



**Department of
Environmental
Conservation**

Division of Environmental Remediation

Site Name: Katzman Recycling Site

Site Number: 558035

Contract Number: D013322

**Location: Town of Granville, Washington
County, New York**

Contract Documents

TRC Engineers, Inc.

3 Corporate Drive, Suite 202

Clifton Park, New York 12065

February 2025

New York State Department of Environmental Conservation
KATHY HOCHUL, *Governor* SEAN MAHAR, *Interim Commissioner*

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**KATZMAN RECYCLING SITE**
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SECTION X

Standard Specifications

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FINAL DESIGN SUBMITTAL
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

KATZMAN RECYCLING SITE
SITE NO. 558035

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SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope: Section includes:
 - 1. Administrative and procedural requirements for selecting materials and equipment for the Project.
 - 2. Procedural requirements for substitutions of materials and equipment.
 - 3. Procedural requirements for substitute construction methods or procedures, when construction methods or procedures are specified.
 - 4. This section supplements the requirements of Article 5.7 of the General Conditions.
- B. A proposed substitute will not be accepted for review if:
 - 1. Approval would require changes in design concept or a substantial revision of the Contract Documents.
 - 2. Approval would delay completion of the Work or the work of other contractors.
 - 3. Substitution request is indicated or implied on a Shop Drawing or other submittal, or on a request for interpretation or clarification, and is not accompanied by CONTRACTOR's formal and complete request for substitution.
- C. If proposed substitute is not approved, CONTRACTOR shall provide the specified materials, equipment, method, or procedure, as applicable.
- D. Approval of a substitute does not relieve CONTRACTOR from requirement for submitting Shop Drawings and other submittals in accordance with the Contract Documents.
- E. ENGINEER and DEPARTMENT have the right to rely upon the completeness and accuracy of the information included in CONTRACTOR's request for approval of a substitute, and CONTRACTOR accepts full responsibility for the completeness and accuracy thereof.
- F. When approved substitute is defective or fail to perform in accordance with the Contract Documents, responsibility for remedying the defect or failure resides solely with CONTRACTOR and Supplier.

1.2 SUBSTITUTE MATERIALS AND EQUIPMENT

- A. Requests for approval of substitute items of materials or equipment will be evaluated in accordance with the requirements of the Article 5.7 of the General Conditions.
- B. Procedure:
 - 1. Submit requests for substitution in accordance with requirements for furnishing submittals, as indicated in Section 01 33 00, Submittal Procedures.
 - 2. Submit separate request for each proposed substitute.
 - 3. Submit request for substitution using forms attached to this Section. Complete all information requested on each form and enclose with the forms supplementary information as required. In addition to requirements of the General Conditions and information required on substitution request forms, include with each substitute request the following:
 - a. Identification of the materials and equipment (as applicable), including manufacturer's name and address.
 - b. Manufacturer's literature with description of the materials and equipment, performance and test data, and reference standards with which materials and equipment comply.
 - c. Samples, when appropriate.
 - d. Name and address of similar projects on which the materials and equipment were used, date of installation, and names and contact information (including telephone number) for the facility operations and maintenance manager.

1.3 SUBSTITUTE CONSTRUCTION METHODS OR PROCEDURES

- A. Where construction methods or procedures are specified, for a period of 15 days after the Effective Date of the Contract, ENGINEER will consider CONTRACTOR's written requests for substitute construction methods or procedures shown or specified in the Contract Documents.
- B. The provisions of the General Conditions, as may be modified by the Supplementary Conditions, regarding substitute items of materials and equipment are hereby extended to apply to substitute construction methods or procedures.
- C. Procedure:
 - 1. Submit requests for substitution in accordance with requirements for furnishing submittals, as indicated in Section 01 33 00, Submittal Procedures.
 - 2. Submit separate request for each proposed substitute.
 - 3. Submit request for substitution using forms attached to this Section. Complete all information requested on each form and enclose with the forms supplementary information as required. In addition to requirements of the General Conditions and information required on substitution request forms, include with each substitute request the following:
 - a. Detailed description of proposed method or procedure.

- b. Itemized comparison of the proposed substitution with the specified method or procedure.
- c. Drawings illustrating method or procedure.
- d. Other data required by ENGINEER to establish that proposed substitution is equivalent to specified method or procedure.

1.4 CONTRACTOR'S REPRESENTATIONS

- A. In submitting request for substitution, CONTRACTOR represents that:
 - 1. CONTRACTOR has read, fully understands and complies with the provisions regarding substitutes as indicated in the General Conditions, as may be modified by the Supplementary Conditions.
 - 2. Substitution request is complete and includes all information required by the Contract Documents.
 - 3. CONTRACTOR certifications required by the General Conditions, as may be modified by the Supplementary Conditions, are valid and made with CONTRACTOR's full knowledge, information, and belief.
 - 4. CONTRACTOR will provide the same or better guarantees or warranties for proposed substitute as for the specified materials, equipment, methods, or procedures, as applicable.
 - 5. CONTRACTOR waives all Claims for additional costs or extension of time related to proposed substitute that subsequently may become apparent.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The documents listed below and attached following this Section's "End of Section" designation, are part of this Specification Section.
 - 1. Substitution Request Form (two pages).
 - 2. Product Substitution Checklist (one page).

+ + END OF SECTION + +

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SUBSTITUTION REQUEST

Project: _____ Substitution Request Number: _____

From: _____
To: _____ Date: _____

Engineer Project. No. _____
Re: _____ Contract For: _____

Specification _____ Title: _____ Description: _____
Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitute: _____
Manufacturer: _____ Address: _____ Phone: _____
Trade Name: _____ Model No.: _____
Installer: _____ Address: _____ Phone: _____

History: ☐ New product ☐ 1 to 4 years old ☐ 5 to 10 years old ☐ More than 10 years old

Differences between proposed substitute and specified item: _____

☐ Point-by-point comparative data attached — REQUIRED BY THE CONTRACT DOCUMENTS

Reason for not providing specified item: _____

Similar Installation:

Project: _____ Engineer: _____
Address: _____ Department: _____
_____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Savings to Owner for accepting substitute: _____ (\$ _____)
(attach detailed, itemized estimate)

Proposed substitute changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.
(clarify whether change is to Substantial Completion, Milestone, or time for readiness for final payment)

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST

(Continued)

☐ Substitute product, method, or procedure is subject to payment of licensing fee or royalty (check if “yes” and attach information)

☐ Substitute product, method, or procedure is patented or copyrighted (check if “yes” and attach information)

The undersigned certifies:

- Representations in the General Conditions and in Section 01 25 00, Substitution Procedures, regarding substitutions are valid.
 - Same or better warranty and guarantee will be furnished for proposed substitution as for specified item.
 - Same maintenance service and source of replacement parts, as applicable, is available.
 - Proposed substitute will have no adverse effect on other trades and will not affect or delay Progress Schedule.
 - Cost data as stated above is complete. Claims for additional costs or time related to accepted substitution which may subsequently become apparent are waived.
 - Proposed substitute does not affect dimensions and functional clearances.
 - Payment will be made for Engineer’s review and changes, if any, to the design and Contract Documents, and construction costs caused by the substitute.
 - Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.
-

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

Telephone: _____

Attachments: ☐

ENGINEER’S REVIEW AND ACCEPTANCE (OR NON-ACCEPTANCE) WILL BE DOCUMENTED IN A FIELD ORDER OR CHANGE ORDER, AS APPROPRIATE. _____

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ Engineer
☐ Other:

PRODUCT SUBSTITUTION CHECKLIST

Date: _____

Re: _____

Engineer's Proj. No.: _____

Manufacturer's Project No.: _____

Filing No.: _____

Contract For: _____

Item Equivalence:

- ☐ Is the submitted item equivalent to the specified item? _____
- ☐ Does it serve the same function? _____
- ☐ Does it have the same dimensions? _____
- ☐ Does it have the same appearance? _____
- ☐ Will it last as long? _____
- ☐ Does it comply with the same codes, and standards and performance requirements? _____
- ☐ Has the item been used locally, and where are the projects? _____

- ☐ Has a problem occurred with the item, and what was the remedy? _____

Effect on the Project:

- ☐ Will the substitute affect other aspects of the construction? _____
- ☐ Are any details affected and are changes required? _____
- ☐ What is the cost of the changes? _____
- ☐ Who pays for the required changes? _____
- ☐ Are Contract Times affected? _____

Effect on the Warranty:

- ☐ How does the proposed warranty differ from the specified warranty? _____

- ☐ Does the manufacturer have a track record of standing behind the warranty? _____

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SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope.
 - 1. This Section provides requirements which are in addition to provisions of the General Conditions (Articles 9 and 10), as may be modified by the Supplementary Conditions, and includes:
 - a. Requests for interpretation.
 - b. Minor changes in the Work and Field Orders.
 - c. Proposed Change Order Request.
 - d. Proposed Change Orders.
 - e. Approved Change Orders.
- B. Submit Contract modification documents to ENGINEER, addressed to the contact person as specified in the preconstruction conference, and in accordance with Section 01 31 26, Electronic Communication Protocols.
- C. Retain at CONTRACTOR's office and at the Site complete copy of each Contract modification document and related documents, and ENGINEER's response.

1.2 REQUESTS FOR INTERPRETATION

- A. General.
 - 1. Transmit written requests for interpretation to ENGINEER. CONTRACTOR may prepare and transmit requests for interpretation.
 - 2. Prepare and transmit request for interpretation to obtain clarifications or interpretations of the Contract Documents. Report conflicts, errors, ambiguities, and discrepancies in the Contract Documents by requesting an interpretation in accordance with General Conditions.
 - 3. Do not transmit request for interpretation when other form of communication is appropriate, such as CONTRACTOR's submittals, requests for approvals of substitutes, notices, ordinary correspondence, or other form of communication. Improperly prepared or inappropriate requests for interpretation will be returned without response or action by ENGINEER.
 - 4. Do not submit request for interpretation or clarification when:
 - a. answer may be obtained by observations at the Site; or
 - b. required information is clearly indicated in the Contract Documents; or
 - c. required information is included in industry standards referenced in the Contract Documents or Supplier's instructions that are consistent with the Contract Documents; or

- d. interpretations or clarifications are reasonably inferable from any of foregoing.
5. CONTRACTOR shall have sole financial responsibility for requests for interpretations or clarifications that are submitted late, out of sequence, or that are unnecessary.

B. Procedure.

1. Transmit requests for interpretation in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Include with each request for interpretation a separate letter of transmittal.
2. ENGINEER will provide timely review of requests for interpretation. Allow sufficient time for review and response.
3. ENGINEER will maintain log of requests for interpretation. Upon request, copy of log will be transmitted to CONTRACTOR
4. ENGINEER's response to requests for interpretation will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Each response to a request for interpretation will include a separate letter of transmittal.
5. ENGINEER's written response to each request for interpretation will be distributed to:
 - a. CONTRACTOR.
 - b. DEPARTMENT.
 - c. ENGINEER.
6. If ENGINEER requests additional information to make an interpretation, CONTRACTOR requesting the interpretation shall transmit the information requested within ten days, unless ENGINEER allows additional time, via correspondence referring to request for interpretation number.
7. Interpretations that One or Both Parties Believes Entails a Change to the Contract:
 - a. If CONTRACTOR believes that a change in the Contract Price or Contract Times or other change to the Contract is required as a result of ENGINEER's interpretation, so advise ENGINEER in writing before proceeding with the Work associated with the request for interpretation.
 - b. If, after this initial communication, CONTRACTOR believes that change in Contract Price, Contract Times, both, or other relief with respect to the terms of the Contract is necessary, recourse shall be in accordance with the Contract Documents.

C. Preparation of Requests for Interpretation:

1. Prepare each request for interpretation on the "Request for Interpretation" form included with this Section, or other form acceptable to ENGINEER.
2. Number each request for interpretation as follows: Numbering system shall be the Contract number and designation followed by a hyphen and three-digit sequential number. Example: First request for interpretation on the general contract for project titled, "Contract A15" would be, "RFI No. A15-GC-001".

3. In space provided on form, describe the interpretation requested. Provide additional sheets as necessary. Include text and sketches as required in sufficient detail to describe the need for an interpretation.
4. When applicable, request for interpretation shall include CONTRACTOR's recommended resolution.

1.3 MINOR CHANGES IN THE WORK AND FIELD ORDERS

A. General:

1. Field Orders, when required, will be initiated and issued by ENGINEER.
2. Field Orders authorize minor variations in the Work but do not change the Contract Price or Contract Times.
3. Field Orders will be in the form of Engineers Joint Contract Documents Committee document EJCDC® C-942, "Field Order".
4. ENGINEER will maintain a log of Field Orders issued.

B. Procedure.

1. Field Orders will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Each Field Order will include a separate letter of transmittal.
2. Each Field Order will be distributed to:
 - a. CONTRACTOR.
 - b. DEPARTMENT.
 - c. ENGINEER.
3. Field Orders that One or Both Parties Believes Entails a Change to the Contract Price or Contract Times:
 - a. If CONTRACTOR or DEPARTMENT believes that a change in the Contract Price or Contract Times or other change to the Contract is required as a result of a Field Order, so advise ENGINEER in writing before proceeding with the Work associated with the Field Order in accordance with General Conditions, Section VIII, Article 8.10.
 - b. If, after this initial communication, CONTRACTOR believes that change in Contract Price, Contract Times, both, or other relief with respect to the terms of the Contract is necessary, recourse shall be in accordance with the General Conditions.
4. If the Field Order is unclear, submit request for interpretation.

1.4 PROPOSED CHANGE ORDER REQUEST

A. General:

1. Proposed Change Order Request may be initiated by ENGINEER or DEPARTMENT in accordance with General Conditions, Article 9.1
2. Proposed Change Order Request are for requesting the effect on the Contract Price and the Contract Times and other information relative to contemplated changes in the Work. Proposed Change Order Request do not authorize changes or variations in the Work, and do not change the Contract Price or Contract Times or terms of the Contract.

3. Proposed Change Order Request will be furnished using the “Proposed Change Order Request” form included with this Section.
- B. Procedure.
1. Proposal Change Order Request will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Each Proposed Change Order Request will include a separate letter of transmittal.
 2. Each signed Proposed Change Order Request will be transmitted to:
 - a. CONTRACTOR.
 - b. DEPARTMENT.
 - c. ENGINEER.
 3. Transmit request for interpretation to clarify conflicts, errors, ambiguities, and discrepancies in Proposal Request.
 4. Upon receipt of Proposed Change Order Request, CONTRACTOR shall prepare and transmit to ENGINEER a Proposed Change Order, in accordance with the Contract Documents, for the proposed Work described in the Proposed Change Order Request.

1.5 PROPOSED CHANGE ORDERS

- A. General.
1. Prepare and transmit written Proposed Change Order to ENGINEER in response to each Proposed Change Order Request; or when CONTRACTOR believes a change in the Contract Price or Contract Times or other change to the terms of the Contract is required; or to appeal an initial decision by ENGINEER concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the General Conditions.
- B. Procedure.
1. Prepare and transmit Proposed Change Order within time limits indicated in the General Conditions, as may be modified by the Supplementary Conditions.
 2. Transmit Change Proposals in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Include with each Proposed Change Order all required supporting documentation and a separate letter of transmittal.
 3. ENGINEER’s Review and Requests for Interpretation:
 - a. ENGINEER will review and act on each Proposed Change Order in accordance with, and within the time limits indicated in, the General Conditions, as may be modified by the Supplementary Conditions.
 - b. When, ENGINEER requests additional information to render a decision, submit required information within three days of receipt of ENGINEER’s request, unless ENGINEER allows more time. Submit

the required information via correspondence that refers to the specific Proposed Change Order number.

- c. DEPARTMENT shall transmit to ENGINEER such comments, if any, that DEPARTMENT has on the Change Proposal, within 30 days of DEPARTMENT's receipt of the Proposed Change Order.
 - d. ENGINEER will render a written decision on the Proposed Change Order.
 - e. ENGINEER's response to Proposed Change Order will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section, the General Conditions, and the Supplementary Conditions.
4. ENGINEER's response to each Proposed Change Order will be distributed to:
 - a. CONTRACTOR.
 - b. DEPARTMENT
 - c. ENGINEER.
 5. If Proposed Change Order is recommended for approval by ENGINEER and is approved by DEPARTMENT, an Approved Change Order will be issued or, when applicable, an appropriate use of contingency allowance will be authorized by DEPARTMENT.
 6. If parties do not agree on terms for the change, DEPARTMENT or CONTRACTOR may file a Claim against the other, in accordance with the General Conditions, as may be modified by the Supplementary Conditions.

C. Preparation of Change Proposals:

1. Each Proposed Change Order shall be submitted on the "Proposed Change Order" form included with this Section, or other form acceptable to ENGINEER.
2. Number each Proposed Change Order as follows: Numbering system shall be the Contract number and designation followed by a hyphen and three-digit sequential number. Example: First Change Proposal for the general contract for project named "Contract A15" would be, "Proposed Change Order No. A15-GC-001".
3. In space provided on Change Proposal form:
 - a. Describe scope of each proposed change. Include text and sketches on additional sheets as required to provide detail sufficient for ENGINEER's review and response. If a change item is submitted in response to Proposed Change Order Request, write in as scope, "In accordance with Proposed Change Order Request No." followed by the Proposal Request number. Submit written clarifications, if any, to scope of change.
 - b. Submit justification for each proposed change. If change is in response to Proposed Change Order Request, write in as justification, "In accordance with Proposed Change Order Request No." followed by the proposed change order request number.
 - c. List the total change in the Contract Price and Contract Times for each separate change item included in the Proposed Change Order Request.

4. Unless otherwise directed by ENGINEER, attach to the Proposed Change Order detailed breakdowns of pricing (Cost of the Work and CONTRACTOR's fee) including:
 - a. List of Work tasks to accomplish the change.
 - b. For each task, labor cost breakdown including labor classification, total hours per labor classification, and hourly cost rate for each labor classification.
 - c. Construction equipment and machinery to be used, including manufacturer, model, and year of manufacture, and number of hours for each.
 - d. Detailed breakdown of cost of materials and equipment to be incorporated into the Work, including quantities, unit costs, and total cost, with Supplier's written quotations.
 - d. Breakdowns of the Cost of the Work and fee for Subcontractors, including labor, construction equipment and machinery, and materials and equipment incorporated into the Work, other costs, and Subcontractor fees (e.g., overhead and profit).
 - f. Breakdown of other costs eligible, in accordance with the General Conditions and the Supplementary Conditions under "Cost of the Work" provisions.
 - g. Other information required by ENGINEER.
 - h. CONTRACTOR's fees applied to eligible CONTRACTOR costs and eligible Subcontractor costs.

1.6 APPROVED CHANGE ORDERS

A. General:

1. Approved Change Orders will be recommended by ENGINEER (when required by the General Conditions), and will be approved and signed by DEPARTMENT and CONTRACTOR, to authorize additions, deletions, or revisions to the Work, or changes to the Contract Price or Contract Times.
2. Approved Change Orders will be in the form of EJCDC® C-941, "Change Order".

B. Procedure.

1. Approved Change Orders for signature by CONTRACTOR will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Each Change Order will include a separate letter of transmittal. CONTRACTOR shall print three originals of Approved Change Order for CONTRACTOR's signature.
2. CONTRACTOR shall promptly sign each original Approved Change Order and, within five days of receipt, return all originals to ENGINEER.
3. ENGINEER will sign each original Approved Change Order and forward them to DEPARTMENT.
4. After approval and signature by DEPARTMENT, original Approved Change Orders will be distributed as indicated below.
5. Original, signed Approved Change Orders will be distributed as follows:

- a. CONTRACTOR: One original.
- b. DEPARTMENT: One original.
- c. ENGINEER: One original.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The forms listed below, following this Section’s “End of Section” designation, are part of this Specifications Section:
 - 1. Request for Interpretation (one page).
 - 2. Proposed Change Order Request (one page).
 - 3. Proposed Change Order (one page).
 - 4. Field Order (one page).

+ + END OF SECTION + +

REQUEST FOR INTERPRETATION

DEPARTMENT: _____

Project Name: _____

Contractor: _____

RFI No. _____

Date Transmitted: _____

Date Received: _____

Date Response Requested: _____

Date Response Transmitted: _____

Subject: _____

Specification Section and Paragraph: _____

Drawing References: _____

INTERPRETATION REQUESTED:

Signature: _____ Date: _____

ENGINEER'S RESPONSE:

Signature: _____ Date: _____

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[insert name, address, phone number of issuing entity]

Site Name:		PCO No.:	
Site Location:		Date Issued:	
		Site No.:	
Owner:		Contract No.:	
Contractor:		Associated RFI or FO:	
		<input type="checkbox"/> RFI No.: _____	<input type="checkbox"/> FO No.: _____ <input type="checkbox"/> None
PROPOSAL			
<i>Contractor proposals substantiating the amount and extent of any proposed adjustment in Contract Price or Contract Time shall become due within three days of receipt (or issuance) of a Proposed Change Order initiated by Department (or Contractor), and shall be submitted in accordance with Articles 8, 9, 10 and 11 of the General Conditions. Any delays in the submittal of Contractor proposals relative to adjustments in Contract Price or Contract Time will not justify a delay or constitute basis for an increase in Contract Price or an extension in Contract Time.</i>			
Description of Change:			
INSTRUCTIONS - Provide a description of the change in sufficient detail to specify the additional work contemplated and how measurement for payment will be made. Refer to paragraph 10.3 of the General Conditions (for example, if time and materials is contemplated indicate herein). Specifications and drawings should be attached as appropriate.			
Reason for Change:			
INSTRUCTIONS - Provide an explanation why the change to the original Contract Documents is necessary			
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Associated Bid Item:	
		Attachments: <input type="checkbox"/> Yes <input type="checkbox"/> No	
		If yes, describe:	
		Relevant Contract Documents:	
		Specification Section:	
		Drawing No.:	
		Detail:	

<p><i>Contractor quotations substantiating the amount or extent of any proposed adjustment in Contract Price or Contract Time shall cover all known amounts or extents to which Contractor is entitled as a result of the proposed change. If the provision of any bond requires that the surety be notified of any change in the Work, it shall be Contractor's responsibility to so notify the surety and the amount of each applicable bond shall be adjusted accordingly.</i></p>	
<p><i>Upon receipt of an Administrative Order, or Proposed Change Order, the Contractor shall proceed with the Work involved. All such Work involved shall be performed in accordance with the applicable conditions of the Contract Documents. If an Administrative Order or Proposed Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made in a duly executed Change Order.</i></p>	
<p>Cost and Time Documentation required: The submission shall account for the requirements of this proposed change order, Article 10 - Change of Contract Price or Time and Article 11 - Unit Price Work and Cash Allowances of the General Conditions. Proposed changes of contract time will be supported by a revised project schedule.</p> <p>Differing site conditions: No claim by Contractor under paragraph 3.11 of the General Conditions will be allowed unless: 1) Contractor has given the written notice required in paragraph 3.8 of the General Conditions, and 2) within fifteen days thereafter, Contractor has submitted to Department a written Proposed Change Order substantiating in detail Contractor's proposed adjustments in accordance with the requirements of Articles 9, 10 and 11 of the General Conditions, and the Standard Specifications.</p> <p>Audit; Access to Records: In addition to the rights of access set forth in Appendix A, if Contractor has submitted Cost and Pricing Data in connection with the pricing of any Change Order, Proposed Change Order or Claim related to this Contract, Department and Engineer or any of their duly authorized representatives shall have the right to examine and audit all books, ledgers, records, and documents pertinent to all Cost and Pricing data available and relied upon by Contractor including but not limited to that used by Contractor in the determination of its Bid for the Work, in order to evaluate the accuracy, completeness, and currency of the Cost or Pricing data.</p> <p>Engineer's Review: Costs associated with Engineer's review and return of cost documentation shall be borne by Contractor after the Engineer's second review.</p>	
<p>Issued By:</p>	
<p>_____</p> <p>Signature</p>	<p>_____</p> <p>Date</p>

CONTRACT TITLE

Site No.

Contract No.

Change Order No.

Change Order Amount: \$0.00

Date of Issue:

Contractor:

Engineer:

This Change Order is comprised of **number (#)** items described below:

I. CHANGE ORDER ITEMS: (as many as needed)

A. Item Name or Brief Description:

Description of Change: Text

Drawing Reference: Text

Contract Pay Item: Text

Reason for Change: Text

Cost: The cost of this Change Order Item is \$0.00.

B. Item Name and Brief Description:

Description of Change: Text

Drawing Reference: Text

Contract Pay Item: Text

Reason for Change: Text

Cost: The cost of this Change Order Item is \$0.00.

II. CHANGE ORDER COST SUMMARY:

Item A: Description	\$0.00
Item B:	
Item C:	
Total:	\$0.00

III. CHANGE IN CONTRACT PRICE:

Original Contract Price:	\$0.00
Net Increase/Decrease in Contract Price Due to Prior Change Order(s):	\$0.00
Net Increase/Decrease in Contract Price Due to This Change Order (No. X):	\$0.00
New Contract Price Including This Change Order:	\$0.00

IV. CHANGE IN CONTRACT TIME:Contract Execution Date: **Month, DD, YYYY**

	Calendar Days	Substantial Completion Date	Final Completion Date
Original Contract Completion Time/Date:	330 / 360		
Net Change of Contract Time Due to Prior Change Order(s)	0 / 116		
Net Change of Contract Time Due to This Change Order (No. X)	0 / 153		
New Contract Completion Date	330 / 629		

It is understood and agreed that, unless expressly so stated above, the work herein authorized will not extend the time for the completion of the contract.

It is understood and agreed that this change order represents full and complete compensation for all work described herein.

This work is to be performed in accordance with the terms of the contract and original plans and specifications, except as herein modified. It is understood and agreed that this order shall be deemed executory only to the extent of moneys available and no liability shall be incurred by the state beyond the moneys available for the purpose.

IN WITNESS WHEREOF, this Change Order has been duly executed by the parties hereto on the day and year appearing following their respective signatures.

Agency Certification: "In addition to the acceptance of this Change Order, I also certify that original copies of this signature page will be attached to all other exact copies of this Change Order."

CONTRACTOR SIGNATURE	DEPARTMENT SIGNATURE
By:	By:
Print Name:	Print Name:
Title:	Title:
Dated:	Dated:

<p>Contractor Acknowledgement</p> <p>State of _____) County of _____) ss.:</p> <p>On the _____ day of _____ in the year _____, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.</p> <p>_____ Notary Public</p>
--

COMPTROLLER SIGNATURE
Approved: Thomas P. DiNapoli State Comptroller
Dated:

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NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Field Order No. _____

Date of Issuance:

Site Name:

Owner: **DEC**

Owner's Contract No.:

Contractor:

Site No.:

Engineer:

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph 9.2, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit written notification in accordance with Paragraph 8.10 within 3 days and provide documentation within 15 days in a Proposed Change Order to Engineer.

Reference:

Specification(s)_____
Drawing(s) / Detail(s)

Description:

Attachments:

ISSUED:

RECEIVED:

By:

Engineer (Authorized Signature)

By:

Contractor (Authorized Signature)

Title:

Title:

Date:

Date:

Copy to: DEC Project Manager and DEC Designated Representative

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SECTION 01 29 73

SCHEDULE OF VALUES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall prepare and submit to ENGINEER for acceptance a Schedule of Values that allocates costs to each item of the Work. The Schedule of Value list of line items shall correspond to each aspect of the Work, established in Section III – Bidding Information and Requirements, Article 12; Section V – Bid Forms and Acknowledgements, Bid Form; and Section XII – Measurement for Payment.
2. Upon request of ENGINEER, support values with data that substantiate their correctness.
3. Submit preliminary Schedule of Values to ENGINEER for initial review. CONTRACTOR shall incorporate ENGINEER's comments into the Schedule of Values and resubmit to ENGINEER. ENGINEER may require corrections and re-submittals until Schedule of Values is acceptable.
4. Schedule of Values may be used as a basis for negotiating price of changes, if any, in the Work.
5. Schedule of Values and the Progress Schedule updates specified in Section 01 32 16, Progress Schedule, will be basis for preparing each Application for Payment.

1.2 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Submit to ENGINEER Schedule of Values in the form and quantity required in Section 01 33 00, Submittal Procedures, and in accordance with Section 01 31 26, Electronic Communication Protocols.
2. Content of Schedule of Values submittals shall be in accordance with Article 1.3 of this Section.
3. Timing of Submittals:
 - a. Submit preliminary Schedule of Values within ten days following the date that the Contract Times commence running in accordance with the Notice to Proceed.
 - b. Submittal of the Schedule of Values for acceptance by ENGINEER shall be in accordance with the General Conditions, Articles 1.4 and 1.6 a. ENGINEER will not accept Applications for Payment without an acceptable Schedule of Values.
 - c. When required by ENGINEER, promptly submit updated Schedule of Values to include cost breakdowns for changes in the Contract Price.

