D. Exothermic Weld: Provide fusion welds specifically designed for type and size of cable, rods, etc.; Erico Products Inc. Cadweld Process, or accepted equal.
- E. Ground Rods: Copper-clad (minimum 0.10 jacket) steel ground rods, minimum ¾" diameter by 10'- 0" long, unless otherwise indicated on the Drawings.
- F. Plate Electrodes: Copper plates minimum 0.06 inches thick by 2'- 0" square feet surface area.
- G. Grounding Electrode Conduit and Bonding Conductor: Bare stranded copper, minimum #4/0. Size shall meet NFPA 70 requirements.

- H. Equipment Grounding Conductor: THWN insulated, stranded copper, size as indicated on the Drawings.
- I. Hardware: Silicon bronze bolts, nuts, flat & lock washers, etc. as manufactured by Burndy, Dossert Corp., Everdur, O-Z/Gedney, or accepted equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that final backfill and compaction have been completed before driving rod electrodes.

3.2 INSTALLATION

- A. Install products in accordance with the manufacturer's instructions.
- B. For below grade, pullbox, and other outdoor applications, make grounding and bonding connections using exothermic welds.
- C. Quantity, spacing and location of ground rods shall be as called for on the Drawings, and as required to achieve specified resistance to ground.
- D. All other connections use silicon bronze hardware and ground clamps, ground lugs or compression connectors to suit the job conditions.
- E. Solder is prohibited from connections.
- F. Provide separate insulated equipment grounding conductor within each feeder and branch circuit raceway per NEC Table 250-122 or as indicated, whichever is larger. Terminate each end on suitable lug, bus or bushing.
- G. Bond all equipment and metallic boxes per NEC. Provide bonding connection to all water pumps, including domestic water. Surface of pipe shall be thoroughly cleaned immediately prior to making connection.
- H. Conduit that only contains a grounding conductor, and is provided for its mechanical protection, shall be bonded to that conductor at the entrance and exit from the conduit.

3.3 FIELD QUALITY CONTROL

- A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.
- B. Use suitable test instrument to measure resistance to ground of system. Perform testing in accordance with test instrument manufacturer's recommendations using the fall-of-potential method.

END OF SECTION 260526

SECTION 260543 - UNDERGROUND CONDUIT SYSTEM

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes limited materials and methods required for conduit, pullboxes and associated hardware for underground conduit system. The extent, location and details of the products are as indicated in the Drawings.

1.2 REFERENCES

- A. National Fire Protection Association (NFPA):
No. 70 National Electrical Code, the following Articles:
352, Rigid Nonmetallic Conduit.
- B. Underwriters Laboratories, Inc. (UL):
UL 651 Schedule 40 and 80 PVC Conduit.
- C. National Electrical Manufacturers Association (NEMA)
NEMA, TC 6 PVC and ABS Plastic Utilities Duct for Underground Installation.
NEMA, TC 8 Extra Strength PVC Plastic Utilities Duct for Underground Installation.
NEMA, TC 9 Fittings for ABS and PVC Plastic Utilities Duct for Underground Installation.
- D. American Society for Testing and Materials (ASTM):
ASTM F 512 Standard Specification for Smooth Wall Polyvinylchloride (PVC) Conduit and Fittings for Underground Installation.

1.3 SUBMITTALS

- A. Submit all products and accessories provided under this Section.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer with five successfully completed Projects of similar scope for the installation and application of all Work stated herein.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Store and handle materials in compliance with the manufacturers' recommendations to prevent their deterioration and damage.
- B. Protect PVC conduit from sunlight.

1.6 PROJECT CONDITIONS

- A. Locate, identify, and protect electrical services passing through construction area and serving other areas outside the construction limits. Maintain services to areas outside construction limits. When services must be interrupted, install temporary services for affected areas.
- B. Conditions Affecting Excavations: The following project conditions apply:
 - 1. Maintain and protect existing building services which transit the area affected by selective construction.
 - 2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by excavation operations.
 - 3. Existing Utilities: Locate existing underground utilities in excavation areas. If utilities are indicated to remain, support and protect services during excavation operations.
 - a. Uncharted or Incorrectly Charted Utilities: Contact respective utility immediately for instructions.

1.7 SEQUENCE AND SCHEDULING

- A. Cooperate with the Owner for the shut-off and disconnection of electrical service.
- B. Notify the Owner at least seven (7) days prior to commencing construction operations.

1.8 SPARE MATERIALS

- A. Furnish two (2) Penta-Head sockets for handholes to owner and obtain receipt.

PART 2 – PRODUCTS

2.1 CONDUIT AND MATERIALS

- A. Rigid Steel Conduit and Fittings: Galvanized on the outside and inside (conduit enameled on the inside will not be accepted), as manufactured by; Allied Tube & Conduit Corp., Midwest Electric Mfg. Corp., Robroy Industries Inc., Steelduct Conduit Products, Triangle PWC Inc., Wheatland Tube Co, or accepted equal.
- B. Rigid Nonmetallic Conduit:
 - 1. PVC Plastic Schedule 40 Conduit and Fittings: Carlon Plus A or Plus 40, or accepted equal.
 - 2. PVC Plastic Schedule 80 Conduit and Fitting: Carlon Plus 80 or accepted equal.
- C. Conduit Spacers and Levelers: Commercially manufactured type to suit conduit, installation and spacing requirements.
- D. Duct Sealing: Appleton Electric Co.'s DUC Weatherproof Compound, Manville Corp.'s Duxseal, O-Z/Gedney Co.'s DUX, or accepted equal.

- E. Pull Rope: Minimum 3/4" wide flat polyester tape with 2,500 lbs. pulling strength, durably marked with accurate sequential footage marking and pre-lubricated for easy pulling and reduced friction; Condux Part No. 08096303, Neptco Part No. WP2500P, Arnco Part No. DLWP25, or accepted equal.
- F. Thru Wall Sealing Bushings:
 - 1. For Walls Which Have or Will Have Membrane Waterproofing:
 - a. Cast-In-Place Installations: O-Z/Gedney Co.'s Type FSK thruwall seal and Type FSKA membrane clamp adapter, or accepted equal.
 - b. Core Drilled or Sleeved Installations: O-Z/Gedney Co.'s Type CSM and Type CSMC with membrane clamp adapter, or accepted equal.
 - 2. For Walls Which Will Not Have Membrane Waterproofing:
 - a. Cast-In-Place Installations: O-Z/Gedney Co.'s Type FSK, or accepted equal.
 - b. Core Drilled or Sleeved Installations: O-Z/Gedney Co.'s Type CSM or Thunderline Corp.'s Link-Seal, or accepted equal.
- G. End Bells:
 - 1. For Rigid Steel Conduit: O-Z/Gedney Co.'s Type TNS, or accepted equal.
 - 2. For Rigid Nonmetallic Conduit: Conduit manufacturer's standard end bells.

2.2 MARKING TAPE

- A. For electrical Work, provide 6-inch wide, detectible heavy gauge, 4.5 mil red polyethelene with solid aluminum foil core labeled with black letters "CAUTION BURIED ELECTRIC LINE BELOW"; equal to Seton Identification Products Item #85517, or accepted equal by Craftmark Identification Systems, Kolbi Pipe Marker Co., or Panduit.

2.3 WATERPROOFING SEALS & MISCELLANEOUS HARDWARE

- A. Provide expanding link type seal for installation between conduit and sleeve or core-drilled hole in concrete; Thunderline Corp.'s, Link Seal, OZ/Gedney Co.'s type CSM, or accepted equal.
- B. For joints in precast manholes and handholes, provide preformed joint sealant made of butyl rubber material in flexible rope form, exceeding the requirements of ASTM C-990 and AASHTO M-198. Equal to Pro-Stik as manufactured by Press-Seal Gasket Corporation (1-800-348-7325).
- C. Provide miscellaneous bolts, nuts, washers, anchor bolts, inserts, fittings, rods etc. for complete and operational installation.

2.4 HANDHOLES

- A. Handholes shall be nominally 26" x 36" x 24" deep, with open bottom.

- B. Handholes shall be constructed of high strength, precast combination polymer concrete and fiberglass reinforced resin system, UL listed and meeting or exceeding ANSI/SCTE 77. Covers shall be gasketed, extra heavy-duty bolt-down type, constructed of similar material. Furnish two (2) bolt sockets per Article 1.8.
- C. Covers shall be bolted to handhole body with captive stainless-steel bolts and self-centering fasteners.
- D. Handhole shall have one-piece, gasketed heavy duty solid cover, exceeding the ANSI/SCTE 77 Tier 15 test provisions with a vertical design load of 22,500 lbs. with a test load of 33,750 lbs. over a 10" x 20" plate.
- E. Provide identification lettering cast into top of handhole cover to identify type of service (electric, communications, site lighting, telephone, etc.) contained in handhole.
- F. Make: Hubbell Quazite PG1324 series with HH-series cover, or accepted equal by CDR Systems Corporation, Highline Products, New Basis, or Oldcastle Precast.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Before installing any Work, layout the proposed course for the conduits, location of handholes, etc. and have same accepted.

3.2 INSTALLATION OF CONDUITS

- A. Types and Locations of Conduits:
 - 1. Rigid Steel Conduit (Direct Burial and Concrete Encased): May be installed in locations as specifically indicated on the Drawings.
 - 2. Rigid Nonmetallic Conduit Schedule 40 (Direct Burial and Concrete Encased): May be installed in locations as specifically indicated on the Drawings.
 - 3. Rigid Nonmetallic Conduit Schedule 80 (Direct Burial): May be installed in locations as specifically indicated on drawings.
- B. Spacing:
 - 1. Conduit Bank: Separate individual conduits a minimum of 3 inches. Use spacers and levelers located no more than 8 feet apart.
- C. Depth:
 - 1. Existing Grade to Remain: Unless otherwise indicated or directed, install conduit 36 inches below existing finished grade.
 - 2. Existing Grade to Be Altered: Unless otherwise indicated or directed, install conduit more than 18 inches below the existing grade where the finished grade is to be higher than the existing grade. Where the finished grade is to be lower than the existing grade, install conduit 36 inches below finished grade.

3. Under Roads and Parking Lots:
 - a. Rigid Steel Conduit (Direct Buried) or Rigid Nonmetallic Conduit (Concrete Encased): Unless otherwise indicated or directed, install a minimum of 30 inches below top surface of roads and parking lots.
 4. Crossing Obstructions: Use rigid steel conduit when crossing obstructions (sanitary lines, storm lines, etc.).
 5. In Rock: Unless otherwise indicated on the Drawings, install rigid steel conduit or concrete encased nonmetallic conduit at depths previously specified.
- D. Pitch:
1. Pitch conduit toward manholes.
- E. Cleaning Conduits: Take precautions to prevent foreign matter from entering conduits during installation. After installation, clean conduits with tools designed for the purpose.
- F. Sealing Ends of Conduits:
1. Occupied Conduits: Seal ends of conduits to be used for work of this Contract until cables are to be installed. After cable installation, seal conduits at building entrances and pullboxes outside building. Seal with duct seal.
- G. Marking Tape: Locate marking tape directly above full length of conduit or ductbank and approximately 12 inches below finished grade. Use metallic detection type for non-metallic underground installations.

3.3 INSTALLATION OF HANDHOLES

- A. Install in accordance with manufacturer's instructions and requirements.
- B. Install handholes plumb.
- C. Set the top of each handhole to finished elevation.
- D. Install 18" thick layer of crushed stone, #2 tamped for open bottom handholes placement.

END OF SECTION 260543

SECTION 260553 - ELECTRICAL IDENTIFICATION

PART 1 – GENERAL

1.1 SUMMARY

- A. Identification of Electrical products, equipment and conduit and cable systems installed under Division 26, including but not limited to the following:
 - 1. Buried electrical line warnings.
 - 2. Identification labeling for raceways, and conductors.
 - 3. Operational instruction signs.
 - 4. Warning and caution signs.
 - 5. Equipment labels and signs.
- B. Provide identification on all equipment, raceways, boxes, conductors and devices. Electrical identification includes, but is not limited to, warning signs, nameplates, cable tags, wire markers, phase identification tape, identification labels and nominal system voltage designation labels.
- C. Electrical identification shall be permanent, machine printed, appropriately sized and provided such that it is easily read upon approach or within enclosures.

1.2 REFERENCES

- A. ANSI/ASME A13.1 – Scheme for the Identification of Piping Systems.
- B. NFPA 70 – National Electrical Code.
- C. Other Division 26 Sections for additional specific electrical identification associated with specific items.

1.3 SUBMITTALS

- A. Submit product data for electrical identification.
- B. Submit list of wording, symbols, letter size, and color coding for electrical identification.
- C. Submit schedule with type of identification to be utilized for each system.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - 1. Allen Systems Inc.
 - 2. American Labelmark Co.
 - 3. Calpico, Inc.

4. Cole-Flex Corp.
5. Emed Co., Inc.
6. George-Ingraham Corp.
7. Glen Ellen, Inc.
8. Ideal Industries, Inc.
9. Kraftbilt
10. LEM Products, Inc.
11. Markal Corp.
12. National Band and Tag Co.
13. Panduit Corp.
14. Radar Engineers Div., EPIC Corp.
15. Seton Name Plate Co.
16. Standard Signs, Inc.
17. W.H. Brady Co.

2.2 MATERIALS

- A. Adhesive Marking Labels for Raceways: Pre-printed, flexible, self-adhesive labels with legend indicating voltage and service (EMERGENCY, LIGHTING, POWER, LIGHT, POWER D.C., AIR CONDITIONING, COMMUNICATIONS, CONTROL, FIRE ALARM, etc.).
 1. Label Size: as follows:
 - a. Raceways 1 Inch and Smaller: 1-1/8 inches high by 4 inches long.
 - b. Raceways Larger than 1 Inch: 1-1/8 inches high by 8 inches long.
 2. Color: Black legend on orange background.
- B. Underground Line Marking Tape: Warning tape of continuous lettering and capable of being identified by a metal detector.
 1. For electrical Work, provide 6-inch wide, detectible heavy gauge, 4.5 mil red polyethylene with solid aluminum foil core labeled with black letters "CAUTION BURIED ELECTRIC LINE BELOW"; equal to Seton Identification Products Item #85517, or accepted equal by Craftmark Identification Systems, Kolbi Pipe Marker Co., or Panduit.
- C. Wire Designation Tape Markers: Vinyl or vinyl-cloth, self-adhesive, wraparound, cable/conductor markers with preprinted numbers and letter.

- D. Aluminum, Wraparound, Cable Marker Bands: Bands cut from 0.014 inch thick, aluminum sheet, fitted with slots or ears for securing permanently around wire or cable jacket or around groups of conductors. Provide for legend application with stamped letters or numbers.
- E. Plasticized Card Stock Tags: Vinyl cloth with preprinted and field-printed legends to suit the application. Orange background, except as otherwise indicated, with Eyelet for fastener.
- F. Baked-Enamel Warning and Caution Signs for Interior Use: Preprinted aluminum signs, punched for fasteners, with colors, legend, and size appropriate to the location and use.
- G. Exterior Metal-Backed Butyrate Warning and Caution Signs: Weather-resistant, nonfading, preprinted cellulose acetate butyrate signs with 20-gauge, galvanized steel backing, with colors, legend, and size appropriate to the location and use. Provide 1/4-inch grommets in corners for mounting.
- H. Fasteners for Metal Signs: Self-tapping stainless-steel screws or number 10/32 stainless steel machine screws with nuts and flat and lock washers.
- I. Phenolic for Electrical Equipment: Two color laminated engravers stock, 1/16 inch minimum thickness, machine engraved to expose inner core color (white).

PART 3 – EXECUTION

3.1 PREPARATION

- A. Degrease and clean surfaces to receive adhesive for identification materials and for stencil painting.

3.2 INSTALLATION

- A. Lettering and Graphics: Coordinate names, abbreviations, colors, and other designations used in electrical identification work with corresponding designations specified or indicated. Install numbers, lettering, and colors as approved in submittals and as required by code.
- B. Install identification devices in accordance with manufacturer's written instructions and requirements of NEC.
- C. Sequence of Work: Where identification is to be applied to surfaces that require finish, install Identification after completion of finish Work.
- D. Disconnect Switches:
 - 1. Provide nameplate with equipment identification as indicated on Drawings.
 - 2. Indicate source and location of the source.
 - 3. Provide nominal system voltage designation labels on cover.
 - 4. For disconnect switches and enclosed circuit breakers, indicate the equipment designation and location which the disconnect serves.

- E. Raceway Identification:
1. Low Voltage Raceways: Identify each exposed raceway shown on the single line riser diagram every 20 feet with the installed conductor operating voltage and distribution system designation using adhesive marking labels. Use red base for emergency feeders and black base for normal feeders. (I.e. 208 VOLT LIFE SAFETY, 480 VOLT GENERAL, 240 VOLT NORMAL, 277 VOLT EMERGENCY, etc.).
 2. Clean surface of dust, loose material, and oily films before applying adhesive labels.
 3. Empty Conduit Runs and Conduits with Conductors for Future Use:
 - a. Provide cable tags and identification labels.
 - b. Indicated proposed future use.
 - c. Label conduits and conductors at both ends, including location of the other end.
- F. Identify Junction Boxes, Pull Boxes and Enclosures: Code-required caution sign for boxes shall be pressure-sensitive, self-adhesive label indicating nominal system voltage with feeder, branch circuit and control circuit numbers in black, preprinted on orange background. Install on outside of box cover. Also label box covers with identity of contained branch circuits, feeders and control circuits, the sources and locations of the sources and the loads and locations of the loads served.
- G. Underground Electrical Line Identification: During trench backfilling, for exterior underground power, install continuous underground line marker located directly above full length of ductbank and approximately 12 inches below finished grade. Use metallic detection type for all underground installations. Where multiple types of lines are installed in a common trench or concrete envelope, install multiple line markers.
- H. Conductor Identification: Securely fasten identifying metal tags of aluminum wraparound marker bands to cables, feeders, and power circuits in vaults, pull boxes, junction boxes, manholes, and switchboard rooms with 1/4-inch steel letter and number stamps with legend to correspond with designations on Drawings. If metal tags are provided, attach them with approximately 55-lb test monofilament line or one-piece self-locking nylon cable ties.
1. Tag or label conductors as follows:
 - a. Future Connections: Conductors indicated to be for future connection or connection under another contract with identification indicating source and circuit numbers.

- e. Other systems.
 - f. Time Clocks.
2. Refer to appropriate sections for other nameplate and device plate marking requirements and nomenclature.
 3. Attach nameplates mechanically after finish painting.
- K. Install labels at locations indicated and at locations for best convenience of viewing without interference with operation and maintenance of equipment.

END OF SECTION 260553

SECTION 265113 – LIGHTING

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes general construction criteria required for luminaires, exit lights and associated lamps and ballasts. The extent, location and details of luminaires are indicated on the Drawings and in schedules.
- B. Types of luminaires in this Section include the following.
 - 1. Light Emitting Diode (LED)

1.2 REFERENCES

- A. Electrical Code Compliance: Comply with applicable local code requirements of the authority having jurisdiction and NEC Articles 220, 410, and 510 as applicable to installation, and construction of building luminaires.
- B. Energy Conservation Construction Code of New York State.
- C. National Fire Protection Association (NFPA):
 - No. 70 National Electrical Code
 - No. 101 Life Safety Code
- D. NEMA Compliance: Comply with applicable requirements of NEMA Stds Pub/No.'s LE 1 and LE 2 pertaining to lighting equipment.
- E. IES Compliance: Comply with IES pertaining to general lighting practices.
- F. UL Compliance: Comply with UL standards, pertaining to luminaires. Provide luminaires and components that are UL-listed and labeled.

1.3 SYSTEM DESCRIPTION

- A. Provide all luminaires, lamps, drivers and accessory equipment as shown on the Drawings and specified herein.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions on each type of lamp, building luminaires and related components.
- B. Listed manufacturers and their series and/or model numbers do not imply unconditional specification approval. The series and/or model numbers listed may not be current, but are included as an acceptable series of products that must still comply with the written description and specification. Custom modifications may be required to make the series and/or model numbers listed comply with these written descriptions and specifications.

- C. Shop Drawings: Submit luminaire shop drawings in booklet form with a separate sheet for each luminaire assembled in alphabetical or numerical order, with proposed luminaire and accessories clearly indicated on each sheet. Include a typed index, listing luminaire type designations, luminaire manufacturer, complete catalog number and ballast type. At bottom of page, indicate complete listing of lamps that are to be used; include manufacturer name and complete catalog numbers.
- D. Point-By-Point Footcandle Calculations: Submit point-by-point footcandle calculations where specifically called for as part of submittal package, for approval.
- E. Samples: Submit one workable sample of each product if different from manufacturer specified herein, to aid in analyzing the submittal. Finish samples, factory drawings, special test data, etc, may also be requested by the Engineer.
- F. Maintenance Data: Submit maintenance data and parts list for each luminaire and accessory; including "trouble-shooting" maintenance guide. Include that data, product data, and shop drawings in a maintenance manual.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of luminaires of sizes, types and rating required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer's Qualifications: Firms with at least five successfully completed projects of similar scope.
- C. Codes and Standards: As indicated in Article 1.2.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver luminaires in factory- fabricated containers or wrappings, which properly protect luminaires from damage.
- B. Store luminaires in original packaging. Store inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, humidity, laid flat and blocked off ground.
- C. Handle luminaires carefully to prevent damage, breaking, and scoring of finishes. Do not install damaged units or components; replace with new.

1.7 SEQUENCING AND SCHEDULING

- A. Properly interface installation of luminaires with other Work.
- B. Protect lighting installation to minimize possibility of damage and soiling during remainder of construction.

1.8 SPARE MATERIALS

- A. Provide two of each type lens.
- B. Provide two (2) of each LED array boards for each different type of interior LED luminaire installed.
- C. Provide two (2) of each LED driver type.

- D. Provide one of each type of tamperproof screwdriver for equipment furnished with tamperproof hardware.
- E. Obtain signed receipts from Owner for extra materials.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Available manufacturers are subject to compliance with the requirements set forth herein.
- B. Listed manufacturers and their series and/or model numbers do not imply unconditional specification approval. The series and/or model numbers listed, are included as acceptable series of products that must still comply with the written description and specification. Custom modifications may be required to make the series and/or model numbers listed comply with these written descriptions and specifications.

2.2 LAMPS

- A. Light Emitting Diode (LED) Type: Electrical and photometric performance of LED lamps and LED luminaires shall be both IES LM-79 and LM-80 tested and compliant. As a general rule, provide 3500 degree Kelvin temperature for indoor applications and 4000 degree Kelvin temperature for outdoor applications, unless otherwise noted. Provide of U.S. manufacture and company in business for a minimum of 10 years.
 - 1. For color consistency, provide 3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color.

2.3 EXTERIOR LUMINAIRE TYPES

- A. General Requirements:
 - 1. Outdoor luminaires required are indicated below and must comply with the minimum requirements stated herein.
 - 2. Use heavy duty die cast aluminum construction with stainless steel hardware for maximum corrosion resistance.
 - 3. All luminaires, including custom and modified types, shall carry the UL label.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions under which luminaires are to be installed, and substrate for supporting luminaires. Notify in writing of conditions detrimental to proper completion of the Work.
- B. Examine each luminaire to determine suitability for lamps specified.

3.2 INSTALLATION OF LUMINAIRES

- A. Install luminaires at locations and heights as indicated, in accordance with luminaire manufacturer's written instructions, applicable requirements of NEC, NECA'S "Standard of Installation", NEMA standards, and with recognized industry practices to ensure that luminaires fulfill requirements.
- B. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Stds 486A and B, and The National Electrical Code.
- C. On exterior luminaires, all fastening devices shall be stainless steel or other acceptable non-rusting material. Outlet boxes shall be cast types that are rigidly anchored.
- D. All exterior luminaires shall be provided with internal fusing, whether specified or not.
- E. Use clean, white cotton gloves when handling parabolic and paracube wedge louvers, anodized reflectors, glass lenses, or other parts subject to fingerprints.
- F. Immediately prior to substantial completion, replace lamps in luminaires that are observed to be broken, damaged or noticeably dimmed after Contractor's use and testing and at no additional expense to the Owner.
- G. Furnish stock or replacement parts as stated in Article 1.8. Deliver replacement stock as directed to Owner's storage space.

3.3 FIELD QUALITY CONTROL

- A. Operate each luminaire after installation and connection. Inspect for proper connection and operation.
- B. Verify exterior luminaire line fusing is sized specifically for the lamp installed.

3.4 ADJUSTING AND CLEANING

- A. Clean luminaires of dirt and construction debris upon completion of installation. Clean fingerprints and smudges from lenses and photometric control surfaces.
- B. Protect installed luminaires from damage during remainder of construction period.
- C. Aim and adjust luminaires as directed.
- D. Relamp luminaires that have failed lamps. Replace fuses that may have failed.

3.5 WIRING

- A. Do not use luminaire as a raceway except as allowed in NEC article 410-31. Wiring to luminaire shall be 90 degrees C wire minimum.
- B. Switching control groups shall be exactly as indicated on Drawings. In areas that have multi-level control, switch positions shall be carefully maintained.

- C. Provide equipment grounding connections for luminaires as indicated. Tighten connections to comply with tightening torques specified in UL Std 486A to assure permanent and effective grounds.

3.6 SCHEDULE

- A. Light Emitting Diode (LED) Luminaire Types:
 - 1. Refer to Drawings for Luminaire Schedule.

END OF SECTION 265113

SECTION 311201 - SITE PREPARATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

The general provisions of the Contract, including General and Supplementary Conditions and General Requirements (if any), apply to the work specified in Division 31, 32 and 33.

1.2 DESCRIPTION OF WORK

- A. The extent of site preparation is shown on the drawings.
- B. Site preparation work includes, but is not limited to, the following:
 - 1. Site investigation and underground utility identification (GPR)
 - 2. Protection of existing trees, shrubs, and lawns to remain
 - 3. Topsoil stripping and stockpiling on site (See Section 329201)
 - 4. Site clearing and removals
 - 5. Temporary construction fences and gates
 - 6. Saw cutting
 - 7. Relocations/salvaged materials
 - 8. Clean up
- C. Provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 312201 - Site Earthwork
- B. Section 329201 – Sodded Lawns
- C. Section 334001 - Storm Drainage

1.4 SITE INVESTIGATION

- A. A site visit before bidding is recommended so the Contractor can inform and familiarize themselves of all site conditions, including but not limited to, site topsoil, sub-soil, subsurface and groundwater conditions affecting proposed work.
- B. Verify locations and protect utilities and structures, whether or not shown on the drawings. Existing utilities and structures shown on the drawings are for the Contractor's convenience and locations are not guaranteed.
- C. Verify survey information given on drawings. Walk the site with the Owner's Representative to discuss approximate locations of reputed utilities shown and not shown on the survey, prior to performing work. The Contractor shall provide and perform Ground Penetrating Radar (GPR) utility location prior to performing any excavation. Notify the Architect of any and all discrepancies prior to commencing any work. Commencement of any work will be construed as complete acceptance of survey information.
- D. Contractor shall provide Test Pits at all connection points at existing utilities and at all utility crossings to verify utility locations, size, type, invert, and elevations PRIOR to ordering and taking delivery of materials for construction. Notify the Architect and Owner

of finding immediately. Contractor shall furnish all labor and materials to accomplish at no additional cost to the Owner.

- E. Locate and protect from disturbance existing survey monuments, pins, markers, and benchmarks whether or not shown on drawings. When any disturbance or damage occurs, notify Architect in writing within 24 hours. Describe nature of disturbance or damage and date first occurred. Provide copies to applicable government and municipal agencies. Pay costs for restoring monument to satisfaction of said agencies, at no additional expense to the Owner.

1.5 JOB CONDITIONS

- A. The terms "Architect" and "Landscape Architect" for Divisions 31, 32 and 33 work shall mean Appel Osborne Landscape Architecture, 102 West Division St., Suite 100, Syracuse, NY 13204, Tel. (315) 476-1022. or other representative(s) that SUNY Cortland may determine.
- B. Examine drawings and specifications for the entire project. Become familiar with the scope and sequencing of work required. Coordinate and cooperate with other Contractors and trades working in and adjacent to the project.
- C. Examine work prepared prior to this contract. Commencement of work will be construed as complete acceptance of all preparatory work by others.
- D. Obtain and pay for permits required by authorities. Perform the work in compliance with applicable standards, codes and requirements of governing authorities having jurisdiction.
- E. Safety is the sole responsibility of the Contractor.
- F. Burning on site and use of explosives are not permitted.
- G. Responsibility for existing utilities:
 - 1. Contact Dig Safely New York at least two (2) full working days, and not more than ten (10) working days, before digging begins or as required by latest state law. Locate by hand excavation and provide protection from damage to existing utilities to remain in the area. (Tel. 811)
 - 2. Existing utilities encountered within excavated areas shall be supported, blocked and/or braced in a manner approved by the owner of the utility. Leave supports in place to the extent required by the owner of the utility.
 - 3. Should uncharted or incorrectly charted utilities be encountered, notify the Architect immediately for directions as to procedure.
 - 4. Do not break utility connections without providing temporary services as acceptable to the Architect and the owner of the utility.
 - 5. Repair and pay for damages to existing utilities as directed by utility Owner at no additional cost to the Owner.
 - 6. Cap ends of utilities to be abandoned or removed in accordance with regulatory agencies and as directed by the Architect.