1.3 SCHEDULE OF VALUES FORMAT AND CONTENT

- A. Organization and Major Elements of Schedule of Values
 - 1. Prepare Schedule of Values on the “progress estimate” or “continuation sheets”, as applicable, of the Application for Payment form indicated in Article 13 of Section VIII, Payments to Contractor and Completion.
 - 2. Organization in accordance with General Conditions Section V, Bid Form and Section XII, Measurement and Payment:
 - a. Organize the Schedule of Values by the Bid Schedule of Values.
 - b. Label each row in the Schedule of Values with the appropriate Bid Item number. Include an amount for each row in the Schedule of Values.
 - c. List sub-items of major items as identified in Section VII, measurement and payment for each item on the Bid Form.
 - 3. Include in Schedule of Values unit price payment items with their associated quantity. Provide in the Schedule of Values detailed breakdown of labor, equipment, materials and other direct costs (ODCs) for each unit prices when required by ENGINEER.
- B. Requirements for preliminary and subsequent Schedule of Values are:
 - 1. Subcontracted Work:
 - a. Schedule of Values shall show division of Work between CONTRACTOR and Subcontractors.
 - b. Line items for Work to be done by Subcontractor shall include the word, “(SUBCONTRACTED)”.
 - 2. Apportionment between Materials and Equipment, and Installation:
 - a. Schedule of Values shall include breakdown of costs for materials and equipment, installation, and other costs used in preparing the Bid by CONTRACTOR and each Subcontractor.
 - b. List purchase and delivery costs for materials and equipment for which CONTRACTOR may apply for payment as stored materials, when required by the ENGINEER.
 - 3. Sum of individual values shown on the Schedule of Values shall equal the total of associated payment item. Sum of payment item totals in the Schedule of Values shall equal the Contract Price.
 - 4. Overhead and Profit: Include in each line item a directly proportional amount of CONTRACTOR’s overhead and profit. Do not include overhead and profit as separate item(s).
 - 5. Include separate line item for each work item under both lumps sum and unit price items in accordance with Section XII, Measurement and Payment.
 - 6. Project Record Documents:
 - a. Include in the Schedule of Values a line item with appropriate value for Project record documents.
 - b. If adequate record documents are maintained, up to 50 percent of the value of the record documents line item will be eligible for payment,

spread evenly over those progress payments in which construction at the Site is performed.

- c. Remainder of Project record documents line item will be eligible for payment when complete record documents are submitted in accordance with the General Conditions. If record documents submitted are unsatisfactory to ENGINEER, amount may be reduced via set-offs in accordance with the Contract Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

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SECTION 01 31 19.13

PRE-CONSTRUCTION CONFERENCE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. A pre-construction conference will be held for the Project in accordance with General Conditions, Section VIII, Article 1.2.
 - 2. CONTRACTOR shall attend the conference prepared to discuss all items on the pre-construction conference agenda.
 - 3. ENGINEER will distribute an agenda, preside at conference, and prepare and distribute minutes to all conference participants and others as requested.
- B. Purpose of Pre-construction Conference:
 - 1. Purpose of conference is to designate responsible personnel, establish working relationships, discuss preliminary schedules submitted by CONTRACTOR, and formalize procedures for the preparation and review administrative and procedural requirements for the Project.
 - 2. Review and comply with the requirements of the General Conditions.
 - 3. Review CONTRACTOR's plans for complying with the requirements of Section VIII, Article 5 of the General Conditions.
 - 4. Discuss any conflicts, errors or discrepancies that CONTRACTOR has discovered by review of the Contract Documents.
 - 5. Unless otherwise indicated in the Contract Documents or otherwise agreed to by the entities involved, Site mobilization meeting will be part of the pre-construction conference.

1.2 PREPARATION FOR PRE-CONSTRUCTION CONFERENCE

- A. Date, Time, and Location:
 - 1. Conference will be held no later than twenty calendar days after the effective Date of the Agreement, but before the CONTRACTOR starts the Work.
 - 2. Department will establish the date, time, and location of conference and notify the interested and involved entities.
- B. CONTRACTOR shall furnish information required and contribute appropriate items for discussion at the pre-construction conference.
- C. Handouts for Pre-Construction Conference:
 - 1. CONTRACTOR shall bring to the conference the following, with sufficient number of copies for each attendee:
 - a. Preliminary Progress Schedule, as submitted to ENGINEER.
 - b. Preliminary Schedule of Submittals, as submitted to ENGINEER.

- c. Preliminary Schedule of Values, as submitted to ENGINEER.
- d. Listing of identity and general scope of Work or supply of planned Subcontractors and Suppliers.
- e. List of emergency contact information.

1.3 REQUIRED ATTENDEES

- A. Representative of each entity attending the conference shall be authorized to act on that entity's behalf.
- B. CONTRACTOR Attendance: Conference shall be attended by CONTRACTOR's:
 - 1. Project manager.
 - 2. Site superintendent.
 - 3. Site Health and Safety Officer.
 - 4. Project managers for major Subcontractors, and major equipment Suppliers as CONTRACTOR deems appropriate.
- C. Other attendees will be representatives of:
 - 1. DEPARTMENT.
 - 2. ENGINEER.
 - 3. Authorities having jurisdiction over the Work, if available.
 - 4. Utility owners, as applicable.
 - 5. Others as requested by DEPARTMENT, CONTRACTOR, or ENGINEER.

1.4 AGENDA

- A. Preliminary Agenda: Be prepared to discuss in detail the topics indicated below. Revisions, if any, to the agenda below will be furnished to required attendees prior to the pre-construction conference.
 - 1. Procedural and Administrative:
 - a. Personnel and Teams:
 - 1) Designation of roles and personnel.
 - 2) Limitations of authority of personnel, including personnel who will sign Contract modifications and make binding decisions.
 - 3) Subcontractors and Suppliers in attendance.
 - 4) Authorities having jurisdiction.
 - b. Procedures for communications and correspondence, including electronic communication protocols.
 - c. Copies of the Contract Documents and availability.
 - d. Subcontractors and Suppliers.
 - 1) Lists of proposed Subcontractors and Suppliers.
 - e. The Work and Scheduling:
 - 1) General scope of the Work.
 - 2) Contract Times, including Milestones (if any).
 - 3) Phasing and sequencing.
 - 4) Preliminary Progress Schedule.
 - 5) Critical path activities.

- f. Safety:
 - 1) Responsibility for safety.
 - 2) Contractor's safety representative.
 - 3) Emergency procedures and accident reporting.
 - 4) Emergency contact information.
 - 5) Confined space entry permits.
 - 6) Hazardous materials communication program.
 - 7) Impact of Project on public safety.
- g. Permits.
- h. Review of insurance requirements and insurance claims.
- i. Coordination:
 - 1) Project coordination, and coordination among contractors.
 - 2) Construction coordinator.
 - 3) Coordination with DEPARTMENT's operations.
 - 4) Progress meetings.
 - 5) Preliminary Schedule of Submittals.
 - 6) Procedures for furnishing and processing submittals.
 - 7) Work not eligible for payment until submittals are approved or accepted (as required).
 - 8) Construction photographic documentation.
- j. Substitutes and "Or-Equals":
 - 1) Product options.
 - 2) Procedures for proposing "or-equals".
 - 3) Procedures for proposing substitutes.
- k. Contract Modification Procedures:
 - 1) Requests for interpretation.
 - 2) Written clarifications.
 - 3) Field Orders.
 - 4) Proposal Requests.
 - 5) Change Proposals.
 - 6) Work Change Directives.
 - 7) Change Orders.
 - 8) Procedure for Claims and dispute resolution.
- l. Payment:
 - 1) DEPARTMENT's Project financing and funding, as applicable.
 - 2) DEPARTMENT's tax-exempt status.
 - 3) Preliminary Schedule of Values.
 - 4) Procedures for measuring for payment.
 - 5) Retainage.
 - 6) Progress payment procedures.
 - 7) Prevailing wage rates and payrolls.
- m. Testing and inspections, including notification requirements.
- n. Disposal of demolition materials.
- o. Record documents.
- p. Preliminary Discussion of Contract Closeout:
 - 1) Procedures for Substantial Completion.
 - 2) Contract closeout requirements.

- 3) Correction period.
- 4) Duration of bonds and insurance.
- 2. Site Mobilization (if not covered in a separate meeting):
 - a. Working hours and overtime.
 - b. Field offices, storage trailers, and staging areas.
 - c. Temporary facilities.
 - d. Temporary utilities and limitations on utility consumption (where applicable).
 - e. Utility company coordination (if not done as a separate meeting).
 - f. Access to Site, access roads, and parking for construction vehicles.
 - g. Maintenance and protection of traffic.
 - h. Use of Site and premises.
 - i. Protection of property.
 - j. Security.
 - k. Temporary controls, such as sediment and erosion controls, noise controls, dust control, storm water controls, and other such measures.
 - l. Site barriers and temporary fencing.
 - m. Storage of materials and equipment.
 - n. Reference points and benchmarks; surveys and layouts.
 - o. Site maintenance during the Project.
 - p. Cleaning and removal of trash and debris.
 - q. Restoration.
- 3. General discussion and questions.
- 4. Next meeting.
- 5. Site visit, if required.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 31 19.23

PROGRESS MEETINGS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. Progress meetings will be held throughout the Project. CONTRACTOR shall attend each progress meeting prepared to discuss in detail all items on the agenda.
2. ENGINEER will preside at progress meetings and will prepare and distribute minutes of progress meetings to all meeting participants and others as requested.

1.2 PREPARATION FOR PROGRESS MEETINGS

A. Date and Time:

1. Regular Meetings: Bi-weekly, occurring twice per month, on a day and time agreeable to DEPARTMENT, ENGINEER, and CONTRACTOR.
2. Other Meetings: Weekly meetings may be requested in accordance with the General Conditions, Section VIII, Article 5.36, to discuss and/or resolve matters concerning various elements of the Work.

B. Location:

1. CONTRACTOR's field office at the Site or other location mutually agreed upon by DEPARTMENT, CONTRACTOR, and ENGINEER.

C. Handouts:

1. CONTRACTOR shall bring to each progress meeting the following:
 - a. List of Work accomplished since the previous progress meeting.
 - b. Up-to-date Progress Schedule.
 - c. Up-to-date Schedule of Submittals.
 - d. Health and Safety/Community Air Monitoring Summary.
 - e. Quality control testing including analytical testing Summary.
 - f. Detailed "look-ahead" schedule of Work planned through the next progress meeting, with specific starting and ending dates for each activity, including shutdowns, deliveries of important materials and equipment, Milestones (if any), and important activities affecting the DEPARTMENT, Project, and Site.
 - g. When applicable, list of upcoming, planned time off (with dates) for personnel with significant roles on the Project, and the designated contact person in their absence.
2. ENGINEER shall bring to each progress meeting the following:

- a. Up-to-date Schedule of Submittals including identification of outstanding critical submittals.
- b. Up-to-date Status tracking logs for RFI, PCOs, and Field Orders.

1.3 REQUIRED ATTENDANCE

- A. Representatives present for each entity shall be authorized to act on that entity's behalf.
- B. Required Attendees:
 1. CONTRACTOR:
 - a. Project manager.
 - b. Site superintendent.
 - c. Safety representative.
 - d. When needed for the discussion of a particular agenda item, representatives of Subcontractors and Suppliers shall attend meetings.
 2. Construction coordinator (if any).
 3. ENGINEER:
 - a. Project manager or designated representative.
 - b. Others as required by ENGINEER.
 4. DEPARTMENT's representative(s), as required.
 5. Testing and inspection entities, as required.
 6. Others, as appropriate.

1.4 AGENDA

- A. Preliminary Agenda: Be prepared to discuss in detail the topics listed below. Revised agenda, if any, will be furnished to CONTRACTOR prior to first progress meeting. Progress meeting agenda may be modified by ENGINEER during the Project as required.
 1. Safety.
 2. Review, comment, and amendment (if required) of minutes of previous progress meeting.
 3. Review of progress since the previous progress meeting.
 4. Planned progress through next progress meeting.
 5. Review of Progress Schedule:
 - a. Contract Times, including Milestones (if any).
 - b. Critical path.
 - c. Schedules for fabrication and delivery of materials and equipment.
 - d. Corrective measures, if required.
 6. Submittals:
 - a. Review status of critical submittals.
 - b. Review revisions to Schedule of Submittals.
 7. Contract Modifications (Status Tracking Log as maintained by ENGINEER)
 - a. Requests for Interpretation.
 - b. Field Orders.

- c. Proposed Change Orders.
- d. Approved Change Orders.
- e. Claims.
- 8. Applications for progress payments status.
- 9. Problems, conflicts, and observations.
- 10. Quality standards, testing, and inspections.
- 11. Coordination between parties.
- 12. Site management issues, including access, security, maintenance and protection of traffic, maintenance, cleaning, and other Site issues.
- 13. Permits.
- 14. Construction photographic documentation, as applicable.
- 15. Record documents status, as applicable.
- 16. Punch list status, as applicable.
- 17. Other business.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

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SECTION 01 31 26

ELECTRONIC COMMUNICATION PROTOCOLS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This Section establishes the procedures with which the parties will comply regarding transmission or exchange of electronic data for the Project.
 2. CONTRACTOR shall provide labor, materials, tools, equipment, services, utilities, and incidentals shown, specified, and required for complying with this Section throughout the Project.
 3. This Section does not supersede the General Conditions, as may be modified by the Supplementary Conditions, regarding transmitting of the Contract Documents to CONTRACTOR after the Effective Date of the Contract.
 4. In addition to the requirements of this Section, comply with requirements for exchange of electronic data in the following:
 - a. Section 01 32 16, Progress Schedule.
 - b. Section 01 32 33, Photographic Documentation.
 - c. Section 01 33 00, Submittal Procedures.
 - d. Section 01 78 39, Project Record Documents.
- B. Coordination:
1. CONTRACTOR shall require all Subcontractors and Suppliers to comply with the electronic communication protocols established in this Section.
- C. Related Sections:
1. Section 01 32 16, Progress Schedule.
 2. Section 01 32 33, Photographic Documentation.
 3. Section 01 33 00, Submittal Procedures.
 4. Section 01 78 39, Project Record Documents.

1.2 TERMINOLOGY

- A. The following words or terms are not defined but, when used in this Section, have the following meaning:
1. “Electronic data” means information, communications, drawings, or designs created or stored for the Project in electronic or digital form.
 2. “Confidential information” means electronic data that the transmitting party has designated as confidential and clearly marked with an indication such as “Confidential”, “Business Proprietary”, or similar designation.
 3. “Written” or “in writing” means any and all communications, including without limitation a notice, consent, or interpretation, prepared and sent to

an address provided in the Contract Documents or otherwise agreed upon by the parties and ENGINEER using a transmission method set forth in this Section that allows the recipient to print or store the communication. Communications transmitted electronically are presumed received when sent in conformance with this Paragraph 1.2.A.3.

1.3 TRANSMISSION OF ELECTRONIC DATA

- A. Transmission of electronic data constitutes a warrant by the transmitting party to the receiving party that the transmitting party is one or more of the following:
 - 1. The copyright owner of the electronic data.
 - 2. Has permission from the copyright owner to transmit the electronic data for its use on the Project.
 - 3. Is authorized to transmit confidential information.
- B. Receiving party agrees to keep confidential information confidential and not to disclose it to another person except to (1) its employees, (2) those who need to know the content of the confidential information to perform services or construction solely and exclusively for the Project, or (3) its Consultants, Contractors, Subcontractors, and Suppliers whose contracts include similar restrictions on the use of electronic data and confidential information.
- C. Transmitting party does not convey any right in the electronic data or in the software used to generate or transmit such data. Receiving party may not use electronic data unless permission to do so is provided in the Contract Documents, or in a separate license.
- D. Unless otherwise granted in a separate license, receiving party's use, modification, or further transmission of electronic data, as provided the Contract Documents, is specifically limited to the design and construction of the Project in accordance with this Section, and nothing contained in this Section conveys any other right to use the electronic data for any other purpose.
- E. Means of Transmitting Electronic Data: Unless otherwise indicated in Table 01 31 26-A of this Section or elsewhere in the Contract Documents, transmission of electronic data for the Project will generally be via:
 - 1. E-mail and files attached to e-mail. Maintain e-mail system capable of transmitting and receiving files not less than 20 megabytes (MB) file size.

1.4 ELECTRONIC DATA PROTOCOLS

- A. Comply with the data formats, transmission methods, and permitted uses set forth in Table 01 31 26-A, Electronic Data Protocol Table, below, when transmitting or using electronic data on the Project. Where a row in the table has no indicated means of transmitting electronic data, use for such documents only printed copies transmitted to the receiving party via appropriate delivery method.

TABLE 01 31 26-A
ELECTRONIC DATA PROTOCOL TABLE (E-MAIL ATTACHMENTS)

Electronic Data	Data Format	Transmitting Party	Transmission Method	Receiving Party	Permitted Uses	Notes
1.4.A.1. Project communications						
General communications & correspondence	EM, PDF	D, E, C	EM, EMA	D, E, C	R	
Meeting notices and agendas	EM, PDF	E	EM, EMA	D, C	R	
Meeting minutes	PDF	E	EM, EMA	D, C	R	
1.4.A.2. Contractor's submittals to Engineer						
Shop Drawings	PDF	C	EMA	E	M (1)	(1)
Product data	PDF	C	EMA	E	M (1)	(1)
Informational and closeout submittals:	PDF	C	EMA	E	M (1)	(1)
Documentation of delivery of maintenance materials submittals	PDF	C	EMA	E	M (1)	
1.4.A.3. Engineer's return of reviewed submittals to Contractor						
Shop Drawings	PDF	E	EMA	D, C	R	
Product data	PDF	E	EMA	D, C	R	
Informational and closeout submittals:	PDF	E	EMA	D, C	R	
Documentation of delivery of maintenance materials submittals	PDF	E	EMA	D, C	R	
1.4.A.4. Contract Modifications Documents						
Requests for interpretation to Engineer	PDF	C, D	EMA	E	M (1)	(1)
Engineer's interpretations (RFI responses)	PDF	E	EMA	C, D	R	
Engineer's clarifications to Contractor	EM, PDF	E	EM, EMA	C, D	R	
Engineer's issuance of Field Orders	PDF	E	EMA	C, D	R	
Potential Change Orders	PDF	E, D	EMA	C	R	
Change Proposals – submitted to Engineer	PDF	C	EMA	D, E	S	
Change Proposals – Engineer's response	PDF	E	EMA	C, D		
Change Orders (for Contractor signature)	PDF	E	EMA	C	R	(2)
1.4.A.5. Applications for Payment						(3)
1.4.A.6. Claims and other notices						(4)
1.4.A.7. Closeout Documents						
Record drawings (As-Built)	DWG and PDF	C	EMA	E, D	M (5)	(5)
Other record documents	PDF	C	EMA	E, D	M (5)	(5)
Contract closeout documents						

B. Key to Electronic Data Protocol Table:

Data Format:

EM .msg, .htm, .txt, .rtf, e-mail text
W .docx, Microsoft® Word 2007 or later
EX .xlsx, Microsoft® Excel 2007 or later
PDF .pdf. Portable Document Format
DWG .dwg. Autodesk AutoCAD 2013 drawing.

Transmitting Party:

D DEPARTMENT
C CONTRACTOR
E ENGINEER

Transmission Method:

EM Via e-mail
EMA As an attachment to an e-mail transmission
CD Delivered via compact disc
PW Posted to Project website
FTP FTP transfer to receiving FTP server

Receiving Party:

D DEPARTMENT
C CONTRACTOR
E ENGINEER

Permitted Uses:

S Store and view only
R Reproduce and distribute
I Integrate (incorporate additional electronic data without modifying data received)
M Modify as required to fulfill obligations for the Project

Notes:

- (1) Modifications by ENGINEER to CONTRACTOR's submittals and requests for interpretations are limited to printing out, marking-up, and adding comment sheets.
- (2) May be distributed only to affected Subcontractors and Suppliers. Print out, sign document, and return executed ("wet") signatures to ENGINEER after Department Approval.
- (3) Submit printed Applications for Payment with original ("wet") signatures.
- (4) Submit notices, including Claims, in accordance with the notice provisions of the General Conditions.
- (5) Submit record drawings in native CAD format indicated when CONTRACTOR has executed ENGINEER's standard agreement for release of electronic files. In addition, always submit record drawings as a PDF file.

Comply with requirements of Section 01 78 39, Project
Record Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

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SECTION 01 32 16

PROGRESS SCHEDULE

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. Prepare and submit Progress Schedules in accordance with the General Conditions (as may be modified by the Supplementary Conditions) and this Section, unless otherwise accepted by ENGINEER.
2. Maintain and update Progress Schedules. Submit updated Progress Schedules as specified in this Section unless otherwise directed by ENGINEER.
3. ENGINEER's acceptance of the Progress Schedule, and comments or opinions concerning the activities in the Progress Schedule shall not control CONTRACTOR's independent judgment relative to means, methods, techniques, sequences, and procedures of construction. CONTRACTOR is solely responsible for complying with the Contract Times.

1.2 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Interim Schedule:
 - a. Submit an interim schedule indicating CONTRACTOR's anticipated schedule for the Work for the first three (3) months in detail and for the remainder of the Work in summary form in accordance with Article 1.4 of the General Conditions.
2. Progress Schedules:
 - a. Submit preliminary Progress Schedule in accordance with the General Conditions, Section VIII, Article 1.6. Submit in accordance with Section 01 33 00, Submittal Procedures and Section 01 31 26, Electronic Communication Protocols.
 - b. Preliminary Progress Schedule shall consist of a CPM Diagram and schedule narrative.
 - c. After making revisions in accordance with ENGINEER's comments on the preliminary Progress Schedule, submit the Progress Schedule in accordance with the General Conditions. Submit in accordance with Section 01 33 00, Submittal Procedures. This schedule will constitute the Baseline Schedule.
 - d. Bi-monthly (every two weeks) project schedules with a 2-week look ahead shall be submitted in Excel format.
 - e. Submit updated Baseline Progress Schedule with schedule narrative as part of the monthly CONTRACTOR's Application for Payment. If a

- Progress Schedule remains unchanged from one payment application to the next, submit a written statement to that effect.
- f. Furnish each Progress Schedule submittal with letter of transmittal complying with requirements of Section 01 33 00, Submittal Procedures, and specifically indicating the following:
 - 1) Listing of activities and dates that have changed since the previous Progress Schedule submittal.
 - 2) Discussion of problems causing delays, anticipated duration of delays, and proposed countermeasures.
 3. Recovery Schedules: Submit in accordance with this Section, and other provisions of the General Conditions.
 4. Accelerated Schedules may be submitted for in accordance with General Conditions, Section VIII, Article 5.3.
 5. Adjusted Project Schedules shall be submitted in accordance with General Conditions, Section VIII, Article 5.6
 6. If CONTRACTOR doesn't intend to perform Work on the date that the Contract Time commences, CONTRACTOR must notify the DEPARTMENT as soon as possible in writing when work will commence. An interim schedule shall be submitted in accordance with Section VIII, Article 1.4. Within 20 days after starting work at the site, an updated Baseline Project Schedule shall be provided to the ENGINEER for review.
 7. ENGINEER reviewed project schedules shall be managed as Record Documentation.

1.3 PROGRESS SCHEDULE FORMAT AND CONTENT

- A. Format:
 1. Type:
 - a. Gantt chart prepared using software such as Microsoft Project 2007 or later edition, Oracle Primavera P6, Oracle Primavera Project Planner – P3, or similar software.
 2. Sheet Size: 11x17, unless otherwise accepted by ENGINEER.
 3. Time Scale: Indicate first date of each work week.
 4. Organization:
 - a. Indicate on the separate Schedule of Submittals dates for submitting and reviewing Shop Drawings, Samples, and other submittals.
 - b. Group deliveries of materials and equipment into a separate sub-schedule that is part of the Progress Schedule.
 - c. Group construction into a separate sub-schedule (that is part of the Progress Schedule) by activity.
 - d. Group critical activities that dictate the rate of progress (the “critical path”) into a separate sub-schedule that is part of the Progress Schedule. Clearly indicate the critical path on the Progress Schedule. At minimum activities should align with Bid Form.
 - e. Organize each sub-schedule item in accordance with the approved Schedule of Values.

5. Activity Designations: Indicate title and related Specification Section number.
 6. Deliver schedules in both working file and PDF formats with the accompanying narrative.
- B. Content: Progress Schedules shall indicate the following:
1. Dates for shop-testing, as applicable.
 2. Delivery dates for materials and equipment to be incorporated into the Work.
 3. Dates for beginning and completing each phase of the Work by activity and by trade.
 4. Dates for start-up and check-out, field-testing, and instruction of operations and maintenance personnel.
 5. Dates corresponding to the Contract Times, and planned completion date associated with each Milestone (if any), Substantial Completion, and readiness for final payment.
- C. Coordinate the Progress Schedule with the Schedule of Submittals.
- D. Progress Schedules anticipating achievement of Substantial Completion ahead of the corresponding Contract Time(s), but with zero Contract Float as opposed to positive Contract Float, will be returned as either "Approved as Noted," "Resubmit with Revisions," or "Disapproved." Submittals stamped as "Approved as Noted" will indicate ENGINEER's approval thereof, subject to the limitations set forth, including ENGINEER's computation of the appropriate Contract Float implied by the anticipated early completion.
- E. Any float identified in the approved (or approved as noted) Baseline Schedule will be available for the project. The use of float shall be documented in each progress payment. If the CONTRACTOR disputes the availability of Contract Float and proposes that compensation for delay shall be measured from the anticipated early completion date(s) as opposed to the corresponding Contract Time(s), CONTRACTOR agrees and understands that said proposal will represent a request to the DEPARTMENT that the approved Progress Schedule be evaluated as a substitute Progress Schedule for the purposes of changing the Contract Time(s) to those supported by the CONTRACTOR's early-completion Progress Schedule. Evaluation of that substitution will be in accordance with the requirements of the General Conditions and will require additional supporting data that explains and substantiates the basis of the anticipated Early Schedules. Such supporting data shall consist of: 1) notice of any scheduled Work during hours other than normal work hours, 2) information related to rates of production including pertinent quantities, crew sizes, man-day requirements, major items of equipment, etc., for Critical and other significant Activities, 3) express or implied contingency allowances figured in for Activities for such factors as weather, delays, activities of DEPARTMENT and ENGINEER to respond to reports of differing site conditions, and other relevant factors. Acceptance of that substitution will be evidenced by a Change Order shortening the Contract Time, or Contract Times accordingly, but

maintaining the Contract Price and the provisions for liquidated and actual damages set forth in the Agreement.

1.4 RECOVERY SCHEDULES

A. Recovery Schedules – General:

1. When updated Progress Schedule indicates that the ability to comply with the Contract Times falls five or more days behind schedule, and the delay is within the control of CONTRACTOR, and there is no corresponding Change Order or Work Change Directive to support an extension of the Contract Times, CONTRACTOR shall prepare and submit a Progress Schedule demonstrating CONTRACTOR's plan to accelerate the Work to achieve compliance with the Contract Times ("recovery schedule") for ENGINEER's acceptance.
2. Submit recovery schedule within five days after submittal of updated Progress Schedule where need for recovery schedule is indicated.

B. Implementation of Recovery Schedule:

1. At no additional cost to DEPARTMENT, do one or more of the following: furnish additional resources (additional workers, additional construction equipment, increased work hours or additional shifts, and other resources), provide suitable materials, expedite procurement of materials and equipment to be incorporated into the Work, and other measures necessary to complete the Work within the Contract Times.
2. Upon acceptance of recovery schedule by ENGINEER, incorporate recovery schedule into the next Progress Schedule update.

C. Lack of Action:

1. CONTRACTOR's refusal, failure, or neglect to take appropriate recovery action, or to submit a recovery schedule, shall constitute reasonable evidence that CONTRACTOR is not executing the Work or separable part thereof with the diligence that will ensure completion within the Contract Times. Such lack of action shall constitute sufficient basis for DEPARTMENT to exercise remedies available to DEPARTMENT under the General Conditions.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 32 33
AERIAL AND GROUND PHOTOGRAPHIC AND VIDEO DOCUMENTATION

PART 1. GENERAL

1.1 SECTION INCLUDES

A. Scope:

1. Furnish Unmanned Aircraft Systems (UAS), also known as a Drone, aerial imagery (photographic and video documentation, as required) and ground photographic documentation for the following phases of construction:
 - a. Pre-construction – prior to mobilization to Site, prior to land disturbance.
 - b. Construction progress – frequency, as specified herein, including but not limited to, at Substantial Completion and at Final Completion.
 - c. Final – following final demobilization.

B. Ground camera equipment specifications including camera resolution requirements and photograph submission requirements.

C. Drone aerial imagery equipment specifications including camera resolution requirements and aerial photograph and video submission requirements.

1.2 REFERENCES

- A. DEC Policy CP-71 / Acquisition and Use of Unmanned Aircraft, March 29, 2021.
- B. Low Altitude Authorization and Notification Capability (LAANC).
- C. Federal Aviation Administration (FAA) rules and regulations.
- D. Title 14 of Code of Federal Regulations (CFR) Part 107 – Small Unmanned Aircraft Systems.
- E. EPA IT/IM Directive Policy – Unmanned Aircraft Systems (UAS) Policy, July 7, 2005.
- F. National Wildfire Coordinating Group (NWCG) Aviation Mishap Response Guide and Checklist.