- H. Provide protections and conduct operations to prevent injury and damage to persons, work of other Contractors, existing items to remain, structures, pavements, lawns, and adjacent properties.
- I. Restore work damaged by this Contractor inside and outside the contract limits to the condition existing prior to the start of work, unless otherwise directed, to the satisfaction of the Architect at no additional cost to the Owner.
- J. Vehicular and pedestrian traffic control:
 - 1. Maintain vehicular and pedestrian traffic during construction activities.
 - 2. Provide alternate routes and traffic control around closed and obstructed traffic ways as required by governing regulations or the Owner.
 - 3. Provide temporary fencing, flagpersons, barricades, warning signs, and warning lights or other measures to protect the public and cause the least interruption of work.
- K. Field Measurements: Take necessary field horizontal and vertical measurements required in order to perform the work and design intent shown on the drawings and outlined in the specifications. Assume complete responsibility for accuracy of such measurements and dimensions.
- L. Removal of spoils, dust control, debris, snow and clean up:
 - 1. Control air pollution caused by dust and dirt; comply with governing regulations. Water to control dust when necessary and as directed by the Architect or Certified Erosion Control Specialist. Provide water sprinkling materials, equipment and labor to prevent the nuisance of dust to the surrounding areas.
 - 2. Legally dispose of removed and demolished items, including trash and debris, off the Owner's property, at a licensed disposal facility having adequate capacity to accept the project's waste.
 - 3. Burning of combustible materials on the site is not permitted.
 - 4. During the contract and at intervals as directed by the Architect, clear the site of extraneous materials, rubbish, construction waste, and debris. Leave the site in a clean, safe, neat, well-draining condition.
 - 5. Soil and Snow Removal: Sweep roads, access ways, paved areas, and parking areas where soil, mud and debris have dropped or tracked from construction and delivery vehicles on a daily basis and as directed by the Architect or Certified Erosion Control Specialist. Remove snow and ice from roads, access ways, paved areas and parking areas utilized for site construction purposes.
 - 6. Spoils: Remove from site and dispose when not required for fill or determined to be unsatisfactory soil material per Section 312201 - Site Earthwork.
- M. Construction Review - General: Site visits will be made by the Architect to observe construction conformance to drawings and specifications. The occasional site visits by the Architect shall not be construed as supervision of construction or make them responsible for the safety programs and precautions, including but not limited to: the safe access, visit, use, work travel, or occupancy of any person. Site visits shall not make the

Architect responsible for means, methods, techniques, sequences or procedures of construction selected by the Construction Manager, Contractor or his Sub-contractors.

- N. Site Complexity: The existing site will be intensively developed. Because of the construction and resulting graphic complexity, it is impractical to show every detail. However, the general design intent is clearly shown and shall be applied to individual conditions not specifically shown as directed by the Architect and at no additional cost to the Owner.
- O. Asbestos, Toxic and Hazardous Materials: The Division 31, 32 and 33 site work contract does not include testing for, handling or removal of hazardous materials such as, but not limited to: asbestos, fuel, oil, PCB's, or other toxic or hazardous waste materials as identified by the EPA and/or NYSDEC. If any such materials are encountered during any part of the site work, the Contractor is responsible for identifying potential hazardous material and immediately notify all governing agencies having jurisdiction as required by law. Also, within one (1) hour of discovery notify the Architect, Landscape Architect, Consultants, and Owner. The Owner shall provide testing and removal by others, under separate contract. The Contractor shall recommence work under this contract when the Owner provides written certification that remediation is complete per governing agency. The Contractor shall not be penalized for any delays caused by the hazardous testing and removal, unless such hazardous material incident was a result of Contractor's operations. The Contractor shall indemnify and hold harmless the Architect, Landscape Architect, Consultants and Owner, agents, and employees from and against all claims, damages, losses and expenses, direct and indirect or consequential damages, including but not limited to fees and charges of attorneys and court and arbitration costs, arising out of or resulting from the performance of the work by the Architect, Landscape Architect, Consultants and Owner, or claims against the Architect, Landscape Architect, Consultants and Owner arising from the work of others, related to hazardous waste.

The above indemnification provision extends to claims against the Architect, Landscape Architect, Consultants and Owner which arise out of, are related to, or are based upon, the dispersal, discharge, escape, release or saturation of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, or pollutant in or into the atmosphere, or on, onto, upon, in or into the surface or subsurface soil, water or water courses, objects, or any tangible or intangible matter, whether sudden or not.

Should the hazardous material incident be the result of the Contractor's operations, the Contractor shall be responsible for all costs associated with the discovery and remediation of such hazardous material such as, but not limited to: testing, consultant fees, damage, loss, fees and charges of attorneys, court and arbitration costs, claims by other contractors, direct and indirect or consequential damages.

- P. Salvageable Items: Remove at any time after work starts. Storage or sale on site of salvageable and removed items is not permitted. Do not remove topsoil from site without written permission from the Owner.

1.6 SUBMITTALS:

- A. Provide photographic documentation. Photographically document existing features which, may be affected by the construction, inside and outside the contract limit line. Existing features include, but are not limited to: structures, pavements, curbs, utilities, lawns and vegetation, especially individual trees which are over six (6") inches in diameter and noted to remain on the drawings. Also, particular attention shall be paid to the construction access, stockpile and haul road areas. Distribute a copy of the

photographic documentation (digital format) to the Owner and Architect prior to the start of construction.

- B. Temporary Chain Link Fence and Gates Manufacturer's Product Data (MPD).

PART 2 - PRODUCTS

2.1 TEMPORARY CHAIN LINK FENCE AND GATES

- A. Shall be new or good quality 6'-0" height galvanized chain link fence and gates.
- B. Layout of temporary fencing and gates shall be completed to surround the entire site with temporary fencing as directed by the Owner to prevent student access to the project site.

2.2 PLASTIC FENCE

- A. Shall be new or good quality used 4'-0" high heavy duty orange plastic fence NC450.
- B. Posts shall be new or good quality U-channel posts to hold plastic fence.

2.3 OTHER PROTECTIVE DEVICES

- A. Shall include, but not be limited to; wood planks, rubber mats, barriers, lights, barricades, coverings, traffic controls, steel plates, and other temporary protections.
- B. Contractor to provide all necessary protections required by Occupational Safety and Health Administration (OSHA).

PART 3 - EXECUTION

3.1 PROTECT EXISTING VEGETATION TO REMAIN

- A. Prior to commencing site preparation work, notify Architect, and meet on site to locate existing trees, lawns and vegetation which are to remain.
- B. Protect and keep existing vegetation to remain free from physical damage. Keep in a healthy, vigorous growing condition for the entire construction period as follows:
 - 1. Keep site disturbance and staging limits to a minimum. Obtain approval from Owner for material and equipment storage areas. Limit access points and routes to the project site. Coordinate site access with other trades and contractors on the work site.
 - 2. Groups of Trees and Vegetation: Place orange plastic construction fencing around drip line(s) of trees and plant beds as detailed or directed by the Architect. Do not store materials, run equipment, park vehicles, or otherwise disturb area within the drip line (full canopy of tree) or in plant beds.
 - 3. Specimen and Individual Trees: Protect each as noted and detailed. Do not store materials, run equipment, park vehicles or otherwise disturb area within the drip line (full canopy of tree).
- C. Rejuvenate damaged vegetation by pruning watering, fertilizing, staking and other methods as directed by the Architect. Replace trees and other vegetation that cannot be

restored to full growth with comparable size, quantity, quality and species as determined by the Architect.

- D. Repair lawns disturbed due to construction operations outside the grading limits, as specified and directed by the Architect. Provide screened topsoil, seed, and mulch over damaged lawn areas, access ways or where tire rutting occurred.

3.2 TOPSOIL STRIPPING AND STOCKPILING ON SITE

- A. Strip full depth of existing topsoil from areas to be regraded, paved, or otherwise built upon. When amount of available topsoil exceeds what is indicated in geo-tech/boring report, on site test pits, or Contractor assumed depth, continue to remove all topsoil and lower the paved or built element subgrade. Place additional satisfactory earth fill in uniform depths as indicated in the Site Earthwork Section 312201. Maintain finished grades as shown on the drawings. This work shall be done at no additional cost to the Owner.
- B. Minimum quantity of topsoil shall be as needed to provide five (5") inches settled depth on lawn areas. Verify quality and quantity. Supply imported topsoil when amount of available topsoil meeting above requirements is less than what is required for the proposed lawn areas. See Section 329201 for imported topsoil requirements.
- C. When amount of available topsoil meeting above requirements exceeds what is required for the proposed lawn areas, haul and dispose of additional topsoil offsite. Maintain finish grades as shown on the drawings. This work shall be performed and supplied at no additional cost to the Owner.
- D. Topsoil shall be well drained, homogeneous texture soil of uniform grade, without the admixture of subsoil material. Topsoil shall be free of dense material, hardpan, and stone over three-quarters (3/4") inch in diameter, and other objectionable foreign material including, but not limited to, brick, concrete, asphalt, glass, nails, screws, toxins, hazardous wastes and chemicals (such as, but not limited to, atrizene and muriatic acid) that may be injurious to humans, animals and plant materials.
- E. Stockpile on site in a location as directed by the Owner. Provide all hauling as necessary. Do not mix topsoil stockpiles with other materials. Stabilize and maintain all stockpiles as specified. Excess topsoil, not needed for proposed lawns, as specified, shall be loaded and hauled offsite at no additional cost to the Owner.

3.3 SITE CLEARING AND REMOVALS

- A. Items and materials noted to be removed shall become the property of the Contractor, unless otherwise noted. Obtain Owner's approval prior to removal off site or for relocation of salvaged material on site. Remove material off site and legally dispose of it. Backfill voids with imported granular backfill, placed in eight (8") inch layers compacted to 95% maximum density.
- B. Remove physical elements above and below grade as shown and which interfere with proposed construction. Physical elements include but are not limited to: trees, root systems, shrubs, vines, grass, vegetation, pavements, walks, curbs, gutters, foundations, previous construction materials, glass, headwalls, flared end sections, catch basins, manholes, inlets, drywells, septic tanks, unused utilities, pipes, cisterns, walls, rocks, and other debris.
- C. Trees, shrubs and roots shall be completely removed and disposed of legally off site.

- D. Maintain existing utilities shown to remain and protect from damage during demolition and construction operations. Do not interrupt existing utilities; provide temporary services when required, as acceptable to the Architect.
- E. Research with Owner possible locations of existing subsurface utilities prior to excavating.

3.5 SAW CUTTING

- A. The Work consists of vertical saw cutting of the existing asphalt or concrete pavement structure to facilitate the removal of the asphalt or concrete bound material.
- B. The equipment shall be capable of producing a smooth vertical saw cut without causing damage to the adjacent pavements or related site features.
- C. The Contractor shall saw cut the asphalt/concrete pavement to a depth which will allow removal of the material without causing damage to the adjacent pavement. Rough, jagged or cracked edges will not be acceptable. Concrete pavement shall be removed at the nearest contraction joint.

3.6 RELOCATIONS

- A. Any item noted to be relocated shall be removed by the Contractor from its existing position without damaging it, stored, protected from theft, fire, vandalism and damage for the project duration. Reset in the location(s) and in the manner detailed, noted on the drawings or specified.
- B. Backfill voids with imported granular fill material, placed in eight (8") inch layers compacted to 95% maximum density when located in proposed pavement areas or 90% maximum density when located in proposed non-paved areas.
- C. Salvaged items shall be returned to the Owner as noted on the drawings. Move items to Owner designated areas.

3.7 CLEAN UP

During the contract and at intervals as directed by the Architect and as site preparation is completed, clear the site of extraneous materials, rubbish, and debris. Leave the site in a clean, safe, well draining, neat condition.

END OF SECTION 311201

SECTION 312201 - SITE EARTHWORK

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of site earthwork and site grading is shown on the drawings.
- B. Site earthwork includes, but is not limited to, the following:
 - 1. Fill Materials
 - 2. Source Quality Control
 - 3. Shoring, Bracing, and Supporting
 - 4. Horizontal and Vertical Layout
 - 5. Grading and Excavation
 - 6. Compacted Backfill and Fill
 - 7. Field Quality Control Testing and Inspection Services
 - 8. Guarantee
 - 9. Clean Up
- C. Provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 311201 - Site Preparation
- B. Section 312501 - Erosion, Sediment, and Pollution Control
- C. Section 334001 - Storm Drainage

1.3 REFERENCES

- A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop; American Association of State Highway and Transportation Officials
- B. ASTM C 136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- C. ASTM D 75 - Practice for Sampling Aggregates
- D. ASTM D 422 - Particle-Size Analysis of Soils (without Hydrometer Analysis)
- E. ASTM D 698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³)
- F. ASTM D 1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³)
- G. ASTM D 2434 - Standard Test Method for Permeability of Granular Soils (Constant Head)
- H. ASTM D 2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)

- I. ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
- J. ASTM D 3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
- K. ASTM D 6938 - In Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods
- L. ASTM D 4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- M. ASTM D 5084 - Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter.
- N. Occupational Health and Safety Administration Regulations and Standards

1.4 SUBMITTALS

- A. Furnish name of New York State licensed Land Surveyor to be employed and perform project layout. Obtain Architect's approval prior to performing work.
- B. Submit written report on NYS licensed Land Surveyor's letterhead verifying that professional's involvement with the project layout. The report shall briefly state the scope of services performed for the project, the dates work was accomplished, and an explanation of any adjustments required, specifically listing as-built and FIELD VERIFY requirements as noted in 3.2 of this specification section.
- C. Provide Earthwork Contractor's experience requirements as indicated in 1.5, "Quality Assurance". Obtain Architect's approval prior to performing work.
- D. Samples: 10 lb. samples of each type of fill; submit in airtight containers to testing laboratory.
- E. Materials Sources: Submit name of imported materials source for each type of fill material.
- F. Fill Composition Test Reports (Imported and Onsite): Provide results of laboratory tests (less than 2 months old) on proposed and actual materials used to determine acceptability. This shall include:
 - 1. One optimum moisture-maximum density curve (Modified Proctor) for each soil/imported fill type as determined by ASTM D1557, Method A, latest issue.
 - 2. Sieve Analysis - ASTM D422
 - 3. Moisture Density Relationship - ASTM D1557, Method C / ASTM D698
 - 4. Plasticity Index - ASTM D4318
 - 5. Soundness Test - ASTM C88
 - 6. Soil Classification - AASHTO and ASTM D2487
- G. Compaction Density Test Report(s) required in Field Quality Control of this specification.
- H. Contractor's NYS Licensed Professional Engineer's layout and design calculations of sheet piling and shoring required.

1.5 QUALITY ASSURANCE

- A. Perform all site earthwork, site grading and excavation in compliance with requirements of governing authorities having jurisdiction, OSHA Standards, and "References" in this project specification.
- B. The Owner will employ a licensed soil testing and inspection service for Field Quality Control Testing of materials. This Contractor will coordinate day to day scheduling with the Owner's testing agency for conformance with "Field Quality Control Testing and Inspection Services" in this project specification.
- C. Earthwork Contractor Experience Requirements: Submit business name, business Owner(s) name(s), business address, telephone number, website and/or email address signed by the Contractor/Subcontractor who meets the qualifications set forth in this specification and is proposed by the Contractor to perform the Earthwork for this Project. Provide a list of at least four (4) Earthwork projects of comparable size, scope and quality completed successfully by the proposed Contractor/Subcontractor within the past three (3) years that includes the date completed, project Owner's name and current contact information, including telephone numbers and email addresses.
- D. Layout Foreman Experience: The Earthwork Contractor must provide a competent layout foreman skilled in this specific type of layout/earthwork project. The layout/earthwork foreman shall have a minimum of four (4) similar projects completed within the last three (3) years. Provide a list of projects layout/earthwork foremen has completed including project name, address, Owner contact information and project scope of work.

1.6 JOB CONDITIONS

- A. Job conditions in Section 311201 apply.
- B. Provide sufficient quantities of fill materials to meet project schedule and requirements. When necessary, store materials on site in advance of need.
- C. When fill materials need to be stored on site, locate stockpiles where directed by Owner.
 - 1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
 - 2. Prevent contamination of material types.
 - 3. Protect all stockpiles from erosion and deterioration of materials by covering with plastic sheets, tarps or as directed by the Architect.
- D. Moisten or dry, fill or backfill materials, to the proper moisture content as determined in accordance with ASTM D1557, Method C in order to obtain proper compaction as indicated.

1.7 SUB-SURFACE SOIL INFORMATION

- A. Geo-technical Report/Data has not been provided by the Owner. Test borings and other exploratory operations may be made by the Contractor at no additional cost to the Owner, provided such operations are acceptable to the Architect and Owner. Coordinate test locations with Owner prior to starting work. Backfill immediately when completed and repair to satisfactory conditions as determined by the Architect. It is expressly

understood that the Owner, Architect, Landscape Architect, and Consulting Engineers are not responsible for interpretations or conclusions drawn therefrom by the Contractor.

1.8 UNUSUAL SUBSURFACE CONDITIONS

- A. Notify the Architect immediately in writing via email when unusual conditions are encountered during excavation, including, but not limited to: excessive flooding, miscellaneous structures, uncharted or unlocated utilities, foundations, bed rock, toxic and hazardous materials and chemicals (such as muriatic acid and atrizene), suspected archaeological artifacts, and unsatisfactory soil materials. Request clarification from the Owner's Representative or Architect before proceeding. Refer to paragraph 3.4 of this specification.

PART 2 -PRODUCTS

2.1 FILL MATERIALS

A. **Satisfactory General Earth Fill:**

1. To be used at least 5'-0" outside of structural elements.
2. Satisfactory general earth fill shall be satisfactory on-site subsoil, or hauled in off-site subsoil free of toxics, hazardous wastes and chemicals (such as, but not limited to, atrizene and muriatic acid) that may be injurious to humans, animals and plant materials. Satisfactory earth fill shall also be free of rubbish, debris, wood, masonry, metal, frost, vegetation, organics or other deleterious material, which cannot be properly compacted. Use satisfactory general earth fill that is dry and free of clay. Rocks, gravel or soil shall not be larger than 3" in any dimension/direction.
3. Satisfactory earth fill materials are also defined as those complying with the American Association of State Highway Transportation Officials (AASHTO), M-145 soil classification Groups A-1, A-2-4, A-2-5, A-3 and Unified Soil Classification System GW, GP, GM, GC, SW, SP, SM, and SC (or a combination of these group symbols) as determined by ASTM D2487.

B. **Imported Granular Backfill and Granular Base Course:**

1. Imported granular backfill to be used for asphalt pavement subbase, concrete subbase, storm structures, storm pipes, water pipes, sanitary manholes, sanitary pipes, other structures, and where indicated on the drawings.
2. Backfill shall be run of crusher stone meeting the following gradation as determined by ASTM-C136:

<u>Standard Sieve Sizes</u>	<u>Percent Passing By Weight</u>
2" or 50 mm	100%
3/4" or 19 mm	75 - 90%
1/4" or 6.3 mm	25 - 60%
#40 or 0.425 mm	5 - 40%
#200 or 0.075 mm	0 - 8%

3. Backfill shall be free of debris and deleterious materials. In no case shall the plasticity index exceed 5.0 or the percentage passing the 200 mesh sieve exceed 8%. The quality of the imported granular backfill shall be determined by the

magnesium sulfate soundness test, if considered suspect by the Architect or Geotechnical Engineer. The maximum percent loss at four cycles by weight shall be 20.

C. Imported Structural Fill:

1. Imported structural fill to be used in areas of structural elements, for top eight (8") inches of design subgrade elevation where noted on the drawings.
2. Shall be run-of-crusher gravel free from organic matter or other deleterious materials, meeting the material gradation requirements of Item 304.05 Sub-base Course, Type 4, of the NYSDOT's Standard Specifications for Construction Materials, as determined by ASTM C136.

<u>Standard Sieve Sizes</u>	<u>Percent Passing By Weight</u>
2" or 50 mm	100%
1/4" or 6.3 mm	25 - 60%
#40 or 0.425 mm	5 - 40%
#200 or 0.075 mm	0 - 8%

3. Imported structural fill shall be accepted on the basis of gradation, soundness, plasticity index and a well-defined Moisture-Density Relationship Curve. Imported structural fill to be placed within 8" of final exterior subgrade shall be subject to Soundness requirements. Soundness shall be less than 30% loss based on a four-cycle magnesium sulfate soundness test. Plasticity Index of that portion of fill material passing the No. 40 mesh sieve shall not exceed 5.0.

D. Drywell and Stormwater Management Trench (SMT) Backfill:

1. Shall be No. 1 clean, washed, crushed stone or crushed gravel meeting the following gradation as determined by ASTM C136:

<u>Standard Sieve Size</u>	<u>Percent Passing By Weight</u>
1" or 25.0 mm	100%
1/2" or 12.5 mm	90-100%
1/4" or 6.3 mm	0-15%

2.2 UNSATISFACTORY SOIL MATERIALS

- A. Shall be defined as soil with high percentage of decomposed rock, sand, organic matter or moisture laden clay to prevent adequate compaction. Also, soil with toxics, hazardous wastes and chemicals (such as atrazine and muriatic acid) that may be injurious to humans, animals and plant materials. Also, soil with significant quantities of rubbish, debris, wood, masonry, metal, frost or other deleterious material which, in the opinion of the Geotechnical Engineer, Owner's Representative, and Architect, cannot be properly compacted shall be classified as unsatisfactory.
- B. Unsatisfactory soil materials are defined as those described in AASHTO M-145, soil classification, Groups A-2-6, A-2-7, A-4, A-5, A-6, and A-7 with CBR value less than 7.0. Also Unified Soil Classification System ML, CL, OL, MH, CH, OH as determined by ASTM D2487 (or a combination of these group symbols) with CBR value less than 7.0 in

addition to peat (PT) and other highly organic soils, cobbles, boulders; and soil materials, of any classifications that have a moisture content at the time of compaction beyond the range of 1% below and 3% above the optimum moisture content of the soil material/backfill material, as determined by the Moisture Density Relationship test.

- C. When unsatisfactory soil materials are encountered at proposed subgrades and other design elevations, proceed as described in Part 3 (Execution) of this Section.
- D. When excavated materials become unsatisfactory as a direct result of the Contractor's work, this shall result in the rejection of the unsatisfactory soil materials by the Architect.
- E. The use of slag (a byproduct of metal processing) or recycled/crushed concrete is unacceptable for any use on this project site.

2.3 SOURCE QUALITY CONTROL

- A. See "Submittals" and "Quality Assurance" of this specification section for general requirements for testing and analysis of soil and fill materials.
- B. Where fill materials are specified by reference to a specific standard, Contractor is responsible to test and analyze all samples for compliance before delivery to site.
- C. If tests indicate materials do not meet specified requirements, change material and retest until approved.

2.4 SHORING, BRACING AND SUPPORTING

- A. Shoring and bracing shall conform to the requirements of the Occupational Health and Safety Act.
- B. Shoring and bracing shall be provided, placed and maintained at the locations and elevation that are necessary or required to: support and protect the sides and bottom of the excavation; prevent undue disturbance or weakening of the supporting materials below or beside the works; prevent movement of ground which may disturb or damage the work, adjacent pavements, property, structures or other works.
- C. Provide materials for shoring, bracing, and supporting, such as sheet piling, uprights, sheathing, stringers, and cross-braces, in good serviceable condition. Use timbers that are sound and free of large or loose knots.
- D. Provide design by Contractor's NYS Licensed Engineer, when shoring is required to perform work as shown on the drawings. Submit to Architect for approval.
- E. Installation: Shoring and bracing shall be driven and placed so that it can be removed as backfilling takes place without damage to the pipeline or its appurtenances, structures, and without settlement of or damage to adjacent pavements and structures.
- F. Removal: The Contractor shall remove all shoring and bracing as the excavation is backfilled, unless directed by the Architect to be left in place. The procedure for extracting shoring and bracing and placing backfill shall ensure the backfill load is applied gradually, and disturbance of the works or foundation material is avoided.
- G. Support all utilities as required by the municipality/utility owner.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify field conditions such as bench marks, monuments, topography, inverts, locations of utilities and property lines before proceeding. Notify the Architect immediately, in writing, of discrepancies prior to commencing work. Commencement of work will be construed as complete acceptance of survey and layout information. Additional costs resulting from failure to verify field conditions prior to commencing work shall be borne by this Contractor and at no additional cost to the Owner.

3.2 LAYOUT

- A. Stake layout up to and including those elevations and dimensions specifically noted on drawings as "FIELD VERIFY" (FV). Ensure that the field elevation and dimension agrees with the elevation and dimension on the drawings before continuing. Notify the Architect immediately, in writing, of any discrepancies prior to commencing work. Additional costs resulting from failure to verify dimensions as noted on drawings shall be borne by this Contractor and at no additional cost to the Owner.
 - 1. Assume sole responsibility for the accuracy of the layout work.
 - 2. Run from point(s) of beginning (POB), base lines, property monuments, benchmarks, iron survey pins, or other points given on the drawings.
 - 3. Roads, Parking Areas, and Walks: Accurately locate and stake curb lines, center line, swales, point of curve and tangency as necessary to accurately build.
 - 4. Buildings and Site Features: Accurately locate and stake corners, offset corners, slopes, and center lines as necessary to accurately build.
 - 5. Pipe Work: Accurately locate with laser.

3.3 GRADING

- A. Cut and Fill: Presume the earthwork does **NOT** balance on site. Meet the grades shown on the drawings. Haul in or haul away as may be necessary. Provide earthwork calculations and provide for imported or exported material as part of bid. No additional costs will be allowed.
- B. Grade areas as indicated, including transition areas, with uniform levels and slopes between finish elevations.
- C. Cut to grades and profiles indicated.
- D. Set grade stakes at fifty-foot (50') intervals, at corners, and breaks in grade.
- E. Conduct operations to avoid ponding of water. Provide all pumping equipment, sump pits, and temporary diversion swales where and when necessary to continue work performance on schedule and as specified.
- F. Shape subgrade surface of site elements to within 0.10' above or below required subgrade elevation, compacted as required and sloped to provide drainage as shown on the drawings. Notify Architect and Geo-Technical Engineer for subgrade review prior to continuing work.
- G. Refer to Section 311201 for topsoil requirements.

3.4 EXCAVATION

- A. Remove and legally dispose of material encountered to obtain required subgrade elevations, including pavement, obstructions visible on ground surface, underground structures and utilities indicated to be removed.
- B. Sloping and Benching: Follow OSHA recommendations based on soil type to determine slope configurations. Slope the sides of excavations five (5') feet deep and over to the angle of repose of the material excavated; otherwise, shore, and brace where sloping is not possible either because of space restrictions or stability of material excavated.
- C. Bracing and Shoring:
 - 1. Provide bracing and shoring as required in excavations, to maintain sides and to protect structures from settlement.
 - 2. Maintain shoring and bracing in excavations regardless of the time period excavations will be open. Carry down shoring and bracing as the excavation progresses.
 - 3. Remove shoring and bracing before completion of backfilling except where required for structural support or slope stability.
 - 4. The design, installation, and maintenance of such shoring and bracing required to accomplish the above purpose are the sole responsibility of the Contractor.
 - 5. Follow OSHA recommendations for bracing and shoring.
 - 6. Indemnify the Owner, the Landscape Architect, Architect, and the Consulting Engineers against any action arising from damage to existing structures, utilities or injury to persons resulting from the Contractor's actions or failure to act, in carrying out the intent of this section.
- D. Protections: Protect structures, vegetation, utilities, sidewalks, pavements, and other facilities in areas of work. Barricade and secure open excavations and provide warning lights/signage from dusk to dawn each day.
- E. Extent of Excavations: Excavate for structures to elevations and dimensions shown, extending excavation a sufficient distance to permit placing and removal of other work and for review. Trim bottom to required lines and grades to provide solid base to receive concrete or imported granular backfill material.
- F. Unsatisfactory Soil Materials: When unsatisfactory soil materials, as defined in this specification, are encountered at design elevations, immediately notify the Architect in writing by email or other equally expeditious means. Continue as directed by the Architect and Geo-Technical Engineer. When, in the sole opinion of the Architect, conditions are not a result of Contractor's negligence, additional excavation may be directed by the Architect and paid for as a Change Order on a unit price or negotiated price basis in accordance with Contract Documents. This additional excavation shall be measured each day and verified by the Owner's representative and the Contractor's Superintendent. A daily written accounting, attested by both parties, shall be maintained with copies daily to the Architect. No claim for extra compensation will be considered except through the procedure outlined above. Assume **200 cy** of undercutting and removals, placement of soil stabilization fabric (SSF) and providing and compacting to 95% density imported granular backfill material in Base Bid. Unit price provided shall be

utilized to add to or delete from this assumed quantity to account for actual quantity encountered.