1.3 QUALITY ASSURANCE

- A. CONTRACTOR personnel, or their Subcontractor, operating Unmanned Aircraft Systems (UAS or drone) shall be licensed in accordance with all applicable rules and regulations, including FAA and 14 CFR Part 107 requirements.
- B. Personnel shall include the remote pilot in command (PIC), the visual observer (if one is used/required), and the person operating the flight controls of the UAS (if different from the PIC).
- C. Personnel must maintain a visual line of sight (VLOS) to the aircraft operation throughout the entire flight with vision that is unaided by any device other than corrective lenses. The VLOS is established in order to:
 - 1. Know the UAS location;
 - 2. Monitor the UAS attitude, altitude, and direction of flight;
 - 3. Observe the airspace for other air traffic or hazards; and
 - 4. Ensure that the UAS does not endanger the life or property of another.
- D. When a visual observer is used during the UAS operation, all of the following requirements must be met:
 - 1. The remote PIC, the person operating the flight controls of the UAS, and the visual observer must maintain effective communication with each other at all times.
 - 2. The remote PIC must ensure that the visual observer is able to see the UAS in the manner specified in paragraph (C) of this section.
 - 3. The remote PIC, the person operating the flight controls of the UAS, and the visual observer must coordinate to do the following:
 - a. Scan the airspace where the UAS is operating for any potential collision hazard; and
 - b. Maintain awareness of the position of the UAS through direct visual observation.
- E. CONTRACTOR shall be responsible for documenting all activity at the Site in accordance with the following schedules:
 - 1. Ground photography shall be used to document the project activity and Work progress on a frequency of twice per week (minimum), at the project

milestones specified herein, and as directed by the DEPARTMENT or ENGINEER.

a. Ground camera requirements:

- (1) Minimum of 10 megapixel still camera capability.
- (2) Full color photographs.
- (3) Ground camera aspect ratio shall be 4:3.
- (4) Ground camera settings shall be set according to Site conditions, light conditions, and the subject being photographed.
- (5) All ground photograph files shall be JPG format, unless otherwise requested by DEPARTMENT or ENGINEER.

2. Drone aerial imagery shall be used to document the project activity and Work progress on a frequency of twice per month (minimum), at the milestones specified herein, and as directed by the DEPARTMENT or ENGINEER.

a. UAS-mounted camera requirements:

- (1) Minimum of 10 megapixel still camera.
- (2) Drone camera settings shall be set according to Site conditions, light conditions, and the subject being photographed.
- (3) Minimum of 1080p, 60 frames per second video camera.
- (4) All video files shall be MP4 or MOV formats, and all still photographs shall be JPG format unless otherwise requested by DEPARTMENT or ENGINEER.

F. CONTRACTOR shall be responsible to provide UAS equipment and accessories of appropriate capabilities (multiple battery packs, memory capacity, etc.) to perform the Work and meet the requirements specified.

G. Photographic images and video shall be suitably staged and set up (“framed”), focused, and shall have adequate lighting to illuminate the Work and conditions that are the subject of the photograph.

- H. Photographic images and video that are not well framed, focused, or do not have adequate lighting, at the discretion of the ENGINEER, shall be repeated by CONTRACTOR at no additional cost.

1.4 SUBMITTALS

- A. Licenses and Certifications. Submit the following:

1. Remote Pilot Certificate (shall be current) from the FAA for all drone pilots proposed for the project, or for the certified Pilot in Command (PIC) overseeing the operation.
2. Insurance: must maintain Commercial Drone Liability Insurance with a minimum of \$1,000,000 liability limit. Submit insurance certificate(s) demonstrating the proper current insurance limits and listing additional insured(s) according to the requirements of the Contract Documents.

- B. Pre-Flight Submittals. Submit the following prior to each flight:

1. Documentation of authorization for each flight plan (as needed) through LAANC.

- C. Pre-Flight Submittals required by CP-71:

1. CONTRACTOR shall complete the DEPARTMENT's Unmanned Aircraft System (UAS) Mission Planning Form and submit to the DEPARTMENT or ENGINEER.
2. CONTRACTOR shall allow for a DEPARTMENT review period of thirty (30) days and shall expect a response (approval or modifications required) in writing.
3. CONTRACTOR shall not proceed with any UAS work without written authorization from the DEPARTMENT.

- D. Informational and Progress Submittals. Submit the following:

1. Pre-construction Photographic and Video Documentation: Submit acceptable pre-construction photographic and video documentation (digital files) prior to mobilizing to and disturbing the Site. Submit pre-construction photographic and video documentation not later than submittal of the first Application for Payment, unless other schedule for pre-construction photographic and video documentation is accepted by ENGINEER.
2. Construction Progress Photographic and Video Documentation: Submit acceptable construction progress photographic and video documentation

(digital files) not less-often than the tenth day of each month documenting work of the prior month, unless otherwise agreed to by ENGINEER.

3. Qualifications Statements:

- a. Work shall be performed by a photographer and drone pilot meeting the requirements of this Specification and applicable regulations. The photographer and drone pilot shall be proficient in the type of work specified in this section. The CONTRACTOR shall submit resumes of the proposed photographer and drone pilot. Photographer and drone pilot must be individual(s) demonstrating the requisite proficiencies, to the satisfaction of the ENGINEER.

E. Closeout Submittals. Submit the following:

- 1. Final Photographic and Video Documentation: Submit acceptable photographic and video documentation prior to requesting the inspection by ENGINEER for Substantial Completion and Final Completion.
- 2. Photographic and Video Documentation shall be considered part of the Record Documentation. Photographic and Video Documentation shall not replace or supplant As-Built Drawings or other documentation required by Contract Documents.

F. CONTRACTOR shall host and maintain for the benefit of the ENGINEER and DEPARTMENT a secured, password enabled/encrypted SharePoint site or Dropbox site for the secure transfer of electronic files.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

3.1 DOCUMENTATION - GENERAL

- A. The documentation specifications in this Part shall be used as default requirements in the absence of an alternate plan submitted by CONTRACTOR, and reviewed and approved by ENGINEER and/or DEPARTMENT.
- B. All photography, video and drone flights shall be performed only by DEPARTMENT-approved professionals.
- C. Digital Files of Videos and Photographs:

1. For each photograph, furnish high-quality digital image in “JPG” file format compatible with Microsoft Windows 10 and higher operating systems.
2. Image resolution shall be sufficient for clear, high-resolution prints. Minimum resolution shall be 10 megapixels.
3. For each video, furnish high-quality (minimum of 1080p, 60 frames per second) digital video file in MP4 or MOV file format, unless otherwise requested by DEPARTMENT or ENGINEER.
4. Do not imprint date and time in the images, unless specifically directed by DEPARTMENT or ENGINEER.
5. Electronic image filename shall describe the image; do not submit files with filenames automatically created by a digital camera. For example, an acceptable electronic filename would be, “Katzman Recycling Preconstruction 04.05.2025 Photo 1.jpg”, or “Katzman Recycling Postconstruction 01.05.2022 Video 1.MP4”.
6. Electronic folder names shall include the project, the date, etc. Do not include folders automatically created by a digital camera. For example, an acceptable folder name would be: “Katzman Recycling – Photos 04.06.2025”, or “Katzman Recycling – Videos 04.06.2025”.
7. Form of Digital Video and Photograph Submittals
 - a. CONTRACTOR shall host and maintain a secured, password enabled/encrypted SharePoint site or Dropbox site for the secure transfer of electronic files.
 - b. Hardcopy photographs shall not be required unless specifically requested by DEPARTMENT or ENGINEER.
 - c. Include in the SharePoint or Dropbox site a file index and appropriately labeled and dated folders for each file transfer containing photographic and video documentation. File index shall list each folder, list the files in each folder by filename, and for each file:
 - (1) Date(s) photographs were taken.
 - (2) Name of Owner.
 - (3) Name of the Site.
 - (4) Project name.

(5) Photographer name and address.

(6) Drone pilot name and address (as applicable).

3.2 PRE-CONSTRUCTION PHOTOGRAPHIC AND VIDEO DOCUMENTATION

A. Ground Photography

1. Obtain and submit pre-construction photographic documentation to record Site conditions prior to construction. Photographs shall document all locations and areas of all Work of the Contract, including all areas which will be disturbed by the Work.
2. Pre-construction photographs are not part of the required number of construction progress photographs specified in Article 3.3 of this Section.
3. Furnish ground-based pre-construction video of all locations and areas of Work of the Contract, including indoor and outdoor work areas, staging areas and all areas which will be disturbed by the Work.
4. If disagreement arises on the condition of the Site and insufficient pre-construction photographic documentation was submitted prior to the disagreement, CONTRACTOR shall restore the conditions in question as directed by ENGINEER and to satisfaction of the DEPARTMENT.

B. Drone Aerial Imagery and Video

1. Take pre-construction aerial photographs at the same time that pre-construction ground photography is performed. The following aerial photographs shall be taken during the pre-construction aerial photography event, unless otherwise directed by ENGINEER or DEPARTMENT:
 - a. Eight (8) photographs from altitude of 400 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW with horizon visible in each photograph;
 - b. Four (4) photographs from altitude of 400 feet, straight down covering each Work area/quadrant of the Site;
 - c. Eight (8) photographs from altitude of 100 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W, and NW with horizon visible in each photograph; and
 - d. Four (4) roof-height photographs (if structures are present), from center of property/Site, viewing N, E, S, and W. If structures are not present, altitude shall be 50 feet.

2. Take pre-construction video of the Site from an altitude of 100 feet, unless otherwise directed by ENGINEER or DEPARTMENT. Video shall be performed in a slow orbit of the Site covering all proposed Work areas, including all areas which will be disturbed by the Work.
3. Regulate the speed of the UAS during the flight to provide clear video. Video files that are not well framed or focused, resulting from the speed of the UAS, at the discretion of the ENGINEER, shall be repeated by CONTRACTOR at no additional cost.
4. When possible, aerial based video should be captured using autonomous flight controls to provide smooth and precise footage.

3.3 CONSTRUCTION PROGRESS PHOTOGRAPHIC AND VIDEO DOCUMENTATION

A. Ground Photography

1. Progress Photographs:
 - a. Approved photographer shall take photographs at the Site not less often than twice per week.
 - b. Take not less than 10 photographs each time photographer is at the Site.
2. Obtain and submit photographic documentation of each area of Work as directed by ENGINEER at the time photographic documentation is taken.
3. Take progress, ground-based video, when directed by ENGINEER or DEPARTMENT, but no less frequently than once per week. Ground-based video shall be conducted in accordance with Article 3.2.A.3.
4. Photographic documentation, documenting adequate completion of the Work to the satisfaction of the ENGINEER, shall be required for Substantial Completion and for Final Completion.

B. Drone Aerial Imagery and Video

1. Progress Photographs:
 - a. Take photographs not less often than bi-weekly or twice per month, or as directed by ENGINEER or DEPARTMENT. The following photographs shall be taken during each aerial photography event, unless otherwise directed by ENGINEER or DEPARTMENT:

- (1) Eight (8) photographs from altitude of 400 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW with horizon visible in each photograph;
- (2) Four (4) photographs from altitude of 400 feet, straight down covering each Work area/quadrant of the Site;
- (3) Eight (8) photographs from altitude of 100 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW with horizon visible in each photograph; and
- (4) Four (4) roof-height photographs (if structures are present), from center of Site, viewing N, E, S, and W. If structures are not present, altitude shall be 50 feet.

2. Progress Video:

- a. Take video of the Site, as directed by DEPARTMENT or ENGINEER, at a minimum of four (4) occasions, not including Pre-Construction and Final Documentation events.
- b. Video shall be taken from altitude of 100 feet – slow orbit of the Site covering all active Work areas, unless otherwise directed by ENGINEER or DEPARTMENT.
- c. Regulate the speed of the UAS during the flight to provide clear video. Video files that are not well framed or focused, resulting from the speed of the UAS, at the discretion of the ENGINEER, shall be repeated by CONTRACTOR at no additional cost.
- d. When possible, aerial based video should be captured using autonomous flight controls to provide smooth and precise footage.

3.4 FINAL PHOTOGRAPHIC AND VIDEO DOCUMENTATION

A. Final Ground Photographs:

1. Take photographs at time and day acceptable to ENGINEER and following completion of all construction and demobilization. Work documented in final (record) photographs shall be generally complete, including all features of completed Work and restored areas, as directed by the ENGINEER and DEPARTMENT.

B. Final Drone Aerial Imagery and Video

1. Take final aerial photographs at the same time that final ground photography is performed. The following aerial photographs shall be taken during the final aerial photography event, unless otherwise directed by ENGINEER or DEPARTMENT:
 - a. Eight (8) photographs from altitude of 400 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW, with horizon visible in each photograph;
 - b. Four (4) photographs from altitude of 400 feet, straight down covering each Work area/quadrant of the Site;
 - c. Eight (8) photographs from altitude of 100 feet, from edge of property/Site facing center of Site, from N, NE, E, SE, S, SW, W and NW with horizon visible in each photograph; and
 - d. Four (4) roof-height photographs (if structures are present), from center of Site, viewing N, E, S, and W. If structures are not present, altitude shall be 50 feet.
2. Take final video of the Site from an altitude of 100 feet, or as approved by DEPARTMENT or ENGINEER. Video shall be performed in a slow orbit of the Site covering all final and restored Work areas.

3.5 MISHAP REPORTING

- A. The CONTRACTOR shall immediately notify the Department when an “Aircraft Incident” or mishap occurs, including:
 1. Any missing aircraft.
 2. Any collision.
 3. Injury to any person or any loss of consciousness.
 4. Damage to any property other than the UAS.
- B. The CONTRACTOR shall support the DEPARTMENT and other agencies with subsequent investigations into the cause of the mishap and with the implementation of corrective actions that are required by CONTRACTOR as a result of the mishap.



Department of
Environmental
Conservation

DEC Video Style Guide

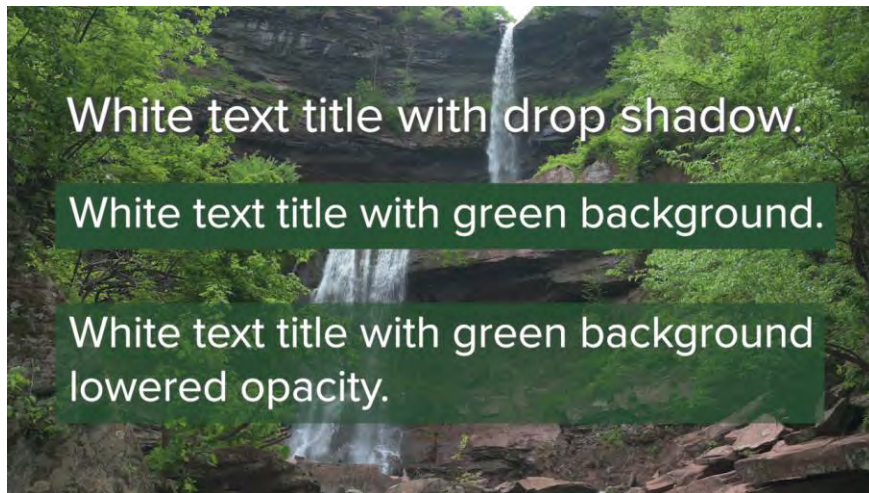
DEC Identifier

- The DEC Identifier should fade in and stay on screen for at least 10 seconds before fading back out.
- It can be placed in any corner to avoid blocking important imagery underneath.
- Keep the text within the title safe margin.
- Use the appropriate identifier file to have the rounded edge face inward.



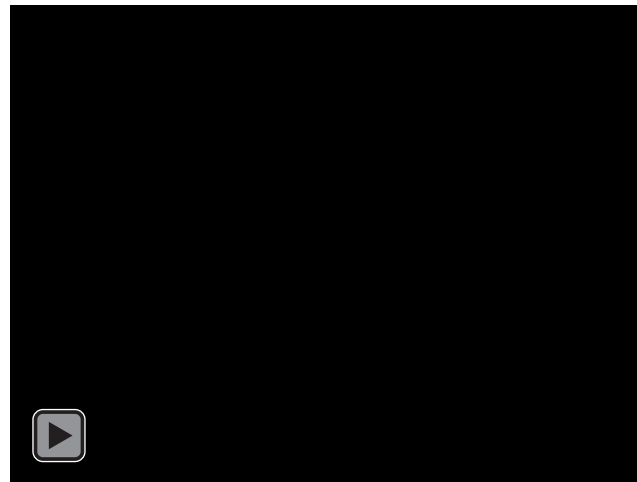
Titles

- Titles should use simple language that is easy to read quickly.
- Keep the title on the screen long enough for someone to read it twice.
- Text can be white or white with a green background (either solid or reduced opacity)
- Use drop shadow where necessary to help text stand out against background.
- DEC Green Hex code: #2C5234
- Fonts: Proxima Nova or Oswald (Use Arial if both fonts are not available)



Editing

- Keep video to 2:30 – 3:00 minutes whenever possible.
- Edit clips on the action.
- Still images used as video should move slowly on screen. (Pan or zoom)
- Avoid showing brand names or the names of establishments.



Zooming out Image

Audio

- We can provide music tracks to add to the project from Artlist.io. Send us a link to a track you want to use (intended for use in this project only) and we can provide it or add it in ourselves before posting.
- Reduce music level to $\sim -20\text{dB}$ if voice over is placed over music.
- Ensure final mix of audio does not peak.



End Slate

- Fade to end slate image file at the end of video.
- Allow slate to be on screen for 10 seconds.



For more information visit:
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SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall prepare and furnish submittals in accordance with the General Conditions, Section VIII, Article 5.24 through 5.30.
2. Provide submittals well in advance of need for the material or equipment, or procedure (as applicable), in the Work and with ample time required for delivery of materials and equipment and to implement procedures following ENGINEER's approval or acceptance of the associated submittal. Work covered by a submittal will not be included in progress payments until approval or acceptance of related submittals has been obtained in accordance with the Contract Documents.
3. CONTRACTOR is responsible for dimensions to be confirmed and corrected at the Site; quantities; information pertaining solely to fabrication processes; means, methods, sequences, procedures, and techniques of construction; safety precautions and programs incident thereto; and for coordinating the work of all trades.
4. CONTRACTOR's signature of submittal's stamp and letter of transmittal shall be CONTRACTOR's representation that CONTRACTOR has complied with his obligations under the Contract Documents relative to that submittal. ENGINEER and DEPARTMENT shall be entitled to rely on such representations by CONTRACTOR.
5. Provisions of the General Conditions, as may be modified by the Supplementary Conditions, apply to all CONTRACTOR-furnished submittals required by the Contract Documents, regardless of whether such submittals are other than Shop Drawings or Samples.

B. Samples:

1. Submittal of Samples shall comply with the General Conditions, as may be modified by the Supplementary Conditions, this Section, and the Specifications Section in which the Sample is specified.
2. Furnish at the same time those Samples and submittals that are related to the same element of the Work or Specifications Section. ENGINEER will not review submittals without associated Samples and will not review Samples without associated submittals.
3. Samples shall clearly illustrate functional characteristics of materials, all related parts and attachments, and full range of color, texture, pattern, and materials.

- C. Restrictions on Quantity of Submittals and Compensation of DEPARTMENT:
1. CONTRACTOR shall furnish required submittals with sufficient information and accuracy to obtain required approval or acceptance of submittal by ENGINEER with not more than the number of resubmittals indicated in the General Conditions (as may be modified by the Supplementary Conditions).
 2. Total number of CONTRACTOR's submittals shall not exceed 25 percent above the total number of first-time submittals indicated in the Schedule of Submittals initially accepted by ENGINEER in accordance with the General Conditions. ENGINEER will record ENGINEER's time for reviewing submittals of Shop Drawings, Samples, and other submittals and items requiring approval or acceptance, beyond the quantity of first-time submittals indicated in the Schedule of Submittals initially accepted by ENGINEER, and CONTRACTOR shall reimburse DEPARTMENT for ENGINEER's charges for such time.
 3. In the event that CONTRACTOR requests a substitution for a previously approved item, CONTRACTOR shall reimburse DEPARTMENT for ENGINEER's charges for such time unless the need for such substitution is beyond the control of CONTRACTOR.
 4. DEPARTMENT may impose set-offs against CONTRACTOR for the costs for which CONTRACTOR is to reimburse or compensate DEPARTMENT, in accordance with the General Conditions.

1.2 TYPES OF SUBMITTALS

- A. Submittal types are classified as follows: 1) Action Submittals, 2) Informational Submittals, 3) Closeout Submittals, and 4) Maintenance Material Submittals. Type of each required submittal is designated in the respective Specifications Sections; when type of submittal is not designated in the associated Specification Section, submittal will be classified as follows:
1. Action Submittals include:
 - a. Shop Drawings.
 - b. Product data.
 - c. Delegated design submittals, which include documents prepared, sealed, and signed by a design professional retained by CONTRACTOR, Subcontractor, or Supplier for materials and equipment to be incorporated into the completed Work. Delegated design submittals do not include submittals related to temporary construction unless specified otherwise in the related Specifications Section. Delegated design submittals include: design drawings, design data including calculations, specifications, certifications, and other submittals prepared by such design professional.
 - d. Samples.
 - e. Testing plans, procedures, and testing limitations.
 2. Informational Submittals include:
 - a. Certificates.

- b. Design data not sealed and signed by a design professional retained by CONTRACTOR, Subcontractor, or Supplier.
 - c. Pre-construction test and evaluation reports, such as reports on pilot testing, subsurface investigations, testing for a potential Hazardous Environmental Condition, and similar reports.
 - d. Supplier instructions, including installation data, and instructions for handling, starting-up, and troubleshooting.
 - e. Source quality control submittals (other than testing plans, procedures, and testing limitations), including results of shop testing.
 - f. Field or Site quality control submittals (other than testing plans, procedures, and testing limitations), including results of operating and acceptability tests at the Site.
 - g. Supplier reports.
 - h. Sustainable design submittals (other than sustainable design closeout documentation).
 - i. Special procedure submittals, including plans for shutdowns and tie-ins and other procedural submittals.
 - j. Qualifications statements.
 - k. Administrative submittals including:
 - 1) Progress Schedules.
 - 2) Schedules of Submittals.
 - 3) Schedules of Values.
 - 4) Photographic documentation.
 - 5) Coordination drawings, when submittal of such is required.
 - 6) Copies of permits obtained by CONTRACTOR.
 - 7) Field engineering reports, survey data, and similar information.
 - 3. Closeout Submittals include:
 - a. Maintenance contracts.
 - b. Operations and maintenance data.
 - c. Bonds, such as special maintenance bonds and bonds for a specific material, equipment item, or system.
 - d. Warranty documentation.
 - e. Record documentation.
 - f. Sustainable design closeout documentation.
 - g. Software.
 - i. Keying.
 - 4. Maintenance Material Submittals include:
 - a. Spare parts.
 - b. Extra stock materials.
 - c. Tools.
 - 5. When type of submittal is not specified and is not included in the list above, request an interpretation from ENGINEER and ENGINEER will determine the type of submittal.
- B. Not Included in this Section: Administrative and procedural requirements for following are covered elsewhere in the Contract Documents:

1. Requests for interpretations of the Contract Documents.
 2. Change Orders, Work Change Directives, and Field Orders.
 3. Applications for Payment.
 4. Reports, documentation, and permit applications required to be furnished by CONTRACTOR to authorities having jurisdiction.
- C. In accordance with Section III, Article 5, the Apparent Low Bidder shall, at a minimum, submit the following with the required five-day submittal package, 5 days following the Notice of Apparent Low Bidder.
1. Health and Safety Plan at a minimum shall include:
 - a. Health and Safety.
 - b. Decontamination of Equipment and Personnel.
 - c. Contingency Measures.
 - d. Community Air Monitoring.
 - e. Odor Control Plan.
 2. Work Plan at minimum shall include:
 - a. Procedures for adequate and safe excavation of soils and materials including a contingency plan detailing procedures and methods to be employed to prevent, contain, and recover spills during the Work.
 - b. Description of equipment to be used on Site with appropriate safety devices needed to undertake the remediation of the Site.
 - c. Identification of the permitted treatment, storage, and disposal facilities (TSDF) proposed to receive liquid or solid wastes to be transported off-Site.
 - d. Identification of permits required to conduct the Work.
 - e. Worksite layout showing, at a minimum, equipment and material staging areas, trailers, decontamination station, and staging procedures.
 - f. Detailed construction drawing(s) of the proposed decontamination station.
 - g. Procedures for excavating, handling, storing, and placing soils.
 - h. Procedures for handling liquid wastes and groundwater.
 - i. Provisions for control of fugitive air emissions and dust control.
 - j. Other requirements necessary to provide security, staging, sampling, testing, removal, and disposal of wastes.
 - k. Procedures for completing any other major aspect of the Work including:
 1. Sampling and Quality Control Plan.
 2. Sequencing of Work.
 3. Soil Erosion and Sedimentation Control Measures.
 4. Monitoring Well Decommissioning and Installation Plan
 5. Transportation Plans.
 6. Site Security.
 7. Miscellaneous Requirements.

- D. Required for Notice of Intent to Award and Notice to Proceed. The CONTRACTOR shall submit the following plans for the Work by the time of the Notice to Proceed, following receipt of the Notice to Intent to Award:
1. Bid Breakdown of items reflecting adjusted contract amount as reflected in Section III, Article 12;
 2. Six (6) Executed copies of the contract agreements with original signatures;
 3. Performance Bond and Insurances;
 4. M/WBE waiver form if Contract goals are not expected to be met;
 5. Completed NYS Office of State Comptroller Substitute Form W-9;
 6. Service-Disabled Veteran-Owned Business (SDVOB) Utilization Plan on Form SDVOC 100;
 7. Acceptable 5-day submittal package as described in Paragraph 1.2.C above; and
 8. Authorizing resolution for (Authority to sign Contract on behalf of the firm).
- E. Submittals following Notice to Proceed. Major submittal requirements identified in other sections of the Specifications are listed below, however, this list is not inclusive of all submittals required elsewhere:
1. Final plans, engineered approved plans, as described in Paragraph 1.2.C.
 2. Interim progress schedule, schedule of values, and technical submittals detailed in the first three months of the progress schedule.
 3. All other technical submittals required by the Contract in accordance with the approved Submittal Registry and in accordance with General Conditions, Articles 5.24 through 5.30.
 4. All other submittals as required by the Supplementary Specifications applicable to the Work being performed or as requested by the ENGINEER.

1.3 REQUIREMENTS FOR SCHEDULE OF SUBMITTALS

- A. Informational Submittals: Submit the following:
1. Schedule of Submittals:
 - a. Timing:
 - 1) Furnish submittal within time frames indicated in the Contract Documents.
 - 2) Submit updated Schedule of Submittals with each submittal of the updated Progress Schedule.
 - b. Content: In accordance with the General Conditions, as may be modified by the Supplementary Conditions, and this Section. Requirements for content of preliminary Schedule of Submittals and subsequent submittals of the Schedule of Submittals are identical. Identify on Schedule of Submittals all submittals required in the Contract Documents. Updates of Schedule of Submittals shall show scheduled dates and actual dates for completed tasks. Indicate submittals that are on the Project's critical path. Indicate the following for each submittal:
 - 1) Date by which submittal will be received by ENGINEER.

- 2) Whether submittal will be for a substitution or “or-equal”. Procedures for requesting approval of substitutes and “or-equals” are specified in the General Conditions, Section 01 25 00, Substitution Procedures, and Section 01 62 00, Product Options (for “or-equals”).
- 3) Date by which ENGINEER’s response is required. Not less than 14 days shall be allowed for ENGINEER’s review, starting upon ENGINEER’s actual receipt of each submittal. Allow increased time for large or complex submittals.
- 4) For submittals for materials or equipment, date by which material or equipment must be at the Site to avoid delaying the Work and to avoid delaying the work of other contractors, if any.
- c. Prepare Schedule of Submittals using same software, and in same format, specified for Progress Schedules in Section 01 32 16, Progress Schedule.
- d. Coordinate Schedule of Submittals with the Progress Schedule.
- e. Schedule of Submittals that is not compatible with the Progress Schedule, or that does not indicate submittals on the Project’s critical path, or that that places extraordinary demands on ENGINEER for time and resources, is unacceptable. Do not include submittals not required by the Contract Documents.
- f. In preparing Schedule of Submittals:
 - 1) Considering the nature and complexity of each submittal, allow sufficient time for review and revision.
 - 2) Reasonable time shall be allowed for: ENGINEER’s review and processing of submittals, for submittals to be revised and resubmitted, and for returning submittals to CONTRACTOR.
 - 3) Identify and accordingly schedule submittals that are expected to have long anticipated review times.

1.4 PROCEDURE FOR SUBMITTALS

- A. Submittal Identification System: Use the following submittal identification system, consisting of submittal number and review cycle number.
 1. Submittal Number: Shall be separate and unique number correlating to each individual submittal required. Assign submittal numbers as follows:
 - a. First part of submittal number shall be the applicable Specifications Section number, followed by a hyphen.
 - b. Second part of submittal number shall be a three-digit number (sequentially numbered from 001 through 999) assigned to each separate and unique submittal furnished under the associated Specifications Section.
 - c. Typical submittal number for the third submittal furnished for Section 40 05 19, Ductile Iron Process Pipe, would be “40 05 19-003”.
 2. Review Cycle Number: Shall be a number indicating the initial submittal or re-submittal associated with each submittal number:
 - a. “01” = Initial (first) submittal.

- b. "02" = Second submittal (e.g., first re-submittal).
- c. "03" = Third submittal (e.g., second re-submittal).