- G. Unauthorized and Over Excavation: Consists of removal of materials beyond required subgrade elevations or dimensions without specific direction of the Architect or Geotechnical Engineer. Unauthorized or over excavation, as well as remedial work directed by the Architect or Geotechnical Engineer, shall be at Contractor's expense. Fill of unauthorized excavations shall be as follows (all at no additional cost to the Owner):
1. Fill the voids created by the removal of materials beyond indicated subgrade elevations with lean concrete (2000 psi). Or;
 2. Extending the indicated bottom elevation of the concrete footing to the lower elevation. Or;
 3. Adding imported granular backfill material compacted to 95% density to proper design elevation and layout as directed by the Architect. Testing agency to perform compaction testing prior to proceeding.
- H. Dewatering:
1. Contractor shall anticipate seasonal variations of soil moisture content and groundwater in the Base Bid as verified by site investigation indicated in Section 311201.
 2. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
 - a. Surface and ground water shall be intercepted and removed before entering excavations. All necessary measures shall be taken. Earth dikes, ditches, or other devices, if required, shall be constructed to prevent such flows.
 3. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - a. 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.
 - b. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations.
 - c. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
 4. The Contractor shall at all times provide and maintain proper and satisfactory means and devices (i.e. ditches, temporary pipes, pumps, and/or other temporary construction) for the removal of all water entering the excavations. Water shall be removed as fast as it may collect, in such manner that shall not interfere with the execution of the work or in the proper placing of pipe, structures or other work.
 5. Provide and operate sufficient pumping machinery to keep excavated parts free of water. Dig sump pits when necessary into which the excavation shall be drained. Take care and proper precautions in the use of pumps so that in no

case will foundations, footings and utilities already in place or existing foundations, footings of adjacent structures or utilities be undermined or disturbed, and erosion occur due to pumping.

6. Do not discharge pumped materials into any body of water, wetland, adjacent property, roadside swales, subsurface storm systems, or any infiltration practices as determined by the Architect. Provide temporary sediment basins, traps, and filter bags for pumped water.
 7. Adjust, repair, replace, or clean all work, surfaces, and property, which may have been affected as a result of any dewatering operation.
- I. Prepare subgrade and twelve (12") inches of existing sub-soils below subgrade elevations in excavated areas to minimum density of 95% in structure, pavement, utility areas, trenches, and 90% under lawn non-paved areas.
- J. Rock and Rock Excavation:
1. **Rock Definition:** Shall be defined as solid hard material located in ledges, bedded aggregate deposits and unstratified masses, and all-natural conglomerate deposits so firmly cemented as to present all the characteristics of solid rock, which must be removed by pneumatic hammers. Rock does not include shale, slate, soft sandstone, hardpan, masonry or concrete rubble, boulders less than three (3) cubic yards, such other rock material which is decomposed, stratified, weathered or shattered, or any material capable of being removed by a well maintained Caterpillar 225 power shovel, D8 Dozer with Ripper, or Architect approved equivalent.
 2. **Rock Excavation Administrative Procedures:** When encountered, shall be stockpiled for measurement before removal and paid for on a unit price basis in accordance with Contract Documents. Notify Architect immediately of rock discovery prior to performing any rock removal or continued excavation. Rock excavations as defined shall be measured each day and verified by the Owner's designated representative and the Contractor's on-site Superintendent. A daily written accounting, attested to by both parties, shall be maintained with copies daily to the Architect. No claim for extra compensation will be considered except through the procedure outlined above. Contractor to assume **25 c.y.** of rock excavation and removal in Base Bid. Unit price provided shall be utilized to add to or deduct from this assumed quantity to account for actual quantity encountered.
 3. **Rock Excavation Removal Procedures:** Includes removal and disposal of rock. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions.
 - a. 24 inches outside of concrete forms other than at footings.
 - b. 12 inches outside of concrete forms at footings.
 - c. 6 inches outside of minimum required dimensions of concrete cast against grade.
 - d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
 - e. 8 inches beneath bottom of concrete slabs-on-grade.
 - f. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.

4. Any over excavation due to rock excavation and removal shall be handled as directed under "Over Excavation" in this Section.
5. Contractor has the option to remove existing rock and dispose off-site or crush existing rock and use as satisfactory general earth fill when it meets gradation noted in 312201 for imported granular backfill material.

3.5 BACKFILL AND FILL

- A. Preparation of Ground Surface to Receive Fill: Remove vegetation, organic materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Break up and remove existing foundations, concrete slabs, abandoned utilities, and site features. Plow, strip, roughen, or break up slopes steeper than 1 vertical to 4 horizontal so that fill material will bond to existing surface.
- B. Execute these steps when the existing ground surface, after removal of the above unsatisfactory soil materials, has a density less than that specified under "Compaction" for the particular area classification: Break up the ground surface, pulverize, moisture-condition to the optimum moisture content, and compact to the required depth and percentage of maximum density.
- C. In no case shall fill be placed on a subgrade that is wet, muddy, rutted, spongy, frozen or that contains frost or that has not been tested and approved to achieve satisfactory results.
- D. Areas to receive any fill or backfill should be properly prepared, proof rolled, tested per "Field Quality Control" within this specification, inspected and approved by the Architect and Geo-Technical Engineer prior to the placement of fill.
- E. Following grade approval by the Architect and Geo-Technical Engineer, place imported granular backfill, imported structural fill and satisfactory general earth fill material in layers not more than eight (8") inches in loose depth in a manner to minimize segregation. The fill shall be placed in nearly horizontal lifts commencing at the lowest fill area elevation and proceeding with each lift upward and outward from the lower lift.
- F. Moisture Content: Contractor shall anticipate seasonal variations of all soils (on site or imported) and imported fills moisture content in the Base Bid and timing required for such shall be included in the project schedule. The moisture content of the materials shall be adjusted prior to application of compaction such that it is no more than 1% below or 3% above the optimum moisture content of the material. Apply water to surface, subgrade or layers of soil material when required to achieve compaction densities stated below. Remove and replace, or scarify and air dry, soils or imported materials that is too wet to permit compaction to specified density.
- G. Compaction:
 1. Compact each eight (8") inch layer of fill and backfill materials.
 2. Compact fill and backfill material below subgrade for structures, slabs, pavements, and utilities to minimum 95% of optimum in place density as determined by ASTM D1557, Modified Proctor.
 3. Compact fill material below subgrade for lawns or unpaved areas to minimum 90% of optimum in place density as determined by ASTM D1557, Modified Proctor.
- H. Equipment:

1. Use sheepsfoot rollers, pneumatic tired rollers, drum rollers, vibrating tampers, and other compaction equipment capable of obtaining the required density throughout the entire layer being compacted.
 2. Use power-driven hand tampers for compacting materials adjacent to site structures.
 3. For utility trenches or other confined areas, small compaction equipment may be necessary such as a vibratory plate, jumping jack or walk-behind vibratory roller. In these cases, lift heights no greater than six (6") inches should be maintained.
- I. Reconditioning Compacted Areas: Where previously completed compacted areas are disturbed by subsequent construction operations (by any Contractor), traffic or adverse weather, scarify and dry out the surface, regrade, and recompact to the required density prior to further construction at no additional cost to the Owner. Use hand tamping for recompaction over underground utilities and trenches.

3.6 FIELD QUALITY CONTROL TESTING AND INSPECTION SERVICES

- A. Soil Testing Service/Geo-Technical Engineer must inspect and approve density tests, retesting, and proof rolling of subgrades, as described in this section, before further construction work is performed thereon.
- B. Perform compaction density testing on compacted fill and imported granular base course in accordance with ASTM D1556, ASTM D1557, ASTM D2922, and D3017.
- C. In place density testing should be performed at a frequency of one (1) test per 500 square feet per lift in smaller open areas, one (1) test per 2,500 square feet per lift in larger open areas, and one (1) test per 25 feet per lift in confined areas and utility trenches.
- D. When the test results indicate that insufficient compaction has been obtained in any layer, the Contractor shall take action to modify or alter the moisture content in the soil, to provide additional compaction and testing or otherwise to increase the in-place soil density. If the Contractor cannot obtain satisfactory compaction due to material properties, the Contractor shall remove the unsatisfactory material and replace with new material at no additional cost to the Owner.
- E. Materials contaminated by mud, debris, organics, frost, and/or other deleterious materials shall be removed and replaced with uncontaminated specified material.
- F. No fill or backfill shall be placed over an area or lift of fill that has not be tested and achieved satisfactory results.
- G. Proof Rolling: On pavement subgrades, in cut areas only, unless otherwise directed by the Architect, the only testing required will be the proof rolling as described below:
 1. Provide Soil Testing Service/Geo-Technical Engineer with 48-hour advance notification when subgrades are ready to proof roll.
 2. Proof Roll the prepared pavement subgrade surface with fully loaded ten (10 c.y.) cubic yard earth moving truck or, in the opinion of the Architect/Geo-Technical Engineer, using a 5-ton smooth drum roller making at least 3 overlapping passes, in each of 2 perpendicular directions, on static mode at a speed of 1 to 4 feet/second. Check for unstable areas. Subgrades that rut, pump or deflect under the truck's tires may be judged unstable by the Architect/Geo-Technical

Engineer. These areas may require further compaction or undercutting as directed by the Soil Testing Service/Geo-Technical Engineer.

3.10 GUARANTEE

- A. Guarantee concrete slabs, pavements, curbs, trenches, utilities, structures, lawns, and plant materials free from settlement for a period of one (1) year from the date given on the certificate of substantial completion or final punch list when satisfactorily completed and accepted by the Architect, whichever is later.
- B. Repair to proper grade and alignment any and all settlement of concrete slabs, pavements, curbs, trenches, utilities, structures, lawns and plant materials adversely affected by settlement within one (1) year after date given on the certificate of substantial completion or final punch list when satisfactorily completed and accepted by the Architect, whichever is later, at no additional expense to the Owner. In damaged compacted areas, scarify the surface, re-shape, and compact to required density prior to further construction.
- C. All repairs/corrections shall be completed to the satisfaction of the Owner within seven (7) days of written notice by the Owner.

3.11 CLEAN UP

During the contract and at intervals as directed by the Architect and as earthwork is completed, clear the site of surplus earth, large surface stones, debris, tools and equipment. Leave the site in a clean, safe, well draining, and neat condition.

END OF SECTION 312201

SECTION 312501 - EROSION, SEDIMENT, AND POLLUTION CONTROL

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Provide erosion, sediment and pollution controls as shown on the drawings and as directed by the Architect to significantly reduce runoff on downstream and neighboring properties. This includes temporary control measures to mitigate land disruption by other Contractors during construction of this project.
- B. Erosion, sediment, and pollution control includes, but is not limited to, the following:
 - 1. Storm structure protection
 - 2. Silt fence
 - 3. Off site sediment tracking controls
 - 4. Temporary concrete washout facility
 - 5. Temporary seeding and mulching
 - 6. Permanent sodding
 - 7. Temporary sediment filter bag for pumped water
 - 8. Compost Filter Sock
 - 9. Construction site dust control
 - 10. Spill prevention, reporting and documentation
 - 11. Clean up
- C. Provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.
- D. Code Compliance: The New York State Department of Environmental Conservation requires a SPDES General Permit for Storm Water Discharges from Construction Activity. This Permit GP-0-25-001 is pursuant to the Environmental Conservation Law and has penalties and fines related to violations.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 311201 - Site Preparation
- B. Section 312201 - Site Earthwork
- C. Section 329201 –Sodded Lawns
- D. Section 334001 - Storm Drainage

1.3 REFERENCES

- A. Spill Guidelines Manual (SGM) New York State Dept. of Environmental Conservation.
- B. New York State Standards and Specifications for Erosion and Sediment Control, dated July 2016 or latest edition.

1.4 SUBMITTALS:

- A. Manufacturer's Data (MPD) are required for:
 - 1. Storm Structure Protection
 - 2. Silt Fence with Net Backing

3. Soil Separation Fabric for Off Site Sediment Tracking Control
 4. Compost Filter Sock
 5. Sediment Filter Bag
 6. Spill Response Equipment
- B. Material Certificates (MC) showing content/mechanical analysis and Samples are required for:
1. No. 3 Stone for Off Site Sediment Tracking Control
 2. Temporary Seeding and Mulching: Submit seed mix species and mulch source
 3. Permanent Sodding: (See Section 329201)
- C. Certification Statement: Submit photocopy of Section 312501, 1.7, filled out completely and accurately to the Landscape Architect at the pre-construction meeting.
- D. Listing of emergency contract numbers. This list shall include the name of an Emergency Response Contractor that may be used in certain situations.
- E. Per NYSDEC SPDES Regulations, all onsite contractors performing earth disturbing activities need to have current NYSDEC endorsed 4-hour erosion and sediment (E&SC) training. Provide copies of all onsite personnel certification cards, prior to construction. The document shall be kept on file (by the Contractor) within the onsite SWPPP log book.

1.5 QUALITY ASSURANCE

- A. Perform erosion, sediment and pollution control in compliance with applicable requirements of the New York Standards and Specifications Erosion and Sediment Control Manual, dated July 2016 (or latest edition) or other governing authorities having jurisdiction.
- B. Prevention of erosion and pollution from storm water runoff for the duration of this project is the responsibility of this Contractor. All Storm Water Pollution Prevention control work indicated on the drawings and/or specifications shall be included in this Contractor's Base Bid. Damages resulting from, but not limited to, negligence, improper maintenance or general disregard for erosion control measures shall be immediately corrected by this Contractor to the satisfaction of the Landscape Architect, Engineer, or Certified Erosion Control Specialist hired by the Owner for SWPPP inspections as required by NYSDEC. Damages resulting from other contractors shall be repaired by this Contractor on a time and materials basis and back charged to the responsible party. Any fines levied on the Owner by governing authorities for SWPPP violations shall be back charged to the responsible party.
- C. In the event of a chemical or hazardous spill or release, the individual(s) who caused the spill is responsible for prompt and proper clean-up. If the spill requires cleanup procedures beyond the means of the Contractor, an emergency spill cleanup Subcontractor shall be hired by the Contractor. They shall be utilized when the Contractor does not have the appropriate training, equipment or materials to cleanup the area safely and effectively. This shall be done at no additional cost to the Owner. Any testing and cleanup required post cleanup shall be provided by the Contractor at no additional cost to the Owner.

1.6 JOB CONDITIONS

- A. Job conditions in Sections 311201, 312201, 329201 and 334001 apply.

- B. Contractor will take all necessary precautions to avoid allowing dust generation that violates NYSDEC regulations and compromises compliance with governing authorities air monitoring plan.
- C. Winter Stabilization Requirement: When construction schedule, regardless of reason, prohibits installation of permanent stabilization measures and site elements, including substantial lawn growth to prevent erosion, this Contractor shall install and provide temporary seeding, mulching, and other preventative/stabilization measures specified and as directed by the Landscape Architect at no additional cost to the Owner.

1.7 CERTIFICATIONS

- A. Authorized, legally responsible signatures for the General Contractor, Site Contractor, Site Earthwork, Landscaping Subcontractor(s) and any other soil disturbing Contractor shall sign and prominently display the following certification statement at the job trailer or office during the life of the project:

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the Storm Water Pollution Prevention Plan (SWPPP) and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for storm water discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations."

1.	General Contractor	Signature: _____
		Name: _____
		Title: _____
		Address: _____

		Phone No.: _____
		Email: _____
2.	Site Earthwork Contr.	Signature: _____
		Name: _____
		Title: _____
		Address: _____

		Phone No.: _____
		Email: _____

3. Site Landscaping Contr. Signature: _____
Name: _____
Title: _____
Address: _____

Phone No.: _____
Email: _____
4. Other Sub Contractors as determined by the Architect Signature: _____
Name: _____
Title: _____
Address: _____

Phone No.: _____
Email: _____

1.8 NOTICES

- A. The Operator (Owner) shall file with the New York State Department of Environmental Conservation (NYSDEC) a Notice of Intent (NOI) a minimum of ten (10) days prior to start of construction. Unless notified by the NYSDEC to the contrary within ten (10) days, a general SPDES permit is automatically issued which authorizes discharge of storm water on the construction site.
- B. When the site has been finally stabilized, the Operator (Owner) shall file with the NYSDEC a Notice of Termination (NOT).
- C. The Operator (Owner) is responsible for payment of annual fees related to the SPDES permit. Filing of a NOT shall typically terminate the Operator's fee responsibility.

1.9 INSPECTIONS AND MAINTENANCE

- A. The Architect or qualified personnel of the Operator shall inspect disturbed areas of the construction site at least once per week. Special attention will be focused on areas not finally stabilized, structural control measures, point discharge (outlets) and locations where vehicles enter or exit the site. Disturbed areas will be inspected for pollutants entering the drainage system. Structural control measures will be reviewed for effectiveness in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site will be inspected for evidence of off site sediment tracking. A written report of inspections shall be produced in a journal during the construction

operations. The journal shall be made available (by the Operator/Owner) for NYSDEC and the general public to review.

- B. The Contractor shall provide timely maintenance of vegetation erosion and sediment control measures, and other protective measures, during construction. Corrective measures must be performed within one (1) calendar day of the Architect's or Operator's (Owner's) report. Failure by the Contractor to perform corrective work within this schedule automatically authorizes the Operator to hire others and backcharge this Contractor. The Architect or Operator will send a letter or email correspondence one (1) calendar day before hiring others and backcharging this Contractor. The Contractor shall keep a written record of maintenance and corrective work in a journal. The journal shall be made available for the Operator, Architect, Landscape Architect, Soil and Water Conservation District, ACOE, and NYSDEC until the site is finally stabilized.
- C. The Contractor shall conduct daily inspections of the equipment staging and maintenance, fueling, hazardous waste staging and waste storage areas to ensure that spill control measures are in place. Stock appropriate clean-up materials whenever changes occur in the types of chemicals used or stored on site.
- D. The Contractor is responsible for having mandatory, up to date NYSDEC endorsed 4-hour erosion and sediment control (E&SC) training all personnel working on site in accordance with the SPDES permit.
- E. The Operator (Owner) shall provide long term maintenance of the storm water facilities after the site is finally stabilized. The designated maintenance personnel shall keep written records and pictures of maintenance and corrective work in a journal. All stormwater discharge points shall be maintained, inspected, and documented. The journal shall be made available for review by the NYSDEC for a minimum period of five (5) years after the Notice of Termination (NOT) has been filed.

1.10 SPILL PREVENTION, REPORTING AND DOCUMENTATION

- A. To minimize the potential for discharge to the environment of oils, petroleum, or other hazardous substances, the following requirements shall apply:
 - 1. All oil, petroleum, or hazardous materials stored or temporarily relocated on site during the construction process shall be stored in a way to provide protection from vehicular damage and to provide containment of leaks or spills. Temporary berms, dikes, storage basins, or similar methods shall be employed as appropriate on site.
 - 2. Refer to Storm Water Pollution Prevention Plan Notes for additional spill prevention good housekeeping practices.
 - 3. Maintain file of Material Safety Data Sheets (MSDSs) or other references for recommended spill clean-up methods and materials.
 - 4. Keep spill response equipment readily accessible.
- B. In the event of a spill contact the Construction Manager, Owner (Operator), and Architect. The Contractor shall also notify all other Contractors working around the area of the spill.
- C. If spilled material has entered any sanitary/storm sewer system then contact the municipality or agency with jurisdiction over the system, in addition to those listed in this section.

- D. The contractor shall be responsible for the initiation of spill reporting and documentation procedures. All petroleum spills must be reported to NYSDEC Spill Hotline at 1-800-457-7362, less than two (2) hours following discovery. All petroleum spills must be reported to NYSDEC unless all of the following apply:

Criteria	Description
Quantity	Must be known to be less than 5 gallons.
Containment	Must be contained on an impervious surface or within an impervious structure. No access to the environment.
Control	Must be under control and not reach a drain or leave the impervious surface.
Cleanup	Must be cleaned-up within two (2) hours of occurrence.
Environment	Must not have already entered into soil or groundwater or onto surface water.

- E. A release of a "reportable quantity"¹ or unknown amount of a hazardous substance must also be immediately reported to the NYSDEC Spill Hotline. Spills of reportable quantities of chemicals or "harmful quantities"² of oil to navigable waters must be reported to the federal National Response Center, 1-800-424-8802 or 1-202-426-2675.

¹ *Reportable Quantity*: Refers to the quantity of a hazardous substance or oil that triggers reporting requirements under the Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA) (USEPA, September 1992).

² *Harmful Quantity*: Includes discharges that violate applicable water quality standards, cause a film, sheen, or discoloration on a water surface or adjoining shoreline; or cause a sludge or emulsion to be deposited beneath the water surface or shoreline (40 CFR 110.3).

PART 2 - PRODUCTS

2.1 STORM STRUCTURE PROTECTION

- A. Shall be a pre-manufactured cylindrical log 12" – 32" in diameter, composed of degradable geotextile mesh tube filled with compost filter media to filter sediment and other pollutants. Filter socks may be filled after placement by blowing compost into the tube pneumatically or filled at a staging location and moved into its designated location. Both ends of the filter socks shall be secured to prevent opening.
- B. The flat dimension of the sock shall be at least 1.5 times the nominal diameter of the sock.
- C. Compost infill shall be a well decomposed (matured at least 3 months), weed-free, organic matter. Shall be aerobically composted, possess no objectionable odors, and contain less than 1% by dry weight, or manmade foreign matter.
- D. All biosolids compost must meet NYS DEC's 6NYCRR Part 360 (Solid Waste Management Facilities) requirements.
- E. When using compost filter socks adjacent to surface water, the compost should have a low nutrient value.
- F. Wood stakes shall be a minimum of 2" x 2" in size. Shall be untreated fir, redwood, cedar or pine and shall be cut from sound timbers. Shall be straight and free of loose and unsound knots or other defects which would render them as unfit for the intended use. Metal stakes may not be used as an alternate. Tops of stakes shall not extend above the top of the fiber roll.

- G. Standard of quality shall be: Diamond SOCK® pre-filled compost filter sock as manufactured by MKB Stormwater Innovation, 888-578-0777; or Architect Approved Equal

2.2 SILT FENCE

- A. Shall be a woven polypropylene geotextile comprised of UV stabilized polypropylene slit film and 1.25" square, non pressure treated, pointed, hardwood posts and net mesh backing for additional support. Standard of quality for silt fence shall be IVI-3611MW as manufactured by Indian Valley Industries, Inc., www.iviindustries.com, (607) 729-5111, or Architect approved equal.

2.3 OFF SITE SEDIMENT TRACKING CONTROLS

- A. No. 3 stone shall meet the following requirements:

<u>Standard ASTM Sieve Size</u>	<u>Percent Passing by Weight</u>
3"	100
2"	0-15
Passing No. 50	5-10
Passing No. 100	2-5

- B. Soil Stabilization Fabric: Shall be a commercially manufactured, UV stabilized low clogging, high flow, woven geotextile. Standard of quality shall be Mirafi 600X, as manufactured by NICOLON/MIRAFI GROUP, 3500 Parkway Lane, Norcross, Georgia (Tel. 1-800-234-0484) or Architect approved equal.
- C. Granular Base Course Material: Shall be as specified in Section 312201.

2.4 TEMPORARY SEDIMENT FILTER BAG FOR PUMPED WATER

- A. Provide prefabricated bags/pouches with nonwoven geotextile fabric. The standard of quality shall be Dirtbag as manufactured by ACF Environmental, 800-448-3636 or Architect approved equal.
- B. Provide wooden pallet to set filter bag on for ease of disposal

2.5 TEMPORARY CONCRETE WASHOUT FACILITY

- A. Concrete washout facility to fully contain all concrete washout needs of the entire project and all contracts.
- B. Concrete washout facility shall be temporary straw bales that are lined with a single sheet of a minimum of 10 mil polyethylene sheeting that extends over the entire basin to prevent escape of discharge. Place a secure, non-collapsing, non-water collecting cover over the concrete washout facility prior to inclement weather to prevent accumulation and overflow of precipitation.
- C. Provide concrete washout to prevent discharge from concrete trucks or equipment cleaning to inlets, surface or groundwater.

- D. Concrete washout facility shall be no closer than 50 feet from environmentally sensitive areas such as waterbodies, wetlands, and open drainage facilities and watercourses. Signs shall designate concrete washout facilities.
- E. Ensure that the concrete washout facility complies with all Federal, State and local laws, rules, and regulations. Ensure that the concrete washout facility is in place before delivery of concrete to site.
- F. Provide a sign identifying area as "Concrete Washout" acceptable to the Architect. Maintain throughout the project duration.

2.6 TEMPORARY SEEDING AND MULCHING

- A. Seeding shall be 100% Perennial Ryegrass with no more than 30% of any one cultivar and always at least 2 different cultivars and a 90% germination rate or more.
- B. All seed mixtures to contain 0.5% weed seed or less.
- C. All seed must be fresh seed, not seed that is left over from last year and beyond the sell by date.
- D. Dry mulch shall be clean straw bales.

2.7 PERMANENT SODDING

Sodding shall be as specified in Section 329201.

2.8 COMPOST FILTER SOCKS

- A. Shall be a pre-manufactured cylindrical log 12" – 32" in diameter, composed of degradable geotextile mesh tube filled with compost filter media to filter sediment and other pollutants. Filter socks may be filled after placement by blowing compost into the tube pneumatically or filled at a staging location and moved into its designated location. Both ends of the filter socks shall be secured to prevent opening.
- B. The flat dimension of the sock shall be at least 1.5 times the nominal diameter of the sock.
- C. Compost infill shall be a well decomposed (matured at least 3 months), weed-free, organic matter. Shall be aerobically composted, possess no objectionable odors, and contain less than 1% by dry weight, or manmade foreign matter.
- D. All biosolids compost must meet NYS DEC's 6NYCRR Part 360 (Solid Waste Management Facilities) requirements.
- E. When using compost filter socks adjacent to surface water, the compost should have a low nutrient value.
- F. Wood stakes shall be a minimum of 2" x 2" in size. Shall be untreated fir, redwood, cedar or pine and shall be cut from sound timbers. Shall be straight and free of loose and unsound knots or other defects which would render them as unfit for the intended use. Metal stakes may not be used as an alternate. Tops of stakes shall not extend above the top of the fiber roll.

- G. Standard of quality shall be: Diamond SOCK® pre-filled compost filter sock as manufactured by MKB Stormwater Innovation, 888-578-0777; or Architect Approved Equal

2.9 SPILL RESPONSE EQUIPMENT

- A. The following is a list of recommended spill control material. The contractor is responsible to have spill control and personnel protective equipment readily available for the materials being used. Acquire sufficient quantities and types of appropriate spill control materials needed to contain any spills that can be reasonably anticipated. The need for equipment to disperse, collect and contain spill control materials should be on site at all times.
1. Personal Protective Equipment
 - a. Chemical Splash Goggles
 - b. Gloves
 - c. Boot Covers
 - d. Tyvek Aprons or Suits
 2. Absorption Materials
 - a. Spill Pillows and Socks
 - b. Absorbent Booms and Pads
 - c. Dikes for use on rough surfaces
 - d. Storm Structure Covers
 - e. "Loose" Absorbents
 3. Tools
 - a. Shovel, Broom, Brush
 - b. Disposal Bags
 - c. Sealing Tape
 - d. Hazardous Waste Stickers
 - e. "Danger" and "Keep Away" Signs
 - f. Five gallon pails or 20 gallon drums with polyethylene liners
- B. Basis of Design shall be provided by: 3M, 888-364-3577; New Pig Corporation, 800-468-4647; SpillKits911, 800-474-5911; Dawg, Inc., 800-935-3294; or Architect approved equal.
- C. Place spill response equipment in a readily assessable location within or immediately adjacent to the project site.

PART 3 - EXECUTION

3.1 SIGNATURE REQUIREMENTS

- A. Between the Pre-Construction Meeting and starting site work, the Contractor shall:
1. Sign the certification statements. Contractor shall prominently display the statements at the job site.
 2. Review inspection and maintenance procedures. Decide where journals will be temporarily stored for review by NYSDEC, S&WC, ACOE, Operator (Owner), the Landscape Architect and Architect.

3. Designate specific Owner and Contractor personnel responsible for daily inspection and maintenance. Provide certification cards.

3.2 GENERAL EROSION CONTROL

- A. Install initial construction erosion control features, as indicated on drawings and specifications or as directed by the Architect, prior to topsoil stripping, earthwork, and removal of existing vegetation. Keep the disturbance to a minimum and shall not exceed five (5) acres, unless directed by the Architect. Install other features as described in the sequence of erosion, sediment and pollution control on the drawings.
- B. Start permanent seeding and mulching within seven (7) calendar days of rough grading. When this is not possible for any reason, provide temporary seeding on non-roof, non-paved areas with 100% perennial rye grass at the rate of six pounds (6#) seed per one thousand (1,000 sf) square feet and straw mulching for complete coverage. When adverse weather conditions prevent good germination, repeat seeding and mulching as directed by the Architect until the area is stabilized. Till under temporary grass and fine grade when preparing for final permanent lawn stabilization.
- C. Until a disturbed area is stabilized, trap runoff sediment by the use of sediment debris basins, diversion swales, sediment traps, or other methods acceptable to the Architect and governing authorities. Provide temporary dry mulch (straw) to stabilize exposed soils as directed by the Architect.
- D. Provide erosion controls on slopes and swales traversing, bordering, or leaving the site. Limit the water flow to a nonerosive velocity.
- E. Do not store fill materials within one hundred (100') feet of the banks of any streams or waterbodies, intermittent or perennial.
- F. Inspect erosion and sediment control measures immediately after each rainfall and at least daily during prolonged rainfall. Make required repairs immediately.
- G. Remove sediment deposits when they reach approximately one-half of the height of the barrier. Dispose sediment in a manner that does not result in additional erosion or pollution.
- H. Provide prompt (weekly) removal and disposal of rubbish and debris in accordance with the governing authorities, Owner policies, and good housekeeping measures.
- I. Traffic shall not be permitted to cross filter socks.