3. Examples:

B. Letter of Transmittal for Submittals:

- 1. Furnish separate letter of transmittal with each submittal. Each submittal shall be for one Specifications Section.
- 2. At beginning of each letter of transmittal, include a reference heading indicating: CONTRACTOR's name, DEPARTMENT's name, Project name, Contract designation, transmittal number, and submittal number.
- 3. For submittals with proposed deviations from requirements of the Contract Documents, letter of transmittal shall specifically describe each proposed variation.

C. Contractor's Review and Stamp:

- 1. Contractor's Review: Before transmitting submittals to ENGINEER, review submittals to:
 - a. ensure proper coordination of the Work;
 - b. determine that each submittal is in accordance with CONTRACTOR's desires; and
 - c. verify that submittal contains sufficient information for ENGINEER to determine compliance with the Contract Documents.
- 2. Incomplete or inadequate submittals will be returned without review.
- 3. Contractor's Stamp and Signature:
 - a. Each submittal furnished shall bear CONTRACTOR's stamp of approval and signature, as evidence that submittal has been reviewed by CONTRACTOR and verified as complete and in accordance with the Contract Documents.
 - b. Submittals without CONTRACTOR's stamp and signature will be returned without review. Signatures that appear to be computer-generated will be regarded as unsigned and the associated submittal will be returned without review.
 - c. CONTRACTOR's stamp shall contain the following:

“Project Name: _____

Contractor’s Name: _____

Contract _____ Designation: _____

Date: _____

----- *Reference* -----

Submittal Title: _____

Specifications:

Section: _____

Page No.: _____

Paragraph No.: _____

Drawing No.: _____ of _____

Location of Work: _____

Submittal No. and Review Cycle: _____

Coordinated by Contractor with Submittal Nos.: _____

—
I hereby certify that the Contractor has satisfied Contractor’s obligations under the Contract Documents relative to Contractor’s review and approval of this submittal.

Approved for Contractor by: _____”

D. Submittal Marking and Organization:

1. Mark on each page of submittal and each individual component submitted with submittal number and applicable Specifications paragraph. Mark each page of each submittal with the submittal page number.
2. Arrange submittal information in same order as requirements are written in the associated Specifications Section.
3. Each Shop Drawing sheet shall have title block with complete identifying information satisfactory to ENGINEER.
4. Package together submittals for the same Specifications Section. Do not furnish required information piecemeal.

E. Format of Submittal and Recipients:

1. Action Submittals and Informational Submittals: Furnish in accordance with Table 01 33 00-A, except that submittals of Samples shall be as specified elsewhere in this Section:
 2. Samples:
 - a. Securely label or tag Samples with submittal identification number. Label or tag shall include clear space at least four inches by four inches in size for affixing ENGINEER's review stamp. Label or tag shall not cover, conceal, or alter appearance or features of Sample. Label or tag shall not be separated from the Sample.
 - b. Submit quantity of Samples required in Specifications. If quantity of Samples is not indicated in the associated Specifications Section, furnish not less than two identical Samples of each item required for ENGINEER's approval. Samples will not be returned to CONTRACTOR. If CONTRACTOR requires Sample(s) for CONTRACTOR's use, so advise ENGINEER in writing and furnish additional Sample(s). CONTRACTOR is responsible for furnishing, shipping, and transporting additional Samples.
 - c. Deliver one Sample to ENGINEER's field office at the Site. Deliver balance of Samples to ENGINEER at address indicated in Table 01 33 00-A, unless otherwise directed by ENGINEER.
 3. Closeout Submittals:
 - a. Furnish the following Closeout Submittals in accordance with Table 01 33 00-A: maintenance contracts; bonds for specific materials, equipment, or systems; warranty documentation; and sustainable design closeout documentation. On documents such as maintenance contracts and bonds, include on each document furnished original ("wet") signature of entity issuing said document. When original "wet" signatures are required, furnish such submittals in printed form and electronic form to ENGINEER, and to other entities furnish as indicated in Table 01 33 00-A.
 - b. Record Documentation: Submit in accordance with Section 01 78 39, Project Record Documentation.
 - c. Software: Submit number of copies required in Specifications Section where the software is specified. If number of copies is not specified, provide two copies on compact disc in addition to software loaded on DEPARTMENT's computer(s) or microprocessor(s).
 4. Maintenance Material Submittals: For spare parts, extra stock materials, and tools, furnish quantity of items specified in associated Specifications Section.
- F. Electronic Submittals:
1. Format: Electronic files shall be in "portable document format" (.PDF). Files shall be electronically searchable.
 2. Organization and Content:
 - a. Each electronic submittal shall be one file; do not divide individual submittals into multiple files each.

- b. When submittal is large or contains multiple parts, furnish PDF file with bookmark for each section of submittal.
 - c. Content shall be identical to printed submittal. First page of electronic submittal shall be CONTRACTOR's letter of transmittal.
 - 3. Quality and Legibility: Electronic submittal files shall be made from the original and shall be clear and legible. Do not submit scans of faxed copies. Electronic file shall be full size of original, printed documents. Properly orient all pages for reading on a computer screen.
 - 4. Provide sufficient Internet service and e-mail capability for CONTRACTOR's use in transferring electronic submittals, receiving responses to electronic submittals, and associated electronic correspondence. Check not less than once per day for distribution of electronic submittals, electronic responses to submittal, and electronic correspondence related to submittals.
 - 5. Submitting Electronic Files:
 - a. Transmit electronic files in accordance with Section 01 31 26, Electronic Communication Protocols.
- G. Distribution:
- 1. Distribution of ENGINEER's Response via Electronic Files: Upon completion of ENGINEER's review, electronic submittal response will be distributed by ENGINEER to
 - a. CONTRACTOR.
 - b. Other prime contractors.
 - c. DEPARTMENT.
 - d. Resident Project Representative (RPR).
 - e. ENGINEER's file.
- H. Resubmittals: Refer to the General Conditions for requirements regarding resubmitting required submittals.
- I. CONTRACTOR shall furnish required submittals with complete information and accuracy in order to achieve required approval of an item within two submittals. All costs to ENGINEER involved with subsequent submittals of Shop Drawings, Samples or other items requiring approval, will be back-charged to CONTRACTOR, at the rate equal to the ENGINEER's charges to the DEPARTMENT under the terms of the ENGINEER's agreement with the DEPARTMENT. In the event CONTRACTOR fails to pay such costs within 30 days after receipt of an invoice from DEPARTMENT, funds will be withheld from payment requests and at the completion of Work, a Change Order or proposed Change Order will be issued incorporating the unpaid amount, and DEPARTMENT will be entitled to an appropriate decrease in Contract price. In the event that CONTRACTOR requests a substitution for a previously approved item, all of ENGINEER'S costs in the reviewing and approval of the substitution will be back-charged to CONTRACTOR unless the need for such substitution is beyond the control of CONTRACTOR.

- J. Shop Drawings shall be submitted well in advance of the need for the material or equipment for construction and with ample allowance for the time required to make delivery of material or equipment after data covering such is approved. CONTRACTOR shall assume the risk for all materials or equipment which are fabricated or delivered prior to the approval of Shop Drawings. Materials or equipment will not be included in periodic progress payments until approval thereof has been obtained in the specified manner.
- K. ENGINEER will review and approve or disapprove Shop Drawings and samples within 14 days of receipt from CONTRACTOR. The ENGINEER will process all submittals promptly, but a reasonable time should be allowed for this, for the Shop Drawings being revised and resubmitted, and for time required to return the approved Shop Drawings to CONTRACTOR.
- L. It is CONTRACTOR'S responsibility to review submittals made by his suppliers and Subcontractors before transmitting them to ENGINEER to assure proper coordination of the Work and to determine that each submittal is in accordance with his desires and that there is sufficient information about materials and equipment for ENGINEER to determine compliance with the Contract Documents. Incomplete or inadequate submittals will be returned for revision without review.
- M. Any related Work performed or equipment installed without an "Approved" or "Approved as Noted" Shop Drawing will be at the sole responsibility of the CONTRACTOR.

1.5 ENGINEER'S REVIEW

- A. Timing: ENGINEER's review will conform with timing indicated in the Schedule of Submittals accepted by ENGINEER.
- B. Submittals not required by the Contract Documents will not be reviewed by ENGINEER and will not be recorded in ENGINEER's submittal log. All printed copies of such submittals will be returned to CONTRACTOR. Electronic copies of such submittals, if any, will not be retained by ENGINEER.
- C. Action Submittals, Results of ENGINEER's Review: Each submittal will be given one of the following dispositions by ENGINEER:
 - 1. Approved: Upon return of submittal marked "Approved", order, ship, or fabricate materials and equipment included in the submittal (pending ENGINEER's approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents.
 - 2. Approved as Corrected: Upon return of submittal marked "Approved as Corrected", order, ship, or fabricate materials and equipment included in the submittal (pending ENGINEER's approval or acceptance, as applicable, of

source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents, and in accordance with the corrections indicated in the ENGINEER's submittal response.

3. Approved as Corrected – Resubmit: Upon return of submittal marked “Approved as Corrected – Resubmit”, order, ship, or fabricate materials and equipment included in the submittal (pending ENGINEER's approval or acceptance, as applicable, of source quality control submittals) or otherwise proceed with the Work in accordance with the submittal and the Contract Documents, and in accordance with corrections indicated in ENGINEER's submittal response. Furnish to ENGINEER record re-submittal with all corrections made. Receipt of corrected re-submittal is required before materials or equipment covered in the submittal will be eligible for payment.
4. Revise and Resubmit: Upon return of submittal marked “Revise and Resubmit”, make the corrections indicated and re-submit to ENGINEER for approval.
5. Not Approved: This disposition indicates material or equipment that cannot be approved. “Not Approved” disposition may also be applied to submittals that are incomplete. Upon return of submittal marked “Not Approved”, repeat initial submittal procedure utilizing approvable material or equipment, with a complete submittal clearly indicating all information required.

D. Informational Submittals, Results of ENGINEER's Review:

1. Each submittal will be given one of the following dispositions:
 - a. Accepted: Information included in submittal complies with the applicable requirements of the Contract Documents and is acceptable. No further action by CONTRACTOR is required relative to this submittal, and the Work covered by the submittal may proceed, and materials and equipment with submittals with this disposition may be shipped or operated, as applicable.
 - b. Not Accepted: Submittal does not indicate compliance with applicable requirements of the Contract Documents and is not acceptable. Revise submittal and re-submit to indicate acceptability and compliance with the Contract Documents.

E. Closeout Submittals, Results of ENGINEER's Review: Dispositions and meanings are the same as specified for Informational Submittals. When acceptable, Closeout Submittals will not receive a written response from ENGINEER. Disposition as “accepted” will be recorded in ENGINEER's submittal log. When Closeout Submittal is not acceptable, ENGINEER will provide written response to CONTRACTOR.

F. Maintenance Material Submittals, Results of ENGINEER's Review: Dispositions and meanings are the same as specified for Informational Submittals. When acceptable, Maintenance Material Submittals will not receive a written response from ENGINEER. Disposition as “accepted” will be recorded in ENGINEER's

submittal log. When Maintenance Material Submittal is not acceptable, ENGINEER will provide written response to CONTRACTOR, and CONTRACTOR is responsible for costs associated with transporting and handling of maintenance materials until compliance with the Contract Documents is achieved.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

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SECTION 01 35 29

CONTRACTOR'S HEALTH AND SAFETY PLAN

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall prepare and maintain a written, Site-specific, health and safety plan (SSHASP), and conduct all construction activities in safe manner that avoids:
 - a. injuries to employees, Subcontractors, and other persons with an interest at or near the Site;
 - b. employee exposures to health hazards above occupational limits established by Laws or Regulations, American Conference of Governmental Industrial Hygienists (ACGIH), and Nuclear Regulatory Commission (NRC), as applicable;
 - c. exposure of the public and DEPARTMENT's employees to air contaminants above levels established for public exposure by the USEPA, NRC, and by other authorities having jurisdiction at the Site;
 - d. significant increases in concentrations of contaminants in soil, water, or sediment near the Site; or
 - e. violations of OSHA Regulations, or other Laws or Regulations.
2. The CONTRACTOR is solely responsible and liable for the health and safety of all on-Site personnel and any off-Site community potentially impacted by the remediation.
3. This section describes the minimum health and safety requirements for this project including the requirements for the development of a written Health and Safety Plan (HASP). All on-Site workers must comply with the requirements of the HASP. The CONTRACTOR's HASP must comply with all applicable federal and state regulations protecting human health and the environment from the hazards posed by activities during this Site remediation. The HASP is a required deliverable for this project. The HASP will be reviewed by the ENGINEER. The CONTRACTOR will resubmit the HASP, addressing all review comments from the ENGINEER. The CONTRACTOR shall not initiate on-Site work in contaminated areas until an acceptable HASP addressing all comments has been developed.
4. Consistent disregard for the provision of these health and safety specifications shall be deemed just and sufficient cause for immediate stoppage of work and/or termination of the Contract or any Subcontract without compromise or prejudice to the rights of the DEPARTMENT or the ENGINEER.
5. The safety and health of the public and project personnel and the protection of the environment will take precedence over cost and schedule considerations for all project work. Any additional costs will be considered only after the cause for suspension of operations is addressed and work is resumed. The ENGINEER's on-Site representative and the CONTRACTOR's Superintendent will be kept apprised,

by the Safety Officer, of conditions which may adversely affect the safety and health of project personnel and the community. The ENGINEER may stop work for health and safety reasons. If work is suspended for health and/or safety reasons, it shall not resume until approval is obtained from the ENGINEER. The cost of work stoppage due to health and safety is the responsibility of the CONTRACTOR under this Contract.

B. Related Sections:

1. Section 01 35 43.13, Environmental Procedures for Hazardous Materials.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Preparer of SSHASP:

- a. Engage a Certified Industrial Hygienist (CIH), accredited by the American Board of Industrial Hygiene, or Certified Safety Professional (CSP), certified by the Board of Certified Safety Professionals, to prepare or supervise preparation of SSHASP. The CIH or CSP must have a minimum of two years of experience in hazardous waste site remediations or related industries and have a working knowledge of federal and state occupational health and safety regulations.
- b. SSHASP preparer shall be thoroughly familiar with: (i) Laws and Regulations and industry standards of safety and protection relating to health and safety pertaining to the Work; (ii) the requirements of the Contract Documents relative to health, safety, and protection; (iii) health and safety hazards associated with the Work and appropriate protections therefor; and (iv) CONTRACTOR's and DEPARTMENT's safety programs.
- c. SSHASP preparer shall have previously prepared site-specific health and safety plans for not less than five construction projects similar in nature, scope, and complexity to the Work.
- d. Submit preparer's qualifications with SSHASP.

2. Safety Officer:

- a. The designated Safety Officer (SO) must have, at a minimum, two years of experience in the remediation of hazardous waste sites under the Toxic Substances Control Act (TSCA), including handling of polychlorinated biphenyls (PCBs), or related field experience. The SO must have formal training in health and safety and be conversant with federal and state regulations governing occupational health and safety. The SO must be certified in CPR and first aid and have experience and training in the implementation of personal protection and air monitoring programs. The SO must have "hands-on" experience with the operation and maintenance of real-time air monitoring equipment. The SO must be thoroughly knowledgeable of the operation and maintenance of air-purifying respirators (APR) and supplied-air respirators (SAR) including SCBA and airline respirators.

3. Health and Safety Technicians:
 - a. The Health and Safety Technician (HST) must have one year of hazardous waste site or related experience and be knowledgeable of applicable occupational health and safety regulations. The HST must be certified in CPR and first aid. The HST will be under direct supervision of the SO during on-Site work. The HST must be familiar with the operations, maintenance and calibration of monitoring equipment used in this remediation. An HST will be assigned to each work crew or task in potentially hazardous areas.
- B. Regulatory Requirements: Laws and Regulations applying to the Work under this Section include, but are not limited to:
 1. 29 CFR 1904 (OSHA), Recording and Reporting Occupational Injuries and Illnesses.
 2. 29 CFR 1910 (OSHA), Occupational Safety and Health Standards.
 3. 29 CFR 1926 (OSHA), Safety and Health Regulations for Construction.
 4. 49 CFR 171.8, Transportation, Definitions and Abbreviations.
 5. 40 CFR 261.3, 264, and 265, Resource Conservation and Recovery Act (RCRA).
 6. 40 CFR 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.

1.3 SUBMITTALS

- A. Informational Submittals: Submit the following:
 1. CONTRACTOR's SSHASP, in accordance with this Section. Submit within times indicated in Article 1.4 of this Section.
 2. Job safety analyses (JSA) submittals for each action required for the Work that is not covered in CONTRACTOR's SSHASP.
 3. Reports:
 - a. Health and safety reports.
 - b. Accident reports.
 4. Qualifications Statements:
 - a. Qualifications for SSHASP preparer, qualifications of Safety Officer and qualifications of Health and Safety Technician(s), including copies of valid, applicable certifications.

1.4 SSHASP AND JSA SUBMITTALS

- A. Timing of Submittals:
 1. Submit SSHASP the sooner of: seven days prior to pre-construction conference, or 30 days prior to CONTRACTOR's scheduled mobilization at the Site.
 2. Do not perform Work at the Site until written SSHASP has been accepted by ENGINEER.
 3. When an element of the Work or work activity is not covered by the SSHASP, prepare and submit a JSA and obtain ENGINEER's acceptance of JSA before performing the work activity or activities covered by such JSA.
 4. Delays in the Work Associated with Submittal or Review of SSHASP and JSAs:

- a. Notwithstanding other provisions of the Contract Documents, changes in the Contract Price or Contract Times will not be authorized due to delay by CONTRACTOR in developing, submitting, revising, or obtaining acceptance of the SSHASP.
- B. Limitations of ENGINEER's Review of SSHASP and JSAs:
 1. ENGINEER's review and acceptance of SSHASP and JSAs (if any) will be only to determine if the topics covered in SSHASP comply with the Contract Documents and specific requirements of safety documents referenced therein (such as DEPARTMENT's safety programs, if any).
 2. ENGINEER's review and acceptance will not extend to safety measures, means, methods, techniques, procedures of construction, or whether representations made in the SSHASP and JSAs (if any) comply with Laws and Regulations, or standards of good practice.
 3. CONTRACTOR's responsibility for safety and protection at the Site shall be as indicated in the Contract Documents. Nothing associated with ENGINEER's review or acceptance of SSHASP or JSAs will create or imply any obligation by ENGINEER to oversee or become, in any way, responsible for CONTRACTOR's safety obligations under the Contract Documents.

1.5 CONTRACTOR'S HEALTH AND SAFETY PROGRAM

- A. General:
 1. Known prior use(s) of the Site are indicated.
 2. The Site is classified as hazardous waste site. Presence of Constituents of Concern (if any), where known to DEPARTMENT and ENGINEER, are indicated in the reports and drawings (if any) of such Hazardous Environmental Conditions listed in the Supplementary Conditions and/or Limited Site Data.
 3. Each employer working at the Site shall develop and implement a written SSHASP for their employees and other individuals for whom such employer is responsible.
 4. When applicable (including when the Site includes one or more Hazardous Environmental Conditions), SSHASP shall comply with 29 CFR 1904, 29 CFR 1910, 29 CFR 1926, and other Laws and Regulations.
 5. Include in the SSHASP requirements for complying with DEPARTMENT's Site-specific hazard/emergency response plans, if any. During the Project, comply with DEPARTMENT's hazard/emergency response plans.
 6. The HASP is a deliverable product of this project. The ENGINEER will review and comment on the CONTRACTOR's HASP. Agreed upon responses to all comments will be incorporated into the final copy of the HASP. The HASP shall govern all work performed for this contract. The HASP shall address, at a minimum, the items in accordance with 29 CFR 1910.120(I)(2).
- B. Location:
 1. Retain at the Site a copy of complete SSHASP, JSAs (if any), and related information.
 2. Retain copy of SSHASP, JSAs (if any), and related information at CONTRACTOR's project office.

3. Throughout the Project, update as necessary all copies of SSHASP, JSAs, and related information.
4. Copies of SSHASP, JSAs, and other related information shall be made available to CONTRACTOR's employees, Subcontractors, Suppliers, DEPARTMENT, and ENGINEER immediately upon request.

C. SSHASP Content: SSHASP shall address and include the following:

1. Address safety and health hazards of each phase of operations at the Site and shall include requirements and procedures for employee protection.
2. CONTRACTOR's organizational structure and other information required by Paragraph 1.5.D of this Section.
3. Comprehensive work plan.
4. Job safety and health risk or hazard analysis for each task and operation found in the work plan.
5. Employee training assignments including copies of OSHA 40-hour, 24-hour supervised field activities, eight-hour supervisors, and eight-hour refresher training certificates for each CONTRACTOR and Subcontractor employee assigned to the Project.
6. Personal protective equipment (PPE) to be used by employees for each task and activity performed. Include respirator fit test certificates for CONTRACTOR and Subcontractor employees assigned to the Project.
7. Medical Surveillance Requirements: Medical clearance certificates for all CONTRACTOR and Subcontractor employees assigned to the Project. The physical examination shall also include but not be limited to the following minimum requirements:
 - a. Complete blood profile;
 - b. Blood chemistry to include: chloride, CO₂, potassium, sodium, BUN, glucose, globulin, total protein, albumin, calcium, cholesterol, alkaline phosphatase, triglycerides, uric acid, creatinine, total bilirubin, phosphorous, lactic dehydrogenase, SGPT, SGOT;
 - c. Urine analysis;
 - d. "Hands on" physical examination to include a complete evaluation of all organ systems including any follow-up appointments deemed necessary in the clinical judgement of the examining physician to monitor any chronic conditions or abnormalities;
 - e. Electrocardiogram;
 - f. Chest X-ray (if recommended by examining physician in accordance with good medical practice);
 - g. Pulmonary function;
 - h. Audiometry - To be performed by a certified technician, audiologist, or physician. The range of 500 to 8,000 hertz should be assessed.
 - i. Vision screening - Use a battery (TITMUS) instrument to screen the individual's ability to see test targets well at 13 to 16 inches and at 20 feet. Tests should include an assessment of muscle balance, eye coordination, depth perception, peripheral vision, color discrimination, and tonometry.

- j. Tetanus booster shot (if no inoculation has been received within the last five years); and
 - k. Complete medical history.
- 8. Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment.
- 9. Site control measures, including procedures for:
 - a. preventing trespassing;
 - b. preventing unqualified or unprotected workers from entering restricted areas;
 - c. preventing “tracking” of contaminants out of the Site;
 - d. maintaining log of employees at the Site and visitors to the Site;
 - e. communicating routes of escape and gathering points.
 - f. ensuring safe handling of Constituents of Concern during the Work, including excavating, handling, loading, and transporting activities. Include procedures for ensuring safety when working in or proximity to Hazardous Environmental Conditions,
 - g. delineating “hot” (e.g., contaminated), “cold”, and support zones;
 - h. locating personnel and equipment decontamination zones; and
 - i. decontamination.
 - j. first aid facilities including fully equipped first aid station and routine replenishment of supplies.
 - k. sanitary facilities including potable drinking water, washing facilities and portable toilets.
 - l. The CONTRACTOR shall be responsible for maintaining a log of security incidents and visitor access granted.
 - m. The CONTRACTOR shall require all personnel having access to the project Site to sign-in and sign-out and shall keep a record of all Site access.
 - n. All approved visitors to the Site shall be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit.
 - o. Site visitors shall not be permitted to enter the hazardous work zone unless approved by the DEPARTMENT.
 - p. Project sites shall be posted, "Warning Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence or equal at a minimum. Warning signs shall be posted at a minimum of every 500 feet.
- 10. Plan for safe and effective responses to emergencies, including necessary PPE and other equipment.
- 11. Community Air Monitoring Plan (CAMP), or Community Protection Plan (CPP) consisting of the following:
 - a. Develop, as part of this HASP, a CAMP/CPP. The CAMP/CPP shall outline those steps to be implemented to protect the health and safety of surrounding human population and the environment.
 - b. Perimeter Air Monitoring consisting of the following:
 - 1. As part of the Air Monitoring Program, use real-time monitoring and documentation sampling as described in the Subpart “Air Monitoring

Program” of this section to determine if off-Site emission, as a result of Site work, poses a threat to the surrounding community.

2. Provide real-time air monitoring for volatile compounds and particulate levels as the perimeter of the work area as necessary. Include the following:
 - a) Volatile organic compounds must be monitored at the downwind perimeter of the work area on a continuous basis. If total organic vapor levels exceed 5 ppm above background, work activities shall be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. All readings shall be recorded and be available for State (DEC & DOH) personnel to review.
 - b) The Air Monitoring Program shall include real-time air monitoring and shall be conducted at the perimeter of the Site.
 - c) The Air Monitoring Program for the Asbestos Containing Material Removal and Disposal shall include monitoring at the edge of the exclusion zone, which shall be delineated a minimum of 50 feet beyond the active excavation/work area. All Asbestos Containing Material Removal and Disposal shall be performed in accordance with Supplementary Specification Section 02 82 33, Removal and Disposal of Asbestos Containing Material and Debris.
 - d) Particulates should be continuously monitored upwind, downwind and within the Exclusion Zone at temporary particulate monitoring stations. If the downwind particulate level is more than 2.5 times greater than the upwind particulate level and greater than 150 ug/m³, then dust suppression techniques shall be employed. This is a general action level. A Site-specific action level shall be developed based on available analytical data. All readings shall be recorded and be available for ENGINEER, DEPARTMENT, and NYSDOH personnel to review.
- c. Vapor Emission Response Plan consisting of the following:
 1. If the ambient air concentration of organic vapors exceed 5 ppm above background at the perimeter of the work area, activities shall be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities may resume. If the organic vapor levels are greater than 5 ppm over background but less than 225 ppm over background at the perimeter of the work area, activities may resume provided the organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.
 2. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities shall be shutdown. When work shutdown occurs, downwind air monitoring as directed by the SO shall be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.
- d. Major Vapor Emission Response Plan consisting of the following:

1. If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities shall be halted.
2. If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, the air quality shall be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).
3. If efforts to abate the emission source are unsuccessful and if organic vapor levels are approaching 5 ppm above background and persist for more than 30 minutes in the 20 Foot Zone, the Major Vapor Emission Response Plan shall automatically be placed into effect.
4. However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background levels.
5. Upon activation, the following shall be undertaken:
 - a) Notify all Emergency Response Contacts listed in the Major Vapor Emission Response Plan.
 - b) The local police authorities shall immediately be contacted by the SO and advised of the situation. Coordinate with local officials to arrange for notification and evacuation of the surrounding community.
 - c) Frequent air monitoring shall be conducted at 30 minutes intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the SO.
2. Coordinate with local officials to arrange for notification and evacuation of the surrounding community in the event that off-Site emissions pose a threat.
- e. Odor control consisting of the following:
 1. Foam active work areas to reduce odors if odor complaints are received from nearby residences during Site activities. Odor masking agents or other odor control methods may be used subject to ENGINEER's review. Continue odor suppression during each day that odor complaints are received.
- f. Off-Site Spill Response consisting of the following:
 1. Produce as part of the HASP a Spill Response Plan, also coordinated with local officials, in case of an off-Site spill of either liquid or solid wastes. The plan shall include transportation routes and times, as well as the minimum requirements set forth in the Subpart titled "On-Site Spill Containment Plan." The driver shall be supplied with Material Safety Data Sheets (MSDSs), a 24-hour emergency phone number, and instructions for reporting emergencies to local agencies and the project Site.

12. Spill containment program. Comply with 40 CFR 112 – Oil Pollution Prevention, and prepare a Spill Prevention Control and Countermeasure Plan, for on-Site storage of petroleum products in excess of 1,320 gallons in containers of 55 gallons or more.
13. Requirements for complying with Section 01 35 43.13, Environmental Procedures for Hazardous Materials.

D. CONTRACTOR's Organizational Structure:

1. Organizational structure portion of the SSHASP shall refer to or incorporate information on specific chain of command and specify the overall responsibilities of supervisors and employees, and shall include the following:
 - a. Name and contact information for CONTRACTOR's "competent person(s)" for various work-related activities.
 - b. Name and contact information for CONTRACTOR's safety representatives, including, but not limited to, the CONTRACTOR's SO and HST.
 - c. Designation of general supervisor who has responsibility and authority to direct operations involving handling of Constituents of Concern and work in or near Hazardous Environmental Conditions.
 - c. Other personnel required for operations involving Constituents of Concern and Hazardous Environmental Conditions and emergency response, and general functions and responsibilities of each.
 - d. Lines of authority, responsibility, and communication.
2. Review and update organizational structure as necessary to reflect current status of work activities on the Project and status of personnel.

E. Work Plan:

1. Comprehensive work plan portion of SSHASP shall refer to or incorporate information on the following:
 - a. Tasks and objectives of work activities, on-Site operations, and logistics and resources necessary to achieve such tasks and objectives.
 - b. Anticipated activities and CONTRACTOR's normal operating procedures.
 - c. Personnel and equipment requirements for implementing the work plan.