3.3 MUNICIPAL SEWER, SWALES AND WETLAND EROSION CONTROL

Control erosion, siltation and pollution to municipal sewers, swales and wetlands by taking appropriate measures such as, but not limited to, the following:

- A. Do not disturb the bed and banks of waterbodies unless specifically shown on drawings. When bed and bank work is shown, obtain permits and proceed with work creating the minimum disturbance necessary to complete the project.
- B. Prevent petroleum products and excessive amounts of silt, clay, and muck from entering municipal sewers, waters, swales or wetlands of New York State during construction.

- C. Prevent fresh concrete, concrete leachate, and washings from equipment and trucks, from entering municipal sewers, waters, swales or wetlands of New York State during construction.
- D. Place silt fence to control erosion at the downslope edge of disturbed areas. This barrier to sediments is to be put in place before disturbance of the ground occurs and is to be maintained in good condition until disturbed land is heavily vegetated or otherwise permanently stabilized.
- E. Seed areas of soil disturbance resulting from this project with appropriate perennial grass seed and mulched with straw within seven (7) calendar days as described in general erosion control. Mulch shall be maintained until a suitable vegetative ground cover is established and as directed by the Architect.

3.4 CONSTRUCTION SITE DUST CONTROL

- A. The Contractor shall prevent surface and air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety issues.
- B. Dust control applies to construction roads, access points, other disturbed areas and stockpiles subject to surface dust movement and dust blowing.
- C. Contractor may use any number and combination of dust control methods, as approved by the Architect. They include:
 - 1. Applying water to haul roads
 - 2. Restricting vehicle speeds to 10 mph
 - 3. Hauling materials in properly tarped or watertight containers.
 - 4. Covering stockpiles and materials
 - 5. Wetting equipment and work area
 - 6. Mulching
 - 7. Spray adhesives and polymer additives (MSDS sheets required)
 - 8. Barriers and wind breaks
- D. Contractor is responsible for any cleanup and site restoration associated with dust control measures, dust pollution on or off the project site property at no additional cost to the Owner.

3.5 STORM STRUCTURE PROTECTION

- A. Install fiber rolls as detailed around drainage structures and where shown on the plans to protect site elements from silt and sediment.
- B. Filter socks shall be anchored in earth with wooden stakes driven a minimum of 12" into the soil on 4-foot centers on the centerline of the sock. On uneven terrain, effective ground contact can be enhanced by the placement of a fillet of filter media on the disturbed area side of the compost sock.
- C. Wrapping the storm structure grate with fabric is NOT acceptable, however straw bales may be used.
- D. Upon stabilization of the area contributory to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed in accordance with the SWPPP. For removal, the mesh can be cut, and the compost spread as an additional mulch to act as a soil supplement.

3.6 SILT FENCE

- A. Locate as shown on drawings and as directed by the Architect. Excavate trench along the lower perimeter(s) of site, along the contract limit line, and as indicated on the drawings. Place excavated material on uphill side of trench for backfilling.
- B. Drive stakes securely into the downhill side of the trench. When prefabricated silt fence with fabric attached to stakes is used, drive stakes so that fabric is buried in the ground as detailed.
- C. Backfill trench with excavated material, so that fabric is securely buried in the ground to prevent undermining. Tamp soil.
- D. Join sections by overlapping fabric between two (2) stakes. Set stakes simultaneously. Overlap by minimum six (6") inches, fold, and staple to prevent sediment bypass.
- E. Attach silt fence securely to stakes spaced no more than eight (8' o.c.) feet on center. Secure fence fabric to stake with minimum three one (1") inch staples.
- F. Toward the end of the project, when site is stabilized and as directed by the Architect, remove silt fence and correct lawn area around removal to a smooth, neat, well-draining condition.

3.7 OFFSITE SEDIMENT TRACKING CONTROLS

- A. Install as detailed and shown on drawings to eliminate tracking sediment off site. Inspect after each rain storm and at the end of each work day.
- B. When sediment begins tracking off site, sweep and clean affected roadway immediately and replace stone with clean No. 3 stone to retain sediment on site.
- C. Remove fabric and stone at project completion. Complete construction of proposed final surface(s).

3.8 TEMPORARY SEDIMENT FILTER BAG FOR PUMPED WATER

- A. Install prefabricated bags/pouches on top of straw bale base as recommended by the manufacturer. Replace system when full (discharge into bag/pouch is significantly reduced).
- B. Silt may be used as general site fill or hauled off site. Remove straw bales, fabric, and prefabricated bags/pouches off site. Regrade area and return to lawn as specified.

3.9 TEMPORARY CONCRETE WASHOUT FACILITY

- A. Install per detail in a location as approved by the Owner. Provide a stable surface, easily accessible by concrete trucks.
- B. A sign shall be installed adjacent to each washout facility to inform concrete equipment operations to utilize the proper facilities. The sign shall be installed as detailed and maintained throughout the project.
- C. Temporary concrete washout facility shall be constructed and maintained in sufficient quantity and size to contain all liquids and concrete waste generated by washout operations for the entire project and by all Contracts.

- D. Perform washout of concrete mixers, delivery trucks, and other delivery systems in designated areas only.
- E. Wash concrete only from mixer chutes into approved concrete washout facility.
- F. Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material. Liner seams shall be installed in accordance with manufacturers' recommendations.
- G. Contents of the concrete washout facility shall not exceed 50% capacity of the facility. At or before 50% capacity is reached, discontinue pouring concrete until the facility is cleaned out. Remove hardened concrete and properly dispose off site. Allow slurry to evaporate or remove from site and dispose off site. Immediately replace the liner if it gets damaged.
- H. Remove concrete washout facility when it is no longer needed as directed by the Architect.

3.10 COMPOST FILTER SOCK

- A. Compost filter socks will be placed on the contour with both terminal ends of the sock extended 8 feet upslope at a 45-degree angle to prevent bypass flow.
- B. Filter socks shall be anchored in earth with wooden stakes driven a minimum of 12" into the soil on 4-foot centers on the centerline of the sock. On uneven terrain, effective ground contact can be enhanced by the placement of a fillet of filter media on the disturbed area side of the compost sock.
- C. Upon stabilization of the area contributory to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed in accordance with the SWPPP. For removal, the mesh can be cut, and the compost spread as an additional mulch to act as a soil supplement.

3.11 TEMPORARY SEEDING AND MULCHING

- A. Provide temporary seeding of topsoil stockpile immediately.
- B. When necessary and as directed by the Architect, provide temporary seeding and mulching on disturbed areas at no additional cost to the Owner.

3.12 PERMANENT SODDING

- A. Install as described in Section 329201.

3.13 SPILL RESPONSE EQUIPMENT

Use per manufacturer's recommendations and as directed by the NYSDEC, or other governing agencies.

3.14 CLEAN UP

- A. During the contract and at intervals as directed by the Architect and as erosion, sediment and pollution control procedures are completed, clear the site of extraneous materials, rubbish, and debris. Leave the site in a clean, safe, well draining, and neat condition.

- B. Clean storm ponding areas, catch basins and detention basins: Clean out contaminants, sediment, rubbish, construction debris, foreign objects and accumulated floatables from chambers and ponding areas thoroughly, immediately prior to final acceptance.

END OF SECTION 312501

SECTION 321201 - ASPHALT PAVING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of asphalt paving is shown on the drawings.
- B. Asphalt Paving work includes, but is not limited to, the following:
 - 1. Soil Stabilization Fabric
 - 2. Granular Base Course
 - 3. Asphaltic Concrete
 - 4. Bituminous Tack Coat
 - 5. Painted Lines and Traffic Markings
 - 6. Hot Pour Crack Sealing and Filling
 - 7. Field Quality Control
 - 8. Clean up
- C. Provide all materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 311201 - Site Preparation
- B. Section 312201 - Site Earthwork
- C. Section 334001 - Storm Drainage

1.3 REFERENCES

- A. The latest editions of the following Standards, as referenced herein, shall be applicable:
 - 1. New York State Department of Transportation Standard Specifications, Section 402 - "Hot Mix Asphalt (HMA) Pavements" and 407 - "Bituminous Tack Coat"
 - 2. "Standard Specifications for Highway Materials and Methods of Sampling and Testing, American Association of State Highway and Transportation Officials (AASHTO)."
- B. The following reference standards shall apply for Testing and Inspection:
 - 1. ASTM D1074: Standard Test Method for Compressive Strength of Bituminous Mixtures
 - 2. ASTM D1188: Standard Test Method for Bulk Specific Gravity and Density of Compacted Mixtures Using Paraffin-Coated Specimens.
 - 3. ASTM D2041: Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
 - 4. ASTM D2726: Standard Test Method for Bulk Specific Gravity and Density of Non-absorptive Compacted Bituminous Mixtures
 - 5. ASTM D2950: Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods
 - 6. ASTM D3203: Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
 - 7. ASTM D3549: Standard Test Methods for Thickness or Height of Compacted Bituminous Paving Mixture Specimens

8. NYSDOT Materials Method 28 Friction Aggregate Control and Test Procedures
- C. The following reference standards shall apply for pavement markings:
 1. ASTM D562, D711, D1475, D1640, D2369, D3723, D3960.
 2. DOT Code of Federal Regulations, Hazardous Materials and Regulations Board, Reference 49CFR, ICC Regulations
 3. Federal Specification TT-P-115E, Type III (Type I if V.O.C. compliance)
- D. Additional testing required, only if directed in writing by Architect, due to asphalt installation and material issues:
 1. ASTM C295: Standard Guide for Petrographic Examination of Aggregate
 2. ASTM D1560: Standard Test Methods for Resistance to Deformation and Cohesion of Bituminous Mixtures by Means of Hveem Apparatus
 3. ASTM D4125: Standard Test Methods for Asphalt Content of Bituminous Mixtures by the Nuclear Method
 4. ASTM D5444: Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
 5. ASTM D6307: Standard Test Method for Asphalt Content of Hot-Mix Asphalt by Ignition Method
 6. ASTM D6931: Standard Test Method for Indirect Tensile (IDT) Strength of Asphalt Mixtures
 7. ASTM D7312: Standard Test Method for Determining the Pavement Shear Strain and Complex Shear Modulus of Asphalt Mixtures Using the Superpave Shear Tester

1.4 SUBMITTALS

- A. Provide Paving Contractor experience requirements, as outlined in "Quality Assurance" of this specification section, for the following:
 1. General Paving
- B. Provide Asphalt Producer Vendor Certificate and proof of quality control monitoring as outlined in "Quality Assurance" of this specification section.
- C. Provide material certificates showing content/mechanical analysis for the following:
 1. Asphaltic Concrete Mix Design with Authorization Signature:
 - a. Type/name of mix (less than 24 months old)
 - b. All aggregates gradations and quality measurements
 - c. Plot (0.45 power graph) of the final aggregate blend
 - d. Bulk (dry) specific gravity of all aggregates and final aggregate blend (Gsb) including worksheets for natural (virgin) as well as reclaimed asphalt pavement (RAP)
 - e. Grade of asphalt binder (PG) being used
 - f. Optimum percent asphalt binder (Pb)
 - g. Mix air voids at optimum (Va)
 - h. Bulk specific gravity of mix at optimum (Gmb)
 - i. Theoretical maximum specific gravity of mix at optimum
 - j. Voids in the Mineral Aggregate (VMA) and Void Filled with Asphalt (VFA)
 - k. Dust to total asphalt content (AC) ratio
 - l. All design data and associated design curves

2. Bituminous Tack Coat
- D. Provide Manufacturer's Product Data (MPD) for the following:
 1. Soil Stabilization Fabric
 2. Painted Lines and Traffic Markings
 3. Hot Pour Crack Sealing and Filling
- E. Provide shop drawings for the following:
 1. Painted Lines and Traffic Markings: Shop drawings indicating sizes, shapes, patterns, and colors of markings, including manufacturers and types of paint.
 2. Owner to approve all paint colors prior to installation.
- F. Submit Asphalt Placement Work Plan, indicating paving pass widths, paving directions, site access, and timing/coordination of any site equipment installation (posts, boxes, fencing, etc.) indicated in 3.3 of this specification section. Supply Owner with yield calculations for all asphalt paving products and materials used on the project as part of the work plan.
- G. Field Quality Control test reports as indicated in this specification section.
- H. Environmental Product Declarations: Provide current Environmental Product Declarations (EPDs), that include the amount of embodied carbon in Asphalt.
 1. Acceptable EPDs are non-expired, Product-specific, Facility or Plant-specific, or Supply Chain-specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services*.
 2. Provide a summary sheet containing the total anticipated quantity/volume/weight (matching the units used in the EPDs) of each product being incorporated into the project.
 - a. With each application for payment, provide an updated accumulative summary sheet and copies of delivery tickets for each product incorporated into the project for the period covered by the payment application.

1.5 QUALITY ASSURANCE

- A. Paving Contractor Experience Requirements:
 1. General Paving: Contractor shall have the experience of at least five (5) years in business. Paving superintendent has a minimum of three (3) years' experience as a paving crew operating foreman.
- B. Asphalt Testing and Inspection Services:
 1. The Owner will employ and pay for the services of an Independent Testing Agency to provide testing and inspections of asphalt pavements.
 2. The services and the information provided by the Testing Agency are provided for the sole benefit of the Owner. The information is provided to the Contractor for the sole purpose of being aware of what is being reported.

3. The Contractor is solely responsible for assuring the work complies with the Contract Documents in all respects and may not rely on the testing agency for this or any other assurances. The Testing Agency and their representatives are not authorized to revoke, alter, relax, enlarge, or release any of the requirements of the Contract Documents, approve or accept any portion of the work, perform or excuse any duties of the Contractor, or be involved in the scheduling of any work.
 4. Asphalt paving materials and operations shall be tested and inspected as the work progresses. Failure by the Testing Agency to detect any defective work or material shall not in any way prevent later rejection (when such defect is discovered) nor shall it obligate the Owner for final acceptance.
- C. Asphalt producer shall monitor production according to the procedures of NYSDOT Material Method 28 Friction Aggregate Control and Test Procedures. Asphalt producer shall be a New York State approved/certified HMA (Hot Mix Asphalt) manufacturing facility.
- D. Calibrated equipment and qualified personnel must be always accessible during the construction of the HMA.

1.6 JOB CONDITIONS

- A. Job conditions in Section 312201 apply.
- B. Atmospheric conditions for applying courses:
1. Hot mix asphalt shall generally arrive on the project site between 270°-300° F. (per asphalt producer recommendations).
 2. Place asphalt concrete wearing course or bituminous surface treatment only when atmospheric temperature is above 50 degrees F. and rising, and when asphalt binder course is thoroughly dry.
 3. Place binder course only when air temperature is above 45 degrees F. and rising and when asphalt base course or granular stone base course is thoroughly dry.
- C. Grade Control: Establish and maintain required lines and elevations.
- D. Codes and Standards: Perform the work in compliance with applicable requirements of governing authorities having jurisdiction. Obtain and pay for permits required by local authorities.
- E. Construction Review and Testing: Notify and coordinate with the Independent Testing Agency and Architect when the subgrade is shaped and ready for proof rolling. Also, when the granular base course is fully installed, compacted and ready for density testing. Protect subgrade and subbase at all times.
- F. When staging or scheduling delays occur and wearing course cannot be installed directly after binder course installation before winter, provide temporary asphalt transition ramp/collar around drainage structures in paved areas and at handicap ramps to prevent damage by snow plow. Remove prior to installation of wearing course. Power wash surface and apply asphalt tack coat, as specified, prior to wearing course installation, at no additional cost to the Owner.

1.7 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver all materials to the job site with all labels intact and legible at time of installation.
- B. Store materials off ground under cover. Protect from damage or deterioration.
- C. Handle materials to prevent damage to surface, edges, ends and factory applied finishes of items. Damaged material shall be rejected and replaced.

PART 2 - PRODUCTS

2.1 SOIL STABILIZATION FABRIC

- A. Shall be a heavy duty, commercially manufactured woven polypropylene geotextile. Standard of quality shall be Mirafi 500X, manufactured by TenCate or Architect approved equal.

2.2 GRANULAR BASE COURSE AND GRAVEL PAVEMENT

- A. Shall be as specified in Section 312201.
- B. The graded and designed granular base below all new Asphaltic Concrete Pavements shall be constructed, tested, and prepared in accordance with Section 312201 - Site Earthwork of the Contract Documents.

2.3 ASPHALTIC CONCRETE

<u>Pavement Types</u>	<u>Percent Asphalt*</u>
37.5mm Type 1 Base Course	4.8% Asphalt
19.0mm Type 3 Binder Course	4.8% Asphalt
12.5mm Type 6 Top Course	5.9% Asphalt

* Percentage of Asphalt is approximate and shall be based off actual project submittals provided by the Asphalt Producer.

- B. Hot Mix Asphalt Top Course: Pavement shall meet the minimum requirements for 12.5 mm (Type 6) SUPERPAVE Hot Mix Asphalt Top Course (75 gyrations), with a PG 64-22 Binder as specified in Section 404, of the current NYSDOT Standard Specifications, with the exception that the maximum proportion of Recycled Asphalt Pavement (RAP) to virgin aggregates shall not exceed 20% of the total mix.
- C. Hot Mix Asphalt Binder Course: Pavement shall meet the minimum requirements of 19.0mm SUPERPAVE Hot Mix Asphalt Binder Course (75 gyrations), with a PG 64-22 Binder, as specified in Section 404, of the current NYSDOT Standard Specifications, with the exception that the maximum proportion of Recycled Asphalt Pavement (RAP) to virgin aggregates shall not exceed 20% of the total mix.
- D. Hot Mix Asphalt Base Course: Pavement shall meet the minimum requirements of 37.5mm SUPERPAVE Hot Mix Asphalt Base Course (75 gyrations), with a PG 64-22 Binder, as specified in Section 404, of the current NYSDOT Standard Specifications, with the exception that the maximum proportion of Recycled Asphalt Pavement (RAP) to virgin aggregates shall not exceed 30% of the total mix.

- E. The coarse aggregate used in HMA shall be sound, angular crushed stone (crushed or rounded gravel is not acceptable). The fine aggregate shall be well graded, moderately sharp to sharp (angular) sands.

2.4 BITUMINOUS TACK COAT

- A. Material shall consist of an asphalt emulsion, Grade RS-1h, and shall meet the minimum requirements of Section 407, of the current NYSDOT Standard Specifications. Bituminous Tack Coat shall be installed over all new and existing concrete and asphalt pavements and structures prior to the installation of new Hot Mix Asphalt materials. The following application rates shall apply:

1.	New Hot Mix Asphalt	0.05-0.07 gal/sy
2.	Milled Surfaces of Existing Asphalt	0.10-0.15 gal/sy
3.	Abutting Vertical Edges (drainage structures, appurtenances)	0.05-0.07 gal/sy
4.	All Styles of Curbs and Gutters	0.05-0.07 gal/sy
5.	Delayed asphalt installation of HMA Courses	0.10-0.15 gal/sy

2.5 PAINTED LINES AND TRAFFIC MARKINGS

- A. The extent of the pavement markings shall match the extent, location and composition of pavement markings existing at the site prior to start of work where applicable.
- B. The work includes, but is not limited to the following: parking stall divider lines, wheelchair legends, "STOP" legends, "NO PARKING" legends, pick-up zone, striping and legends, directional arrow legends, diagonal striping, center line striping, fire lane striping, student area line striping, and other pavement markings as may be shown on the plans.
- C. Provide ready-mixed, one component waterborne traffic line paint. Standard of quality shall be: Pro-Park® Waterborne Traffic Marking Paint B-97 Series as distributed through Sherwin-Williams, 800-474-3794; or Architect approved equal.
 - 1. Colors (as approved by the Owner in writing):
 - a. Yellow: 1 Gallon & 5 Gallon, Product Number B97YD2467
 - b. White: 1 Gallon & 5 Gallon, Product Number B97WD2434
 - c. Blue: 1 Gallon & 5 Gallon, Product Number B97LD2022
 - d. Black: 1 Gallon & 5 Gallon, Product Number B97BD2021
 - 2. Paints shall contain all necessary co-solvents, dispersants, wetting agents, preservatives and all other additives, so that paint shall retain viscosity. Halogenated solvents and glass beads shall not be permitted.
 - 3. Volatile Organic Compound (VOC) content shall not exceed 250 grams maximum per liter of paint as determined in accordance with ASTM D 3960 test, excluding water and exempt solvents.

2.6 HOT POUR CRACK SEALING AND FILLING

- A. Single component, hot applied asphalt crack and joint sealant capable of withstanding temperatures of up to 450° without experiencing polymer degradation.
- B. Shall be supplied in solid blocks comprised of heat stabilized polymers and asphalt.

- C. Meeting the following material requirements when tested in accordance with ASTM D5329. (see chart below)

Chemical & Physical Analysis

Recommended Application Temperature	350-400°F
Maximum Heating Temperature	450°F
Cone Penetration at 25°C	50 max.
Flow at 60°C, mm	0.
Softening point	200°F Min.
Flexibility 0°F	(1" Mandrel)-Pass
Specific Gravity	1.17
Asphalt Compatibility	Passes

- D. Standard or quality shall be Crack Master Supreme as manufactured by Thorworks Industries, Inc., 800-395-7325, www.thorworks.com or approved equal.

PART 3 - EXECUTION

3.1 PREPARE SURFACE

- A. Prior to commencement of asphalt paving, all excavations, drainage, utilities, backfilling, fencing, bollards, storm structures, curbing installations, adjustments, proof-rolling and density test procedures shall be complete to the satisfaction of the Architect.
- B. Prior to commencement of tack coat and asphalt paving within pavement milled areas, as shown on the plans, all cracks and joints in the milled pavement surface shall be prepared and filled in accordance with the project specifications. Any oil or grease spots shall be scraped and treated to prevent bleeding through the tack coat.
- C. Saw cut, using straight and true lines, all existing asphalt pavements to remain in place with straight, neat edge for abutting against proposed asphalt pavement.
- D. Provide and confirm field quality control as described in Section 312201 for pavement subgrade and granular base course stone.

3.2 CONSTRUCT PAVEMENT GRANULAR BASE COURSE

- A. General: Consists of placing granular base course material, in layers of specified thickness, over prepared subgrade and fabric to support a pavement course.
- B. Grade Control: Provide engineering layout per Section 312201 and grade stakes. During construction, protect grade stakes; maintain lines and grades including crown and cross-slope of each course.
- C. Install soil stabilization fabric after subgrade has been acceptably compacted and proof rolled. Install soil stabilization fabric as recommended by the manufacturer AND;
1. Lay fabric in direction of construction traffic.
 2. Overlap fabric side to side and end to end a minimum of two (2') feet.
 3. Establish reasonable compaction and rut stability before using heavy or vibratory compaction equipment.
- D. Placing:

1. Place granular base material over soil stabilization fabric, on prepared subgrade in layers of uniform thickness, conforming to the asphalt pavement details on the drawings.
 2. Place granular base material in a maximum of six (6) inch layers and compact with a vibratory or 10 ton smooth wheeled roller.
- E. Provide density testing as described in Section 312201.
- F. Surface Smoothness: Test finished surface for smoothness. Surface will not be acceptable when it deviates more than 3/8" measured by a 10 foot straightedge, in any direction.
- G. The finished grade of the granular base course shall be verified to ensure that the final finished product of the bituminous concrete pavement surface will be installed to the lines and grades of the existing pavements and proposed elevations surveyed by the Contractor prior to the start of the paving work.

3.3 PLACE ASPHALT MIX

- A. General:
1. The Contractor shall submit a paving plan, indicating intended direction of paving, number of pulls, etc. for approval prior to the start of paving operations.
 2. Joints: Saw cut vertical straight, neat edges for joints required. Joints shall be sharp and clean, conforming to shapes drawn on drawings. Ragged joints will not be accepted.
 3. Mill two (2') feet into surface of adjacent asphalt so joints do not line up or "stack".
 4. Place bituminous tack coat to all surfaces as indicated in this specification. When pavement surface temperature is above or below the 75-130 degrees F. range, the grade of asphalt emulsion must be modified according to NYSDOT standards. Tack coat shall not be applied to a wet surface or when the pavement surface temperature is below 45 degrees F.
 5. Place asphalt on approved prepared surface, spread and strike-off.
 6. Spread mixture at minimum temperature of 225-240 degrees F. Place inaccessible and small areas by hand. Hand work shall be minimized to ensure the best possible finished surface.
 7. Place each course to required grade, cross-section, and compacted thickness.
 8. Paving operations shall not be scheduled when ample time does not exist to place, compact, and finish roll the hot mix asphalt during daylight hours and prior to rainfall.
- B. Pavement Placing: Shall be installed in accordance with Section 402-"Hot Mix Asphalt (HMA) Pavements", of the current NYSDOT Standard Specifications.
- C. Paving Equipment:

1. Must be capable of placing, spreading and finishing courses of HMA to the specified thickness.
 2. HMA shall be free of marks, segregation and be placed to the required uniform elevation with a smooth texture not showing tearing, shoving, or gouging.
 3. Auger extensions are required while pavers are extended beyond the basic screed width.
 4. Paving equipment shall be self-propelled and capable of maintaining the line and grade shown on the plans with suitable electronic equipment. The screed shall be straight and true with no bow and utilizing a vibratory screed. Paving equipment should have fully functional screed heaters and joint preheaters.
- D. Asphaltic Concrete shall be installed as follows:
1. Medium Duty Asphalt Pavement: Installed in two (2) lifts consisting of 19.0mm SUPERPAVE Hot Mix Asphalt Binder Course overlain by 12.5mm SUPERPAVE Hot Mix Asphalt Top Course.
- E. Place in strips not less than ten (10') feet wide, unless otherwise acceptable. In placing each succeeding pass after the placement of the initial pass, the screed of the paver shall be set such that it overlaps the preceding pass by 6" and be sufficiently high such that when compacted, a smooth joint is produced. Prior to pinching the joint, the excess material shall be pushed onto the edge of the new pass with a lute. Excess material shall be removed.
- F. After first lift has been placed and rolled, place succeeding lifts and extend rolling to overlap previous lifts. Where possible, top course shall be placed at right angles to binder course and in the direction that the drainage flows. Where this is impractical, offset joints of the two courses by a minimum of two (2') feet so upper and lower joints do not align.

3.4 ROLL ASPHALT MIX

- A. General:
1. Rollers shall conform to the manufacturer's specifications for all ballasting. At least one vibratory roller shall be required for each project, with two rollers required as a minimum. (Three rollers shall be required when tonnage is greater than 300 tons/day.)
 2. Rollers shall be of a good condition and capable of compacting the HMA to the minimum in-place density required by this specification. Compact asphalt with a nominal 10 ton steel wheel roller or pneumatic rubber tired roller. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.
 3. Begin rolling when mixture will bear roller weight without obvious or excessive displacement.
- B. Finish Rolling: Each lift of the Asphaltic Concrete Pavement shall be mechanically rolled and compacted to the finished thicknesses specified in the Contract Documents. The pavements shall be compacted to a minimum of 94%-97% (95%-102% at longitudinal joints) of the materials theoretical density as determined by AASHTO Method T 209 and an air void percentage of 5%-6% maximum.

- C. Patching: Remove and replace paving areas mixed with foreign materials, dirt, and defective areas. Cut-out such areas and fill with fresh, hot asphalt concrete. Compact by rolling to maximum surface density and smoothness.
- D. Joints:
 - 1. The Contractor shall sequence the installation and orientation of all Asphaltic Concrete Pavements such that the minimum numbers of longitudinal and transverse joints are produced and in accordance with the approved Asphalt Placement Work Plan.
 - 2. Neat, straight butt joints between successive passes. Offset joints a minimum of six (6") inches between lifts of asphalt.
 - 3. When repairs or staging of work occurs, make neat vertical saw cut between old and new work to create butt joint. Heat joint prior to pouring. Cold joints are not acceptable.
 - 4. Apply bituminous tack coat to all surfaces and rates indicated under "Bituminous Tack Coat" of this specification section. Tack coat shall not be required on abutting vertical edges for pavements placed in the same day.
 - 5. Minimize construction, longitudinal, and transverse joints left open for an extended period of time.
 - 6. Construct longitudinal joints by paving in a hot fashion with a temperature of not less than 220°F to ensure maximum performance and adhesion.
 - 7. Compact all joints to provide for a neat, uniform and tightly bonded joint that will meet both surface tolerances and density requirements of this specification.
 - 8. Cut straight and true (vertical construction or transverse joints if the material has cooled to less than 220°F prior to the placement of the next pass to ensure the best performing joint possible.
- F. Edges: Roll at 45 degrees as detailed, creating clean edge conforming to shapes indicated on the drawings. Ragged edges will not be accepted. Return and saw cut ragged edges at no additional cost to the Owner as directed by the Architect.
- G. The final finished grades of the new Bituminous Concrete Pavements must be smooth and true to the contours and shall be installed to the lines and grades of the site prior to start of construction. The final finished grades shall match adjacent pavement surfaces and concrete slabs, aprons, and doorways.
- H. Construction Delays (over 48 hours): When placement of the wearing course over the binder course is delayed over 48 hours, thoroughly clean existing surface of dirt, oil and other debris by pressure washing and sweeping. Place bituminous tack coat as specified in this section.