1.6 ACCIDENT REPORTING AND INVESTIGATION

- A. Comply with 29 CFR 1904.29, including using OSHA Forms 300, 300A, and 301 (or equivalent) to document all accidents that result in bodily injury.
- B. Accident Report Submittals:
 1. Submit copies of completed accident reports to DEPARTMENT and ENGINEER within 24 hours of the accident.
 2. By the tenth day of each month, submit monthly summary of accident reports from the prior month. Monthly summary report shall indicate for each accident the root cause and descriptions of corrective actions to reduce the probability of similar accidents.

3. Submit to DEPARTMENT and ENGINEER a copy of all accident and health or safety hazard reports received from OSHA or other authority having jurisdiction within 24 hours of CONTRACTOR's receipt.
- C. Based upon results of accident investigation, modify the SSHASP as required by changing tasks or procedures to prevent reoccurrence of accident.
- D. Post current copy of CONTRACTOR's OSHA 300A report, Summary of Work-related Injuries and Illnesses, at conspicuous place at the Site during period of February 1 through April 30 of each year.

1.7 DAILY HEALTH AND SAFETY FIELD REPORTS

- A. Submit to DEPARTMENT and ENGINEER daily health and safety field reports.
- B. Content of CONTRACTOR's Daily Health and Safety Field Reports: Reports shall include, but not necessarily be limited to, the following:
 1. Weather conditions.
 2. Delays encountered in construction.
 3. Acknowledgment of deficiencies noted along with corrective actions taken on current and previous deficiencies.
 4. Daily health and safety air monitoring results (when air monitoring is performed).
 5. Documentation of instrument calibrations performed.
 6. New hazards encountered.
 7. PPE utilized.
 8. Description of problems, real or anticipated, encountered during the Work that should be brought to attention of DEPARTMENT and ENGINEER and notification of deviations from planned Work shown in previously submitted daily health and safety field report(s).

1.8 STANDARD OPERATING PROCEDURES

- A. The following are Standard Operating Procedures (SOPs) that should be employed as part of the H&S program:
 1. During periods of prolonged respirator usage in contaminated areas, respirator filters will be changed upon breakthrough. Respirator filters will always be changed daily.
 2. All respirators will be individually assigned and not interchanged between workers without cleaning and sanitizing.
 3. CONTRACTOR, subcontractor and service personnel unable to pass a fit test as a result of facial hair or facial configuration shall not enter or work in an area that requires respiratory protection.
 4. Footwear used on-Site will be covered by rubber overboots or booties when entering or working in the Exclusion Zone area or Contamination Reduction Zone. Boots or booties will be washed with water and detergents to remove dirt and contaminated sediment before leaving the Exclusion Zone or Contamination

Reduction Zone.

5. The CONTRACTOR will ensure that all project personnel shall have vision or corrected vision to at least 20/40 in one eye.
6. Eating, drinking, chewing gum or tobacco, smoking, etc., will be prohibited in the hazardous work zones and neutral zones.
7. No alcohol, firearms or drugs (without prescriptions) will be allowed on-Site at any time.
8. All personnel who are on medication should report it to the SO who will make a determination whether or not the individual will be allowed to work and in what capacity. The SO may require a letter from the individual's personal physician stating what limitations (if any) the medication may impose on the individual.
9. The CONTRACTOR shall provide all equipment and personnel necessary to monitor and control air emissions. The determination of the proper level of protection for each task and safety equipment shall be the responsibility of the CONTRACTOR. These task specific levels of protection shall be stated in the CONTRACTOR's HASP.
10. The CONTRACTOR shall provide a hygiene facility on-Site. The hygiene facility shall include the following:
 - a. Adequate lighting and heat;
 - b. Shower facilities for project personnel;
 - c. Laundry facilities for washing work clothes and towels;
 - d. Areas for changing into and out of work clothing. Work clothing should be stored separately from street clothing;
 - e. Clean and "dirty" locker facilities; and
 - f. Storage area for work clothing, etc.
11. The CONTRACTOR shall provide a portable decontamination station, commonly referred to as a "Boot Wash" facility for each hazardous work zone requiring decontamination for project personnel. These facilities shall be constructed to contain spent wash water, contain a reservoir of clean wash water, a power supply to operate a pump for the wash water, a separate entrance and exit to the decontamination platform, with the equipment being mobile, allowing easy transport from one hazardous work zone to the next. All such wash water shall be disposed of at the dewatering facility. An appropriate detergent such as trisodium phosphate shall be used.
12. The CONTRACTOR shall provide full decontamination facilities at all hazardous zones. Decontamination facilities must be described in detail in the HASP.
13. Contaminated clothing, used respirator cartridges, and other disposable items will be put into drums/containers for transport and proper disposal in accordance with TSCA and RCRA requirements.
14. All equipment and material used in this project shall be thoroughly washed down in accordance with established federal and state procedures before it is removed from the project. With the exception of the excavated materials, all other contaminated debris, clothing, etc. that cannot be decontaminated shall be disposed at the CONTRACTOR's expense by a method permitted by appropriate regulatory agencies. The cost for this element of work shall be incorporated in the lump sum bid for mobilization/demobilization the unit prices bid for disposal

of decontamination liquids or as otherwise directed on this project. All vehicles and equipment used in the "Dirty Area" will be decontaminated to the satisfaction of the SO in the decontamination area on-Site prior to leaving the project. The CONTRACTOR will certify, in writing, that each piece of equipment has been decontaminated prior to removal from the Site.

15. The CONTRACTOR shall develop, as part of the HASP, an air monitoring program (AMP). The purpose of the AMP is to determine that the proper level of personnel protective equipment is used, to document that the level of worker protection is adequate, and to assess the migration of contaminants to off-Site receptors as a result of Site work.
16. The CONTRACTOR shall supply all personnel, equipment, facilities, and supplies to develop and implement the air monitoring program described in this section. Equipment shall include at a minimum real-time aerosol monitors, depending on work activities and environmental conditions.
17. The CONTRACTOR's AMP shall include both real-time and documentation air monitoring (personal and area sampling as needed). The purpose of real-time monitoring will be to determine if an upgrade (or downgrade) of PPE is required while performing on-Site work and to implement engineering controls, protocols, or emergency procedures if CONTRACTOR-established action levels are encountered.
18. The CONTRACTOR shall also use documentation monitoring to ensure that adequate PPE is being used and to determine if engineering controls are mitigating the migration of contamination to off-Site receptors. Documentation monitoring shall include the collection and analysis of samples for total nuisance dust.
19. Real-time monitoring shall be conducted using the following equipment:
 - a. Organic vapor photoionizers shall be Photovac TIP, total organic vapor analyzer as manufactured by Photovac International, 739B Park Avenue, Huntington, New York 11743 or equal. The CONTRACTOR shall provide one Photovac TIP for each and every hazardous work zone operation.
 - b. Particulate monitoring must be performed using real-time particulate monitors (MiniRam Model MIEPDM-3, or equal) and shall monitor particulate matter in the range of 0-10 microns diameter (PM10) with the following minimum performance standards:

Object to be measured: Dust, Mists, Aerosols

Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000 µg/m³)

Precision (2-sigma) at constant temperature: +/- 10 µg/m³ for one second averaging; +/- 1.5 µg/m³ for sixty second averaging

Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 µm, g= 2.5, as aerosolized)

Resolution: 0.1% of reading or 1 µg/m³, whichever is larger

Particle Size Range of Maximum Response: 0.1-10 µ

Total Number of Data Points in Memory: 10,000

Logged Data: Each Data Point: average concentration, time/date, and data point number Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number.

Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes)

Operating Time: 48 hours (fully charged NiMH battery); continuously with charger

Operating Temperature: -10 to 50°C (14 to 122°F)

Automatic alarms are suggested.

- c. Particulate levels will be monitored and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task. A monitor such as the personal DataRAM, manufactured by Monitoring Instruments for the Environment, Inc., or equivalent, can be used as a real time particulate screening tool. Although the instrument's design does not allow it to make a sharp differentiation of particulates at the PM₁₀ standard, the instrument could be used in the passive mode without a pump to provide readings in the 0.1 to 10µ range in the immediate vicinity of construction activities.
- d. Monitor the air, using the same equipment, for 10-15 minutes upwind of the work Site to establish background level. The background level shall be established before the start of each shift every day. In the event that downwind particulates are detected at levels in excess of 150 ug/m³ or 2.5 times the established background level at the work Site, re-measure the background concentrations upwind of the work zone using the same equipment. If the measured particulate level at the work zone is 100 ug/m³ above background, monitor the downwind Site perimeter and implement additional dust controls in the work zone. Continue to take hourly measurements of the upwind background concentrations and compare such concentrations with the particulate level at the work zone, until the downwind level at the work zone is less than 100 ug/m³ above the upwind level. If at any time the measured particulate level at the work zone is more

than 150 ug/m³ over background concentration, the CONTRACTOR shall immediately suspend work at the Site, promptly notify the Safety Officer, and implement suitable corrective action or engineering controls before work resumes.

- e. Real-time monitoring will be conducted at any excavation of contaminated soil or sediments. Real-time monitoring will also be conducted at perimeter locations including an upwind (background) and three downwind locations. A background reading will be established daily at the beginning of the work shift. If the wind direction changes during the course of the day, a new background reading will be made. Downwind readings at the perimeter will be made when CONTRACTOR action levels have been exceeded at the excavation face or at a minimum of twice a day.
- f. If action levels are exceeded at the perimeter location for fugitive dust, work must be suspended and engineering controls must be implemented to bring concentrations back down to acceptable levels.
- g. Construction activities generate dust which could potentially transport contaminants off-Site. There may be situations when visible dust is being generated and leaving the Site and the monitoring equipment does not measure PM₁₀ at or above the action level. Therefore, if dust is observed leaving the working Site, additional dust suppression techniques must be employed by the CONTRACTOR.

20. The following master telephone list shall be completed and prominently posted at the field office. At minimum, the list shall have telephone numbers of all project personnel, the CONTRACTOR's Site Superintendent, SO and HSTs, and emergency services including hospital, fire, police, and utilities. In addition, two copies with telephone numbers shall be submitted to the DEPARTMENT for emergency reference purposes.

<u>Emergency Service</u>	<u>Telephone Number</u>
Fire Department	911
Police Department	911
Ambulance	911
Hospital/Emergency Care Facility (Glens Falls Hospital)	(518) 926-1000
Poison Control Center	(800) 336-6997
Chemical Emergency Advice (CHEMTREC)	(800) 424-9300
NYSDEC Central Office	Work Hours (518) 457-7878 After Hours (800) 342-9296 (leave message)

NYSDEC Region 5 Office	Work Hours	(518) 623-3603
Washington County Dept. of Health		(518) 746-2400
New York State Dept. of Health – Capital District		(518) 408-5300

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

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SECTION 01 35 43.13

ENVIRONMENTAL PROCEDURES FOR HAZARDOUS MATERIALS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, equipment, tools, and incidentals necessary to comply with environmental procedures for Constituents of Concern.
2. CONTRACTOR shall develop, implement, and maintain throughout the Project a hazardous materials management program (HMMP) as part of the SSHASP in accordance with Laws and Regulations.
3. Constituents of Concern Brought to Site by CONTRACTOR: Transport, handle, store, label, use, and dispose of in accordance with this Section, other applicable provisions of the Contract Documents, and Laws and Regulations.
4. Constituents of Concern Generated by CONTRACTOR:
 - a. Materials containing Constituents of Concern shall be properly handled, stored, labeled, transported and disposed of by CONTRACTOR in accordance with Laws and Regulations, and this Section.
 - b. If CONTRACTOR will generate or has generated materials containing Constituents of Concern at the Site, obtain a USEPA identification number listing CONTRACTOR's name and address of the Site as generator of the Constituents of Concern. Obtain identification number from state environmental agency or similar authority having jurisdiction at the Site. Submit identification number within time frame specified in Article 1.3 of this Section.
 - c. CONTRACTOR shall be responsible for identifying, analyzing, profiling, transporting, and disposing of Constituents of Concern generated by CONTRACTOR.
5. Fines or civil penalties levied against DEPARTMENT for violations committed at the Site by CONTRACTOR, and costs to DEPARTMENT (if any) associated with cleanup of a Hazardous Environmental Condition created by CONTRACTOR shall be paid by CONTRACTOR. If CONTRACTOR has exacerbated a Hazardous Environmental Condition existing at the Site prior to the start of the Work, CONTRACTOR shall pay a share of costs associated with fines, civil penalties, and cleanup costs to in proportion equal to the extent of CONTRACTOR's responsibility for creating the Hazardous Environmental Condition and fines and civil penalties associated therewith.

- B. Enforcement of Laws and Regulations:
1. Interests of DEPARTMENT are that accidental spills and emissions, Site contamination, and injury of personnel at and near the Site are to be avoided.
 2. When DEPARTMENT is aware of suspected violations, DEPARTMENT will notify CONTRACTOR, and authorities having jurisdiction if DEPARTMENT reasonably concludes that doing so is required by Laws or Regulations.
 3. Responsibilities regarding Laws and Regulations shall be in accordance with the General Conditions, as may be modified by the Supplementary Conditions.

1.2 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable Laws and Regulations.

1.3 SUBMITTALS

- A. Informational Submittals: Submit the following to the entity(ies) specified for each:
1. Constituents of Concern (including Chemicals) Proposed for Use at the Site:
 - a. Content:
 - 1) Current (dated within the past two years) material safety data sheets (SDSs) in accordance with 29 CFR 1910.1200 (OSHA Hazard Communication Standard).
 - 2) Manufacturer of material or equipment containing such substance.
 - 3) Supplier (if different than manufacturer).
 - 4) Container size(s) and number of containers proposed to be at the Site.
 - 5) Minimum and maximum volume of material intended to be stored at the Site.
 - 6) Description of process or procedures in which Constituent of Concern will be used at the Site.
 - b. Furnish the information required above in sufficient time to obtain DEPARTMENT's acceptance not later than three days before bringing Constituent of Concern to the Site.
 - c. Submit to ENGINEER.
 2. Material Containing Constituents of Concern Generated at the Site:
 - a. Submit for each Constituent of Concern generated at the Site identification number, analysis results, and number and size of storage containers at the Site.
 - b. Furnish such information within 48 hours after CONTRACTOR's receipt of analytical results.
 - c. Submit to ENGINEER.

3. Permits:
 - a. Submit copies of permits for storing, handling, using, transporting, and disposing of materials containing Constituents of Concern, obtained from authorities having jurisdiction.
 - b. Submit to ENGINEER.
4. Other Documents required for the HMMP: Submit to ENGINEER and/or DEPARTMENT's environmental representative the requested documents within 72 hours of CONTRACTOR's receipt of such request. HMMP documents may include emergency/spill response plan, communication plan, and other documents.

1.4 HAZARDOUS MATERIALS MANAGEMENT

- A. Obtain ENGINEER's and/or DEPARTMENT's environmental representative's acceptance before bringing to the Site each material containing a Constituent of Concern.
- B. Communication Plan:
 1. CONTRACTOR shall develop a communication plan relative to materials containing one or more Constituents of Concern.
 2. SDS Notebooks:
 - a. At minimum, maintain at the Site two notebooks containing: 1) Inventory of materials containing a Constituent of Concern (including all chemicals); and, 2) Current (dated within the past two years) SDSs for all materials being used to accomplish the Work, whether or not defined as a Constituent of Concern.
 - b. Keep one notebook in CONTRACTOR's field office at the Site; keep second notebook at location acceptable to ENGINEER.
 - c. Keep notebooks up-to-date as materials are brought to and removed from the Site.
- C. Emergency/Spill Response Plan: Develop, implement, and maintain an emergency/spill response plan, for each Constituent of Concern or each class/group of material containing a Constituent of Concern, as applicable. At minimum, response plan shall include the following:
 1. Description of equipment available at the Site to contain or respond to emergency related to or spill of the material.
 2. Procedures for notifying, and contact information for: authorities having jurisdiction, emergency responders, DEPARTMENT, ENGINEER, the public as applicable, and other entities as required.
 3. Response coordination procedures between CONTRACTOR, DEPARTMENT and others as appropriate.

4. Site plan showing proposed location of Constituents of Concern storage area and location of spill containment/response equipment, and location of storm water drainage inlets and drainage routes, including storm sewers, ditches and swales, and surface waters.
 5. Description of Constituent of Concern handling and spill response training provided to CONTRACTOR's and Subcontractors' employees, in accordance with 29 CFR 1926.21(b) and other Laws and Regulations.
- D. Storage of Materials Containing Constituents of Concern and Storage of Non-Hazardous Materials:
1. Vessels containing materials with a Constituent of Concern shall bear applicable hazard diamond(s).
 2. Container Labeling:
 - a. Properly label each container of consumable materials, whether or not classified as containing a Constituent of Concern.
 - b. Stencil CONTRACTOR's name and, as applicable, Subcontractor's name, on each vessel containing a Constituent of Concern and, for non-hazardous materials, on each container over five-gallon capacity. Containers shall bear securely-attached label clearly identifying contents. Label containers that are filled from larger containers.
 - c. If DEPARTMENT becomes aware of unlabeled containers at the Site, ENGINEER and/or DEPARTMENT's environmental representative will so advise CONTRACTOR. Properly label container(s) within one hour of receipt of such notice from DEPARTMENT or remove container from the Site.
 3. To greatest extent possible, store off-Site materials containing a Constituent of Concern until required for use in the Work.
- E. Area for Storing Materials Containing a Constituent of Concern:
1. Maintain designated storage area for materials containing a Constituent of Concern. Storage area shall include secondary containment to prevent release of spilled or leaking substances. Storage area shall include barriers to prevent vehicles from colliding with storage containers and shall include protection from environmental factors such as weather.
 2. Provide signage in accordance with Laws and Regulations, clearly identifying the storage area.
- F. Not less than monthly, CONTRACTOR's safety representative shall meet with the Engineer and/or DEPARTMENT's environmental representative to review CONTRACTOR's HMMP documents, procedures, and inspect storage areas and the Site in general, to verify compliance with this Section.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

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SECTION 01 42 00

REFERENCES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. Section includes the following:
 - a. Definitions and terminology in general use in the Contract Documents.
 - b. Applicable codes.
 - c. DEPARTMENTS's referenced specifications, where applicable.
 - d. Abbreviations in general use throughout the Contract Documents.
 - e. General requirements regarding reference standards, including a listing of standard-issuing organizations (and their acronyms) used in the Contract Documents.

1.2 DEFINITIONS AND TERMINOLOGY

- A. Definitions and terminology applicable to all the Contract Documents are included in the General Conditions, as may be modified by the Supplementary Conditions.
- B. Additional terminology used in the Contract Documents includes the following:
1. "Indicated" refers to graphic representations, notes, or schedules on the Drawings, or to other paragraphs, provisions, tables, or schedules in the Specifications and similar locations in the other Contract Documents. Terminology such as "shown", "noted", "scheduled", and "specified" are used to help the user locate the reference without limitation on the location.
 2. "Installer", "applicator", or "erector" is CONTRACTOR or another person or entity engaged by CONTRACTOR, either as an employee or Subcontractor, to perform a particular construction activity, including installation, erection, application, or similar Work. Installers shall be experienced in the Work that installer is engaged to perform.
 - a. The term "experienced", when used in conjunction with the term "installer", means having successfully completed not less than five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated and required; being familiar with Laws and Regulations; and having complied with requirements of authorities having jurisdiction, and complying with requirements of the Supplier of the material or equipment being installed, unless other experience requirements specific to that element of the Work are indicated elsewhere in the Contract Documents.
 3. Trades: Use of terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter", unless

otherwise indicated in the Contract Documents or required by Laws or Regulations. Such terminology also does not imply that specified requirements apply exclusively to trade personnel of the corresponding generic name.

4. “Assigned specialists” and similar terms: Certain Sections of the Specifications require that specific construction activities be performed by specialists with recognized, extensive experience in such operations. Engage said specialists for such activities, and their engagement is a requirement over which CONTRACTOR has no option. These requirements do not conflict with enforcement of building codes and other Laws and Regulations. Also, such requirements are not intended to interfere with local trade union jurisdictional settlements and similar conventions. Such assignments shall not relieve CONTRACTOR of responsibility for complying with the requirements of the Contract Documents.

1.3 APPLICABLE CODES

- A. References in the Contract Documents to local code(s) shall mean the following:
 1. National Electric Code in effect at the location of the Project.
 2. NFPA 101, Life Safety Code.

1.4 ABBREVIATIONS

- A. Common abbreviations that may be found in the Contract Documents are indicated below, alphabetically by their written-out meaning:

alternating current	a-c
ampere	A
antemeridian	a.m.
Architectural Barriers Act	ABA
Americans with Disabilities Act	ADA
Americans with Disabilities Act Accessibility Guidelines	ADAAG
average	avg
biochemical oxygen demand	BOD
five-day biochemical oxygen demand	BOD5
brake horsepower	bhp
British thermal unit	Btu
building information model	BIM
carbonaceous biochemical oxygen demand	CBOD
five-day carbonaceous biochemical oxygen demand	CBOD5
chemical oxygen demand	COD
Centigrade (or Celsius)	C
chlorinated polyvinyl chloride	CPVC
chlorofluorocarbons	CFC
Code of Federal Regulations	CFR
computer-aided drafting and design	CADD, or CAD
cubic inch	cu in

cubic foot	cu ft
cubic yard	cu yd, or CY
cubic feet per minute	cfm
cubic feet per second	cfs
decibel	db
diameter	dia
direct current	d-c
dollars	\$
each	ea
efficiency	eff
Fahrenheit	F
feet	ft
feet per hour	fph, or ft/hr
feet per minute	fpm
feet per second	fps, or ft/min
figure	fig
flange	flg
foot-pound	ft-lb
gallon	gal
gallons per hour	gph, or gal/hr
gallons per minute	gpm
gallons per second	gps
gram	g
grams per liter	g/L
Hertz	Hz
horsepower	hp or HP
hour	hr
human-machine interface	HMI
inch	in.
inches of mercury	in. Hg
inches water gage	in. w.g.
inch-pound	in.-lb
inside diameter	ID
iron pipe size	IPS
thousand pounds	kips
thousand pounds per square inch	ksi
kilovolt-ampere	kva
kilogram	kg
kilowatt	kw
kilowatt-hour	kwhr or kwh
linear foot	lin ft or LF
liter	L
Leadership in Energy and Environmental Design	LEED
maximum	max
mercury	Hg
micrograms per cubic meter	ug/m3
milligram	mg

milligrams per liter	mg/l or mg/L
milligrams per kilogram	mg/kg
milliliter	ml
millimeter	mm
million gallons per day	mgd or MGD
million gallon	MG
minimum	min
national pipe threads	NPT
net positive suction head	NPSH
net positive suction head available	NPSHA
net positive suction head required	NPSHR
nitrogen oxide (total concentration of mono-nitrogen oxides such as nitric oxide and nitrogen dioxide)	NO _x
nominal pipe size	NPS
number	no.
operator interface terminal	OIT
ounce	oz
ounce-force	ozf
outside diameter	OD
parts per hundred	pph
parts per million	ppm
parts per billion	ppb
polychlorinated biphenyls	PCBs
polyvinyl chloride	PVC
post meridian	p.m.
pound	lb
pounds per square inch	psi
pounds per square inch absolute	psia
pounds per square inch gauge	psig
pounds per square foot	psf
process control system	PCS
programmable logic controller	PLC
revolutions per minute	rpm
second	sec
specific gravity	sp gr, or SG
square	sq
square foot	sq ft, sf, or ft ²
square inch	sq in., or in ²
square yard	sq yd, or SY
standard	std
standard cubic feet per minute	scfm
total dynamic head	TDH
totally-enclosed fan-cooled	TEFC
volt	V
volts alternating current	vac
volts direct current	vdc
volatile organic compounds	VOC

1.6 REFERENCE STANDARDS

- A. Refer to Article 3 of the General Conditions, as may be modified by the Supplementary Conditions, relative to reference standards and resolving discrepancies between reference standards and the Contract Documents. Provisions of reference standards are in effect in accordance with the Specifications.
- B. Copies of Standards: Each entity engaged in the Work shall be familiar with reference standards applicable to its construction activity. Copies of applicable reference standards are not bound with the Contract Documents. Where reference standards are needed for a construction activity, obtain copies of standards from the publication source.
- C. Abbreviations and Names: Where reference standards, specifications, codes, manuals, Laws or Regulations, or other published data of international, national, regional or local organizations are referred to in the Contract Documents, the organization issuing the standard may be referred to by their acronym or abbreviation only. The following acronyms or abbreviations that may appear in the Contract Documents shall have the meanings indicated below. Listing is alphabetical by acronym.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACS	American Chemical Society
ADSC-IAFD	International Association of Foundation Drilling.
AEIC	Association of Edison Illuminating Companies
AF&PA	American Forest and Paper Association
ABMA	American Bearing Manufacturers Association (formerly Anti-Friction Bearing Manufacturers Association (AFBMA))
AGMA	American Gear Manufacturers Association
AI	Asphalt Institute
AIA	American Institute of Architects
AIChE	American Institute of Chemical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standards Committee
AMA	Acoustical Materials Association
AMCA	Air Movement and Control Association
AMP	National Association of Architectural Metal Manufacturers, Architectural Metal Products Division
ANSI	American National Standards Institute
APA	The Engineered Wood Association

APHA	American Public Health Association
API	American Petroleum Institute
AREA	American Railway Engineering Association
ARI	Air Conditioning and Refrigeration Institute
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASNT	American Society for Non-Destructive Testing
ASQ	American Society for Quality
ASSE	American Society of Safety Engineers
ASTM	American Society for Testing and Materials
AWCI	Association of the Wall and Ceiling Industry
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BAAQMD	Bay Area Air Quality Management District
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association
CBMA	Certified Ballast Manufacturers Association
CDA	Copper Development Association
CEMA	Conveyor Equipment Manufacturers Association
CGA	Compressed Gas Association
CISCA	Ceilings and Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CMAA	Crane Manufacturers Association of America
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
DIN	Deutsches Institut für Normung eV (German Institute for Standardization)
DIPRA	Ductile Iron Pipe Research Association
EJCDC	Engineers Joint Contract Documents Committee
EJMA	Expansion Joint Manufacturers Association, Inc.
ETL	Intertek Testing Services, Inc. (formerly ETL Testing Laboratories, Inc.)
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM	Factory Mutual (FM Global)
FRPI	Fiberglass Reinforced Plastics Institute
FS	Federal Specification
GA	Gypsum Association
GANA	Glass Association of North America
HEW	United States Department of Health, Education and Welfare
HI	Hydraulic Institute

HMI	Hoist Manufacturers Institute
HUD	United States Department of Housing and Urban Development
IBC	International Building Code
ICC	International Code Council
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronics Engineers
IESNA	Illuminating Engineering Society of North America
IFI	Industrial Fasteners Institute
IRI	Industrial Risk Insurers
ISA	Instrumentation, Systems, and Automation Society (formerly Instrument Society of America)
ISO	Insurance Services Office
ISO	International Organization for Standardization
LPI	Lightning Protection Institute
MIA	Marble Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MS	Military Specifications
MSS	Manufacturers' Standardization Society
MMA	Monorail Manufacturers Association
NAAMM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NAPF	National Association of Pipe Fabricators, Inc.
NARUC	National Association of Regulatory Utilities Commissioners
NBHA	National Builders Hardware Association
NBS	United States Department of Commerce, National Bureau of Standards
NCMA	National Concrete Masonry Association
NEC	National Electric Code
NELMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NETA	International Electrical Testing Association
NIOSH	National Institute of Occupational Safety and Health
NFPA	National Fire Protection Association
NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NHPMA	Northern Hardwood and Pine Manufacturers Association
NIST	United States Department of Commerce, National Institute of Standards and Technology
NLGA	National Lumber Grades Authority
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	National Sanitation Foundation
NSSGA	National Stone, Sand, and Gravel Association
NTMA	National Terrazzo and Mosaic Association
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health

OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PEI	Porcelain Enamel Institute
PFI	Pipe Fabrication Institute
PPI	Plastics Pipe Institute
PGMC	Primary Glass Manufacturers Council
PS	Product Standards Section, United States Department of Commerce
RCSC	Research Council on Structural Connections (part of AISC)
RMA	Rubber Manufacturers Association
SAE	Society of Automotive Engineers
SCAQMD	Southern California Air Quality Management District
SCPRF	Structural Clay Products Research Foundation
SCTE	Society of Cable Telecommunications Engineers
SDI	Steel Deck Institute
SDI	Steel Door Institute
SIGMA	Sealed Insulating Glass Manufacturing Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
SPI	Society of the Plastics Industry
SPIB	Southern Pine Inspection Bureau
SSPC	Society for Protective Coatings
SWI	Steel Window Institute
TCNA	Tile Council of North America
TEMA	Tubular Exchanger Manufacturers Association
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
UL	Underwriters Laboratories, Inc.
USAB	United States Access Board
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
USGBC	United States Green Building Council
USGS	United States Geological Survey
USPHS	United States Public Health Service
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Window Covering Manufacturers Association
WCMA	Wood Component Manufacturers Association
WDMA	Window and Door Manufacturers Association
WEF	Water Environment Federation
WWEMA	Water and Wastewater Equipment Manufacturers Association
WWPA	Western Wood Products Association

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 45 29

TESTING LABORATORY SERVICES FURNISHED BY CONTRACTOR

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This section includes requirements for sampling services furnished by the CONTRACTOR for sampling, analysis, and reporting, or as provided in the supplementary conditions.
 2. CONTRACTOR shall employ and pay for services of independent testing laboratory to perform specified services.
 3. Inspection, sampling, and testing shall be as specified in the Specifications including but not limited to:
 - a. Soil sampling and chemical analysis for waste characterization and profiling.
 - b. Soil sampling for physical testing as needed.
 - c. Confirmation soil sampling (upon completion of stages of excavation).
 - d. Post-excavation soil sampling (at completion of all excavation)
 - e. Treated water (effluent) sampling.
 - f. Decontamination water and subgrade beneath the decontamination pad.
 - g. All other wastes generated during the work that require characterization or confirmation sampling and analysis.
 3. CONTRACTOR shall pay for:
 - a. Tests not specifically indicated in the Contract Documents as being DEPARTMENT's or ENGINEER's responsibility.
 - b. Tests made for CONTRACTOR's convenience.
 - c. Repeat tests required because of CONTRACTOR's negligence or defective Work and retesting after failure of test for the same item to comply with the Contract Documents.
 4. Testing laboratory is not authorized to approve or accept any portion of the Work or defective Work; rescind, alter, or augment requirements of Contract Documents; and perform duties of CONTRACTOR.

1.2 REFERENCES

- A. Standards referenced in this Section are:
1. New York State Analytical Services Protocol (ASP).
 2. NYSDEC Technical Guidance for Site Investigation and Remediation DER-10, Appendix 2-B.

1.3 QUALITY ASSURANCE

A. Qualifications:

1. Testing Laboratory:
 - a. Comply with applicable requirements of New York State Department of Environmental Conservation, DER-10 Technical Guidance for Site Investigation and Remediation (May 2010).
 - b. Testing laboratory shall be NYSDOH Environmental Lab Accreditation Program (ELAP) certified.

1.4 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Sampling Plan and Quality Assurance Project Plan (QAPP) Submittals: The sampling Plan shall include the following:
 - a. A chart and/or map indicating the approximate number of samples to be collected and the matrices of each, including anticipated quality assurance/quality control (QA/QC) samples.
 - b. Procedures for sample collection.
 - c. Description of sampling equipment and maintenance procedures for the equipment.
 - d. Procedures for decontamination of sampling equipment.
 - e. Sample handling, labeling and regulatory compliance procedures for shipping.
 - f. Training requirements for environmental sampling for new employees and refresher training requirements for current employees.
2. The QAPP shall be project specific and include the following:
 - a. Organizational chart, including a designated QA Officer.
 - b. Data quality objectives for the Site.
 - c. A chart reflecting types of samples, approximate number of samples, matrices, holding times, analytical protocols and anticipated QA/QC samples to be collected or analyzed.
 - d. Specific limits of concern for each analyte for each matrix to be sampled.
 - e. The matrix specific method detection limit that must be obtained for each of the analytes and matrices listed.
 - f. The analytical laboratory to be used and evidence of their certification for all subcategories of solid and hazardous waste, including contract laboratory program (CLP) metals, under the NYSDOH ELAP CLP.
 - g. Criteria for laboratory selection and audits.
 - h. Criteria for field sampling audits.
 - i. Record maintenance and archive methods.
 - j. Review and checking procedures for the sampling plan and the analytical results reporting.
 - k. Copy of the QA Officer's resume and training certificates. QA Officer must be proficient in analytical methodology, data interpretation and

validation, quality control procedures and auditing techniques. The QA Officer shall interface with laboratory and data validator to make requests and/or resolve issues specific to data usability.

3. Test Reports: Testing laboratory shall promptly submit to CONTRACTOR results of testing and inspections, including:
 - a. Date issued.
 - b. Project title, number, and name of the Site.
 - c. Testing laboratory name and address.
 - d. Name and signature of inspector or person obtaining samples.
 - e. Date of inspection or sampling.
 - f. Record of temperature and weather conditions.
 - g. Date of test.
 - h. Identification of material or item tested, and associated Specifications Section.
 - i. Location in the Project.
 - j. Type of inspection or test.
 - k. Results of tests and observations regarding compliance with this section and supplementary sections, as applicable.
 - l. Category B deliverables for the reporting of deliverables package as per Volume 1 of the NYSDEC ASP.
 - m. Electronic deliverables shall conform to DER-10, Appendix 2B requirements.
4. Qualifications Statements:
 - a. Testing Laboratory:
 - 1) NYSDOH ELAP certification – Analytical Laboratories.
 - 2) Statement of Qualifications – Geotechnical Laboratories.

1.5 TESTING LABORATORY DUTIES

- A. Testing laboratory shall:
 1. Complete analytical services in compliance with NYSDOH ELAP certification and NYSDEC ASP Protocol.
 2. Perform required inspections, sampling, and testing of materials and methods of construction; comply with applicable reference standards and the Contract Documents; and ascertain compliance with requirements of the Contract Documents.
 3. Promptly notify ENGINEER and CONTRACTOR of irregularities or deficiencies in the Work that are observed during performance of services.
 4. Promptly submit to CONTRACTOR reports of inspections and tests.
 5. Perform additional tests and services, as required by CONTRACTOR.
 6. Data deliverables shall conform to Guidance for Data Deliverables, DER-10 Appendix 2-B.

1.6 CONTRACTOR'S RESPONSIBILITIES

A. CONTRACTOR shall:

1. Cooperate with testing laboratory personnel.
2. Provide to testing laboratory preliminary representative samples of materials and items to be tested, in required quantities.
3. Promptly submit to ENGINEER results of tests and inspections received from testing laboratory.
4. Furnish to laboratory the preliminary design mix proposed for concrete and other material mixes to be tested by testing laboratory.
5. Provide labor and facilities:
 - a. For access to the Work to be tested, and where required, to Suppliers' operations.
 - b. For obtaining and handling samples at the Site.
 - c. For facilitating inspections and tests.
 - d. For testing laboratory's exclusive use for storing and curing of test samples.
 - e. Forms for preparing concrete test beams and cylinders.
6. Notify laboratory and ENGINEER sufficiently in advance of operations to allow assignment of personnel and scheduling of tests.
7. Arrange with laboratory and pay for additional services, sampling, and testing required for CONTRACTOR's convenience.
8. Confirm that analytical data deliverables conform to DER-10, Appendix 2B prior to submittal to the ENGINEER for review.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 51 05

TEMPORARY UTILITIES AND CONTROLS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all temporary utilities and temporary facilities required for the Project, including, but not limited to the following:
 - a. Access roads and staging areas.
 - b. Temporary field offices.
 - c. Sanitary facilities.
 - d. Sediment and erosion controls.
 - e. Tree protection.
 - f. Decontamination facilities.
 - g. Air monitoring stations.
 - h. Electricity and internet.
 - i. Lighting.
 - j. Telephone and communications.
 - k. Heating, cooling, ventilating, and temporary enclosures.
 - l. Water.
 - m. Fire protection.
 - n. Temporary fences and gates.
2. Make all arrangements with utility owners for temporary utilities and with others as appropriate for temporary facilities. Obtain required permits and approvals for temporary utilities and temporary facilities.
3. Pay all service costs for utilities and facilities indicated in this Section as CONTRACTOR's responsibility, including cost of electricity, internet service, water, fuel, and other utility services and temporary facilities required for the Work.
4. At minimum, provide and maintain temporary utilities and temporary facilities through Substantial Completion unless otherwise approved in writing by ENGINEER.
5. Maintain, including cleaning, temporary utilities and temporary facilities, and continuously provide consumables (i.e., potable water, soap, paper towels, toilet paper, etc.) as required.
6. Temporary utilities and temporary facilities shall be adequate for personnel using the Site and the needs of the Project.
7. Provide temporary utilities and temporary facilities in compliance with Laws and Regulations and, when applicable, requirements of utility owners.

1.2 REQUIREMENTS FOR TEMPORARY UTILITIES AND TEMPORARY FACILITIES

A. Electrical

1. Provide temporary electrical service required for the Work, including continuous power for temporary field offices and sheds, and operation of dewatering and treatment equipment. Provide temporary outlets with circuit breaker protection and ground fault protection.
2. Provide written plan for electrical service including approved service requests and work orders; as applicable.
3. Provide materials that comply with applicable NEMA, NECA, and UL standards and governing regulations of temporary electrical services.
4. Provide grounded extension cords with waterproof connectors. Use "hard service" cords where there is exposure to abrasion and traffic. All electrical equipment, wiring, conduits, etc. shall be permitted, installed and maintained in accordance with applicable codes by a properly licensed electrician.
5. Provide hard-wired, temporary power supply to within 50-feet of equipment to be powered. Under no circumstances shall CONTRACTOR run temporary extension cords more than 50-feet (a single extension cord - connecting multiple extension cords together is prohibited).
6. Provide general service lamps and guard cages or tempered glass enclosures where lamp is exposed to breakage by the Work. Use liquid-tight enclosures or boxes for the devices.
7. The CONTRACTOR shall provide a weatherproof, grounded temporary electrical power service and distribution system of sufficient size, capacity, and power characteristics to accommodate performance of the Work.
8. Install overload protection and disconnect switches for each temporary circuit at the power source.
9. Install all cable or extension cords in the Work area in such a manner that visual surveillance is easily accomplished.

B. Lighting

1. All lighting shall be Light-Emitting Diode (LED) type fixtures.
2. Provide lighting at the Site of not less than five foot-candles (LED equivalent) for open areas and not less than ten foot-candles (LED equivalent) for stairs and shops. Provide not less than one, 300-watt (LED equivalent) lamp every 15 feet in indoor work areas. Provide night security lighting of not less than five foot-candles (LED equivalent) within 50 feet of all parts of the Site during hours of darkness, controlled by photocell.
3. Do not work in areas with insufficient lighting. Where lighting is insufficient for the Work activities to be performed, provide additional temporary lighting.
4. Provide temporary lighting sufficient for observation of the Work by ENGINEER and inspection by CONTRACTOR and authorities having jurisdiction. Where required by ENGINEER, provide additional temporary lighting.

5. Provide temporary lighting for ENGINEER's field office in accordance with Section 01 52 11, Engineer's Field Office.
- C. Telephone and Communications
1. Provide temporary telephone and communications required for CONTRACTOR's operations at the Site and for summoning emergency medical assistance.
 2. Provide temporary telephone and communications for ENGINEER's field office in accordance with Section 01 52 11, Engineer's Field Office.
- D. Heating, Ventilating, and Enclosures
1. Provide sufficient temporary heating, cooling, ventilating, and enclosures to ensure safe working conditions and prevent damage to existing facilities and the Work.
 2. Maintain temperature of areas occupied by ENGINEER and DEPARTMENT's personnel and of areas used for storage of electronic equipment, including offices, lunchrooms, locker rooms, toilet rooms, and rooms containing computers, microprocessors, and control equipment, between 65 degrees F and 74 degrees F with relative humidity less than 55 percent.
 4. Required temperature range for storage areas and certain elements of the Work, including preparation of materials and surfaces, installation or application, and curing as applicable, shall be in accordance with the Supplemental Specifications and on the Contract Drawings for the associated Work and/or the Supplier's recommended temperature range for storage, application, or installation, as appropriate.
 5. Provide temporary ventilation sufficient to prevent accumulation in construction areas and areas occupied by ENGINEER and DEPARTMENT of hazardous and nuisance levels or concentrations of dust and particulates, mist, fumes or vapors, odors, and gases, associated with construction.
 6. Provide temporary enclosures and partitions required to maintain required temperature and humidity.
 7. Provide temporary heating, ventilating, and cooling for ENGINEER's field office in accordance with Section 01 52 11, Engineer's Field Office.
- E. Water
1. General:
 - a. Provide temporary water facilities including piping, valves, and other mechanical conduit and fittings to connect to the temporary water supply. Provide freeze-protection as required.
 - b. Continuously maintain adequate water flow and pressure for all purposes during the Project, until removal of temporary water systems.
 - c. All water delivered to and used at the Site shall be from a potable water source. CONTRACTOR shall obtain ENGINEER's approval of water source prior to delivery or use at the Site.
 2. Water for Construction Purposes:
 - a. Provide water for Site maintenance and cleaning and, water necessary for

construction activities, and water for disinfecting and testing of systems.

3. Water for Human Consumption and Sanitation:
 - a. Provide potable water in accordance with NYSDOH Laws and Regulations for consumption by personnel at the Site, for field offices, and for sanitary facilities.
 - b. When necessary, provide bottled, potable water for use and consumption by personnel at the Site, including CONTRACTOR, ENGINEER, and visitors to the Site.
 - c. Provide temporary water for ENGINEER's field office in accordance with Section 01 52 11, Engineer's Field Office.
 - d. Provide separate sanitary facilities for males and females.

F. Fire Protection

1. Provide temporary fire protection, including portable fire extinguishers rated not less than 2A or 5B in accordance with NFPA 10, Portable Fire Extinguishers, for each temporary building and for every 3,000 square feet of floor area under construction.
2. Provide Class A (ordinary combustibles), Class B (combustible liquids and gases), and Class C (electrical equipment) fire extinguishers as appropriate.
3. Comply with NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations, and requirements of fire marshals and authorities having jurisdiction at the Site.

G. Staging Area

1. Staging areas (if required) shall be located on the Site in areas (exclusion zone) approved by the ENGINEER in order to minimize possible cross contamination.
2. The staging areas for waste materials shall have a lined bottom with a minimum 40-mil sealed, HDPE watertight liner or 20-mil pre-seamed LLDPE liner, as approved by the ENGINEER. Remove the liners when the staging area is no longer needed and dispose off-Site.
3. Waste materials shall be covered at all times with a minimum 10-mil polyethylene liner, or thicker if so specified elsewhere. The polyethylene liner shall be a sealed, watertight liner to prevent contaminated runoff. Remove the liners when the staging area is no longer needed and dispose off-Site.
4. CONTRACTOR shall be responsible for all decontamination, sampling, testing, characterization, profiling, removal and processing for disposal of staging area liners and covers, and other waste generated.
5. All staging areas shall be constructed to prevent the spread of any contamination to the surrounding soils, surfaces, and/or groundwater.
6. Water spray or equivalent shall be utilized as necessary to prevent dust generation. Monitoring shall be provided to ensure that unacceptable levels of dust generated from the movement and handling of soil do not migrate from the work area.
7. Shop Drawings of all staging areas shall be submitted by the CONTRACTOR to the ENGINEER for review and approval prior to the start of Work.

8. Clean soil staging areas: Can be located outside the exclusion zone over non-remedial areas and erosion controls shall be maintained at the perimeter of piles. Long-term storage of piles shall require additional stabilization measures, as directed by the ENGINEER or required in the Supplemental Specifications and on the Contract Drawings.
 9. Materials staging area: provide and maintain material staging areas as needed in locations indicated on the CONTRACTOR's work Site layout, and as approved by the ENGINEER.
- H. Decontamination Trailer and Personal Hygiene Facility
1. A separate trailer for personnel decontamination shall be provided. The equipment and fixtures specified below shall be provided:
 - a. Shower facilities with at least one shower for every six on-Site personnel. Separate showers shall be provided for men and women.
 - b. Locker room with one locker for each employee.
 - c. A room where all personnel safety equipment and protective clothing can be stored.
 - d. Boot rack for wash boots to drain.
 - e. Toilet facilities in accordance with OSHA and local health authorities.
 - f. Sanitary waste holding tank and piping from the decontamination facility and Site offices.
 2. All equipment and fixtures shall be maintained in clean condition. No storage of any equipment will be allowed in the decontamination trailer. The installation shall be in accordance with the SSHASP.
 3. Shop drawing of the trailer and facilities shall be submitted by the CONTRACTOR to the ENGINEER for review and approval.
- I. Temporary (Work Zone) Fencing
1. Work Zone Fencing, unless otherwise detailed in the Supplemental Specifications and on the Contract Drawings, provide a temporary, secure four-foot high, high strength polyethylene orange plastic fence around the operations and work areas to control access. Fence posts shall be a minimum of five-feet in total length and shall adequately support the fence and prevent leaning. Fence posts shall be set a maximum 10 feet apart.
 2. Perimeter Fencing, unless otherwise detailed in the Supplemental Specifications and on the Contract Drawings, shall consist of temporary or driven post fence panels a minimum of six feet in height. Privacy screening shall be provided.
- J. Water Control
1. Comply with procedures outlined in the NYSDEC Stormwater Management Design Manual.
- K. Pollution Control
1. Maintain work areas on and off-Site free from further environmental pollution that would be in violation of any federal, state, or local regulations.

2. Minimize air pollution by wetting down bare soils with clean water, requiring use of properly operating combustion emission control devices on construction vehicles and equipment used by CONTRACTORS, and encouraging shutdown of motorized equipment not actually in use.
3. Any emissions during Site activities that may have an adverse health effect on workers or the community shall be suppressed to the extent possible.
4. Chemicals used, whether herbicide, pesticide, disinfectant, polymer, reactant, or other classification, must be approved by either the DEPARTMENT or any other applicable regulatory agency and the ENGINEER and be used in a manner as their original purpose was intended.
5. Use of such chemicals and disposal of residues shall be in conformance with manufacturers' instructions, as well as applicable laws and regulations.
6. Use of chemicals must be approved in advance by the ENGINEER.
7. Disposal of volatile fluid wastes (such as mineral spirits, oil, or paint thinner) in storm or sanitary sewer system or into streams or waterways is not permitted.
8. Volatile wastes generated will be handled as hazardous wastes and reported to NYSDEC.
9. The CONTRACTOR shall provide that the generated project hazardous waste (if any) and any existing hazard waste to be removed under this Project shall be transported, manifested, and disposed in accordance with the current regulations.
10. More specific requirements are given in other sections of this document.

L. Traffic Control

1. The CONTRACTOR shall maintain all on-Site temporary roads necessary for performance of the Work. Temporary access roads shall be repaired as necessary to insure unimpeded daily operations. This shall include at a minimum, routine grading and repairs to areas subject to settling resulting from Site-related traffic.
2. Use of off-road vehicles in lieu of constructed access roads is not permitted.
3. Park vehicles in areas designated and approved in the Work Plan.
4. Keep the designated parking areas clear of dirt and debris resulting from the Work.

M. Rubbish Control (Noncontaminated)

1. Clean up the debris resulting from the Work at the end of each day and leave work areas broom clean. Locate containers where directed.
2. Remove debris from the Site at least once a week or more often if it presents a fire hazard or becomes excessive. Burning of waste material will not be permitted.
3. Containers shall have secure tops.

N. Protection of Natural Resources

1. General:

- a. Preserve the natural resources within the Project Site that are not specified for removal or change or in accordance with supplementary permit conditions.
 - b. Preserve the natural resources outside the Project Site impacted by the Work.
 - c. Conform to federal, state and local permitting requirements.
 - d. Restore disturbed resources to an equivalent or improved condition upon completion of Work.
 - e. Vehicles, equipment and machinery delivered or used at the Site that have visible oil or hydraulic leaks will not be allowed on-Site. Clean up any oil or hydraulic fluid spills immediately.
- 2. Land Resources
 - a. Except in areas specified to be cleared, do not remove, cut, deface, injure, or destroy existing vegetation.
 - b. Protect vegetation, that is to remain, from damage by construction operations.
 - c. Vegetation, intended to remain, that is scarred or damaged by construction operations shall be removed and replaced with equivalent undamaged vegetation.
 - d. Removal of scarred or damaged vegetation shall be in accordance with the specifications.
 - e. Trees or shrubs with 30 percent or more of their root systems damaged shall require removal and replacement.
 - f. Replacement vegetation shall be approved by the ENGINEER before replacement.
- 3. Water Resources
 - a. Prevent oily or hazardous substances from entering the ground, drainage areas, or local bodies of water.
 - b. Provide secondary containment of temporary fuel oil, petroleum, or hazardous substance storage tanks of sufficient size and strength to contain the contents of the tanks.
- 4. Fish and Wildlife Resources
 - a. Do not alter or significantly disturb water flows on or adjacent to the Project Site, except as indicated or specified.
 - b. Do not alter or significantly disturb native habitat on or adjacent to the Project Site, except as indicated or specified.
 - c. Conformance with supplementary permit conditions, as applicable.
- O. Noise, Vibration and Dust Control
 - 1. Conduct operations in compliance with applicable local noise ordinance.
 - 2. Dust shall be controlled in compliance with approved CONTRACTOR's Vapor Control Emissions Plan, Community Air Monitoring Plan, and Site-Specific Health and Safety Plan (SSHASP), or otherwise directed by the DEPARTMENT.

3. Equip compressors, hoists, and other apparatus with such mechanical devices as may be necessary to minimize noise, vibration and dust. Equip compressors with silencers on intake lines.
4. Equip gasoline or oil-operated equipment with silencers or mufflers on intake and exhaust lines.
5. Provide unpaved roads, detours, or haul roads used in construction areas with water treatment to minimize dust. No visible dust, as determined by the ENGINEER, will be permitted beyond the limits of the work area.
6. CONTRACTOR is responsible for providing all sound barriers needed to meet the requirements of these specifications. CONTRACTOR is responsible for all costs related to the manufacturer's representatives or consultants (contractors) who specialize in addressing such problems.
7. Control noise levels associated with Site operations in accordance with local noise ordinances.
8. Measure noise levels in decibels with a sound level meter conforming to the American National Standard Specification.
9. Measurements shall be made at Site perimeter.
10. Measurements shall be continuous during the first week of construction activities. Additional measurements may be directed by the ENGINEER throughout the course of the Project.
11. Measurements shall be documented and reported to the ENGINEER.
12. CONTRACTOR shall take appropriate measures to bring the noise under control at no additional cost to the DEPARTMENT.
13. Comply with DER-10, Appendix 1A.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for temporary utilities and temporary facilities may be new or used but shall be adequate for purposes intended and shall not create unsafe conditions and shall comply with Laws and Regulations.
- B. Provide required materials, equipment, and facilities, including piping, cabling, controls, and appurtenances.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install temporary utilities and temporary facilities in neat, orderly, manner, and in accordance with the DEPARTMENT-approved plan.
- B. Location of Temporary Utilities and Temporary Facilities:

1. Locate temporary systems for proper function and service.
 2. Temporary systems shall not interfere with or cause hazards or nuisances to: the Work under this and other contracts, movement of personnel, traffic areas, materials handling, hoisting systems, storage areas, finishes, and work of DEPARTMENT and others.
 3. Do not install temporary utilities on the ground, with the exception of temporary extension cords, hoses, and similar systems in place for short durations.
- C. Modify and extend temporary systems as required by progress of the Work.

3.2 USE

- A. Maintain temporary systems to provide safe, continuous service as required.
- B. Properly supervise operation of temporary systems:
1. Enforce compliance with Laws and Regulations.
 2. Enforce safe practices.
 3. Prevent abuse of services.
 4. Prevent nuisances and hazards caused by temporary systems and their use.
 5. Prevent damage to finishes.
 6. Ensure that temporary systems and equipment do not interrupt continuous progress of construction.
- C. At end of each workday check temporary systems and verify that sufficient consumables are available to maintain operation until Work is resumed at the Site. Provide additional consumables if the supply on hand is insufficient.

3.3 REMOVAL

- A. Completely remove temporary utilities, temporary facilities, equipment, and materials when no longer required. Repair damage caused by temporary systems and their removal and restore the Site to condition required by the Contract Documents; if restoration of damaged areas is not specified, restore to preconstruction condition.
- B. Where temporary utilities are disconnected from existing utility, provide suitable, watertight or gastight (as applicable) cap or blind flange, as applicable, on service line, in accordance with requirements of utility owner.
- C. Where permanent utilities and systems were used for temporary utilities, upon Substantial Completion replace all consumables such as filters and light bulbs and parts used during the Work.

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SECTION 01 52 11

ENGINEER'S FIELD OFFICE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This Section includes requirements for CONTRACTOR-provided field office, with furnishings, equipment, and consumables, for use by ENGINEER.
 2. CONTRACTOR shall provide and maintain field office for ENGINEER's sole use. Provide field office at location approved by ENGINEER, near CONTRACTOR's field office.
 3. Field office shall be complete and fully functional within 10 days after date on which the Contract Time commences or ENGINEER approved mobilization date, unless the schedule is otherwise modified in accordance with the General Conditions.
 4. Obtain required permits for field offices, as applicable.

1.2 SUBMITTALS

- A. Action Submittals: Obtain ENGINEER's approval of the following prior to staging field office to the Site:
1. Field Office Submittal: Submit the following under one submittal cover:
 - a. Site plan indicating proposed location of field office, parking for field office, facilities related to the field office, and material of both field office parking and sidewalk or walkway to field office.
 - b. Information on proposed field office size, construction, exterior appearance, interior finishes, and field office security measures.
 - c. Proposed layout of field office interior, showing location of offices, common areas, restroom, closet, other areas specified (if any), with dimensions indicated for each.
 - d. Proposed layout of field office exterior identifying sign, showing all text, font, colors, and graphics (if any).
 - e. Proposed type of Internet service; name of proposed Internet service provider; and product data and technical information on equipment (if any) required for Internet service.
 - f. Office Equipment: Product data and technical information for copier, telephones, and other office equipment.

PART 2 – PRODUCTS

2.1 FIELD OFFICE CONSTRUCTION AND SITE REQUIREMENTS

- A. Site at Field Office:
1. Allocate total of four reserved parking spaces for use by ENGINEER and DEPARTMENT in close proximity to ENGINEER's field office. Parking area shall be paved with crushed stone, or other material approved by ENGINEER. Parking area shall be suitably drained and free of standing water during wet weather.
 2. Provide walkway, not less than four feet wide, of crushed stone, or other material approved by ENGINEER, for the full distance between parking area and field office.
- B. Field Office, Minimum Construction: Field office shall comply with the following:
1. Structurally sound foundation and superstructure.
 2. Size: Floor area of not less than 430 square feet, and not less than 10 feet wide.
 3. Completely weather-tight and insulated, with minimum R-19 insulation.
 4. Exterior finish approved by ENGINEER.
 5. New interior finishes approved by ENGINEER, including resilient floor covering in good condition.
 6. Field Office Ingress and Egress:
 - a. Two doors for ingress and egress for each field office unit, each with landing, stairs, and railing complying with building codes and other Laws and Regulations in effect at the Site.
 - b. Landing and stairs shall have slip-resistant walking surfaces, and be metal, pressure-treated wood, fiberglass, or concrete.
 - c. Railing shall be metal, wood, or fiberglass.
 - d. Door Security:
 - 1) Doors shall be secure and lockable.
 - 2) Furnish each door with suitable, lockable security bar. Security bar shall be Master Lock 265DCCSEN Dual-Function Security Bar, or equal.
 7. Windows:
 - a. Window area equal to not less than ten percent of floor area.
 - b. Windows shall each have insect screen and operable sash.
 - c. Provide each window with lock and exterior security bars approved by ENGINEER.
 8. One lockable closet for storage.
 9. Keys:
 - a. Furnish to ENGINEER two identical sets of keys suitable for operating all keyed locks, including ingress/egress door locks, security bars for doors, window locks, closets, and office furnishings.
 - b. Permanently label each key to indicate its associated lock.

10. Restroom:
 - a. Provide in field office one private restroom including one lavatory, one toilet, medicine cabinet with mirror, soap dispenser, and paper towel holder.
 - b. Provide each restroom with appropriate electric ventilation fan with positive discharge to location outside the field office.
 - c. Portable units and hand washing stations may be provided, as equivalent, as approved by the ENGINEER.
 11. Exterior Sign:
 - a. Field office identifying exterior sign, approved by ENGINEER. Sign shall be durable, weatherproof, suitable for long-term exposure to sunlight.
 - b. Exterior sign shall be not less than 1.5 feet high by four feet wide, installed at location determined in field and acceptable to ENGINEER.
 - c. Sign shall be in color, as presented in the layout below.
 - d. Sign layout and general proportions shall be as presented below. Text of first line and last line shall be Arial. Text size and size of graphic shall be proportionate to the graphic below. ENGINEER will furnish graphic as JPG file for use by CONTRACTOR in preparing the sign.
- C. Field Office Optional Construction:
1. Provide mobile office trailer in first-class condition approved by ENGINEER, specifically designed for use as construction field office and complying with requirements of this Section.
 2. Provide skirting around perimeter of each mobile field office trailer.
 3. Supplier: Provide field office by one of the following:
 - a. Pac-Van, Inc.
 - b. Modular Space Corporation (ModSpace).
 - c. Williams Scotsman, Inc.
 - d. Or equal.

2.2 FIELD OFFICE UTILITIES

- A. Comply with Section 01 51 05, Temporary Utilities and Controls.
- B. Provide the following for the ENGINEER's field office:
1. Electrical System and Lighting:
 - a. Electric service as required, including paying all costs. Provide electrical submeter if electrical service is obtained from DEPARTMENT's system.
 - b. Interior lighting of not less than 50 foot-candles at desktop height.
 - c. Minimum of eight 120-volt, wall-mounted, duplex convenience electrical receptacles.
 - d. Exterior, wall-mounted lighting at each entrance to field office, not less than 250 watts each.
 - e. Exterior security light for ENGINEER's field office parking area. Provide one 1000-watt, pole-mounted fixture with photocell control.