3.5 ASPHALT TOLERANCES

- A. Thickness and Density: Compact each asphalt course to produce the thickness indicated on the drawings within the following tolerances:
 - 1. Binder Course: Plus or minus 1/4-inch

2. Wearing Course: Plus or minus 1/8-inch
- B. Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined using a 10-foot straightedge applied transversely or longitudinally to paved areas:
 1. For Asphalt Concrete:

Binder Course Surface:	1/4"
Wearing Course Surface:	1/8"
- C. Asphalt Cores: Shall be provided as indicated under "Field Quality Control" of this specification.

3.6 FIELD QUALITY CONTROL

- A. The Owner's Testing Agency shall provide the following in the daily report at a minimum:
 1. Verify the following for the asphalt mix design prior to asphalt placement:
 - a. The asphalt mix design has been approved.
 - b. The asphalt mix design specifies the minimum relative compaction and the methods required to determine maximum density.
 2. Verify the asphalt subgrade has been acceptably proof-rolled. (See Section 312201.)
 3. Inspect /test aggregate base course material for in-place density (95%) and thickness. Test materials for gradation classification, and physical properties. (See Section 312201.)
 4. Inspect/test asphalt wearing course material for compaction during placement and conduct thickness measurements during lay-down. Take temperature of the asphalt mixture and compare actual temperature with the approved asphalt mixture design range. As a minimum, perform the following inspection/tests:
 - a. Collect trip tickets from trucks delivered to the site and verify correct mix design being used for the project.
 - b. Temperature tests: one per truck.
 - c. Lay down thickness (uncompacted): one per strip or 500 square feet minimum
 - d. Verify equipment rolling pattern and passes to ensure proper compaction: one per day
 - e. Density test (daily lab density): one test per 5000 square feet minimum
 - f. Hot mix samples (laboratory testing for density per ASTM D1188): one per day
 - g. Thickness per ASTM D3549 and density samples per ASTM D2950 by a properly calibrated nuclear asphalt testing device. If there is a disagreement between tests done by ASTM D2950 and ASTM D1188, the values done by ASTM D1188 will govern: one test per 20,000 square feet (surface lift), one test per 10,000 square feet (base lift)
 - h. Air voids per ASTM D3203 or D2726: one test per 5000 square feet minimum
 - i. Verify compaction at the joints and seams. The completed paved surface to be true to grade and cross section. Verify smoothness by using an unlevelled 10 foot straightedge and ensuring no gap at any point between

- straightedge and pavement exceeds surface smoothness requirements above except at interception or at changes of grade.
- j. The screed/lay down thickness tolerance shall be between 1/8 to 3/16 inches greater than the required asphalt minimum layer requirement. When screed depth is set for the exact thickness as specified, immediately notify the Owner's Representative and Contractor that the installed asphalt thickness may be deficient to achieve the specified minimum thickness. Identify areas of non-complying thickness and attach a drawing identifying the areas to the daily field report.
 - k. Immediately notify the Owner's Representative and Contractor when paving is being conducted in cold weather and asphalt temperatures are below or above the design mix range.
 - l. Check the surface grades and drainage patterns. Identify on a drawing all paved areas that are holding water after asphalt placement and notify the Owner's Representative and Contractor. Small ponding areas (bird baths) larger than two (2') feet in any dimension are not acceptable. When this test proves that surface conditions are not acceptable, the Contractor will be responsible for correcting the problem areas. Install a one (1") inch shim coat of wearing course material, or other means acceptable to the Architect.
 - m. Verify tack coat and edge coat have been applied at the proper rate.
5. Asphalt Cores: Shall be as directed by the Architect.
- a. Prior to final acceptance of the asphalt and before lining or other surface materials are placed, the Owner's Testing Agency shall core 3" diameter areas of the asphalt surfacing where directed by the Architect. Consistency, density, thickness, and tensile strength per ASTM D6931 will be evaluated.
 - b. Patch core areas as directed by the Architect to match adjacent density, texture and thickness.
 - c. Coordinate day to day scheduling with the Testing Agency.
 - d. If cores vary significantly from the contract requirements, additional cores will be performed by the Testing Agency as directed by the Architect. Once the overall general quality is determined, provide remedial work as directed by the Architect to achieve the quality and consistence as specified.
- B. Unacceptable Paving: Remove and replace unacceptable paving as directed by the Architect, immediately and without argument or delay. Correction of deficient areas in the wearing course shall be done by sawcutting and removal of defective area of work. Tack coat shall be applied to all edges and the pavement shall be replaced. Shimming or skin patching of the wearing course shall not be permitted. Correction of deficient areas within the binder course shall be corrected by sawcutting and milling high spots, and truing and leveling low spots or as directed by the Architect.

3.7 SURFACE PROTECTION

- A. Protection: After final rolling and sealing, do not permit any type of vehicular or construction traffic on pavement until it has cooled and hardened as recommended by the producer/manufacturer, minimum of 48 hours.
- B. Provide protection including, but not limited to, fencing, traffic cones, barrels, lights, reflective signs, flagpersons and barricades until mixture has cooled and attained its maximum degree of hardness.

3.8 PAINTED LINES AND TRAFFIC MARKINGS

- A. Cleaning: Sweep and clean surface to eliminate loose material and dust. Remove dirt, oils and other foreign matter. All surfaces to receive pavement markings shall be clean and in good condition to accept pavement markings.
- B. Coordinate provisions for installation with work of other trades.
- C. Locate to alignment and dimensions as shown on drawings and/or approved by Owner.
- D. Painted markings shall meet regulations described in the "Manual of Uniform Traffic Control Devices", latest edition, as published by NYSDOT, Division of Traffic and Safety, Section 262.25 and figure PM-42; and they shall comply with the most recent version of the Americans with Disabilities Act Standards for Accessible Design.
- E. Protect: Adjacent surfaces and other items to remain with tape, drop cloths, or other Architect approved means.
- F. Application: Two coats according to manufacturer's recommendations resulting in a dense, opaque application without any ghosting of former pavement markings showing through. Overspraying along edges will not be accepted. Edges shall be sharp and crisp, to the shapes required by the drawings.
 - 1. First coat shall be installed at the recommended DFT (dry film thickness) after paving is in place. The second coat shall be applied at the recommended DFT no later than thirty (30) days after the completion of work.
 - 2. Apply paint materials using clean brushes, rollers or spraying equipment.
 - 3. Apply paint materials as a rate not exceeding those recommended by the paint manufacturer for surfaces being painted, less 10% of losses
 - 4. Comply with manufacturer's recommendations for drying time between coats. The minimum DFT must be met. Apply additional coats as needed to achieve minimum total specified DFT of the paint system.
 - 5. The minimum required total Dry Film Thickness (DFT): The DFT shall be the minimum required thickness as measured in mils.
 - 6. System coverage requirements minimum total thickness (unless otherwise noted):
 - a. 1st Coat – 3.0 mils
 - b. 2nd Coat – 6.0 mils
 - 7. Exterior Paint Systems: Provide the following paint systems as indicated: (Colors to be approved by Owner.)
 - a. Parking stall, division and limit lines shall be 4" in width, true and straight. Color: White – DFT 6.0 mils
 - b. Pavement lettering "NO PARKING" shall be 2'-0" in height. Color: Yellow – DFT 6.0 mils
 - c. Compact lettering "COMPACT" shall be 1'-0" in height. Color White – DFT 6.0 mils
 - d. Stop legends shall be as detailed on drawings. Color: White – DFT 6.0 mils

- e. Wheelchair legends shall be as detailed on the drawings. Color: Blue background with white symbols. Parking stall striping shall be Blue at handicap stalls only – DFT 6.0mils
 - f. Diagonal striping Handicapped. Color: Blue – DFT 6.0 mils
 - g. Diagonal striping Loading Zone. Color: Yellow – DFT 6.0 mils
 - h. Directional signage shall be as detailed on the drawings. Color: White – DFT 6.0 mils
 - i. Center line striping shall be 4" in width as detailed on the drawings. Color: White – DFT 6.0 mils
 - j. Fire line striping shall be 4" in width. Color: Yellow – DFT 6.0 mils
 - k. Electric vehicle charger legends shall be as detailed on the drawings. Color: Green background with white symbols and border – DFT 6.0mils
- G. Allow 48 hours minimum curing time for paint before allowing traffic on surfaces. Clean up thoroughly including all protective tape, spilled paint, and debris. All parking area marking and painting to be protected by appropriate traffic barriers, lighted if necessary, so located as to prohibit parking and traffic until traffic lines are completed and properly dry.

3.9 HOT POUR CRACK SEALING AND FILLING

- A. The crack must be free from moisture, dust, and loose aggregate. Routing or wire brushing are preferred methods followed by a compressed air heat lance immediately prior to sealing. The substrate and air temperature must be above 45°F.
- B. Shall be melted in direct fired or oil jacketed melters. Material should reach recommended pouring temperature of 350-400°F. Fresh material may be added as sealant is used.
- C. Apply heated crack filler using either a pump and wand system or a pour pot. For best results the sealant depth to width ratio should not exceed 2 to 1 (i.e. 2-inches deep to 1-inch wide). The cooled sealant height should not exceed 1/8" above surrounding pavement. Using a sealing shoe or squeegee, band the material 2 to 3 inches wide over the crack.

3.10 CLEAN UP

During the contract, and at intervals as directed by the Architect, and as asphalt paving is completed, clear the site of extraneous fabric, gravel, asphalt and debris. Leave the site in a clean, safe, well draining, neat condition.

END OF SECTION 321201

SECTION 321202 – INLAID THERMOPLASTIC ASPHALT PAVEMENT MARKING SYSTEM

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of thermoplastic asphalt pavement marking system is shown on the drawings.
- B. Inlaid preformed thermoplastic asphalt pavement marking system work includes, but is not limited to, the following:

A durable preformed thermoplastic asphalt pavement marking system, inlaid just below the asphalt pavement surface to create colorized patterns within the asphalt for streetscape and traffic calming purposes on public roads and private property.

- C. Provide all materials, labor, equipment and services required to accomplish related work in accordance with the drawings and specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 311201 - Site Preparation
- B. Section 321201 - Asphalt Paving

1.3 REFERENCES

- A. The latest editions of the following Standards, as referenced herein, shall be applicable:
 - 1. FHWA Docket No. FHWA – 99-6190 Table 5 and Table 6 as revised and corrected.
 - 2. ASTM E 303
 - 3. ASTM C 1028
 - 4. ASTM D 2047

1.4 SUBMITTALS

- A. Provide Certified Applicator experience requirements, as outlined in "Quality Assurance" of this specification section, for the following:
 - 1. Inlaid Preformed Thermoplastic Asphalt Pavement Marking System
- B. Provide Manufacturer Certification as outlined in "Quality Assurance" of this specification section.
- C. Provide Manufacturer's Product Data (MPD) for the following:
 - 1. Preformed Thermoplastic Material
- D. Provide shop drawings for the following:

1. Line Markings: Shop drawings indicating sizes, shapes, patterns, and colors of markings, including manufacturers and types of pigments.
2. Owner to approve all pigment colors prior to installation.

1.5 QUALITY ASSURANCE

- A. Certified Applicator Experience Requirements:
 1. Contractor shall have the experience of at least five (5) years in business. Superintendent has a minimum of three (3) years' experience as an inlaid preformed thermoplastic asphalt pavement marking system foreman approved by the manufacturer.
- B. MANUFACTURING CONTROL AND ISO CERTIFICATION: The manufacturer must be ISO 9001:2015 certified for design, development and manufacturing of preformed thermoplastic, and provide proof of current certification.

1.6 JOB CONDITIONS

- A. Codes and Standards: Perform the work in compliance with applicable requirements of governing authorities having jurisdiction. Obtain and pay for permits required by local authorities.
- B. The preformed thermoplastic is inlaid into asphalt pavement using proprietary infrared heating equipment designed specifically to elevate the temperature of the asphalt without it being adversely affected. A specialized template is imprinted into the heated asphalt pavement to create depressions to match the desired pattern. The preformed thermoplastic, precut by the material manufacturer to match the imprinted pattern, is laid to fit within the depressions and melted in place using the proprietary infrared heater.
- C. When applied in accordance with the manufacturer's application guidelines by an applicator certified by the manufacturer, the inlaid preformed thermoplastic will wear at a similar rate as the surrounding asphalt pavement. Therefore, the life of the inlaid preformed thermoplastic is dependent upon using a long lasting, durable and stable asphalt pavement to prevent premature wear.

1.7 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver all materials to the job site with all labels intact and legible at time of installation.
- B. Store materials off ground under cover. Protect from damage or deterioration.
- C. Handle materials to prevent damage to surface, edges, ends and factory applied finishes of items. Damaged material shall be rejected and replaced.
- D. The preformed thermoplastic material shall be vacuum sealed in protective plastic film with cardboard stiffeners to prevent damage in transit. The cartons in which standard preformed thermoplastic patterned sheets are packed shall be non-returnable and shall not exceed 25 in. in length and 25 in. in width. The cartons shall be labeled for ease of identification. The weight of an individual carton must not exceed fifty (50) pounds. The carton must be wrapped with a protective film to protect the material from rain or premature aging.

PART 2 – PRODUCTS

2.1 PREFORMED THERMOPLASTIC MATERIAL

- A. The inlaid preformed thermoplastic pattern shall be created using precut preformed thermoplastic sheets that are 24 in. x 24 in. The precut patterned border pieces shall measure either 8 in. or 12 in. wide x 24 in. long. These sizes ensure the specified patterns are created with a minimal number of seams between the preformed thermoplastic sheets. The use of individual preformed thermoplastic strips inlaid into standard imprinted patterns to create the design shall not be allowed.
- B. The inlaid preformed thermoplastic shall be manufactured without glass beads. The inlaid preformed thermoplastic material must be a resilient preformed thermoplastic product, which contains intermixed anti-skid/anti-slip elements with a minimum hardness of 6 (Mohs scale), and where the top surface contains factory applied anti-skid/anti-slip elements with a minimum hardness of 8 (Mohs scale).
- C. PREFORMED THERMOPLASTIC MATERIAL: Must be composed of an ester-modified rosin impervious to degradation by motor fuels, lubricants, etc. in conjunction with aggregates, pigments, binders, and anti-skid/anti-slip elements. Pigments and anti-skid/anti-slip elements must be uniformly distributed throughout the material. The thermoplastic material conforms to AASHTO designation M249, with the exception of the relevant differences due to the material being supplied in a preformed state, being non-reflective, and potentially being of a color different from white or yellow.
 1. Pigments:
 - a. White: The material shall be manufactured with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.
 - b. Other Colors: The pigment system must not contain heavy metals, nor any carcinogen as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.
 2. Skid Resistance: The surface of the preformed thermoplastic material shall contain factory applied anti-skid material with a minimum hardness of 8 (Mohs scale). Upon application the material shall provide a minimum skid resistance value of 60 BPN when tested according to ASTM E 303.
 3. Slip Resistance: The surface of the preformed thermoplastic material shall contain factory applied anti-skid material with a minimum hardness of 8 (Mohs scale). Upon application the material shall provide a minimum static friction of coefficient of 0.6 when tested according to ASTM C 1028 (wet and dry), and a minimum static coefficient of friction of 0.6 when tested according to ASTM D 2047.
 4. Thickness: The material must be supplied at a minimum thickness of 90 mil (2.3 mm).
 5. Environmental Resistance: The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.
 6. Storage Life: The material may be stored for 12 months, if stored indoors and protected from the elements.

7. Transverse Lines for Inlaid Preformed Thermoplastic Crosswalk Application: Supplied as white, retroreflective preformed thermoplastic linear striping material in 125 mil (3.2 mm) thickness, 12 in. (.30 m) width. This material may be supplied and applied by the certified applicator in conjunction with the inlaid preformed thermoplastic system and is available from the inlaid preformed thermoplastic manufacturer. (Consult the manufacturer's published application instructions for the preformed thermoplastic linear striping material selected for proper application methods.)
- D. Standard of Quality shall be Traffic Patterns XD Thermoplastic Texturing System as manufactured by Ennis Flint, (336) 477-8438, www.ennisflint.com.

PART 3 – EXECUTION

3.1 SPECIALIZED APPLICATION EQUIPMENT

- A. Stamping Templates: Designed and constructed for imprinting the specified pattern into the asphalt pavement, templates are supplied by the inlaid preformed thermoplastic manufacturer in 150 mil thickness. Standard patterned templates are designed to create crosswalks ranging from 6 ft. to 20 ft. wide, in 2 ft. width increments. Template layout drawings shall be supplied by the inlaid preformed thermoplastic manufacturer to illustrate proper template placement to create the specified pattern. Certain templates may be field assembled as needed using the manufacturer supplied template assembly kit. For crosswalk widths less than 6 ft. or more than 20 ft., custom templates may be designed and constructed in 2 ft. width increments.
- B. Heating Equipment: The inlaid preformed thermoplastic manufacturer shall distribute reciprocating infrared heating equipment designed specifically to elevate the temperature of the asphalt pavement without adversely affecting it, as well as the inlaid preformed thermoplastic material. The primary asphalt heating unit must employ a bank of propane-fired infrared heaters, mounted on a track device that allows the heater bank to reciprocate back and forth over a designated area, thereby allowing the operator to monitor the temperature of the asphalt pavement and the inlaid preformed thermoplastic at all times during the pavement heating process.
1. A smaller, mobile infrared heater distributed by the inlaid preformed thermoplastic manufacturer is designed specifically to heat areas such as borders and narrow areas that are inaccessible to the primary heater. This secondary heater also allows the operator to monitor the temperature of the asphalt pavement and the inlaid preformed thermoplastic at all times during the heating process.
 2. An approved hand-held propane heat torch distributed by the inlaid preformed thermoplastic manufacturer shall be used to heat isolated areas of the asphalt pavement or inlaid preformed thermoplastic.
- C. Hand Held Finishing Tool: Enables the applicator to complete the imprinting of the asphalt pavement in areas around permanent structures, such as curbs and manholes covers, which may be inaccessible to the stamping template. The hand held finishing tools are distributed by the inlaid preformed thermoplastic manufacturer.
- D. Vibratory Plate Compactor (700-900 lb. / 318-408 kg): Shall be used for pressing the stamping template into the heated asphalt to create the specified pattern. The inlaid preformed thermoplastic manufacturer does not supply vibratory plate compactors.

3.2 APPLICATION

- A. **Manufacturer Certified Applicator Requirement:** The material shall be supplied and applied only by an applicator certified by the manufacturer. The applicator shall provide proof of current certification before commencing work. The Certified Applicator shall follow the manufacturer's current published application guidelines.
- B. **Substrate Condition:** The material must only be applied to a stable, high quality asphalt pavement substrate over a stable base, that is free of defects, as per the manufacturer published substrate guide. The asphalt pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.
- C. **Procedure:** The asphalt pavement surface is heated with the primary reciprocating infrared heater to the appropriate temperature range to allow for surface imprinting. The stamping template in the specified pattern is imprinted into the heated asphalt pavement using the 700-900 lb. vibratory plate compactor. The preformed thermoplastic sheets, precut at the factory by the material manufacturer to match the template pattern, are laid into the pattern created by the stamping template, and heated until thoroughly molten with the primary reciprocating infrared heater. The mobile infrared heater or approved propane heat torch may be used in areas inaccessible to the primary reciprocating infrared heater. The material is then allowed to cool thoroughly before being opened to vehicle or pedestrian traffic. (Consult the manufacturer's published application procedures for complete information.)
- D. The inlaid preformed thermoplastic asphalt pavement marking system shall not be applied to Portland Cement Concrete.

3.3 CLEAN UP

During the contract, and at intervals as directed by the Architect, and as inlaid preformed thermoplastic asphalt pavement marking system is completed, clear the site of extraneous paint, cutouts, and debris. Leave the site in a clean, safe, well draining, neat condition.

END OF SECTION 321202

SECTION 321301 - SITE CONCRETE WORK

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of site concrete work is shown on the drawings and includes formwork, reinforcement, accessories, cast in place concrete, installation of embedded items, finishing, curing, mix designs, testing and acceptance requirements for concrete.
- B. Site Concrete work includes, but is not limited to, the following:
 - 1. Concrete walks and pads
 - 2. Concrete footings, bases, foundations
 - 3. Concrete curb ramps with detectable warning system
 - 4. Exterior anchoring cement non-shrink grout
 - 5. Concrete scheduling April 1 to October 15
 - 6. Clean up
- C. Provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 312201 - Site Earthwork
- B. Section 321601 - Granite Curb
- C. Section 323001 – Metal Bollards
- D. Section 334001 - Storm Drainage

1.3 REFERENCES

- A. ACI 301-96 - Specifications of Structural Concrete for Buildings
- B. ASTM A615 - Deformed and Plain Billet-Steel for Concrete Reinforcement
- C. ASTM C31 - Standard Practice for Making and Curing Test Specimens in the Field
- D. ASTM C33 - Concrete Aggregate
- E. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
- F. ASTM C94 - Ready-Mixed Concrete
- G. ASTM C109 - Test Method for Compressive Strength of Hydraulic Cement Mortars
- H. ASTM C143 - Standard Test Method for Slump of Hydraulic Cement Concrete
- I. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-Shrink)
- J. ASTM C150 - Portland Cement

- K. ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete
- L. ASTM C173 - Standard Test Method for Air Content of Freshly Mixed Concrete by Volumetric Method
- M. ASTM C260 - Air Entraining Admixtures for Concrete
- N. ASTM C309 - Liquid Membrane-Forming Compounds for Curing Concrete
- O. ACI 315 - Details and Detailing Concrete Reinforcement

1.4 SUBMITTALS:

- A. Manufacturers Product Data (MPD) and Samples where indicated are required for the following:
 - 1. Expansion Joint and Sealant: MPD and Color Samples
 - 2. Water Based Curing and Sealing Compound
 - 3. Slip Dowel System
 - 4. Cold Weather Admixture
 - 5. Hot Weather Admixture
 - 6. Air Entrainment
 - 7. Detectable Warning System
 - 8. Exterior Anchoring Cement Non-Shrink Grout
 - 9. High Strength Anchoring Epoxy System
 - 10. Concrete Bonding Agent
- C. Submit proposed 4,500 psi concrete mix design and test data in accordance with ACI 301 to the Architect for review prior to commencement of the work.
 - 1. Indicate the locations and elements for which the mix will be used.
 - 2. Include in the concrete mix design all required or proposed admixtures necessary to facilitate the installation of the concrete by the means and methods selected by Contractor for this project.
- D. Mill test certificates and/or test reports for cement indicating compliance with these specifications.
- E. Environmental Product Declarations: Provide current Environmental Product Declarations (EPDs), that include the amount of embodied carbon in Concrete.
 - 1. Acceptable EPDs are non-expired, Product-specific, Facility or Plant-specific, or Supply Chain-specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services*.
 - 2. Provide a summary sheet containing the total anticipated quantity/volume/weight (matching the units used in the EPDs) of each product being incorporated into the project.
 - a. With each application for payment, provide an updated accumulative summary sheet and copies of delivery tickets for each product incorporated into the project for the period covered by the payment application.

1.5 QUALITY ASSURANCE

- A. Concrete Testing Services: The Owner shall employ an acceptable independent testing laboratory to perform materials evaluation, testing of concrete mixes, and quality control testing. Coordinate day to day scheduling with the testing agency. Field technician shall be ACI Certified Grade 1 Field Technician.
- B. Construct and erect concrete formwork in accordance with ACI 301 and 347.
- C. Perform concrete reinforcing work in accordance with ACI 301.
- D. Perform cast-in-place concrete work in accordance with ACI 301.
- E. Conform to New York State Building Code.
- F. Field quality control tests are specified in Part 3 - Execution.

1.6 JOB CONDITIONS

- A. Job conditions in Section 312201 apply. Provide ample and skilled manpower for concrete installation which is a recognized time sensitive procedure.
- B. All concrete work shall conform to American Concrete Institute (ACI) 304R-00 "Guide for Measuring, Mixing, Transporting and Placing Concrete".
- C. Do not install concrete work when the temperature of the outside air is below 50 degrees F. and falling unless suitable means acceptable to the Architect are provided to protect work from cold and frost and ensure that mortar and concrete will cure without freezing as indicated in "Cold Weather Concreting" below.
- D. Cold Weather Concreting: Provide non-chloride accelerating water reducing admixture in site concrete work placed at ambient air temperatures below 50 degrees F. (10 degrees C.). Comply with International Masonry Industry All-Weather Council cold weather construction and protecting recommendations and American Concrete Institute 306R-10 "Guide to Cold Weather Concreting."
- E. Hot Weather: Provide water reducing retarding admixture in site concrete work placed at ambient air temperatures above 80° F. Comply with American Concrete Institute 305R-10 "Guide to Hot Weather Concreting."
- F. Construction Review: Notify the Architect/Geotechnical Engineer when stairs, retaining walls, walks, ramps, curbs and pads are formed and ready to receive concrete. Radius form layout shall be inspected and approved by the Architect.
- G. Schedule: Unless otherwise directed in writing by the Architect, construct site concrete work from April 1 to October 15. This permits a minimum 30 day dry curing period prior to possible application of deicing chemicals by the Owner.

1.7 ADA REQUIREMENTS

- A. GENERAL: Concrete work shall comply with the Americans With Disabilities Act as described in the 2010 ADA Standards issued by the Department of Justice (DOJ) and the Department of Transportation (DOT) or latest edition, shall be used.
- B. Curb ramp and concrete walk surfaces shall meet the following tolerances:

1. Transitions from ramps to walks, gutters, or streets shall be flush and free of abrupt changes.
2. Thresholds at doorways shall not exceed 3/4" in height for exterior sliding doors or 1/2" for other types of doors. Raised thresholds and floor level changes at accessible doorways shall be beveled with a slope no greater than 1:2.
3. Detectable warning system shall cast in place for the safety and convenience of the visually impaired. Contractor shall have a minimum of three (3) years experience with materials and installation.

PART 2 - PRODUCTS

2.1 FORM MATERIALS AND ACCESSORIES

- A. Forms: Either steel or wood, exterior type softwood, PS1, of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use forms that are straight and free of distortion and defects, extending the full depth of concrete. Concrete walks which require radius form work shall be set with flexible forms, conforming to the shapes and dimensions as indicated.
- B. Lumber: PS 20.
- C. Form Ties: Snap-off, metal type of fixed length, cone type.
 1. Ties shall be left in place and equipped with swaged washers or other approved devices to prevent seepage of moisture along the tie.
 2. Depth of Breakback: Minimum one (1") inch.
 3. Unless otherwise noted, provide form ties, which will not leave holes larger than one (1") inch diameter in concrete surface.
- D. Dovetail Anchor Slot: Galvanized steel, form filled, release tape sealed slots; bend tab anchors.
- E. Form Release Agent: Shall be non-staining and non-residual. Increte Wall Form Release manufactured by Increte or Architect approved equal.

2.2 REINFORCEMENT MATERIALS

- A. Reinforcing Steel: ASTM A615, 60 ksi yield grade; deformed billet steel bars, plain finish, free of rust and/or oxidation. Reinforcing bars shall be bundled and tagged with grades and suitable identification markings, shall be waterproof, and shall not be removed until steel is placed.
- B. Steel Welded Wire Reinforcement ASTM A185, plain type:
 1. Flat Sheets
 2. Mesh size: 6 x 6 (standard W1.4 x W1.4, heavy duty W2.1 x W2.1)
 3. Free of rust and/or oxidation
- C. Reinforcement Accessories:
 1. Tie Wire: FS QQ- W-461 G, annealed steel, back, 16-gage minimum.
 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement. They shall provide sufficient supports at close enough spacing so that the steel will carry the weight of the workmen and the fresh concrete without deformation from its specified location.

- D. Fabricate concrete reinforcing in accordance with ACI 315.
- E. Slip Dowels: Shall be a slip dowel system comprised of a round dowel sleeve and corresponding base. Standard of quality: shall be Speed Dowel as distributed by A.H. Harris, (860) 216-9500 or Architect approved equal.

2.3 CONCRETE MATERIALS

- A. Cement: ASTM C150, Normal-Type 1 or Type II, Portland type.
- B. Aggregates (ASTM C33):
 - 1. Fine aggregates: clean, sharp, natural sand.
 - 2. Coarse Aggregates: 3/4" maximum size stone meeting the requirements of New York State Department of Transportation Specification 703.02.
- C. Water: Clean and not detrimental to concrete.