2. Heating, Ventilating, and Air Conditioning System:
 - a. Provide automatic heating to maintain indoor temperature in field office of not less than 65 degrees F in cold weather. Furnish all fuel and pay all utility costs.
 - b. Automatic cooling to maintain indoor temperature in field office of not warmer than 74 degrees F in warm weather.
3. Water and Sewerage:
 - a. Provide potable water service for each plumbing fixture associated with field office.
 - b. Provide sanitary sewerage for each lavatory/sink and toilet.
 - c. Utility Connections – General:
 - 1) Comply with Laws and Regulations, including plumbing and sewer codes, and requirements of authorities having jurisdiction.
 - 2) Protect plumbing from freezing.
 - d. Potable Water Service: Provide the following:
 - 1) Type K copper waterline from potable water main to each plumbing fixture.
 - 2) Reduced pressure zone (RPZ)-type backflow preventer in accordance with Laws and Regulations and requirements of authorities having jurisdiction.
 - 3) Provide 15-gallon electric hot water tank or tankless hot water heater, and hot water piping to serve each lavatory/sink in field office.
 - 4) Not less than one exterior hose bib, with not less than 50 feet of hose, located adjacent to field office sidewalk or walkway, near field office ingress/egress doors. Provide wall-mounted hose reel or hose caddy.
 - 5) Before placing potable water system into service, disinfect piping and appurtenances in accordance with Laws and Regulations.
 - e. Sanitary Sewerage:
 - 1) Provide PVC or other appropriate piping, arranged in accordance with Laws and Regulations, to convey wastewater from field office to sanitary sewer that discharges to a permitted wastewater treatment facility, or to holding tank provided by CONTRACTOR.
 - 2) When holding tank is provided, also provide pumping and disposal of holding tank contents at appropriate, regular intervals.
4. Telephone Service:
 - a. Land Lines (not used or required)
 - b. Cellular Telephones and Service: ENGINEER will provide cellular telephones and service for ENGINEER's employees assigned to the field office. CONTRACTOR will provide cellular telephones and service for CONTRACTOR's employees.
5. Internet Access:
 - a. Obtain and pay for Internet service until removal of the field office, with unlimited (untimed) Internet access, for ENGINEER's sole use.
 - b. Set up system and appurtenances required and verify functionality in the field office.

- c. Internet service shall be one of the following, listed in order of preference; provide a lower type of access only when the next-higher level is unavailable:
 - 1) Fiber-optic or Cable Provider Service:
 - a) Provide service via communication service provider via either cable or fiber-optic service at download speed of not less than 15 megabytes per second (Mbps) and upload speed of not less than 1 Mbps.
 - b) Provide appropriate modem, cabling, and appurtenances.
 - 2) DSL:
 - a) Provide service via symmetrical digital subscriber line with download speed of not less than 1.5 Mbps and upload speed of not less than 384 kilobits per second (Kbps).
 - b) Provide dedicated telephone line for Internet access.
 - c) Provide DSL filters on each non-DSL outlet in the field office telephone system.
 - 3) Mobile Broadband Wireless:
 - a) Provide mobile broadband wireless 4G network by AT&T, Verizon, Sprint, T-Mobile, or equal, with download speed of not less than 37 Mbps and upload speed of not less than 17 Mbps.
 - b) Provide mobile broadband wireless router. Product and Manufacturer: Linksys Wireless-G Router for Mobile Broadband, or equal.
 - c) Mobile broadband air-card for field office. Product and Manufacturer: Sierra Wireless 597E, Novatel Merlin EX720, or equal.
 - d) Router and air-card will remain CONTRACTOR's property upon removal of field office from the Site.
 - 4) Satellite:
 - a) Provide 4G network service with download speed of not less than 12 Mbps.
 - b) Provide required equipment, including outdoor unit (dish) and indoor satellite modem equipment, together with required cabling.
 - c) Provide telephone modem in computer, together with telephone line and service, for file uploading.

- C. Should actions of utility companies delay the complete set up of field office, CONTRACTOR shall provide temporary electricity, heat, water supply, sanitary facilities, and telephone service as required at no additional cost to DEPARTMENT.

2.3 FURNISHINGS AND EQUIPMENT

- A. Provide the following furnishings and equipment:

1. Desks: Two 5-drawer desks, each with desktop surface five feet long by 2.5 feet wide with not less than one file drawer per desk, suitable for storing 8.5-inch by 11-inch documents.
2. Desk Chairs: Two new or used (in good condition) five-point, high backed, cushioned swivel chairs with seat-height adjustment.
3. Other Chairs: Four side chairs with arm rests and padded seats and backs, and eight metal folding chairs without arm rests.
4. One new or used (in good condition) folding table eight feet long by 2.5 feet wide.
5. One new or used (in good condition) folding table four feet long by 2.5 feet wide.
6. Two polyethylene waste baskets, each with capacity of not less than seven gallons.
7. Suitable doormat at each exterior ingress/egress door.
8. One cork tack-board 2.5 feet by three feet, with thumbtacks.
9. One white board for use with dry markers, approximately six feet by four feet, with marker holding tray, installed by CONTRACTOR at location directed by ENGINEER in the field office. Furnish supply of colored markers and eraser for the white board.
10. Safety Equipment: Provide the following:
 - a. Fire extinguishers with associated signage.
 - b. Smoke detector with supply of batteries.
 - c. Carbon monoxide detector with power supply.
 - d. Provide in accordance with Laws and Regulations. For each field office structure, provide not less than two wall-mounted fire extinguishers, one battery-operated ceiling-mounted smoke detector, and one carbon monoxide detector suitably installed.
11. First-Aid Station:
 - a. In addition to first-aid stations otherwise required by the Contract Documents, provide for ENGINEER's sole use a first-aid station in ENGINEER's field office.
 - b. Product and Manufacturer: Zee Medical USA, Item 0152, "Medium Four-Shelf Plastic Cabinet", www.zeemedical.com; or equal.
12. Weather Monitoring Station:
 - a. Monitoring Capability: System shall measure: wind speed, wind direction, outdoor temperature, wind chill, time, date, indoor temperature, and rainfall.
 - b. Manufacturer and Product:
 - 1) Weather Monitoring Station: Provide Peet Bros. ULTIMETER 100; or equal.
 - 2) Rain Gauge: Provide Peet Bros. ULTIMETER PRO Rain Gauge, or equal.
 - c. Sensors:
 - 1) Cable-mounted sensors installed outdoors. Wireless systems are unacceptable.

- 2) Vane-type wind sensor equipped with 40-foot cable, accurate to wind speeds as low as 1.5 mph.
- 3) Temperature sensor, installed in the shade, equipped with 25-foot cable.
- 4) Provide rain gauge for monitoring rainfall/precipitation, with 40-foot cable. Rain gauge shall be suitable for use in winter weather and accurate to 0.01-inch.
- 5) Sensors and cabling shall be compatible with the weather monitoring recording/display unit.
- 6) Install sensors at appropriate locations, agreed upon at the Site with ENGINEER, for optimal monitoring of weather. Provide required poles and mounting brackets as required for installation of sensors.
- d. Recording/Display Unit: Unit shall have keyboard and data display, featuring maximums and minimums of all data monitored, displayed and stored in-unit for the following periods: current day, each of the previous seven days, and long-term. Display and record time and date for each recorded maximum and minimum. Individually-resettable memories and master-reset capability to clear all memory.
- e. Appurtenances:
 - 1) Provide data logging capability to allow data to be transmitted to and displayed on personal computer in ENGINEER's field office. Provide data relay capability to transmit data to such computer.
 - 2) Provide required appurtenances including junction boxes, 120-volt power supply with transformer, all required cords and cabling, and mounting brackets and hardware.
- f. Provide all items and Work necessary for a fully-operational unit with properly-functioning capability as specified.
13. Personal Protective Equipment for Visitors: Furnish the following:
 - a. Protective Helmets (Hard Hats): Four, each with full brim, of fiberglass or thermoplastic; each with ratchet suspension; white in color.
 - b. Safety Glasses: Four, each with clear lenses, polycarbonate, anti-fog and anti-scratch coating, suitable to fit over personal eyewear.
 - c. Reflective Safety Vest: Four, each of polyester mesh or other material acceptable to ENGINEER, color to be high-visibility orange, with one-inch-wide reflective tape, one-size-fits-all design.
 - d. Earplugs: Supply of foam, disposable earplugs. Promptly resupply when stock is depleted.
14. One electric clock.
15. One electric coffee maker, with ten-cup capacity or larger.
16. Bottled water with electric cooler dispenser for five-gallon bottles, with cup dispenser.
17. Multi-function Copier:
 - a. One new or used (in good condition) machine with the following functions: photocopying, network printing, scanning to produce PDF and JPG files, and e-mail.
 - b. Products and Manufacturers: Provide one of the following:

- 1) Xerox WorkCentre 5845.
 - 2) Or equal.
 - c. Minimum Memory: 2 GB.
 - d. Ten-bin sort capacity, 8.5-inch by 11-inch, 8.5-inch by 14-inch, and 11-inch by 17-inch paper capacity, enlarging and reducing capabilities, stream-feed capability, bypass feeder, stapling capability, and double-sided copying capability. Copier shall produce not less than 40 copies per minute.
 - e. Provide necessary cables and appurtenances to enable all functions specified in this Section, including scan-and-email and printing from field office computers. Furnish services of manufacturer's representative to set up and service copier.
18. Kitchen Area Appliances: Provide the following in the field office kitchen area:
- a. One new, frost-free, refrigerator-freezer, with capacity of not less than six cubic feet.
 - b. One new microwave oven, not less than 1.2 cubic foot size.
 - c. Kitchen area appliances will remain property of CONTRACTOR upon removal of field office.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install field office and related facilities in accordance with Laws and Regulations.
- B. Install materials and equipment, including prefabricated structures, in accordance with manufacturer's instructions, and to provide optimal performance and accuracy.

3.2 CLEANING, MAINTENANCE, AND SUPPLIES

- A. Furnish the following maintenance services:
 - 1. Immediately repair malfunctioning, damaged, leaking, or defective field office structure, Site improvements, systems, and equipment.
 - 2. Provide computer supplies and pay for maintenance of CONTRACTOR-furnished computer system and copier.
 - 3. Promptly provide snow and ice removal for ENGINEER's field office, including parking area, walkways, and stairs and landings.
 - 4. Provide continuous maintenance and janitorial service of field office and sanitary facilities. Clean field office not less than once per week. Sweep or vacuum field office not less than daily, or more-frequently when Site conditions are such that dirt or mud is frequently tracked into field office. Clean and wax (as appropriate) flooring every six months.
 - 5. Waste Disposal:
 - a. Properly dispose of trash and waste as needed, not less than twice per week.

- b. Properly handle and dispose of recyclables. Do not dispose of recyclables as trash.
 - c. Dispose of other waste, if any, as required, to avoid creation of nuisances and adverse environmental effects. Properly dispose of electronic waste, when necessary, at proper waste receiving facility.
- B. Consumables: Provide the following consumables as needed:
 - 1. Toner and ink cartridges for printers and copier, as required.
 - 2. Paper supplies for printer and copier. Always maintain in field office not less than one ream of each size of paper for which printer and copier are capable.
 - 3. Dry markers in six colors and white board eraser set. Replace markers when exhausted or lost.
 - 4. Bottled water suitable for water dispenser and disposable cups.
 - 5. Coffee supplies, including coffee, filters, cups, sugar, creamer, and stir-sticks.
 - 6. Hand-soap, paper towels, toilet paper, cleansers, and janitorial implements, including broom.
 - 7. Batteries for smoke detector and other battery-powered items furnished by CONTRACTOR.
 - 8. Replace fire extinguishers upon expiration.
 - 9. Not less-often than monthly, inspect first-aid kit and inventory items consumed or used and remove items that are at or near their expiration date. Promptly replace and restock consumed and expired items.

3.3 REMOVAL

- A. Remove field office and furnishings when directed by ENGINEER, prior to inspection for final completion. Deliver specified equipment to DEPARTMENT.

+ + END OF SECTION + +

SECTION 01 52 13

CONTRACTOR'S FIELD OFFICE AND SHEDS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. CONTRACTOR shall provide a temporary field office for CONTRACTOR's use with not less than the minimum facilities specified in the Contract Documents.
 - 2. Provide required temporary storage and work sheds, as applicable.
 - 3. Obtain and pay for required permits and utilities. Field offices and sheds shall comply with local ordinances unless otherwise modified in the Supplementary Conditions.
- B. Coordination:
 - 1. Coordinate with DEPARTMENT and ENGINEER use of the Site including the location of field offices and sheds.
- C. Location:
 - 1. Locate field offices and sheds in accordance with the Contract Documents and in accordance with the approved submittals.
- D. Furnish in CONTRACTOR's field office one complete set of the Contract Documents for ready reference by interested persons. In addition to the reference set, comply with Section 01 78 39, Project Record Documents and related provisions of the General Conditions, as may be modified by the Supplementary Conditions.

PART 2 – PRODUCTS

2.1 FIELD OFFICE AND SHEDS – FURNISHINGS, AND EQUIPMENT

- A. Contractor's Field Office and Furnishings:
 - 1. Construction: As required by CONTRACTOR and sufficient for Project meetings.
 - 2. Utilities and Services: Provide the following:
 - a. Telephone service, capable of group teleconference
 - b. Computer network and related facilities as required for CONTRACTOR's needs.
 - c. Utilities and related facilities for lighting and maintaining temperature, in accordance with Section 01 52 11, Engineer's Field Office.
 - 3. Furnishings:

- a. Conference Facilities: Provide conference area with conference table and chairs sufficient for 10 people. Conference facilities and furnishings shall be provided with suitable utilities, lighting, ventilation, and temperature controls prior to the first progress meeting, unless otherwise approved by ENGINEER.
 - b. Other furnishings required by CONTRACTOR.
 - 4. Provide on field office's exterior an identification sign displaying CONTRACTOR's company name and emergency contact number. Maximum size of sign shall be four feet by four feet. Sign shall be suitable for outdoor use for the duration of the Project.
 - 5. Furnish and maintain at CONTRACTOR's field office four (4) sets of protective helmets ('hard hats'), safety glasses, and hi-visibility vests for use by visitors to the Site (these sets are in addition to the sets furnished for ENGINEER's field office).
- B. Contractor's Storage and Work Sheds:
- 1. Provide storage and work sheds sized, furnished, and equipped to accommodate personnel, materials, and equipment involved in the Work, including temporary utility services and facilities required for environmental controls sufficient for personnel, materials, and equipment.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Installation:
- 1. Install CONTRACTOR's temporary field offices, sheds, and related facilities in accordance with Laws and Regulations.
 - 2. Install materials and equipment, including prefabricated structures, in accordance with manufacturer's instructions.

3.2 MAINTENANCE AND REMOVAL

- A. Maintenance:
- 1. Clean and maintain field offices and sheds as required.
 - 2. Provide consumables as required.
- B. Removal:
- 1. Do not remove temporary field offices and sheds until after Substantial Completion of the entire Work, unless otherwise approved by ENGINEER.
 - 2. Remove field offices and sheds and restore areas prior to final inspection.

+ + END OF SECTION + +

SECTION 01 55 13

ACCESS ROADS AND PARKING AREAS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. CONTRACTOR shall provide temporary construction roads, walks, parking areas, and appurtenances required during the Project for use by CONTRACTOR, ENGINEER, DEPARTMENT, and emergency vehicles.
 - 2. Temporary roads and parking areas shall be designed and maintained by CONTRACTOR and shall be fully passable to all on-road vehicles in all weather conditions.
- B. Use of Existing Access Roads:
 - 1. CONTRACTOR is allowed to use DEPARTMENT's existing roads starting on the Effective Date of the Contract and satisfying other Contract requirements relative to starting the Work.
 - 2. Prevent interference with traffic on existing roads and parking areas. Always keep access roads and entrances serving the Site clear and available to DEPARTMENT and their respective employees; emergency vehicles; and other contractors. Do not use access roads or Site entrances for parking or storage of materials or equipment.
 - 3. CONTRACTOR shall indemnify and hold harmless DEPARTMENT and ENGINEER from expenses and losses caused by CONTRACTOR's operations over existing roads, drives, and parking areas.
 - 4. Schedule deliveries to minimize use of driveways and Site entrances.
 - 5. CONTRACTOR shall upgrade and maintain existing access roads in accordance with the requirements of this section. All existing access roads will be left in place following construction.

1.2 SITE ACCESS

- A. Site Access:
 - 1. CONTRACTOR access to the Site shall be as shown on the drawings.

1.3 CONTRACTOR PARKING

- A. CONTRACTOR employee vehicles shall park in area(s) as shown on the drawings.
- B. Park construction vehicles and equipment in work areas off of permanent roads and parking areas, in areas of the Site designated for CONTRACTOR staging.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Materials for temporary roads and parking areas shall comply with the Contract Documents requirements for permanent roads, drives, and parking areas.
- B. Traffic controls shall comply with requirements of authorities having jurisdiction. When such authority is the DEPARTMENT or facility manager, and no requirements are indicated, comply with the standard specifications of the New York State Department of Transportation (NYSDOT).

PART 3 – EXECUTION

3.1 TEMPORARY ROADS AND PARKING AREAS

- A. Temporary Roads and Parking in Areas Different from Permanent Pavement:
 - 1. Provide temporary roads and parking areas adequate to support and withstand traffic loads during the Project. Locate temporary roads and parking areas in accordance with the DEPARTMENT-approved shop drawings.
 - 2. Provide reasonably-level, graded, well-drained subgrade of satisfactory soil material, compacted to not less than 95 percent of maximum dry density in the upper six inches.
 - 3. Where required to support loads and provide separation between subgrade and subbase materials, provide geosynthetic separation fabric as required.
 - 4. Subbase:
 - a. Provide crushed stone subbase material not less than six inches thick, roller-compacted to a level, smooth, dense surface.
 - b. Subbase for temporary roads and areas traveled by construction vehicles shall be adequate for loads and traffic served.
- B. Temporary Roads and Parking in Same Areas as Permanent Pavement:
 - 1. Provide temporary roads and parking areas adequate to support and withstand traffic and construction loads during the Project. Locate temporary roads and parking areas in same location as permanent roads and parking areas. Extend temporary roads and parking areas, within construction limits indicated, as required for construction operations.
 - 2. Coordinate elevations of temporary roads and parking areas with permanent roads and parking areas.
 - 3. Prepare subgrade, subbase, and base for temporary roads and parking areas in accordance with the Contract Documents requirements for permanent roads, drives, and parking areas.

4. Where required by subgrade conditions and construction loads and traffic, provide geosynthetic separation fabric as required on compacted subgrade for subbase support and separation of subbase and subgrade materials.
5. Re-condition granular subbase of temporary roads and parking areas, including removing and properly disposing of granular material that has become intermixed with soil, re-grading, proof-rolling, compacting, and testing.

3.2 TRAFFIC CONTROLS

A. Traffic Controls:

1. Provide temporary traffic controls at intersections of temporary roads with each other and with parking areas, including intersections with other temporary roads, intersections with public roads, and intersections with permanent access roads at the Site.
2. Provide temporary warning signs on permanent roads and drives and provide temporary “STOP” and “TRUCKS ENTERING” signs for traffic on temporary roads where required and at entrances to public roadways.
3. Comply with requirements of authorities having jurisdiction. When such authority is the DEPARTMENT, and no requirements are indicated, comply with the standard specifications of the NYSDOT.

3.3 MAINTENANCE OF ROADS

A. General:

1. Maintain temporary roads and parking to continuously provide at the Site access for construction vehicles and trucks, DEPARTMENT and facility manager vehicles, deliveries for DEPARTMENT and facility manager, emergency vehicles, and parking areas for DEPARTMENT’s and facility manager’s personnel.
2. Public roads shall be passable at all times unless a road closure is allowed in writing by authority having jurisdiction.
3. When granular material of temporary roads and parking without hard surfacing become intermixed with soil or when temporary roads otherwise create a nuisance, remove intermixed granular-and-soil material and replace with clean granular material as required.
4. Provide snow and ice removal for roads and parking areas.

B. Cleaning and Dust Control:

1. Cleaning: Clean paved surfaces over which construction vehicles travel.
2. Clean the following surfaces:
 - a. Roads within limits of the Project.
 - b. Permanent roads at the Site between the Site entrance and the work areas, and between the Site entrance and construction parking and staging areas.
 - c. Public roads that require sweeping and cleaning due to construction operations.

3. Dust Control:
 - a. Control dust resulting from construction activities to prevent nuisances at the Site and in nearby areas.
- C. Protection of Underground Facilities: Comply with the General Conditions, as may be modified by the Supplementary Conditions, and other requirements of the Contract Documents.

3.4 REMOVALS AND RESTORATION

- A. Removals:
 1. Remove temporary roads, drives, walks, and parking areas that are not intended for, or acceptable for, integration into permanent pavement. Return areas of temporary roads, drives, walks, and parking to pre-construction condition unless otherwise required by the Contract Documents or directed by the ENGINEER.
 2. Remove temporary gates, fencing, and traffic controls associated with temporary roads and parking areas.
 3. Where areas of temporary roads and parking will be permanently landscaped, remove pavement, granular subbase, geosynthetic (where required by ENGINEER), soil, and other materials that do not comply with the Contract Documents regarding fill, subsoil, and landscaping.
 4. Remove and properly dispose of materials contaminated with oil, bitumen, and other petrochemical compounds resulting from CONTRACTOR's operations, and other substances that might impair growth of plants and lawns.
- B. Restoration:
 1. Repair or replace paving, curbs, gutters, and sidewalks affected by temporary roads and parking, and restore to required conditions as directed by the ENGINEER and in accordance with authorities having jurisdiction.
 2. Restore to pre-construction conditions existing roads, walks, and parking areas damaged by CONTRACTOR, subject to approval of the DEPARTMENT of affected roads, drives, walks, and parking areas.

+ + END OF SECTION + +

SECTION 01 57 33

SECURITY

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes general requirements for security at the Site, including accessing the Site, securing the Work, temporary fencing, and other requirements.
2. CONTRACTOR shall safely guard all the Work, the Project, materials, equipment, and property from loss, theft, damage, and vandalism until Substantial Completion, unless otherwise agreed upon by the parties.
3. CONTRACTOR's duty includes safely guarding DEPARTMENT's property in vicinity of the Work and Project, and other private property in the vicinity of the Project from injury and loss in connection with performance of the Project.
4. Employ watchmen as required to provide required security and prevent unauthorized entry.
5. Costs for security required under this Section shall be paid by CONTRACTOR.
6. Make no claim against DEPARTMENT for damage resulting from trespass.
7. Remedy damage to property of DEPARTMENT and others arising from failure to furnish adequate security.
8. Provide temporary fencing in accordance with the Contract Documents.
9. The CONTRACTOR is solely responsible for the security of the ENGINEER's and CONTRACTOR's work areas, equipment, materials, and supplies provided under this Contract. Furthermore, CONTRACTOR is responsible for ensuring Site visitors related to this Contract are escorted as necessary (to get where they are going) and do not enter contaminated areas without authorization.
10. If the CONTRACTOR furnishes an uniformed watchman or other security personnel, the CONTRACTOR shall provide that person(s) with accommodations separate from the DEPARTMENT and ENGINEER. The ENGINEER will have the right of approval and rejection of the CONTRACTOR's security personnel.

1.2 SUBMITTALS

A. Action Submittals: Submit the following:

1. Shop Drawings:

- a. Temporary Fencing: Submit Site plan drawings showing proposed locations and extent of temporary Site security fencing and each breach therein.
 - 2. Product Data:
 - a. Temporary Fencing: Manufacturer's literature, specifications, and installation instructions for temporary Site security fencing proposed.
 - 3. Qualifications:
 - a. Submit security firm experience and personnel resumes.
 - 4. Routine Submittals:
 - a. Submit monthly security logs.
 - b. Submit three copies of all Site entrance/exit logs and the watchman logs as part of the Project record documents.
- B. Informational Submittals: Submit the following:
- 1. Employee Information: Submit to DEPARTMENT, as applicable under the supplementary conditions:
 - a. Format of employee background data.
 - b. Background data for employees to whom identification badges will be furnished.
 - c. Updated listing of personnel to whom identification badges have been issued. Submit updated listing within 24 hours of a change in the list or change in an employee's Site access status.

1.3 CONTRACTOR'S SITE ACCESS AND SECURITY PROCEDURES

- A. Comply with Section 01 55 13, Access Roads and Parking Areas.
- B. Comply with DEPARTMENT's security procedures and access restrictions at the Site throughout the Project. Comply with the following:
 - 1. Personnel Identification:
 - a. All CONTRACTOR personnel, including Subcontractors, Suppliers, and others associated with the Project shall wear, at a visible location, at all times at the Site a durable, waterproof badge bearing CONTRACTOR's name, employer (if other than CONTRACTOR), employee's name and, as applicable, employee number.
 - 2. General Provisions Regarding Personnel Identification, as applicable under the Supplementary Conditions:
 - a. Prerequisites to Issuance of Personnel Identification Badges:
 - 1) Do not issue personnel identification badge until the person receiving the badge is documented by CONTRACTOR as:
 - a) Being eligible to perform work in the jurisdiction where the Project is located.
 - b) Has received all required safety instructions, training, and equipment.

- c) Is known to CONTRACTOR as being qualified to perform the Work to which the person will be assigned.
- b. Listing of Personnel to Whom Badges are Issued:
 - 1) Maintain and continuously update a listing or log of all personnel to whom personnel identification badges have been issued.
 - 2) Listing or log shall indicate each person's full name, home address, personal telephone number, employer name, and employer address and telephone number.
 - 3) Submit copy of listing to DEPARTMENT in accordance with Article 1.2 of this Section.
- 3. Parking:
 - a. Do not park outside of designated CONTRACTOR parking area.
 - b. Prepare and maintain parking area as required.

PART 2 – PRODUCTS

2.1 TEMPORARY FENCING

- A. When security fencing, gates or barriers are breached or temporarily removed for the Project, provide and maintain temporary security fencing equal to existing, unless otherwise specified, in manner satisfactory to ENGINEER and DEPARTMENT.

PART 3 – EXECUTION

3.1 TEMPORARY FENCING

- A. Installation:
 - 1. Provide temporary fencing for Site security so that integrity of Site security is maintained throughout the Project.
 - 2. Install temporary fencing used for Site security in accordance with the Contract Documents, Section 01 51 05, Temporary Utilities and Controls and fence manufacturer's instructions.
- B. Maintenance:
 - 1. Maintain temporary fencing throughout the Project.
 - 2. Repair damage to temporary fencing and replace fencing when required to preserve Site security.
- C. Removal:
 - 1. Remove temporary fencing when permanent Site security fencing is in place and fully functional, or when otherwise directed or ENGINEER.

3.2 LOGS

- A. Site Entrance/Exit Log:
 - 1. Log shall contain signed entry and exit record for Project personnel and visitors.
 - 2. Log shall record time of entry and exit and firm of the individual.
- B. Watchman Log/Activities:
 - 1. Log shall record all security checks performed by security personnel and shall contain date and time, problem notes and CONTRACTOR personnel notified of problems. Allow inspection of log by ENGINEER or DEPARTMENT.
 - 2. Conduct three security checks during non-working hours.
- C. Site Access/Control:
 - 1. The CONTRACTOR shall be responsible for the control of all persons and vehicles entering and leaving the Project Site, and shall:
 - a. Require personnel to print full name and employer and sign in on entering the Project Site and to sign out when leaving and maintain the logs.
 - b. Maintain a log of Project-related vehicles and equipment entering and leaving the work areas.
 - c. Persons not associated with the Project will require the ENGINEER's acceptance to be admitted on-Site.
 - d. Maintain a log of visitors, separate from the Project personnel log.
 - 2. A log of all security incidents shall be maintained and furnished to the ENGINEER upon request.
 - 3. The CONTRACTOR shall ensure that all warning signs are in place and temporary fences around work areas are closed and any breaks or gaps are attended immediately. The ENGINEER shall be informed immediately of any incident of vandalism in the work areas.
 - 4. The CONTRACTOR shall contact law enforcement officials, emergency medical care units, local fire departments and utility emergency teams to ascertain the type of response required in any emergency situation and to coordinate the responses of the various units. A standard operating procedure describing security force response to foreseeable contingencies shall be developed. The CONTRACTOR shall also prepare and update a list of emergency points of contact, telephone numbers, radio frequencies, and call signs to ensure dependable responses.
 - 5. The CONTRACTOR shall maintain a current list of authorized persons and shall submit copies of the updated list to the ENGINEER.

+ + END OF SECTION + +

SECTION 01 58 00

PROJECT IDENTIFICATION AND SIGNS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall furnish, install, and maintain temporary signage for Project identification and construction site information.
2. Temporary signs required are indicated in Part 2 of this Section.
3. Do not display any other temporary signs, other than those specified, without the prior approved of DEPARTMENT.

1.2 QUALITY ASSURANCE

A. Qualifications:

1. Sign Painter:
 - a. Shall be a professional in the type of Work required, regularly engaged in work similar to that required.

1.3 SUBMITTALS

A. Action Submittals: Submit the following:

1. Shop Drawings:
 - a. Layout of each sign (sign proof), indicating layout, text, font, character size, graphics (if any), type and grade of materials, including sign materials, supports, and bracing.
2. Product Data:
 - a. Specifications and product data for finishes proposed for use, when requested by ENGINEER.
3. Samples: Submit color Samples when requested by ENGINEER.