2.4 ADMIXTURES

- A. Calcium Chloride in concrete is prohibited.
- B. Air Entrainment Admixture: ASTM C260, Darex AEA ED or Architect approved equal.
- C. Water Reducing Admixture: ASTM C494, Type A; not containing more chloride ions than are present in municipal drinking water.
- D. High Range Water Reducing Admixture: ASTM C494, Type F or G; not containing more chloride ions than are present in municipal drinking water.
- E. Cold Weather Accelerating Admixture: (Ambient temperature below 50°F.) Non-chloride water reducing accelerating admixture, ASTM C494, Type C, PolarSet as manufactured by WR Grace & Co. or Architect approved equal. Mix at rates recommended by the manufacturer. No reduction in compression rating of the concrete is permitted.
- F. Hot Weather Water Reducing and Retarding Admixture: (Ambient temperature above 80° F.) Shall be Daratard series admixture, ASTM C494, Type D, as manufactured by WR Grace & Co. or Architect approved equal. Mix at a rate recommended by the manufacturer. No reduction in compression rating of the concrete is permitted.

2.5 RELATED MATERIALS

- A. Expansion Joints:
 - 1. For Radius Applications: Expansion joint filler shall be polyethylene closed cell backing with peel off strip, X-Foam as manufactured by W.R. Meadows or Architect approved equal.
 - 2. For Straight Applications: Expansion joint filler shall be fiber expansion joint with peel off snap-cap, as manufactured by W.R. Meadows or Architect approved equal.
- B. Caulking for flat slabs shall be one part elastomeric self leveling polyurethane gray sealant Pourthane SL or Architect approved equal. Caulking for vertical surfaces shall be one component elastomeric gun grade polyurethane sealant Pourthane NS, color as selected by the Owner to match wall stain or Architect approved equal.

2.6 COMPOUNDS, HARDENERS, AND SEALERS

- A. Water Based, Acrylic, Curing and Sealing Compound: ASTM C309, Type 1, Class A and B, clear or translucent. Standard of quality shall be VOCOMP-20 as manufactured by W.R. Meadows or Architect approved equal.

2.7 CONCRETE MIX

- A. Mix and deliver ready-mix concrete in accordance with ASTM C94.
- B. Concrete:
 - 1. Compressive Strength (Minimum at 28 days): 4,500 psi
 - 2. Slump (Maximum): 4 inches +/- 1"
 - 3. Air Entrainment: 6.5-8.0% +/- 1.5%
 - 4. Flexural Strength (ASTM C78): 650 psi at 28 days.
- C. Use water-reducing admixture in all concrete.
- D. Water/Cement Ratio: Maximum 0.42 for 4,500 psi concrete.
- E. Cement Factor Per Cubic yard: Minimum 560 lbs. for 4,500 psi concrete.
 - 1. Substitution of fly ash for cement is prohibited.
- F. Maximum Size of Coarse Aggregate:
 - 1. General Work: Per ACI 301, 3/4" maximum.
- G. Select admixture proportions for normal weight concrete in accordance with ACI 301.
- H. Add air-entraining agent to concrete mix for all concrete work exposed to exterior.

2.8 MIXING WATER CONTROL

- A. The quantity of mixing water used in the concrete mix shall be determined by the Contractor, except that the Architect/Geotechnical Engineer may direct that such quantity of water be reduced if the slump of the concrete exceeds the specified slump. The Contractor's determination of the quantity of mixing water shall conform to the various limits on water/cement ration and slump specified. Concrete consistency shall be uniform from batch to batch.
- B. During the course of the work, the batch plant will make quantitative measured moisture determinations of the aggregates utilized in each batch. Aggregate weights and batch water requirements shall be adjusted accordingly for measured aggregate moisture content.
- C. When concrete is transported in units approved for mixing, the addition of not more than 10% of the total design water will be permitted at the job site to obtain initial slump.
 - 1. Any addition of water shall be followed by mixing of at least 30 revolutions in the mixing speed range.
 - 2. No more than two additions of water at the point of deposition before discharge shall be allowed.
 - 3. No retempering of the concrete will be permitted. Retempering is defined as the addition of water after the mix has attained its desired initial slump.

2.9 DETECTABLE WARNING SYSTEM

- A. Cast in place iron detectable warning plates (cast iron), with raised detectable/tactile domes. Units shall be interlocking or concealed bolted to provide varying lengths, ADA compliant. Standard of quality shall be East Jordan Iron Works, Inc., Cast Iron Detectable Warning Plates, (800) 626-4653, www.ejiw.com or Architect approved equal.
- B. Finish: Natural Patina providing visual contrast.
- C. Guarantee period shall be five (5) years from substantial completion including defective work, breakage, deformation, heave, and loosening plates.

2.10 EXTERIOR ANCHORING CEMENT (NON-SHRINK GROUT)

- A. For Steel Posts, Fencing and Other Non-Aluminum Elements: Shall be an exterior grade anchoring cement (non-shrink grout) with a min. compressive strength (ASTM C-109) of 7,200 psi at 28 days. Standard of quality shall be Super Por-Rok as manufactured by CGM, Inc., www.cgmbuildingproducts.com, or Architect approved equal.
- B. For Aluminum Posts and Elements: Shall be an exterior grade anchoring cement (non-shrink grout) with a min. compressive strength (ASTM C-109) of 7,200 psi at 28 days. Standard of quality shall be Por-Rok as manufactured by CGM, Inc., www.cgmbuildingproducts.com, or Architect approved equal.

2.11 HIGH STRENGTH ANCHORING EPOXY SYSTEM

- A. A two-component vinylester adhesive anchoring system. The system includes injection adhesive in plastic cartridges, mixing nozzles, dispensing tools and hole cleaning equipment.
- B. Designed for bonding threaded rod and reinforcing bar elements into drilled holes in concrete and masonry base materials.
- C. Standard of quality shall be AC100+ GOLD Vinylester Injection Adhesive Anchoring System as distributed by A.H. Harris, (315) 414-0340, or Architect approved equal.

2.12 CONCRETE BONDING AGENT

- A. Shall be a concrete bonding adhesive specifically formulated for permanently bonding new concrete to old concrete in exterior applications.
- B. Concrete bonding adhesive applied to appropriate substrates will achieve tensile bond strengths typical of 150 psi in 28 days.
- C. Standard of quality shall be Quickrete Concrete Bonding Adhesive or Architect approved equal.

PART 3 - EXECUTION

3.1 CONCRETE WALKS AND PADS

- A. Surface Preparation: Remove loose material from the compacted subgrade surface immediately before placing concrete. Remove any standing water, mud, debris, frost, snow, ice from surfaces upon or against which concrete is to be placed.
- B. Proof-roll prepared subgrade surface to check for unstable areas and the need for additional compaction. Do not begin concrete pour until such conditions have been corrected, subgrade is compacted to 95% and ready to receive concrete.
- C. Form Construction: Construct to required size and shape. Brace and secure to maintain alignment, elevation and position. Check completed formwork for grade and alignment, prior to installing concrete. Clean forms as needed to removed foreign matter.
- D. Install welded wire mesh on concrete brick or mesh chairs to proper level in maximum lengths possible. Offset end laps in both directions. Splice laps with tie wire. Lifting mesh after concrete pouring is not acceptable.
- E. Prepare concrete mixture including the following:
 - 1. Add hot weather or cold weather admixture to accommodate field weather conditions.
- F. Concrete Testing: Will be performed as described in Part 3, "Field Quality Control" of this specification section.
- G. Conveying:
 - 1. Convey concrete by means that will prevent segregation and loss of mortar from the mix.
 - 2. Provide adequate manpower and equipment in the form of buckets, buggies, chutes, conveyors or other approved means to assure continuous operation.
 - 3. Convey concrete so that no equipment with aluminum parts comes in contact with fresh concrete.
- H. Concrete Placement: Do not place concrete until subgrade and forms have been checked for line and grade. Moisten granular base course as required to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they have been brought to the required finish grade, alignment, and expansion joints have been installed.
- I. Spread concrete as soon as it is deposited on the granular base course, using methods which prevent segregation of the mix, and with as little rehandling as possible. Consolidate concrete along the face of forms. Consolidate with care to prevent dislocation of mesh, reinforcing and joint materials.
- J. Install Concrete Walk Joints:
 - 1. Construct expansion and contraction joints as detailed and as shown on plans. Concrete joints that do not follow the pattern(s) shown on the plans and/or changes that have been approved by the Architect will be removed and replaced at no additional cost to the Owner.
 - 2. When the walkway is abutting existing walks, place transverse joints to align with previously placed joints, unless otherwise shown.
 - 3. Contraction Joints: Approximately 5' on center. Break walk into individual slabs of not more than twenty-five (25 sf) square feet with jointing tool, round edges. Saw cut scoring pattern (contraction joints) to depth shown on details for each type of concrete work with new, sharp concrete sawblade one day (24 hours)

after the pour. Joint cuts to be clean, sharp, uniformly made cuts to achieve scoring pattern as shown and detailed. Note: When tooled joints or saw cutting is not performed as described, an extended three (3 yr.) year written guarantee or credit for defective work will be required as determined by the Architect at no additional cost to the Owner.

4. Expansion Joints: Provide where abutting building(s), columns, structures, concrete paving and curbs, catch basins, manholes, inlets, walks, walls, other fixed objects and as directed by the Architect.
5. Locate expansion joints at thirty feet on center (30' o.c.) for each walkway lane, unless otherwise shown. Provide slip dowels as detailed and specified.
6. Locate expansion joints with slip dowels at all flush building access points, whether specifically shown on drawings or not.
7. Extend joint fillers full width and depth of the joint, flush with finished pavement grade, and not less than 1/4" or more than 1/2" below the finished pavement surface. Joint surfaces shall be clean and dry prior to installation of sealant as per manufacturer's recommendations. Remove excess sealant on surfaces adjacent to joint.

K. Concrete Finishing:

1. Perform concrete finishing using machine or hand methods as required.
2. After striking off and consolidating concrete, smooth the surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Adjust the floating to compact the surface and produce a uniform texture.
3. After floating, test surface for trueness with a ten (10') foot straightedge. Distribute concrete as required to remove surface irregularities, and refloat repaired areas to provide a continuous, smooth finish.
4. Work edges of slabs and joints with a 1/8" radius edging tool, two (2") wide, unless otherwise shown.
5. After completion of floating and when excess moisture or surface sheen has disappeared, complete surface finishing, as follows.
6. Broom finish, by drawing a medium hair broom across the concrete surface as detailed. Repeat operation when required to provide a medium texture acceptable to the Architect.
7. For handicap curb ramps, tool grooves along sloping surfaces in line with drainage flow as detailed.
8. Curing: Refer to schedule noted in 1.6, above.
 - a. Immediately after placement, protect concrete from premature drying.
 - b. Remove all dirt, dust, oil, grease, asphalt and foreign matter. Cleanse with caustics and detergents as required. Rinse thoroughly and allow to dry.
 - c. Stir curing compound thoroughly before using.
 - d. Apply a continuous, uniform film by solvent-resistant low pressure spray only, short-nap roller or lamb's wool applicator. For best results, use a canister curing compound sprayer. Use spray tip number 8004 or equivalent for water-based or waterborne products.
 - e. For curing, apply first coat evenly and uniformly as soon as possible after final finishing. Apply second coat when all construction is completed and structure is ready for occupancy.
 - f. When soil contamination occurs, notify the Architect immediately in writing. Remove contaminated soils and legally dispose of, provide soil test(s), replace soil, plantings and lawns at no additional cost to the Owner.

3.2 FOOTINGS, BASES, FOUNDATIONS

- A. Footings, Bases, Foundations: Locate and provide where shown on drawings and as detailed.

3.3 INTERRUPTION OF CONCRETING

- A. Should placing concrete be suspended or unavoidably interrupted, provide key ways and bulkheads to prevent feather-edging when work is resumed. Roughen horizontal surface for bond.

3.4 REPAIR AND PROTECTION FOR CONCRETE WORK

- A. Cut out and replace defective concrete work which has blisters, cracking, crazing, curling, discoloration, dusting, efflorescence, low spots, pop outs, scaling or mortar flaking, spalling, settling, or heaving as defined by Portland Cement Association 2001, "Concrete Slab Surface Defects" and as directed by the Architect.
- B. Modify or replace concrete not conforming to the required lines, details, elevations and specifications as directed by the Architect.
- C. Protect the work from damage until acceptance of the work. Exclude traffic from concrete work for at least fourteen (14) days after placement. When construction traffic is permitted, maintain concrete as clean as possible by removing surface stains and spillage of materials as they occur.

3.5 ANCHORING RAILINGS AND POSTS INTO CONCRETE

- A. Aluminum posts **must** be coated or treated with a good sealer or paint prior to anchoring.
- B. Drill the hole as detailed. Blow out all dust and loose particles.
- C. Fill the hole with water. Scrub the sides and bottom of the hole and with a stiff wire brush such as a bottlebrush. This is important.
- D. Remove excess water with rag or other absorbent materials. Leave the hole clean and uniformly damp.
- E. Mix the anchoring cement in a clean container to flowable consistency based on the following formula. For best results, measure accurately. The correct amount of water is as follows:

2.3 oz per lb
11.5 oz for 5 lbs
115 oz for 50 lbs
7 quarts for 100 lbs

Measure the amount of anchoring cement and water to be mixed. Add the measured amount of water to the appropriate amount of cement and mix until the desired consistency is achieved. (NEVER USE MORE WATER THAN PRESCRIBED). This will reduce the ultimate strength, increase the possibility of volume instability and may cause the product to become soft and less durable.)

- F. Fill the hole with the plastic cement first, and then tamp the bolt, post or rod with a twisting motion into place. If the material becomes too fluid during the tamping process

and sags out of place, let it stand for a few minutes and it will stiffen. Smooth out the surface around the bolt with spatula or trowel.

- G. Let the cement harden for at least 60 minutes. For heavy equipment, allow 4 hours prior to use or loading.

3.6 ANCHORING BOLTS, DOWELS, AND REBAR INTO CONCRETE

- A. Anchor Hole Preparation: Prepare all anchor holes prior to placement of anchoring epoxy. Hole diameter is typically 1/8" (3 mm) greater than the anchor diameter. Hole depth is typically nine times anchor diameter. Required minimum anchor hole depth is 6". Consult project specifications and details. Drill hole to proper diameter and depth and blow all dust from the bottom of the hole, brush and blow (4x) repeatedly to remove all dust and debris. The anchor hole must be clean and free of standing water prior to placement of material.
- B. Application: Use only professional caulking gun. Remove plastic cap and plugs from cartridge. Save for closing cartridge. Attach mixing nozzle to cartridge. Discard small amount of gunned product until uniform color is achieved. Mixing nozzle will harden in approximately 20 min. if not in use.
- C. Hardened nozzle must be discarded. Dispense the epoxy at the bottom of the hole while withdrawing nozzle. Dispense epoxy (typically filling 5/8 of hole) so that once threaded rod or rebar is inserted, the hole is completely full. Insert threaded rod or rebar to the bottom of the hole while turning clockwise. Promptly remove any excess material. Leave anchor undisturbed for 6 hours (at 77°F /25°C), or longer for colder temperatures. Load can be applied 8 hours at 77°F (25°C).

3.7 CONCRETE BONDING AGENT

- A. Required at elements where new concrete is applied and joined to existing concrete.
- B. Surface Preparation:
 - 1. Apply only to clean, sound, dry surfaces.
 - 2. Remove dust, dirt, oil, grease, wax, unsound concrete and plaster, paint, and other foreign materials.
- C. Applications:
 - 1. Apply to a dry surface with brush, roller or spray to the thickness of a coat of paint.
 - 2. Place new concrete, topping mixes, Portland cement, or patches as soon as the adhesive is dry.
 - 3. Make sure basecoat is dry before applying adhesive.
 - 4. Tools, brushes and other application accessories should be immediately cleaned with soapy water. Use hot water to clean up any drippings.

3.8 FIELD QUALITY CONTROL

- A. Field inspection and testing shall be performed by ACI certified technicians; Grade 1. Certificates shall be submitted to the Architect for persons performing inspection and testing prior to the start of work.
- B. Field Inspection and testing shall be paid for as directed under 1.5 "Quality Assurance". Where retesting, additional inspection, lab tests or other professional services are

required due to rejected work, any cost associated therewith will be solely at the Contractor's expense.

- C. The Contractor shall plan his operations to allow adequate time for all required testing and inspection.
- D. The Contractor shall provide facilities and equipment necessary to obtain and handle representative sample of materials to be tested.
- E. The testing laboratory shall be responsible to the Owner for the field control of all concrete and may reject batches because of high slump, uncontrolled air entrainment, delays or other conditions of non-compliance with these specifications.
- F. Sampling and Field testing will be performed during concrete placement per ASTM C31, C39, C143, C172 and C173.
- G. Five (5) Concrete Test Cylinders: Taken for every 30 or less cubic yards of concrete placed are required or a fraction thereof;
 - 1. Two (2) Cylinders will be tested at 7 days, two (2) cylinders will be tested at 28 days and one (1) cylinder will be held for possible testing at a later time.
- H. One (1) Additional Test Cylinder: Taken during cold weather concreting, to be cured on the job site under the same conditions as placed concrete it represents, is required.
- I. Air Content Test: Taken for each set of test cylinders taken, is required.
- H. One (1) Slump Test: Taken for each set of test cylinders taken is required.
- K. Test results will be reported by telephone to the General Contractor and Architect on same day tests are made. Written report with copies will follow to the Owner, Architect, and Landscape Architect. Email copies of laboratory test, evaluation reports for concrete materials and mix designs will be submitted.

3.9 CLEAN UP

During the contract and at intervals as directed by the Architect and as concrete work is completed, clear the site of gravel, concrete, appurtenances and debris. Leave the site in a clean, safe, well draining, neat condition.

END OF SECTION 321301

SECTION 321601 - GRANITE CURB

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of granite curb is shown on the drawings.
- B. Provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 321201 - Asphalt Paving
- B. Section 321301 - Site Concrete Work

1.3 SUBMITTALS:

- A. Provide material certificates showing granite curb source and that material meets product specification in Section 2.1 below.

1.4 JOB CONDITIONS

- A. Job conditions in Section 312201 apply.
- B. Construction Review: Mark location in field for review by Architect prior to setting granite curb.

PART 2 - PRODUCTS

2.1 GRANITE CURB

- A. Shall be hard, durable, light grey in color and free from seams which would impair its strength. The curb shall be sawed top and split face. No drill marks shall appear on the exposed face. Minimum length shall be 2 ft.; maximum 8 ft. Curbs set to a radius of less than 100 ft. shall be cut to the curve required. Maximum length on curves shall be four feet.
- B. Provide project specific granite types:
 - 1. Vertical Curbs:
 - a. Standard: 5" x 16"
- C. Standard of quality: As manufactured by Geneva Granite Co. (315) 789-8142 or Architect approved equal.

2.2 WET CONCRETE SETTING BED

Shall be 4,500 psi as specified in Section 321301.

2.3 IMPORTED GRANULAR BASE COURSE

As specified in Section 312201, 2.1, B.

2.4 MORTAR

Shall be one part Portland cement, one part lime and three parts mason's sand by volume.

2.5 DRY MIX CONCRETE

Shall be Portland cement dry, mixed in the proportions of, one part Portland cement to three parts of concrete sand and six parts of coarse aggregate (passing 1-1/2" screen).

PART 3 - EXECUTION

3.1 SETTING CURB

- A. Curbing shall be set leveled on a 6 inch dry mix concrete setting bed foundation.
- B. Set granite to line and grade as shown on the plan. Provide continuous wet concrete backing both sides of curb. Joints shall be a minimum of 1/4" and shall be fully mortared from face to back of curb. Bevel corners to 45 degrees with a mitered joint.
- C. Set curbs to the line and grade given in a smooth curve or straight line. When curbing ends, it shall transition from a six (6") inch reveal to no reveal meeting finished grade.
- D. Curbing shall be set, backfilled, and compacted to 1/2 the height on the sidewalk face to prevent movement when backfilling is placed. Once the paving has been rolled, the remaining fill shall be placed and compacted to avoid future settlement of the walk.
- E. Pointing: The joints between curb stones shall be carefully filled with cement mortar and neatly pointed on the top and front exposed curb portions. Remove excess mortar and clean curb.
- F. Backfill curbing with wet concrete each side of the curb stone and all spaces under the curb shall be filled with concrete so that the entire unit is completely supported.

3.2 CLEAN UP

During the contract and at intervals as directed by the Architect and as granite curb installation is completed, clear the site of extraneous granite curb, concrete, gravel, asphalt and debris. Leave the site in a clean, safe, well draining, neat condition.

END OF SECTION 321601

SECTION 323001– BUS SHELTER(S)

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of the bus shelter is shown in the drawings and as specified below.
- B. Provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 321301 - Site Concrete

1.3 SUBMITTALS:

- A. Provide Manufacturer's Product Data (MPD), Shop Drawings and color chips for bus shelter.
- B. Provide engineering calculations and certification by the manufacturer's NYS Professional Engineer to verify anchor bolt and footing sizing.

1.4 JOB CONDITIONS

- A. Job conditions in Section 312201 apply.

PART 2 – PRODUCTS

2.1 BUS SHELTER- **(PROVIDE 2)**

- A. **STANADARD OF QUALITY:** shall be S6-3R Transit Shelter with twin wall, clear tempered glass, dutch seam decking hip roof, powder coated finishes, as manufactured by Handi-Hut, www.handi-hut.com, 1-800-614-1800, or Architect Approved Equal.
- C. **DESIGN REQUIREMENTS:** Each bus stop shelter shall consist of a structural aluminum frame with glazed rear, side walls, and hip roof. The walls shall be glazed full height with 10" ventilation space at bottom. Benches shall be furnished. The bus stop canopy, including connections, components and anchorage, shall be tamperproof. The shelter, including the structural frame, glazing and roof domes, shall be capable of withstanding a wind load minimum of 90 MPH. The roof including the dome shall be capable of supporting a uniformly distributed load minimum of 40 pounds per square foot or a separate concentrated load of 200 pounds placed at any location on the roof or fascia without permanent deformation.
- D. **ALUMINUM:** All structural and framing members including the fascia shall be extruded aluminum of 6063-T52 alloy not less than 1/8 inch in thickness.
- E. **GLAZING:** All wall and roof glazing shall be 1/4 inch thick. Wall panels shall be clear tempered glass.
- F. **SHELTER CONSTRUCTION:** Maximum horizontal span of any panel shall not exceed 27.
- G. All bus stop shelter wall panels shall be factory glazed into aluminum sub-frames with minimum depth engagement of 3/4. Panel sub-frames shall be

attached to vertical and horizontal structural mullions with 3/16 diameter rivets on approximately 13" centers.

- H. Each shelter shall be supported by four vertical 2 1/2" x 2 1/2" aluminum tube corner mullions anchored at base and supporting the roof, rear wall and side walls. Intermediate vertical mullions shall be 2 1/2" x 1 1/2" aluminum tubing.
- I. Mullion connections shall be by means of extruded aluminum U channels 2 1/4" x 2 1/4" or 1 1/4" x 2 1/4" with tapered edges.
- J. Anchor flanges shall be aluminum with minimum height of 5" to provide up to 3" vertical adjustment for possible unlevel site conditions. All mounting hardware for bus stop shelters shall be factory supplied.
- K. Roof fascia shall have both corner keys and alignment plates secured with 3/16" diameter rivets. Under no circumstances will corner keys be dependent upon mere pressure fit. Each corner key shall be secured with a total of six rivets, three on each face, through both the roof fascia and corner key. Rivet shall match the finish of roof fascia.
- L. FINISH: All aluminum components shall be: Powder coated black with brite red kynar finish for the roof.
- M. BENCH/BACKREST: is required and, materials shall be extruded aluminum consisting of two contoured sections for bench and one section for backrest. Included shall be aluminum brackets and hardware. Bench/backrest shall be supported along inside for shelter rear wall.
- N. WARRANTY: Bus stop shelters shall be guaranteed against any defects in material and/or workmanship for one (1) full year from time of delivery.

PART 3 – EXECUTION

3.1 INSTALL BUS SHELTER

- A. Locate as shown on drawings or as directed by the Owner.
- B. Install as directed by the manufacturer.

3.10 CLEAN UP

During the contract and at intervals as directed by the Architect and as bench installation is completed, clear the site of extraneous packaging materials, concrete, gravel, asphalt and debris. Leave the site in a clean, safe, well draining, neat condition

END OF SECTION 323001

SECTION 323002 - TRAFFIC SIGNS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of traffic signs is shown on the drawings.
- B. Provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.2 SUBMITTALS:

- A. Provide shop drawings for each different type and size of sign listed in the Traffic Sign Schedule.
- B. Provide MPD for signposts, breakaway system, and sign plates.

1.3 JOB CONDITIONS

- A. Job conditions in Section 312201 apply.
- B. No work shall be fabricated until shop drawings for the work have been favorably reviewed by the Architect.
- C. Construction Review: Notify the Architect when locations for signs are coordinated to avoid underground utilities and marked in the field for review.
- D. Provide posts, bolts, splice bars, sign plates and build in coordination with work of other trades.

PART 2 - PRODUCTS

2.1 SIGNS

- A. Sign Plate:
 - 1. Sign Plate shall be aluminum sheets .090" (approximately 3/32") thick, with two coats of Dupont Imron spray semigloss paint.
 - 2. Letters, numbers, symbols, and arrows shall be engineering grade, (EG) reflective. Sign plates, letters and numbers shall meet the colors and regulations described in the "Manual of Uniform Traffic Control Devices", latest edition, as published by the State of New York Department of Transportation, Division of Traffic and Safety.
 - 3. The following Traffic Sign Schedule shall apply:

SIGN WORDING	SIGN NO.	SIZE	LETTER SIZE / COLORS
Stop	R1 - 1C	30" x 30"	10"C/White and Red
HC Reserved Parking w/ Van Accessible	P4 - 6C	12" x 18"	2" Green/White Blue Background
	P3-8(NY)	12" x 6"	2" Green/White

Background

No Parking
Any Time

P1-1

12" x 18"

3"C/Red on
White

4. Refer to Traffic Sign Schedule and/or sign details on drawings for sign wording, quantities, and other information.
5. Hardware shall be galvanized.
6. Standard of quality shall be as manufactured by Eastern Metal/USA-Sign, www.usa-sign.com or Architect approved equal.

B. Breakaway Signposts:

1. Shall be minimum 2.5 lbs. / ft high carbon new billet steel (SP-80) U-channel posts with predrilled 3/8" holes at 1" on center.
2. Crashworthy to NCHRP 350 criteria. Meeting FHWA (Federal Highway Administration) for small sign support applications.
3. Lap Splice U-channel Breakaway System shall be 3/8" x 3/4" x 5" and sized to post, bar color silver. Special manufacturer designed bolts for lap splice are required.
4. Hot dipped galvanized or Powder Coated Color as directed by the Architect.
5. Standard of quality shall be "Rib-Bak" U-channel signposts as manufactured by NUCOR Steel Marion, Inc. www.nucorhighway.com (800) 333-4011 or Architect approved equal.

PART 3 - EXECUTION

3.1 INSTALL SIGNS

- A. Erect signs plumb. Drive posts into firm ground or bolt to sleeve in pavement areas or concrete footings as detailed. Use driving caps to avoid deforming posts.
- B. Mount sign plates at heights detailed. Attach metal sign plates to steel posts securely with 1/4" galvanized allen head screws.

3.2 CLEAN UP

During the contract and at intervals as directed by the Architect and as traffic sign installation(s) are completed, clear the site of extraneous paint, fasteners, concrete, gravel, asphalt, and debris. Leave the site in a clean, safe, well draining, neat condition.

END OF SECTION 323002

SECTION 329001 - PLANTING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of planting is shown on the drawings.
- B. Planting work includes, but is not limited to, the following:
 - 1. Soil preparation
 - 2. Planting commercially grown trees
 - 3. Transplanting trees
 - 4. Planting accessories
 - 5. Maintenance: See watering, weed control and other specific requirements
 - 6. Guarantee
 - 7. Clean up
- C. The Contractor shall provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 312201 - Site Earthwork
- B. Section 329201 – Sodded Lawns

1.3 SUBMITTALS

- A. Furnish name of Landscape Contractor and/or Nurseryman to perform planting work and obtain Architect's approval.
- B. Provide Material Certificates, MPD, Test Reports or Samples as noted for:
 - 1. Mulch: Twelve (12 oz.) ounce sample
 - 2. Planting Soil Mixture: Material Certificate and Test Report. See 1.4 F.
 - 3. Plant Materials: Certificates of Inspection by regulatory agencies. Leave tags with botanical names and nursery source(s) on plants until reviewed by Architect.

1.4 QUALITY ASSURANCE

- A. Perform planting in compliance with applicable requirements of governing authorities having jurisdiction.
- B. Planting Contractor: Planting work by established Landscape Contractor and/or Nurseryman having sufficiently experienced crews, supervisor(s), specialized equipment and an excellent record of performance on completed planting projects of comparable size, scope, and quality. Provide expert plantsman to direct the work in the field on a regular, daily basis.
- C. Nomenclature: Plant names shall conform to the latest edition of "Standardized Plant Names" as adopted by the American Joint Committee of Horticultural Nomenclature. Plants shall be true to botanical name, tagged with a waterproof, legible tag showing botanical name, size, and nursery source of origin.

- D. Size and Grading: Plant sizes and grading shall conform to the latest edition of "American Standard for Nursery Stock" as sponsored by the American Association of Nurserymen, Incorporated (AAN), latest issue unless otherwise specified.
- E. Nursery Source: Obtain freshly dug, healthy, vigorous, plants nursery grown under climatic conditions similar to those in the locality of the project for a minimum of two (2) years. Plants shall have been lined out in rows, annually cultivated, sprayed, pruned, and fertilized in accordance with good horticultural practice. Plants shall have been transplanted or root pruned at least once in the past three years. Balled and burlapped plants must come from soil which will hold a firm root ball. Heeled in plants and plants from cold storage not accepted.
- F. Testing:
 - 1. Engage an independent, qualified State of New York soil testing service. Pay for soil testing and inspection services.
 - 2. Test representative material samples proposed for use as follows:
 - a. Planting Soil Mixture
 - (1) pH factor
 - (2) Mechanical analysis
 - (3) Percentage of organic content
 - (4) Recommendations on type and quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring nutrients to satisfactory level for planting.
 - b. Peat Moss
 - (1) Loss of weight by ignition
 - (2) Moisture absorption capacity

1.5 JOB CONDITIONS

- A. Job conditions in Section 312201 apply.
- B. Planting seasons and timing conditions:
 - 1. Unless otherwise directed in writing by the Architect, the planting of trees, shrubs, and perennials shall be from in the Spring, March 15 to June 1, and in the Fall, from October 15 to December 15. Refer to 1.5 Fall Planting Hazard restrictions below.
 - 2. Proceed with and complete planting work as rapidly as portions of the site become available, working within the seasonal limitations for each kind of landscape work required.
 - 3. Do not conduct planting operations until fine grading in the work areas has been completed satisfactorily.
 - 4. Cooperate with other Contractors and trades working in and adjacent to planting locations. Examine drawings and specifications for the entire site and become familiar with the scope of other work required, especially underground utilities.

- C. Construction Review:
1. Plants must be reviewed by the Architect before planting, either at the site or at the nursery.
 2. Notify the Architect forty-eight (48) hours prior to delivery of plant materials to the site.
 3. Plants not meeting specifications or not installed according to drawings may be rejected at any time by the Architect.
- D. Provide plants of the species, size, and special characteristics noted on the Plant List. Substitutions not permitted unless approved in writing by the Architect. In the event that quantity discrepancies or material omissions occur in the Plant List, the planting drawings shall govern.
- E. Owner shall furnish water at the building face(s). Contractor shall provide labor, hoses, sprinklers and watering equipment.
- F. Fall Planting Hazard (FPH):
1. Notify the Architect in writing when any of the proposed plants are sensitive to fall planting in the experience of the Contractor. Plant materials noted as FPH in the PLANT LIST shall be planted in the Spring season. Assume sole responsibility of plant health related to materials noted FPH which are fall planted. Replace unhealthy or dead plants as described in the Guarantee.
 2. Plants considered very risky to transplant in the fall include, but are not limited to, the following; (based on information obtained from Princeton Nurseries, Fall 2001- Spring 2002 catalog and experience of the Landscape Architect)
- | | |
|-------------------------|-----------------------|
| Acer rubrum & vars. | Platanus acerifolia |
| Betula varieties | Prunus - Stone fruits |
| Carpinus varieties | Pyrus - Pears |
| Cornus florida & vars. | Quercus - Oaks |
| Crataegus varieties | Salix - weeping vars. |
| Halesia | Strax japonica |
| Koelreuteria | Tilia tomentosa |
| Liquidambar styraciflua | Zelkova varieties |
| Liriodendron tulipifera | Pinus nigra |

PART 2 - PRODUCTS

2.1 PLANTS

- A. Plants shall be well formed without voids and open spaces, typical of their species or variety, with normal habit of growth. Plants shall be first quality, sound, healthy, vigorous, well branched and densely foliated. Plants shall have healthy, well developed fibrous root systems. They shall be free of defects, disfiguring knots, sun-scald injuries, frost cracks, abrasions, disease, insect pests, eggs, and larvae.
- B. Plants shall conform to the measurements specified in the Plant List. Measurements specified shall be minimum size acceptable for each variety. For each plant of minimum size, provide a plant of maximum size. Plants that meet the requirements specified in the Plant List, but do not possess a normal balance between height and spread will not be

accepted. Plants for use when symmetry is required, or in rows, shall be matched as nearly as possible. Plants shall not be pruned prior to delivery.

- C. Plants and tree trunks shall be measured when the branches are in their normal position. Dimensions for height and spread as contained herein refer to the main body of the plant and not from branch-tip to branch-tip. Shade trees shall be free of branches up to seven feet, with a single leader, well branched and reasonably straight stems. No trees which have had their leaders cut or damaged will be accepted. Trees must have straight trunks with single leader intact. There shall be no abrasion of the bark and no fresh cuts of limbs over one (1") inch which has not been completely calloused over.
- D. Balled and burlapped plants with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock." Cracked or mushroomed balls are not acceptable.
- E. Container-grown stock: Grown in a container for sufficient length of time for the root system to have developed to hold its soil together, firm and whole.
 - 1. No plants shall be loose in the container.
 - 2. Container stock shall not be pot bound.
- F. Spade transplants: Shall be dug with Architect approved self propelled tree spade, Verimeer or Big John type equipment, capable of taking adequate size root ball to ensure the survival of transplants. Blades shall be sharp to ensure a clean cut of roots. Trees shall be sprayed prior to digging with an anti-desiccant and foliage tied and covered to reduce excessive moisture loss.
- G. Bare-root plants dug with adequate fibrous roots, covered with a uniformly thick coating of mud by being puddled immediately after they are dug, or packed in moist straw or peat moss.
- H. Evergreen trees shall be fully branched to the ground. (Park Standard)

2.2 PLANTING ACCESSORIES

- A. Planting soil mixture for trees, shrubs, perennials, annuals and plant beds shall be premixed in bulk, and contain the following by volume:
 - 20 parts clean on site soil
 - 10 parts topsoil
- B. Topsoil: 5-10% organic, 20-50% passing 200 mesh sieve. Fertile, friable, natural topsoil of leafy character, without admixture of subsoil material, obtained from a well-drained arable site, reasonably free from clay, lumps, coarse sand, stones, plants, roots, sticks, and other foreign materials, with acidity range of between pH 6.5 and 7.5, free of substances harmful to plants which will be grown in the soil.
- C. Starter Fertilizer: Water soluble fertilizer and plant food 10-52-17 containing no sulfate or chloride salts. Standard of quality shall be as manufactured by Fairlawn Chemical Co., Inc., 485 Holt Road, Webster, NY (585) 671-2400, and distributed by Organix, 569 Klem Road, Webster, NY (585) 787-2711 or Architect approved equal.
- D. Peat Moss: Brown to black in color, weed and seed free, dried sphagnum peat moss, containing not more than 9% mineral on a dry basis and conforming to NYSDOT 713-20.

- E. Bone Meal: Finely ground, raw, minimum 4% nitrogen and 20% phosphoric acid. It shall be delivered in sealed bags showing the manufacturer's guaranteed analysis.
- F. Stakes: Minimum eight (8') foot long, two (2") inch round or square sound wood stakes.
- G. Hose: New, two (2) ply garden hose not less than one-half (1/2") inch in diameter.
- H. Guy Wire: 10 gauge galvanized steel wire for guying plantings where specified.
- I. Tree Wrap: Standard of quality shall be four (4") inch wide waterproof 30-30-30 Krinklecraft, or Architect approved equal.
- J. Mulch:

Ground or shredded bark, medium size, from softwood trees. No pieces over two (2") inches in greatest dimension. Free from sawdust, stones, debris, and deleterious materials.
- K. Anti-desiccant: Standard of quality shall be "Wiltpruf" or Architect approved equal.
- L. Plant Bed Edging: Shall be polyvinyl commercially manufactured edge. Standard of quality shall be as manufactured by Oly-Ola Sales, Inc., Villa Park, IL (Tel. 1- 800-EDGINGS) or Architect approved equal.
- M. Weed Control Fabric: Non-Woven weed control fabric at plant beds.

PART 3 - EXECUTION

- 3.1 LAYOUT: Locate and stake in the field individual trees, shrubs, and plant beds for approval by the Architect prior to commencing planting operations.

3.2 GENERAL PLANTING OPERATIONS

- A. Transportation and Handling: Take precautions customary in good trade practice in preparing plants for moving. Workmanship that fails to meet the highest standards will be rejected. Spray deciduous plant's foliage with an approved "Anti-Desiccant" immediately after digging to prevent dehydration. Dig, pack, transport, and handle plants with care to ensure protection against injury. Do not hold or move trees by stems. Support and protect root balls.
- B. Inspection certificates required by law shall accompany each shipment invoice or order to stock and on arrival, the certificate shall be filed with the Architect.
- C. Protect plants from drying out. When plants cannot be planted immediately upon delivery, properly protect them with soil, wet peat moss, or in a manner acceptable to the Architect. Water heeled-in plantings daily. No plant shall be bound with rope or wire in a manner that could damage or break the branches. Cover plants transported on open vehicles with protective covering to prevent wind burn. Do not hold or move trees by stems. Support and protect root balls.
- D. Provide dry, loose prepared planting soil for planting bed mixes. Frozen or muddy soil is not acceptable.
- E. Excavate tree pits, shrub and planting beds as dimensioned and located on drawings. When soils harmful to plant materials are encountered, immediately notify the Architect.

- F. Plants shall be set plumb and straight and at such a level that after settlement, a normal or natural relationship of the crown of the plant with the ground surface will be established. Each plant shall be planted in the center of the pit. When balled, burlapped, and platformed plants are set, the platform shall first be removed from the pit and topsoil shall be carefully tamped under and around the base of each ball to fill voids. Burlap, ropes, and wires shall be removed from the sides and tops of balls, but no burlap shall be pulled out from under the balls.
- G. Plants shall be planted in the planting soil mixture which shall be thoroughly watered and tamped. On level ground or slight slopes, a shallow basin a little larger than the diameter of the plant pit shall be left around each plant as shown on the drawings or as directed by the Architect. On steep slopes, the soil on the lower side of the plant shall be graded in such a manner that it will catch and hold water as shown on the drawings or as directed by the Architect.
- H. Staking: Trees two (2") inch caliper or less shall be staked with two stakes. The trunks of trees larger than two (2") inches shall be staked with three stakes, equally spaced about the tree, set vertically and securely fastened. The trees shall be guyed with two or three strands of wire as specified, which shall run through the rubber hose and be securely tightened.
- I. Install weed control fabric over the planting area to limits indicated or as directed by the Architect. Cut fabric as required to avoid shrubs.
- J. Mulching: Spread continuous four (4") inches settled depth of mulch over finished surface of each plant, plant bed, or hedge trench as detailed. Water plants thoroughly after mulching. NOTE: The Architect may field check depth of mulch for proper weed control barrier since no weed control fabric is required.
- K. Wrap deciduous trees with tree wrap to first branch and secure wrap.
- L. Pruning: Each shrub or tree shall be pruned to preserve the natural character of the plant. Remove dead wood and crossing branches. Do not prune terminal leaders. Refer to drawings for additional tree pruning details.
- M. Anti-Desiccant: Immediately after planting and staking, trees and shrubs shall be sprayed with anti-desiccant, using an approved power sprayer to apply an adequate film over trunks, branches, twigs, and/or foliage. Apply according to manufacturer's recommendations.
- N. Replacements: Remove and immediately replace plants, as determined by the Architect, to be unsatisfactory during the initial planting installation.

3.3 SPADE TRANSPLANTS

- A. Shall be dug and reset within a two hour period. Water and stake immediately.
- B. Thoroughly wash in planting soil mix to fill voids and air spaces.
- C. Prune out deciduous trees as indicated in 3.2-L above.

3.4 INSTALL EDGE: When shown on drawings according to manufacturer's recommendations.

3.5 MAINTENANCE

- A. Maintenance by Contractor begins as soon as plants are installed. Protect plants from drought, washout and wind erosion. In general, maintain new plantings, including watering, weeding, pruning, applications of herbicides, fungicides, insecticides and pesticides, until healthy, vigorous plants are accepted by the Architect. Specifically:
1. Protect: Protect plantings against harsh weather, trespass and vandalism by wrapping, staking, temporary fencing or other means.
 2. Water: The Owner shall furnish water at the building face(s). The Contractor shall provide labor, hoses, sprinklers and watering equipment to maintain plants, prevent them from drying (browning) out, and keep plants in a healthy, growing condition until final acceptance.
 3. Cultivate: Cultivate plants by straightening any settled plant materials, restaking and guying, rewrapping, pruning dead and broken branches, weeding and re-applying anti-desiccant, herbicide, fungicide, insecticide and pesticide.
 4. Should the Contractor fail to protect and maintain the plantings, the Owner may issue a three (3) day notification to the Contractor, hire work done, and backcharge this Contractor.
- B. Maintenance by the Contractor continues until Certificate of Final Acceptance, or Final Punch List is satisfactorily completed and accepted by the Architect, whichever is later. Maintenance by Owner begins as soon as the Architect issues Certificate of Final Acceptance or Final Punch List is satisfactorily completed and accepted by the Architect, whichever is later.

3.6 STANDARDS FOR ACCEPTANCE: Review to determine acceptance of plantings will be made by the Architect upon request. Provide notification at least five (5) working days before requested review date.

- A. New plantings will be acceptable provided requirements, including maintenance, have been complied with. Healthy, well-formed, vigorous plants, true to species and size on Plant List, must be established, free of disease, broken branches and insects.
- B. Any plant which is poorly formed, structurally unsound, not true to species and size on Plant List, diseased, contains broken branches, or is generally unhealthy (containing 25% or more browned out foliage), shall be rejected and replanted at no additional cost to the Owner.

3.7 GUARANTEE

- A. Contractor shall guarantee plant materials to be true to species and size on Plant List, and in vigorous growing condition, for a period of one (1 yr.) year from the date given on the Certificate of Substantial Completion or Final Punch List is satisfactorily completed and accepted by the Architect, whichever is later.
- B. Any plant material that does not meet the Standards for Acceptance shall be replaced as soon as weather conditions permit. Replacement plantings shall be made in accordance with the specifications and drawings. Replacements shall be subject to inspection,

acceptance, and guaranteed for one (1 yr.) year after date of replanting and acceptance by the Architect.

3.8 CLEAN UP

During the contract and at intervals as directed by the Architect and as planting is completed, clear the site of extraneous materials, pots, flats, hose, wire, stakes, pruned branches, rubbish, and debris. Leave the site in a clean, safe, neat, well draining condition.

END OF SECTION 329001

SECTION 329201 - SODDED LAWNS

1.0 PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of the lawn work is shown on the drawings. The lawn work limits equal the Contract Limit Line except as noted on the drawings. Non-paved, non-roofed areas within the Contract Limit Line shall receive five (5") inches settled depth of topsoil and lawn seed or sod. Existing lawn areas that are not disturbed require no additional work. Lawn types as shown on the drawings are defined as follows:
1. Lawn: Strip and stockpile topsoil, remove debris, furnish and place 5" topsoil and sod.
- B. Lawn work includes, but is not limited to, the following:
1. Placing and spreading stockpiled topsoil
 2. Importing, placing, and spreading topsoil
 3. Sod bed preparation and placing
 4. Sodding lawns
 5. Fertilizing
 6. Maintenance: See watering, mowing, fertilizing, core aerating, weed control, grow in and other specific requirements.
 7. Clean Up
- C. Provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 311201 - Site Preparation (Topsoil Stripping)
- B. Section 312201 - Site Earthwork

1.3 REFERENCES

- A. ASTM D4972 - Standard Test Method for pH of Soils
- B. ASTM D5268 - Standard Specification for Topsoil Used for Landscaping Purposes
- C. ASTM D422 and D1140 - Standard Test Method for Particle Size Analysis of Soils
- D. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effect
- E. ASTM F1647 - Standard Test Method for Organic Material Content of Athletic Field Rootzone Mixes.
- F. ASTM F1632 - Standard Test Method for Particle Size Analysis and Sand Shape Grading of Golf Course Putting Green and Sportsfield Rootzone Mixes
- G. ASTM F2060 - Standard Guide for Maintaining Cool Season Turfgrasses on Athletic Fields
- H. National Turfgrass Federation, Inc.

- I. National Turfgrass Evaluation Program (NTEP).
- J. Cornell Universities: Sportsfield Management Guidelines
- K. Turfgrass Producers International: Guideline Specifications to Turfgrass Sodding, latest edition.

1.4 SUBMITTALS:

- A. Furnish name of Landscape Contractor or Nurseryman to perform lawn work and a list of completed projects including contact information for each project demonstrating compliance with applicable qualification requirements outlined in 1.5 "Quality Assurance" of this specification section.
- B. Provide Material Certificates and MPD for:
 - 1. Sod species and source, location for sod producer
 - 2. Fertilizers
- C. Provide Topsoil Test Report (for Onsite and Imported Topsoil): Submit test results from Architect approved independent testing laboratory on their letterhead. Report shall:
 - 1. Certify soil texture, organic content, and particle size analysis.
 - 2. Chemical analysis testing nitrogen, phosphorus, potassium, calcium, magnesium, cation exchange capacity, base saturation percentages, micronutrients, and acidity (pH).
 - 3. Provide timing and rates of soil additives, liming and fertilizers. (Materials and procedures regarding soil amendments and fertilizers specified in this section are approximate.) Adjust all soil amendments to comply with test results based on actual soil tests and as directed by the Architect at no additional cost to the Owner.
- D. Provide letter on Contractor's letterhead certifying that only topsoil from the above tested source was used on the project.
- E. Provide schedule for review and approval as outlined under "Sequence and Scheduling" of this specification section.

1.5 QUALITY ASSURANCE

- A. General Lawn Contractor: Work shall be contracted to a single, established Landscape Contracting or Nursery firm having sufficiently experienced crews, supervisor(s), specialized equipment, and an excellent record of performance on completed lawn projects of comparable size, scope, and quality. Provide expert turfman to direct the work in the field on a regular, daily basis. The expert turfman shall be employed by the same company engaged in the installation of the lawn work for a minimum of five (5) years.
- B. Sod Standards: Comply with the Turfgrass Producers International: Guideline Specifications to Turfgrass Sodding, latest edition.
- C. Testing: If required by the Architect for poor lawn grow in, engage an Architect approved independent, qualified New York State testing service and turfgrass specialist to evaluate Contractor grow in practices and materials used. Pay for all testing/inspection services, materials, and manpower to correct lawn areas as approved by the Architect.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Sod:

1. Cut, deliver, and install sod within a 24-hour period. Sod cutting and shipping shall be coordinated with the sod installers.
2. Do not harvest or transport sod when moisture content may adversely affect sod survival.
3. Protect sod from sun, wind, and dehydration prior to installation.
4. Do not tear, stretch or drop sod during handling and installation.
5. Store sod materials at site in an orderly manner at location(s) acceptable to the Architect.

B. Fertilizer:

1. Deliver fertilizer in the manufacturer's standard sized bags showing the weight, analysis, and manufacturer's name. Store all fertilizer under a waterproof cover or in a dry place as approved by the Architect.

1.7 JOB CONDITIONS

A. Job conditions in Section 312201 apply.

B. Lawn Work:

1. Perform lawn work after planting, fine grading and other work affecting the ground surfaces in the lawn work areas has been completed satisfactorily.
2. Where practical, the Owner will provide a connection to the water system such as, but not limited to, existing yard hydrants, building hose bibs, etc. If this source is insufficient, not available or practical to provide a source of sufficient water to meet the requirements herein, the Contractor shall secure a water source sufficient to meet the water requirements herein such as, but not limited to, municipal hydrants, water truck, etc. at no additional cost to the Owner.
3. Contractor shall provide all watering equipment and appurtenances such as, but not limited to, meters, backflow preventer, labor, hoses, sprinklers, irrigation, and watering equipment.
4. Calendar dates for sodding under "Sequence and Scheduling" of this specification section shall apply.
5. Place sod only when ground surface is free of mud, frost, snow and ice.
6. Protect newly sodded lawns from vehicles, vandalism, or trespass. Provide temporary fencing or barriers as required.

C. Construction Review:

1. Upon completion of topsoil spreading and sod bed preparation, notify Architect to review work.

2. The Architect may review fine graded areas by the Contractor to check for surface smoothness and general compliance with grading requirements. Fill or cut by hand raking or other acceptable means to achieve smooth, even well-draining lawn surfaces free of "bird baths" and breaks in grade as directed by the Architect at no additional expense to the Owner.
3. On athletic fields the Architect shall review planarity of the field by string grading and/or by visual inspection of the temporary line markings installed by the Contractor prior to seeding/sodding as indicated in Part 3 - Execution.
4. Review of any fine graded lawn and athletic field areas by Architect shall not alleviate the Contractor of his responsibility for conforming to the required grades as shown on the drawings, nor be misconstrued as final acceptance of lawn work.

1.8 SEQUENCING AND SCHEDULING

- A. Schedule: Prior to construction, provide a schedule which addresses the following lawn thresholds involving erosion control stabilization and competitive use of playfields:
 1. Seeding and Sodding Installation: The Contractor may invoice for 50% of the approved schedule of value breakdown at the time of acceptable installation.
 - a. Unless otherwise directed in writing by the Architect, sod lawns from April 1 to May 15, and from August 15 to October 1. Seeding and sodding between May 16 and August 14 is not acceptable unless adequate water supply is available and applied to the turfgrass as required herein and approved by the Architect.
 - b. Proceed with and complete sodding as rapidly as portions of the site become available, working within the seasonal limitations for each kind of landscape work required.
 2. Substantial Completion: The Contractor may invoice for 25% of the approved schedule of value breakdown at the time of substantial completion as described in Part 3, "Standards For Substantial Completion Of Lawns" of this specification section. The date of substantial completion is anticipated approximately 60 days after lawn installation presuming all Contractor maintenance operations have been vigorously performed.
 3. Final Acceptance: The Contractor may invoice for the final 25% of the approved schedule of value breakdown at the time of final acceptance as described in Part 3, "Standards For Final Acceptance Of Lawns" of this specification section. The date of final acceptance is anticipated approximately 30 days after substantial completion presuming all Contractor maintenance operations have been vigorously performed.
 4. Owner Maintenance: After final acceptance of the lawns, the Owner will maintain for 1 to 3 growing seasons to reach competitive maturity and beyond per ASTM F2060.

2.0 PART 2 - PRODUCTS

2.1 TOPSOIL

- A. Source: Provide from off site, Architect approved source, when stripped, stockpiled, and amended quantity is inadequate to provide five (5") inches settled depth of topsoil for all lawn areas at no additional cost to the Owner.
- B. Texture and Content: Provide topsoil conforming to the following:
1. Soil texture and content:
 - a. Sandy loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil material. Topsoil shall be entirely free of dense material, hardpan, clay, stones over 3/4" in diameter, sod, or any other objectionable foreign material, including but not limited to, glass, debris, toxins, hazardous wastes and chemicals (such as atrazine or muriatic acid within the past seven (7) years) that may be injurious to humans, animals and plant materials.
 - b. Organic Matter: Containing not less than 5% or more than 10% organic matter in that portion of a sample passing a 1/4" sieve when determined by the wet combustion method on a sample dried at 105 degrees F.
 2. pH Value: Containing a pH value within the range of 6.0 to 7.0 on that portion of the sample which passes a 1/4" sieve.
 3. Soluble salt content: Not higher than 500 parts per million.
 4. Sieve Analysis for general lawn work: Shall be screened or rock picked to meet the following gradation:

Sieve Designation	% Passing
3/4"	100
1/4"	97-100
No. 200	20-50 (of the 1/4" sieve)
- C. No lawn shall be sodded on topsoil that has been chemically treated until sufficient time has elapsed to permit dissipation of all toxic materials. The Contractor shall assume full responsibility for any loss or damage to turfgrass sod or the inability to grow a sufficient stand of grass from sod, as indicated herein, arising from improper use of chemicals or due to failure to allow sufficient time to permit dissipation of toxic residues, whether or not such materials are specified herein.

2.2 SOD

- A. Sod shall conform to NYSDOT Item 713-14 and be approved nursery grown mineral soil sod with 60% Kentucky Bluegrass and 40% Fine Fescue blend with a minimum (4) varieties. Muck grown sod is NOT acceptable. Installation of plastic netting is NOT acceptable.
- B. Provide well-rooted, healthy sod, free of diseases, nematodes and soil borne insects. Provide sod uniform in color, leaf texture, density, and free of weeds, undesirable grasses, stones, roots, thatch and extraneous material viable and capable of growth and development when planted. Sod is considered free of weeds when less than five (5) weeds are found per one hundred (100 s.f.) square feet.
- C. Thickness of Cut: Furnish sod machine cut at a uniform soil thickness of 0.60 inch at the time of cutting and of supplier's standard width, length, and thickness: uniformly 1" to 1-

1/2" thick with clean cut edges. Measurement of thickness shall exclude top growth and thatch. Mow sod before stripping.

- D. Mowing Height: Before stripping, sod shall be mowed uniformly at a height of 1 to 1-1/2 inches.
- E. Thatch: Sod shall be relatively free of thatch, up to 1/2 inch allowable (un-compressed).
- F. Pad Size:
 - 1. For General Lawn: Individual pieces of sod shall be cut to the supplier's standard width and length. Maximum allowable deviation from standard widths and lengths shall be plus or minus 1/2 inch on width and plus or minus 5% on length. Broken pads and torn or uneven ends will not be acceptable.
 - 2. For Athletic Fields and Other Such Large Areas: Sod shall be thick-cut "big" rolls of 250 s.f. Maximum allowable deviation from standard width and lengths shall be plus or minus 1/8" on width and plus or minus 1/2% on length. Broken and torn or uneven rolls will not be acceptable.
- G. Strength of Sod Sections: Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically from a firm grasp on the upper 10% of the section.
- H. Standard of Quality: Shall be Premium Sod supplied by Batavia Turf (585) 548-2552, Sky High Turf Farms (315) 687-6510, Saratoga Sod Farm (518) 664-5038, Lakeside Sod (716) 741-2877 or Architect approved equal.

2.3 FERTILIZER

- A. For Starter Fertilization: Immediately prior to seeding, fertilize with a commercial starter fertilizer, granular, non-burning product, with not less than 90% organic slow acting, micro nutrients and 1% iron, guaranteed analysis commercial fertilizer. Fertilizer ratio shall be: (1-2-1). Apply at a rate of 0.33 - 0.66 lbs of nitrogen (N) per 1,000 sf.
- B. For Subsequent and Final Fertilizations: Apply commercial fertilizer, poly coated granular non-burning product with not less than 90% organic slow acting, guaranteed analysis
 - 1. For Spring and Fall Lawn Work: Fertilizer ratio shall be: (3-0-1). Apply at rate of 1.5 - 2 lbs nitrogen (N)/1,000 s.f.

3.0 PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify limits of lawn and other types of ground cover materials in the field with drawings. Also, any imported and screened topsoil areas. Notify Architect of discrepancies prior to proceeding with lawn work.
- B. Examine finish surfaces, grade, topsoil quality, and depth.
- C. Do not start lawn work until unsatisfactory conditions are corrected to the satisfaction of the Architect.

3.2 SPREAD TOPSOIL

- A. Limit preparation to areas which will be immediately seeded or sodded.
- B. Perform topsoil spreading operations only during dry weather.
- C. To ensure a proper bond with the topsoil, disc, harrow, decompact, or otherwise scarify and loosen the lawn subgrade to a depth of five (5") inches before spreading topsoil.
- D. Spread topsoil to ensure a minimum settled depth of five (5") inches in lawn areas.

3.3 PREPARE GENERAL LAWN AREAS

- A. Perform a pH test, sieve, and nutrient analysis of the topsoil and advise the results to the Architect prior to adding limestone or other soil amendments. Soil amendments shall be uniformly incorporated into the top four (4") inches of topsoil by discing, harrowing or other approved methods.
- B. Remove debris and stones 3/4" or larger by handpicking, fine tooth aluminum grading rakes, and mechanized stone picker. When topsoil has hardened, cultivate soil to a four (4") inch depth by plowing, discing, harrowing, or otherwise scarifying and loosening the topsoil.
- C. Grade lawn areas to a smooth, free draining even surface with a loose, moderately coarse texture. Scarify, rake, level, and roll with a light static roller as necessary to obtain true, even lawn surfaces and fill depressions as required to drain. Correct irregularities in the surface resulting from tillage operations to prevent formation of depressions or water pockets.
- D. Cultivate soil to provide a firm bed of minimum of four (4") inches deep, free of clods, stones, or foreign matter over 3/4" in diameter from the top of soil. Do not move heavy objects except necessary lawn making equipment over the lawn areas after the soil is prepared unless it is again loosened and graded. Remove stones and all debris greater than one 3/4" in diameter during cultivation. Level undulations and irregularities in the surface.
- E. For pH correction provide adjusted rate of application as recommended in Topsoil Test Report submittal. For low pH correction: Add ground limestone at the rate indicated by the soil test. For high pH correction: Materials and application rates shall be determined by appropriate soil tests.
- F. Place starter fertilizer at the rate of 0.33 - 0.66 lbs. of nitrogen (N) per 1,000 sf. and mix into full depth of topsoil.
- G. Rake area with fine toothed aluminum grading rake before placing seed to obtain a smooth surface at the proper elevation. Drag area with a wood float to level out minor humps and hollows. Beds shall have a smooth friable uniform surface, free of areas ponding water.

3.4 SODDING

- A. Notify Architect that sod bed is ready for review as specified in Job Conditions. Obtain Architect's approval prior to sodding.
- B. Moistening the Soil: During periods of higher than optimal temperature for species being specified and after unevenness in the soil surface has been corrected, the soil shall be lightly moistened immediately prior to laying the sod.

- C. Sod immediately after preparation of bed and Architect's approval.
- D. Lay sod to form a solid mass with tightly-fitted joints in strips parallel to contours. Butt ends and sides of sod strips. Do not overlap edges. Stagger strips to offset joints in adjacent courses. Remove excess sod to avoid smothering of adjacent grass. Provide sod pad top flush with finish grade of adjacent curbs, pavements, drainage structures and seeded areas.
- E. Do not lay dormant sod or install sod on soil surfaces that are hot, dry, saturated or frozen.
- F. When sodding slopes, install initial row of sod in a straight line, beginning at bottom of slope. Place subsequent rows parallel to and lightly against previously installed row.
- G. Sod strips laid in drainageways must meet the finished grades shown on the drawings.
- H. Sod abutting existing lawn or seeded lawns shall meet flush with top of sod pad (soil and thatch). Remove excess topsoil as necessary to meet flush.
- I. Stake sod in lawn swales and on lawn slopes 3H to 1V (horizontal to vertical) and steeper to prevent slippage. Use two (2) biodegradable stakes per square yard of sod. Stakes are to have their flat sides against the slope and be driven flush with sod surface.
- J. Roll with light static lawn roller to ensure contact with subgrade.
- K. As sodding is completed in anyone section, water sod thoroughly to a depth sufficient to ensure the underside of the new sod pad and topsoil immediately below the pad is thoroughly wet. Contractor is responsible to ensure there is an adequate water supply available prior to installation. Do not allow sod to dry out.

3.5 MAINTENANCE

- A. Maintenance by Contractor begins as soon as lawns are sodded or seeded. Protect lawns from drought, washout and wind erosion. In general, maintain new installed lawn areas, including watering, fertilizing, core aerating, spot weeding, overseeding, mowing, applications of herbicides, fungicides, insecticides, and re-sodding until a full, uniform, healthy, vigorous stand of grass free of weed, undesirable grass species, disease, and insects is achieved and accepted by the Architect. Specifically:
 - 1. Watering Sodded Lawns:
 - a. First Week: Soil on sod pads shall be kept moist. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of at least four (4") inches.
 - 2. Second and Subsequent Weeks: Contractor shall provide water to the lawns as required to maintain adequate moisture, in the upper four (4") inches of soil, necessary for the promotion of deep root growth until final acceptance. After 2nd mowing, water two (2) times weekly until thoroughly established.
 - 3. Protect: Protect lawn areas against trespass, vandalism and routine pedestrian traffic and Owner maintenance traffic by temporary fencing or other means.

4. Repair: Repair, rework, resod and overseed (as originally specified for that area) areas that have washed out, eroded, do not germinate and are vandalized or otherwise damaged. Overseeding rates are to be adjusted to 6 lbs. of seed per 1,000 s.f.
 5. Mow: Initial mowing shall begin when the blade height reaches 2" and the soil will bear the weight of the lawn mower. Use mowers with low impact tires. For the first 3 mowings cut the grass blades to 1.5 inches. After that mow the grass when it reaches a height of about 3.5" to a height of about 2.5". Never remove more than 1/3 of the grass blade at any one mowing. A minimum of three (3) to five (5) mowings are required (approximately once per week after the initial germination period to final acceptance). Notify the Architect of dates in writing as mowing is performed. Excess clippings shall be carefully raked so as not to remove healthy grasses, and removed.
 7. Core Aerating: Between mowings three (3) and four (4), core aerate lawns about three (3") inches on center minimum three (3") inches deep to ensure aggressive root growth. This will require multiple passes at different directions to achieve 16 to 20 holes 3/4" to 1" diameter per square foot. Sweep scattered plugs off paved areas onto adjacent lawn areas. Pulverize plugs during subsequent mowing operations. Provide additional core aerating after the 10th mowing as directed by the Architect to expedite the lawn maturation process. Moistening field by thoroughly watering the topsoil profile, several days in advance of coring to facilitate proper penetration of the topsoil.
 8. Fertilizer: Immediately after core aerating, between mowings three (3) and four(4), apply subsequent fertilizer at the rate of 1.5-2 lbs./1,000 s.f. Apply a final fertilizer just prior to final acceptance at the same application rate.
 9. Weed Control: When infestation of weeds or crabgrass develops, treat infestation by hand weeding or herbicides control appropriate to the area. Furnish and install weed chemical control as recommended by manufacturer. Herbicides controls must be acceptable to the Owner. Obtain and pay for permits. Use as directed by the manufacturer and applicable laws, codes, ordinances and regulatory requirements. Under NO circumstances is it acceptable to seed or overseed over Nutsedge, Crabgrass or other grassy/broadleaf weeds.
- B. Maintenance by the Contractor continues through the certificate of substantial completion to final acceptance by the Architect as described below. Maintenance by Owner begins after final acceptance of the lawn.
- 3.6 STANDARDS FOR SUBSTANTIAL COMPLETION OF LAWNS: Review to determine substantial completion of lawns will be made by the Architect, upon request. Provide notification at least five (5) working days before requested review date.
- A. Lawn areas will be substantially complete provided requirements, including maintenance, have been complied with. A healthy, vigorous, uniform, partially mature stand of lawn is established free of weeds, undesirable grass species, disease, and insects. With proper watering and maintenance as indicated herein, this should culminate after an approximate 60-72 day period for initial germination with average temperatures above 40°F. Grass roots shall have matured to a minimum of 1½" depth as determined by the Architect when core samples are taken.
 - B. Lawn areas shall not have more than 10% dead/bare spots.

- C. Contractor shall provide a written copy of all maintenance activities performed up to this date.
 - D. The architect will prepare a written punch list of items which need correction prior to final acceptance.
- 3.7 STANDARDS FOR FINAL ACCEPTANCE OF LAWNS: Review to determine final acceptance of lawns will be made by the Architect, upon request. Provide notification at least five (5) working days before requested review date.
- A. Lawn areas will be acceptable provided requirements, including maintenance, have been complied with. A healthy, vigorous, uniform, full stand of lawn is established free of weeds, undesirable grass species, disease, and insects. Grass roots shall have matured to a minimum of 2" depth as determined by the Architect when core samples are taken.
 - B. Any lawn which contains disease, more than 1% dead/bare spots, or any dead/bare area greater than one (1) square foot shall be rejected and the unacceptable area(s) repaired as originally specified at no additional cost to the Owner.
 - C. In the event the Contractor fails to complete the punch list items within a 30 day period with average temperatures of 40°F after the time of Substantial Completion, the Contractor shall be liable to the Owner for any additional costs including those charged by the Architect.
 - D. Contractor shall provide a written copy of all maintenance activities performed during the contract up to final acceptance of lawns.

3.8 CLEAN UP

During the contract and at intervals as directed by the Architect and as lawn work is completed, clear the site of extraneous materials, rubbish, and debris. Leave the site in a clean, safe, neat, well-draining condition.

END OF SECTION 329201

SECTION 334001 - STORM DRAINAGE

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The extent of the storm drainage is shown on the drawings.
- B. Storm drainage work includes, but is not limited to:
 - 1. Trenching, backfilling and compaction
 - 2. Storm structures, castings, and appurtenances
 - 3. Piping, jointing and fittings
 - 4. Connection(s) to other storm system(s)
 - 5. Adjusting existing storm structures and other utilities
 - 6. Storm Water Management Trench (SMT)
 - 7. Storm line cleaning and scoping
 - 8. Quality Control Testing and Submittals
 - 9. Clean Up
- C. Provide materials, labor, equipment, and services required to accomplish related work in accordance with the drawings and specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 311201 - Site Preparation
- B. Section 312501 - Erosion, Sediment, and Pollution Control
- C. Section 312201 - Site Earthwork: For Elaboration of Shoring and Bracing, Dewatering, Backfilling, Compaction and Field Quality Control Testing.
- D. Section 321201 - Asphalt Paving
- E. Section 321301 - Site Concrete

1.3 REFERENCES

- A. ASTM D2321 Standard Practice for Underground Installation of Thermoplastic Pipe for Sewer and Other Gravity Flow Applications.

1.4 SUBMITTALS:

- A. Shop Drawings (SD) required for:
 - 1. Precast concrete drainage structures showing sizes, elevations for openings and, HS20 loading certification.
- B. Manufacturer's Product Data (MPD) required for:
 - 1. Drainage structures and castings
 - 2. Pipe, joints, and fittings
 - 3. Stormwater Management Trench for Pipes and Geotextiles
- C. Quality Control Submittals:

1. Provide a list of completed projects including Owner's contact information for each project, demonstrating compliance with applicable "Experience Requirements" specified in "Quality Assurance" of this specification section.
2. Provide Infiltration Testing Report(s) for all new drywells as described in "Quality Assurance" of this specification section. Stormwater facility design may be adjusted by Architect depending on results of tests.

1.5 QUALITY ASSURANCE

A. Drainage Contractor Experience Requirements:

1. Submit business name, business owner(s) name(s), business address, telephone number, website and/or email address signed by the Contractor/Subcontractor who meets the qualifications set forth in this specification and is proposed by the Contractor to perform the Drainage for this Project.
2. Provide a list of at least four (4) Drainage work projects of comparable size, scope and quality completed successfully by the proposed Contractor/Subcontractor within the past three (3) years that includes the date completed, project Owner's name and current contact information, including telephone numbers and email addresses.

B. Infiltration Testing Required by Contractor: (Drywells)

1. Perform three (3) infiltration tests in locations as directed by the Architect and as detailed.
2. May be done through a boring or open excavation as described in NYSDEC, Division of Water, published in Standards of Wastewater Treatment Works, 1988 or latest revision.
3. Install casing (solid 4–6 inch diameter, 30" length) to 24" below finished grade.
4. Remove any solid surface and provide a natural soil interface into which water may percolate. Remove all loose material from the casing. Upon the tester's discretion, a two (2") inch layer of coarse sand or fine gravel may be placed to protect the bottom from scouring and sediment. Fill casing with *clean* water to a depth of 24" and allow to pre-soak for twenty-four hours.
5. Twenty-four hours later, refill casing with another 24" of clean water and monitor water level (measured drop from the top of the casing) for 1 hour. Repeat this procedure (filling the casing each time) three additional times, for a total of four observations. Upon tester's discretion, the final field rate may either be the average of the four observations, or the value of the last observation. The final rate shall be reported in *inches per hour*.
6. Upon completion of the testing, the casing shall be immediately pulled, and the test pit shall be backfilled and site restored.

1.6 JOB CONDITIONS

- ##### A. Job conditions in Section 312201 apply.

- B. Plan and execute piping work so that trenches are not opened for more than two hundred (200') feet in advance or left unfilled more than one hundred (100') feet behind. No overnight open excavation is permitted.
- C. CERTIFICATION OF STORM SYSTEM: The storm system must be installed and certified by a licensed County Plumber when required by municipal code or state law.
- D. CONSTRUCTION REVIEW: Notify the Architect when the storm system is approximately 25%, 50% and 95% complete.

1.7 SUBSTITUTIONS

- A. Contractor is responsible for design of any substituted structures, systems or units in Section 334001 by a NYS licensed engineer. Submit to Architect for approval.
- B. If a product is being submitted as a substitution to the specified product; the the Prime Contractor shall submit and request a product material substitution with his/her bid. The Prime Contractor shall at a minimum provide the following for review by the Architect and Owner:
 - 1. All submittals as specified herein
 - 2. Product comparison
 - 3. Cost Information (including proposal of change in Contract Sum)
 - 4. Contractor's certification that proposed substitution complies with requirements in the Contract Documents
 - 5. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

PART 2 - PRODUCTS

2.1 BACKFILL

- A. Backfill for pipes, Stormwater Management Trenches (SMT), drainage structures, and drywells shall be as specified in Section 312201.

2.2 STORM STRUCTURES AND CASTINGS

- A. Storm Inlets, Manholes and Catch Basins:
 - 1. Shall be precast reinforced portland cement concrete conforming to the size(s) and shape shown on drawings, designed for AASHTO HS-20 loading. The materials and structural design of the structures shall be per ASTM C478 and ASTM A497, Grade 60. The minimum compressive strength of the concrete in the structure base, riser, and top section shall be 5,000 psi. The minimum wall thickness shall be one twelfth of the internal diameter of the riser or largest cone diameter. All joints shall be waterproofed with O-ring rubber gaskets and sealed with a mastic treatment in accordance with ASTM C990. Any grout used within the system shall meet the ASTM C 1107. Manhole connector holes shall be equipped with a seal gasket that meets or exceeds material specification of ASTM C-923 or other locally approved methods. Base units shall be extended.

Standard of quality shall be as manufactured by Zeiser Wilbert, Jefferson Concrete, Fort Miller or Architect approved equal.

2. Castings: Provide HS20 loading and bike safe grates, ductile iron meeting grade 65-45-12 as determined by ASTM A536-84, sizes as noted on the plans. Frames, covers and grates shall be machined to prohibit rocking. Standard of Quality shall be Neenah Foundry, East Jordan Iron Works, US Foundry, or Architect approved equal.

B Dry Wells:

1. Shall be pre-cast reinforced portland cement concrete with reinforcement conforming to ASTM C478 and ASTM A615 with AASHTO HS20 Loading. Openings shall be precast in each unit at the factory. Size(s) as shown on drawings and constructed of reinforced Portland Cement concrete; as manufactured by Zeiser Wilbert, Jefferson Concrete, Fort Miller or Architect approved equal.
2. When the size of a manufacturer's product differs from the item as detailed on the drawings, provide the manufacturer's next larger size than detailed unless approved by the Architect in writing.
3. Castings: Provide HS20 loading and bike safe grates, ductile iron meeting grade 65-45-12 as determined by ASTM A536-84, sizes as noted on the plans. Frames, covers and grates shall be machined to prohibit rocking. Standard of Quality shall be Neenah Foundry, East Jordan Iron Works, US Foundry, or Architect approved equal. Refer to drainage details on drawings for model numbers and other information on castings.

2.3 STORM STRUCTURE APPURTENANCES

- A. Precast Concrete Adjustment Rings: Shall be square or round depending on structure. Built in accordance to ASTM C478, and made of 5,000 psi concrete and reinforced steel, meeting ASTM A615 Grade 60, as manufactured by Fort Miller, Zeiser Wilbert, Jefferson Concrete or Architect approved equal.
- B. Steps: Shall be copolymer polypropylene plastic reinforced with 1/2" diameter grade 60 steel as manufactured by M.A. Industries or Architect approved equal.
- C. Mortar: Shall be lime, cement, and clean sand, 1:1:3 measured by volume, meeting ASTM C1107.

2.4 PIPING

- A. High Density Polyethylene Pipe (HDPE): Shall be heavy duty dual wall, high density polyethylene (HDPE) pipe conforming to ASTM F2648 for 4" to 60" pipe with a smooth inner wall, annular corrugations, "n" flow rating of 0.012, and HS-20 loading capability with minimum one (1') foot cover for 4" to 48" pipe and two (2') foot cover for 6"- pipe. Joint couplings for pipe shall be connected using a bell & spigot joint, meeting AASHTO M252, AASHTO M294, or ASTM F2306. The joint shall be soil tight and gaskets, when applicable, shall meet the requirements of ASTM F477. Standard of quality shall be N-12 Mega Green ST IB pipe as manufactured by Advanced Drainage Systems, Inc., 800-821 6710, or Architect approved equal.

2.5 STORM WATER MANAGEMENT TRENCH

- A. 4" to 10" Pipe: Shall be flexible, heavy duty, corrugated interior and exterior, perforated (or slotted) polyethylene pipe meeting requirements ASTM F-667 for 4" to 10" diameters. Standard of quality shall be ADS with prefabricated snap fittings as manufactured by Advanced Drainage Systems, Inc., (614) 457-3051 or Architect approved equal. Size pipe(s) as noted on drawings.
- B. 12" to 24" Pipe and Fittings: Shall be heavy duty polyethylene (HDPE), corrugated interior and exterior, perforated pipe meeting requirements AASHTO M252, AASHTO M294, Type C. Standard of quality shall be ADS with prefabricated fittings as manufactured by Advanced Drainage Systems, Inc., (614) 457-3051 or Architect approved equal. Size pipe(s) as noted on drawings.
- C. 4" to 12" Fittings: Shall be injection molded fittings with a smooth interior and exterior meeting requirements AASHTO M252 for 4" to 10" diameters, and ASTM M294 or ASTM F2306 for 12" diameter. Standard of quality as manufactured by Advanced Drainage Systems, Inc., (614) 457-3051 or Architect approved equal. Size pipe(s) as noted on drawings.
- D. Backfill: Shall be clean, washed No. 1 stone as indicated in Section 312201.
- E. Soil Separation Fabric: Shall be a commercially manufactured non- woven polypropylene filter fabric. Standard of quality shall be Mirafi 140N as manufactured by TenCate or Architect approved equal.

2.6 STORM LINE CLEANING & SCOPING

- A. Contractor shall provide 600 linear feet of 18" storm line cleaning, verification, documentation, and scoping in areas directed by the Architect and as shown on the plans.
- B. Cleaning Equipment: Acceptable cleaning equipment includes, but is not limited to, rodding machines, bucket machines, hydraulic flushers, movable dams with flexible scrapers.
- C. Scoping Equipment: Acceptable scoping equipment includes, but is not limited to, pipe inspection camera with pan-and-tilt, radial viewing that pans 275 degrees and rotates to 360 degrees. The camera shall have the following attributes:
 - 1. Be operative in 100 percent humidity conditions.
 - 2. Measure with an accurate footage counter that displays on the monitor the exact distance of the camera, to the nearest tenth of a foot, from the centerline of the starting manhole.
 - 3. Camera with height adjustment so that the camera lens is always centered at half the inside diameter, or higher, in the pipe being televised.
 - 4. Lighting for the camera shall be suitable to allow a clear picture of the entire pipe periphery.
 - 5. The video camera shall be capable of showing on the digital inspection the Owner's name, project name, contractor name, date, line size and material, line identification (Owner's manhole numbers at both ends), ongoing footage counter, and slope and angle of pipe.

- D. For four- and six-inch lateral internal television inspections a "push camera" shall be used to produce color video. Camera reel shall be equipped with a footage counter to identify approximate distances from the start of the inspection.
- E. Contractor to provide written report with mapping of found lines, sizes, inverts, and conditions. This should align with the video scoping files.

PART 3 - EXECUTION

3.1 CONNECTIONS TO OTHER STORM SYSTEM

- A. Connections at Building(s):
 - 1. Locate accurately per site and plumbing drawings. Verify invert and sizes. Notify Architect of any discrepancies immediately, prior to installation.
 - 2. Install pipe and jointing to within five (5') feet of each building exterior. Install temporary plugs, cap end, mark above grade, and protect. Coordinate with Plumbing Contractor. Connection will be made by Plumbing Contractor.
 - 3. The Plumbing Contractor shall be responsible for connecting the building drains and leaders to the site storm system.
 - 4. Make connections securely, watertight and as detailed. Provide all necessary couplers and fittings to make connections.
- B. Connections to existing Storm Systems:
 - 1. Coordinate with the Municipality and other agencies having jurisdiction. Notify governing agency in writing a minimum of two (2) weeks prior to anticipated date of connection so that field procedures and installation can be reviewed by a representative of the Municipality. Copy letter to Architect.
 - 2. Locate accurately per drawings. Verify inverts and sizes. Notify Architect of any discrepancies immediately, prior to installation.
 - 3. Make connections securely, watertight and as detailed. Provide all necessary couplers and fittings to make connections.

3.2 TRENCHING AND BACKFILL

- A. Reference: Refer to Section 312201 for elaboration of shoring and bracing, supporting, rock, dewatering, and backfilling.
- B. Trenching:
 - 1. Remove material encountered to the depth shown on drawings and with a maximum width of fourteen (14") inches and a minimum of nine (9") inches each side of conduit springline as detailed. Provide safe shoring, sheeting, and bracing. Remove before backfilling. Backfill excess or over excavation as described in Section 312201 to proper line and grade. Compact to 95% density.
 - 2. When unsatisfactory soil materials are encountered at design elevations, immediately notify the Architect in writing via email. Continue as directed by the

Architect. When conditions are not a result of Contractor's negligence, additional excavation may be directed by the Architect and paid for as a Change Order on a unit price basis in accordance with specification Section 312201.

- C. Water: Remove from trenches; drain trenches and/or provide sump pits and pumping equipment as necessary to keep trenches stable and dry at no additional cost to the Owner.
- D. Soft Material in Trench Bottom: Dry out and stabilize or remove and replace with imported granular backfill material to achieve firm, stable foundation at no additional cost to the Owner.
- E. Rock: Remove boulders and rock within one (1'-0") foot of pipe. Provide one (1'-0") foot of granular backfill between rock and conduits at no additional cost to the Owner.
- F. Backfill: Conform to details on drawings and as specified. Compact backfill to a minimum 95% of optimum density.

3.3 STORM STRUCTURES INSTALLATION

- A. Pre-Cast Structures:
 - 1. Install with corresponding extended precast base section. Precast base units shall be modified in the factory to have the correct size openings for piping.
 - 2. Provide drainage structures as detailed, built to finished grades given. Backfill with imported granular backfill material around drainage structure and compact to 95% density to avoid settlement.
 - 3. Mortaring: Thoroughly wet concrete risers before laying. Mortar joints. Joints shall be completely full and struck flush.
 - 4. Install any required steps in a continuous flight, avoiding any conflict with piping.
 - 5. Construct channels in base of storm structures for positive flow from inlet to outlet piping where detailed.
 - 6. Build completed structure to avoid any infiltration or exfiltration of water except at underdrains or storm water management trenches.
- B. Dry Well Units: Install as detailed, built to finished grades given. See masonry details for installation of casting. Build drywells to facilitate exfiltration of water. Line drywells with soil separation fabric and backfill with No. 1 stone as specified.

3.4 CASTINGS

- A. Provide the type specified and shown on drawings. Build to the finish grade as shown on drawings.
- B. Set castings firmly. Loose or rocking castings shall be rejected by the Architect.
- C. Paint all installed castings (inside and outside) with two (2) coats of black rust inhibitive paint as directed by the Architect.

3.5 ADJUSTING EXISTING UTILITIES

Adjust existing utilities as necessary to maintain utility service and meet finished grade conditions. Existing utilities include but are not limited to; hydrants, water valves, gas valves, electric pull boxes and manholes, storm drainage structures, cable and telephone markers, fiber optic cables, sanitary cleanouts and manholes, and guy wires.

3.6 PIPE LAYING

- A. Shall be in accordance with ASTM D2321 and pipe manufacturer requirements.
- B. Bed pipe in granular backfill or concrete as shown on drawings, compact under springline of pipe to assure firm support. Align pipe to line and grade given in plan and profile. Set batter boards or set by laser level.
- C. Pipe joints shall be made using the flexible gaskets specified. Clean bell end of any debris and lubricate. Remove protective wrap from gasket. Do not allow lubricated section to touch dirt or backfill. Foreign matter could adhere to surface and compromise joint integrity. Push together pipes so that the gasket is firmly seated in the socket. Always push spigot end into bell, not bell end into spigot.
- D. Place backfill around pipes to equal depths on both sides as work progresses.
- E. "Lamp" pipes to check for misalignment and breakage after backfilling has been completed. Replace pipes deviating more than 1/2" from line or grade at no additional cost to the Owner.

3.7 STORM WATER MANAGEMENT TRENCH

- A. Use only pipe which is undamaged and flexible (have not been exposed to direct sunlight for more than six (6) months causing brittleness, cracking or splitting prior to placement). Pipe shall be stored for at least twenty-four (24 hrs.) hours in an area having a minimum temperature of fifty (50) degrees F.
- B. Trenching: Remove material encountered to the depth shown on the drawings. Provide shoring, sheeting, and bracing as necessary for safety; remove before backfilling.
- C. Install continuous envelope of soil separation fabric around the backfill up to subgrade of finish material. Fill stone to proper elevation and wrap top. Overlap fabric minimum twenty-four (24") inches at top and joints. Secure fabric joints to prevent separation and infiltration of adjacent materials and separation of fabric.
- D. Install pipe sloped as shown on drawings.
- E. Compact backfill to maximum density of adjacent materials.

3.8 STORM LINE CLEANING & SCOPING

- A. Cleaning Operations:
 - 1. Potable water withdrawal from hydrants will be allowed for utility cleaning purposes. A contractor provided hydrant meter with backflow prevention device shall be used when withdrawing water from a fire hydrant.
 - 2. The pipe sections shall be cleaned using hydraulically propelled, high-velocity jet, or mechanically powered equipment. The equipment shall be capable of

removing dirt, grease, rocks, sand, and other materials and obstructions from the utility lines and manholes.

3. Any roots which could prevent adequate internal television inspection shall be removed. Procedures may include the use of mechanical equipment such as rodding machines, bucket machines and winches using root cutters and porcupine, and equipment such as high-velocity jet cleaners.
4. Flows diverted during cleaning operations shall be returned to the utility system.
5. Debris accumulated during cleaning operations shall be removed from the utility and disposed offsite.

B. Inspection and Scoping:

1. If during inspection of the utility section, the wastewater flow depth exceeds 20% of the inside pipe diameter, reduce the flow depth to an acceptable level by performing the inspection during minimum flow hours, bypass pumping, plugging or by pulling the camera with swab, high velocity jet nozzle or other acceptable dewatering device.
2. Video inspections performed while floating the camera is not acceptable.
3. Documentation of Television Inspection
 - a. All inspections shall be documented using a data logger and reporting system.
 - b. Inspection Logs: Computer printed location records shall be kept by the Contractor and shall clearly show the location and orientation in relation to an adjacent manhole. Other points of significance such as locations and orientations or service connections, building sewers, unusual conditions, roots, cross connections, broken pipe, presence of scale and corrosion, and other discernible features shall be recorded, and a copy of such records shall be supplied to the Owner.
 - c. Video Recordings: Video recordings shall include an audio track recorded by the inspection technician during the actual inspection work describing the parameters of the line being inspected (i.e. location, depth, diameter, pipe material, pipe slope, etc.), as well as describing connections, defects and unusual conditions observed during the inspection. Video recording playback shall be at the same speed that it was recorded. Once inspected, the DVDs shall be labeled and become the property of the Owner.
4. Perform inspection immediately after line cleaning.
5. The camera shall be moved through the line in either direction at a moderate rate, stopping when necessary to permit proper documentation of the utilities condition. In no case will the camera be pulled at a speed greater than 30 feet per minute. Manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with the proper documentation of the utility conditions shall be used to move the camera through the utility line.
6. During the inspection, the camera shall be temporarily stopped at each defect along the line. The nature, location, and orientation of the defect shall be recorded by the contractor. Where defects are also active infiltration sources, the

rate of infiltration in gallons per minute shall be estimated by the Contractor and recorded. The camera shall also be stopped at all service connections and identified by footage and clock orientation.

7. The camera operator shall slowly pan and tilt and beginning and ending manhole connections, each service connection, joints, visible defects and at pipe material transitions.
8. Inspections shall be continuous for pipe segments between manholes.
9. All videos, notes, file names, etc. shall be cross referenced to the project site plan.
10. Should at any interval during the inspection and scoping the camera becomes unmovable, non-functioning, or unresponsive it shall be the contractor's sole responsibility to retrieve the camera, at no additional cost to the Owner. Any damage done to the site or storm system retrieving the camera shall be corrected immediately by the Contractor to match existing conditions.

3.9 FIELD QUALITY CONTROL

- A. Density Testing: Perform all density testing for piping trenches and structure backfill as indicated in Section 312201.

3.10 CLEAN UP

- A. During the contract and at intervals as directed by the Architect and as storm drainage is completed, clear the site of pipe, trench and backfill material, stone, concrete and debris. Leave the site in a clean, safe, well draining, neat condition.
- B. Clean drainage structures, storm water management trenches and pipes: Clean out sediment, rubbish, construction debris, and foreign objects thoroughly, immediately prior to final acceptance.

END OF SECTION 334001