PART 2 – PRODUCTS

2.1 MATERIALS AND CONSTRUCTION

A. Performance Criteria:

1. Temporary signs, including supports and bracing, shall withstand sustained winds of 75 miles per hour.

B. Temporary Signage Required: Provide the following temporary signs:

1. Project Sign: as further defined in the project sign guidance attachment.

PART 3 – EXECUTION

3.1 INSTALLATION, MAINTENANCE, AND REMOVAL

A. Installation:

1. Location of signs shall be as shown or indicated on the Contract Documents, or as directed by ENGINEER. Signs shall be plainly visible to vehicular traffic.
2. Install signs in a neat, professional, workmanlike manner to withstand the performance criteria indicated in this Section.
3. Install signs within two weeks of Mobilization to the site.
4. Fasten sign, in a level position, securely to posts or fenceline. The center of the sign should be located approximately 6 to 7 feet from ground level.

B. Maintenance:

1. Maintain temporary signage so that signs are clean, legible, and upright.
2. Cut grass, weeds, and other plants so that temporary signs are not covered or obscured.
3. Repair and repaint damaged temporary signs.
4. Relocate signs as required by progress of the Project.

C. Remove temporary signage prior to final inspection of the Work, or when directed by ENGINEER.

Sign Requirements

Sign Size: Horizontal format – 96” wide by 48” high

Construction

Materials: Aluminum or wood blank sign boards with vinyl sheeting.

Content: “New York State DEC logo”, “STATE SUPERFUND PROGRAM”, “{Site Name}”, “{Site No.}”, “New York State Department of Environmental Conservation”, “Governor {First Name, Middle Initial, Last Name}”, “For More Information: derweb@dec.ny.gov”.

Text and

Color Scheme: New York State DEC Logo (PM to provide .eps file or equivalent)
Green text (PANTONE 350C or CMYK 100/43/83/42)

STATE SUPERFUND PROGRAM (ALL CAPS)
Green text (PANTONE 350C or CMYK 100/43/83/42)

{Site Name}
Blue text (PANTONE 288C or CMYK 100/87/27/19)

Site No. {Site Number}
Blue text (PANTONE 288C or CMYK 100/87/27/19)

New York State Department of Environmental Conservation
Green text (PANTONE 350C or CMYK 100/43/83/42)

Governor {First Name, Middle Initial, Last Name}
Black text (PANTONE Black 6 C or CMYK 100/61/32/96)

For More Information: derweb@dec.ny.gov
Blue text (PANTONE 288C or CMYK 100/87/27/19)

Type

Specifications: All Font is: Ariel
Format is: Center each line of copy with initial caps and small letters

Production

Notes: 96” wide x 48” high aluminum blanks will be covered with vinyl sheeting to achieve background color. Copy and logo will be silk screened on this surface.

Sign Format: See following page.

Project Sign Format

8'	
	Department of Environmental Conservation
<small>Logo (use eps or jpg file) Green Text (See Key) White Background</small>	
STATE SUPERFUND PROGRAM	
{Site Name}	
Site No. {#####}	
New York State Department of Environmental Conservation	
Governor {First Name, Middle Initial, Last Name}	
For More Information: derweb@dec.ny.gov	

Color Key for Text:
 Green Text = Pantone 350C or CMYK 80/43/83/42
 Blue Text = Pantone 285C or CMYK 100/87/27/19
 Black Text = Pantone Black 6 C or CMYK 100/61/32/96

+ + END OF SECTION + +

SECTION 01 62 00

PRODUCT OPTIONS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. This Section includes:
 - a. CONTRACTOR's options for selecting materials and equipment.
 - b. Requirements for consideration of "or-equal" materials and equipment as further defined in the General Conditions.

1.2 PRODUCT OPTIONS

- A. For materials and equipment specified only by reference standard or description, without reference to Supplier, furnish materials and equipment complying with such standard, by a Supplier or from a source that complies with the Contract Documents.
- B. For materials and equipment specified by naming one or more items or Suppliers, furnish the named materials and equipment that comply with the Contract Documents, unless an "or-equal" or substitute item is approved by ENGINEER.
- C. For materials and equipment specified by naming one or more items or Suppliers and the term, "or-equal", when CONTRACTOR proposes a material or equipment item or Supplier as an "or-equal", submit to ENGINEER a request for approval of an "or-equal" item or Supplier.

1.3 "OR-EQUAL" ITEMS

- A. Procedure:
 - 1. For proposed materials and equipment not named in the Contract Documents and considered as an "or-equal" in accordance with the General Conditions, CONTRACTOR shall request in writing ENGINEER's approval of the "or-equal".
 - 2. Request for approval of an "or-equal" item shall accompany the Shop Drawing or product data submittal for the proposed item
- B. Requests for approval of "or-equals" shall include:
 - 1. CONTRACTOR's written request that the proposed item be considered as an "or-equal" in accordance with the General Conditions, accompanied by CONTRACTOR's certifications required in the General Conditions.
 - 2. Documentation adequate to demonstrate to ENGINEER that proposed item does not require extensive revisions to the Contract Documents, that proposed

item is consistent with the Contract Documents, and that proposed item will produce results and performance required in the Contract Documents, and that proposed item is compatible with other portions of the Work.

3. Detailed comparison of significant qualities of proposed item with the materials and equipment and manufacturers named in the Contract Documents. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements shown or indicated.
4. Evidence that proposed item's manufacturer will furnish warranty equal to or better than that specified, if any.
5. List of similar installations for completed projects with project names and addresses, and names and address of design professionals and owners, when requested.
6. Samples, when requested by ENGINEER.
7. Other information requested by ENGINEER.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 65 00

PRODUCT DELIVERY REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This Section includes general requirements for preparing for shipping, delivering, and handling materials and equipment to be incorporated into the Work.
 2. CONTRACTOR shall make all arrangements for transporting, delivering, and handling of materials and equipment required for execution and completion of the Work.
 3. When required, move stored materials and equipment without changes to the Contract Price or Contract Times.

1.2 SUBMITTALS

- A. Refer to individual Specifications Sections for submittal requirements relative to delivering and handling materials and equipment.

1.3 PREPARING FOR SHIPMENT

- A. When practical, factory-assemble materials and equipment. Mark or tag separate parts and assemblies to facilitate field-assembly. Cover machined and unpainted parts that may be damaged by the elements or climate with strippable, protective coating.
- B. Package materials and equipment to facilitate handling, and protect materials and equipment from damage during shipping, handling, and storage. Mark or tag outside of each package and crate to indicate the associated purchase order number, bill of lading number, contents by name, DEPARTMENT's Contract Designation, CONTRACTOR name, equipment number, and approximate weight. Include complete packing lists and bills of materials with each shipment.
- C. Protect materials and equipment from exposure to the elements and damage by climate and keep thoroughly dry and dust-free at all times. Protect painted surfaces against impact, abrasion, discoloration, and other damage. Lubricate bearings and other items requiring lubrication in accordance with manufacturer's instructions.

- D. Do not ship materials and equipment until:
1. Related Shop Drawings, Samples, and other submittals required by the Contract Documents have been approved or accepted (as applicable) by ENGINEER, including, but not necessarily limited to, all Action Submittals associated with the materials and equipment being delivered.
 2. Manufacturer's instructions for handling, storing, and installing the associated materials and equipment have been submitted to and accepted by ENGINEER in accordance with the Specifications.
 3. Results of source quality control testing (factory testing), when required by the Contract Documents for the associated materials or equipment, have been submitted to and accepted by ENGINEER.
 4. Facilities required for handling materials and equipment in accordance with the Contract Documents and manufacturer's instructions are in place and available.
 5. Required storage facilities have been provided.

1.4 DELIVERY

- A. Scheduling and Timing of Deliveries:
1. Arrange deliveries of materials and equipment in accordance with the Progress Schedule accepted by ENGINEER and in ample time to facilitate inspection and observation prior to installation.
 2. Schedule deliveries to minimize space required for and duration of storage of materials and equipment at the Site or other delivery location, as applicable.
 3. Coordinate deliveries to avoid conflicting with the Work and conditions at Site, and to accommodate the following:
 - a. Work of other contractors and DEPARTMENT.
 - b. Storage space limitations.
 - c. Availability of equipment and personnel for handling materials and equipment.
 - d. DEPARTMENT's use of premises.
 4. Deliver materials and equipment to the Site during regular working hours.
 5. Deliver materials and equipment to avoid delaying the Work and the Project, including work of other contractors, as applicable.
- B. Deliveries:
1. Shipments shall be delivered with CONTRACTOR's name, Subcontractor's name (if applicable), Site name, Project name, and contract designation clearly marked.
 2. Site may be listed as the "ship to" or "delivery" address; but DEPARTMENT shall not be listed as recipient of shipment unless otherwise directed in writing by ENGINEER.
 3. Provide CONTRACTOR's telephone number to shipper; do not provide DEPARTMENT's telephone number.

4. Arrange for deliveries while CONTRACTOR's personnel are at the Site. CONTRACTOR shall receive and coordinate shipments upon delivery. Shipments delivered to the Site when CONTRACTOR is not present will be refused by DEPARTMENT, and CONTRACTOR shall be responsible for the associated delays and additional costs, if incurred.
 5. Comply with Section 01 35 43.13, Environmental Procedures for Hazardous Materials.
- C. Containers and Marking:
1. Have materials and equipment delivered in manufacturer's original, unopened, labeled containers.
 2. Clearly mark partial deliveries of component parts of materials and equipment to identify materials and equipment, to allow easy accumulation of parts, and to facilitate assembly.
- D. Inspection of Deliveries:
1. Immediately upon delivery, inspect shipment to verify that:
 - a. Materials and equipment comply with the Contract Documents and approved or accepted (as applicable) submittals.
 - b. Quantities are correct.
 - c. Materials and equipment are undamaged and of the required quality.
 - d. Containers and packages are intact and labels are legible.
 - e. Materials and equipment are properly protected.
 2. Promptly remove damaged materials and equipment from the Site and expedite delivery of new, undamaged materials and equipment, and remedy incomplete or lost materials and equipment. Furnish materials and equipment in accordance with the Contract Documents, to avoid delaying progress of the Work.
 3. Advise ENGINEER in writing when damaged, incomplete, or defective materials and equipment are delivered, and advise ENGINEER of the associated impact on the Progress Schedule.

1.5 HANDLING OF MATERIALS AND EQUIPMENT

- A. Provide equipment and personnel necessary to handle materials and equipment, including those furnished by DEPARTMENT, by methods that prevent soiling or damaging materials and equipment and packaging.
- B. Provide additional protection during handling as necessary to prevent scraping, marring, and otherwise damaging materials and equipment and surrounding surfaces.
- C. Handle materials and equipment by methods that prevent bending and overstressing.
- D. Lift heavy components only at designated lifting points.

- E. Handle materials and equipment in safe manner and as recommended by the manufacturer to prevent damage. Do not drop, roll, or skid materials and equipment off delivery vehicles or at other times during handling. Hand-carry or use suitable handling equipment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 66 00

PRODUCT STORAGE AND HANDLING REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
 - 1. This Section includes general requirements for storing and protecting materials and equipment.
 - 2. CONTRACTOR shall provide all labor, materials, tools, equipment, and incidentals to store and handle materials and equipment to be incorporated into the Work, and other materials and equipment at the Site.

1.2 STORAGE

- A. Store and protect materials and equipment in accordance with manufacturer's recommendations and the Contract Documents.
- B. General:
 - 1. CONTRACTOR shall make all arrangements and provisions necessary for, and pay all costs for, storing materials and equipment.
 - 2. Excavated materials, construction equipment, and materials and equipment to be incorporated into the Work shall be placed to avoid injuring the Work and existing facilities and property, and so that free access is maintained at all times to all parts of the Work and to public utility installations in vicinity of the Work.
 - 3. Store materials and equipment neatly and compactly in locations that cause minimum inconvenience to DEPARTMENT, facility manager, other contractors, public travel, and tenants, and occupants of adjoining property.
 - 4. Arrange storage in manner to allow easy access for inspection by ENGINEER.
- C. Storage Location:
 - 1. Areas available at the Site for storing materials and equipment are shown or indicated in the Contract Documents, or as acceptable to ENGINEER.
 - 2. Restrictions:
 - a Do not store materials or equipment in structures being constructed unless approved by ENGINEER in writing.

- b. Do not use lawns or other private property for storage without written permission of the DEPARTMENT or other person in possession or control of such premises.

D. Protection of Stored Materials:

1. Store materials and equipment to become DEPARTMENT's property to ensure preservation of quality and fitness of the Work, including proper protection against damage by freezing, moisture, and with outdoor ambient air high temperatures as high as 120 degrees F; temperature and humidity inside crates, containers, storage sheds, and packaging may be significantly higher than the outdoor ambient air temperature.
2. Store in indoor, climate-controlled storage areas all materials and equipment subject to damage by moisture, humidity, heat, cold, and other elements, unless otherwise acceptable to DEPARTMENT.
3. When placing orders to Suppliers for equipment and controls containing computer chips, electronics, and solid-state devices, CONTRACTOR shall obtain, coordinate, and comply with specific temperature and humidity limitations on materials and equipment, because temperature inside cabinets and components stored in warm temperatures can approach 200 degrees F.
4. CONTRACTOR shall be fully responsible for loss or damage (including theft) to stored materials and equipment.
5. Do not open manufacturer's containers until time of installation, unless recommended by the manufacturer or otherwise specified in the Contract Documents.
6. Comply with requirements of Article 1.3 of this Section.

1.3 PROTECTION – GENERAL

- A. Equipment to be incorporated into the Work shall be boxed, crated, or otherwise completely enclosed and protected during shipping, handling, and storage, in accordance with Section 01 65 00, Product Delivery Requirements.
- B. Store all materials and equipment off the ground (or floor) on raised supports such as skids or pallets.
- C. Protect painted surfaces against impact, abrasion, discoloration, and other damage. Painted equipment surfaces that are damaged or marred shall be repainted in their entirety in accordance with equipment manufacturer and paint manufacturer requirements, to the satisfaction of ENGINEER.
- D. Protect electrical equipment, controls, and instrumentation against moisture, water damage, humidity, heat, cold, and dust. Space heaters provided in equipment shall be connected and operating at all times until equipment is placed in operation and permanently connected.

1.4 UNCOVERED STORAGE

- A. The following types of materials may be stored outdoors without cover on supports so there is no contact with the ground:
1. Reinforcing steel.
 2. Precast concrete materials.
 3. Structural steel.
 4. Metal accessories and castings.
 5. Fiberglass items.
 6. Rigid electrical conduit, except PVC-coated conduit.
 7. Piping, except PVC or chlorinated PVC (CPVC) pipe.

1.5 COVERED STORAGE

- A. The following materials and equipment may be stored outdoors on supports and completely covered with covering impervious to water:
1. Grout, Portland cement, solidification agents, and mortar materials.
 2. Masonry units.
 3. Rough lumber.
 4. Soil materials and granular materials such as aggregate.
 5. PVC and CPVC pipe.
 6. PVC-coated electrical conduit.
 7. Filter media.
- B. Tie down covers with rope and install covering properly sloped to prevent accumulation of water.
- C. Store loose granular materials, with covering impervious to water, in well-drained area or on solid surfaces to prevent mixing with foreign matter.

1.6 FULLY PROTECTED STORAGE

- A. Store all material and equipment not indicated in Articles 1.4 and 1.5 of this Section on supports in buildings or trailers that have concrete or wooden flooring, roof, and fully-closed walls on all sides. Covering with visquine plastic sheeting or similar material in space without floor, roof, and walls is unacceptable. Comply with the following:
1. Provide heated storage for materials and equipment that could be damaged by low temperatures or freezing.
 2. Provide air-conditioned storage for materials and equipment that could be damaged by high temperatures or humidity.
 3. Protect mechanical and electrical equipment from being contaminated by dust, dirt, and moisture.
 4. Maintain humidity at levels recommended by manufacturers for electrical and electronic equipment.

1.7 HAZARDOUS MATERIALS AND EQUIPMENT

- A. Prevent contamination of personnel, storage areas, and the Site. Comply with Laws and Regulations, manufacturer's instructions, Section 01 35 29, Contractor's Health and Safety Plan and Section 01 35 43.13, Environmental Procedures for Hazardous Materials, and other provisions of the Contract Documents.

1.8 MAINTENANCE OF STORAGE

- A. On a scheduled basis, periodically inspect stored materials and equipment to ensure that:
 - 1. Condition and status of storage facilities is adequate to provide required storage conditions.
 - 2. Required environmental conditions are maintained on continuing basis.
 - 3. Materials and equipment exposed to elements are not adversely affected.

1.9 RECORDS

- A. Keep up-to-date account of materials and equipment in storage to facilitate preparation of Applications for Payment, if the Contract Documents provide for payment for materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 71 23

FIELD ENGINEERING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes field engineering, surveying, and layouts by CONTRACTOR, and associated requirements. This Section supplements the Agreement and General Conditions provisions on reference points and other matters.
2. CONTRACTOR shall provide field engineering services, surveying and layout services, and professional services of the types indicated for the Project, including:
 - a. Furnishing civil, structural, and other delegated professional engineering services specified or required to execute CONTRACTOR's construction methods.
 - b. Developing and making all detail surveys and measurements required for construction; including slope stakes, batter boards, and all other working lines, elevations, and cut sheets.
 - c. Providing materials required for benchmarks, control points, batter boards, grade stakes, structure and pipeline elevation stakes, and other items.
 - d. Keeping a total station; survey grade global positioning system (GPS); leveling instrument; and related surveying equipment at the Site at all times and having a skilled instrument person available when necessary for laying out the Work.
 - e. Being solely responsible for all locations, dimensions and levels. No data other than Change Order, Work Change Directive, or Field Order shall justify departure from dimensions and levels required by the Contract Documents.
 - f. Rectifying all Work improperly installed because of not maintaining, not protecting, or removing without authorization established reference points, stakes, marks, and monuments.
 - g. Providing such facilities and assistance necessary for ENGINEER and/or DEPARTMENT to check lines and grade points placed by CONTRACTOR. Do not perform excavation or embankment work until all cross-sectioning necessary for determining payment quantities for Unit Price Work have been completed and accepted by ENGINEER.
 - h. All survey work shall be certified by a New York State Professional Land Surveyor (PLS).

- i. PLS shall also work with CONTRACTOR to develop a Quality Assurance program and necessary certification of GPS guided equipment to ensure accuracy. The use of GPS data from equipment will not replace the required record surveys.

B. Coordination:

1. Review requirements of this and other Sections and coordinate installation of items to be installed with or before field engineering, surveying, and layout Work.

1.2 SUBMITTALS

A. Informational Submittals: Submit the following:

1. Certificates:
 - a. When requested by ENGINEER, submit certificate signed by professional engineer or professional surveyor, as applicable, certifying that elevations and locations of the Work comply with the Contract Documents. Explain each deviation, if any.
2. Field Engineering:
 - a. Submit daily reports as indicated in this Section.
 - b. When requested by ENGINEER, submit documentation verifying accuracy of field engineering.
3. Surveying:
 - a. Complete plan for performing survey work, submitted not less than 10 days prior to beginning survey Work.
 - b. Example of survey data to be maintained by CONTRACTOR's surveyor. Example shall have sufficient information and detail, including example instrument output, calculations and notes.
 - c. Submit raw instrument data or field data within two days after completing survey Work.
 - d. Submit certified survey in accordance with this Section and other requirements of the Contract Documents.
4. Qualifications Statements:
 - a. Field Engineer: Name, employer, and professional address. When requested by ENGINEER, submit qualifications, including resume.
 - b. Surveyor: Name, employer, and professional address of firm, and resumes of each professional land surveyor and crew chief that will be engaged in survey Work. Submit not less than 10 days prior to beginning survey Work. During the Project, submit resume for each new registered, licensed land surveyor and crew chief employed by or retained by CONTRACTOR not less than 10 days prior to starting on the survey Work.

1.3 CONTRACTOR'S ENGINEERS

A. Qualifications of Field Engineer:

1. Employ and retain at the Site a field engineer with experience and capability of performing all field engineering tasks required of CONTRACTOR, as indicated in this Article and elsewhere in the Contract Documents.
2. CONTRACTOR's field engineer shall possess experience performing duties similar in scope and extent to those required of CONTRACTOR's field engineer on this Project. Qualifications of the CONTRACTOR's field engineer shall be subject to review and approval by the DEPARTMENT.

B. Responsibilities of CONTRACTOR's Field Engineer:

1. Daily Reports:
 - a. Prepare and maintaining daily reports of activity on the Contract. Submit reports to ENGINEER including the following information:
 - 1) Number of employees at the Site.
 - 2) Number employees at the Site for each Subcontractor.
 - 3) Breakdown of employees by trades.
 - 4) Major equipment and materials installed as part of the Work.
 - 5) Major construction equipment utilized.
 - 6) Location of areas in which construction was performed.
 - 7) Materials and equipment delivered to the Site or suitable, off-Site storage location.
 - 8) Work performed, including field quality control and testing.
 - 9) Materials and equipment removed from the Site, including quantity, date, and time.
 - 9) Weather conditions.
 - 10) Safety concerns, events, and precautions taken.
 - 11) Delays encountered, extent of delay incurred, reasons for the delay, and measures that will be taken to rectify delays encountered.
 - 12) Acknowledgement of specific instructions received from ENGINEER or DEPARTMENT.
 - b. Daily reports shall be signed and dated by responsible member of CONTRACTOR's staff, such as CONTRACTOR's project manager, field engineer, or superintendent, or foreman designated by CONTRACTOR as having authority to sign daily reports.
 - c. Submit CONTRACTOR's daily reports in accordance with Section 01 31 26, Electronic Communication Protocols, by 9:00 a.m. the next working day after the day covered in the associated report.
2. Continually inspect the Work to ensure that the quality and quantities required by the Contract Documents are provided.
3. Cooperate as required with ENGINEER in observing the Work and performing field inspections.

4. Check and coordinate the Work for conflicts and interferences, and immediately advise ENGINEER of all discrepancies of which CONTRACTOR is aware.
 5. Maintain field office files and drawings, record documents, and coordinate field engineering services with Subcontractors and Suppliers as appropriate, and other prime contractors (if any).
 6. Prepare layout and coordination drawings for construction operations.
 7. Review and coordinate the Work with Shop Drawings and CONTRACTOR's other submittals approved or accepted, as applicable, by ENGINEER.
- C. Professionals Retained by CONTRACTOR (whether or not stationed at the Site):
1. Delegated Professional Design Services:
 - a. Where the Contract Documents require CONTRACTOR to furnish professional engineering or architecture services as delegated professional design, the provisions of the General Conditions regarding delegated professional design services, and the Contract Documents requirements applicable to the specific delegated professional design, shall apply.
 2. Professional Services that are Not Delegated as Professional Design of the Completed Work:
 - a. Where the Contract Documents require that the CONTRACTOR retain a design professional to carry out the CONTRACTOR's responsibilities for construction means, methods, techniques, sequences and procedures (including temporary construction that will not remain as part of the completed Work), such services shall be performed by a registered professional of the discipline required for specific service on the Project, with valid license in the same jurisdiction as the Site.
 - b. DEPARTMENT and ENGINEER shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed by such design professionals.

1.4 CONTRACTOR'S SURVEYOR

- A. Qualifications:
1. Employ or retain the services, as needed, at the Site a surveyor with experience and capability of performing surveying and layout tasks required in the Contract Documents and as required for the Work. Surveyor qualifications will be subject to review and acceptance by the ENGINEER.
 2. Surveyor shall be a professional land surveyor registered and licensed in the State of New York.
- B. Responsibilities of Contractor's Surveyor:
1. Providing required surveying equipment, including transit, theodolite, or total station; level; stakes; and surveying accessories.

2. Establishing required lines and grades for constructing all facilities, structures, pipelines, and Site improvements, including outdoor electrical equipment and feeders.
3. Preparing and maintaining professional-quality, accurate, well-organized, legible notes of all measurements and calculations made while surveying and laying out the Work.
4. Prior to backfilling operations, survey, locate, and record on a copy of the Contract Documents accurate representation of buried Work and Underground Facilities provided and encountered.
5. Locate on a Site plan the actual location of above-ground Work to be indicated on record documents.
6. Complying with requirements of the Contract Documents relative to surveying and related Work, including requirements of this Section's Articles 1.5 and 3.1.
7. Prepare all surveys in AutoCAD format. Coordinate version with ENGINEER.

1.5 RECORDS

- A. Records – General:
 1. Maintain at the Site a complete and accurate log of control and survey Work as such Work progresses.
- B. Field Books and Records:
 1. Survey data and records shall be in accordance with recognized professional surveying standards, Laws and Regulations, and prevailing standards of practice in the locality where the Site is located.
- C. Initial Survey:
 1. Provide topographic survey of Site property and any CONTRACTOR use areas, property boundary survey and utilities prior to Site disturbance. Elevations shall be provided for all control points. Elevation contour interval shall be one foot.
 2. Compute the coordinates of each surveyed point on the New York State Plane Coordinate System using the 1983 North American Datum. The elevations shall be on the National Geodetic Vertical Datum.
- D. Site Control:
 1. Provide one permanent Site control monument with elevations referenced to a National Geodetic Vertical Datum (NGVD) benchmark and coordinates referenced to the New York State Plane (NAD 83) Datum. The monument locations and elevations shall meet the Federal Geodetic Control Committee Standard for second order (horizontal and vertical). Final locations will be reviewed by the ENGINEER for acceptability.

- E. Payment Surveys:
1. Surveys required for the verification of payment quantities shall be signed and sealed by the professional land surveyor.
 2. Compute the coordinates of each surveyed point on the New York State Plane Coordinate System using the 1983 North American Datum. The elevations shall be on the National Geodetic Vertical Datum.
- F. Certified Survey of Excavation:
1. Upon completion of excavation, prepare a certified survey, signed and sealed by professional surveyor, showing or indicating dimensions, locations, angles and elevations of construction and locations and elevations of Underground Facilities installed and encountered during the Work.
 2. Compute the coordinates of each surveyed point on the New York State Plane Coordinate System using the 1983 North American Datum. The elevations shall be on the National Geodetic Vertical Datum.
 3. During construction of any concrete slab, the subbase will be surveyed before installation of the concrete, and the concrete surface will be surveyed.
 4. Well locations and their corresponding elevations of the top of casing shall be surveyed in.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 SURVEYING

- A. Reference Points:
1. Refer to the General Conditions, as may be modified by the Supplementary Conditions, for requirements regarding reference points.
 2. DEPARTMENT's established reference points that are damaged or destroyed by CONTRACTOR will be re-established by DEPARTMENT at CONTRACTOR's expense. DEPARTMENT may deduct from payments owed CONTRACTOR such amounts as set-offs in accordance with the Contract Documents.
 3. From DEPARTMENT-established reference points, establish lines, grades, and elevations necessary to control the Work. Obtain measurements required for executing the Work to tolerances specified in the Contract Documents.
 4. Establish, place, and replace as required, such additional stakes, markers, and other reference points necessary for control, intermediate checks, and guidance of construction operations.
- B. Surveys to Determine Quantities for Payment:

1. For each application for progress payment, perform such surveys and computations necessary to determine quantities of Work performed or placed. Perform surveys necessary for ENGINEER to determine final quantities of Work in place. Submit survey maps signed and sealed by New York State licensed land surveyor.
 2. Notify ENGINEER not less than 24 hours before performing survey services for determining quantities to be included in Application for Payment. Unless waived in writing by ENGINEER, perform quantity surveys in presence of ENGINEER or Resident Project Representative (if any).
- C. Construction Surveying: Comply with the following minimum requirements:
1. Alignment Staking: Provide alignment stakes at 50-foot intervals on tangent, and at 25-foot intervals on curves.
 2. Slope Staking: Provide slope staking at 50-foot intervals on tangent, and at 25-foot intervals on curves. Re-stake at every ten-foot difference in elevation.
 3. Structure: Stake-out structures, including elevations, and check prior to and during construction.
 4. Pipelines: Stake-out pipelines including elevations and check prior to and during construction.
 5. Roads, Drives, and Paved Areas: Stake-out roadway, driveway, and paved area elevations at 50-foot intervals on tangent, and at 25-foot intervals on curves.
 6. Cross-sections: Provide original, intermediate, and final staking as required, for Site work in other locations as necessary for quantity surveys.
 7. Easement Staking: Provide easement staking at 50-foot intervals on tangent, and at 25-foot intervals on curves. Also provide wooden laths with flagging at maximum intervals of 100 feet.
 8. Record Staking: Provide permanent stake at each blind flange and each utility cap provided for future connections. Stakes for record staking shall be material acceptable to ENGINEER.
- D. Accuracy:
1. Establish CONTRACTOR's temporary survey references points for CONTRACTOR's use to not greater than second-order accuracy (e.g., 1:10000). Construction staking used as a guide for the Work shall be set at not greater than third-order accuracy (e.g., 1:5000). Basis on which such orders are established shall provide the absolute margin for error specified below.
 2. Horizontal accuracy of easement staking shall be plus or minus 0.1 feet. Accuracy of other staking shall be plus or minus 0.04 feet horizontally and plus or minus 0.02 feet vertically.
 3. Survey calculations shall include an error analysis sufficient to demonstrate required accuracy.

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SECTION 01 76 50

NUISANCE CONTROLS, MANAGEMENT AND CORRECTIVE MEASURES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes requirements for managing, controlling nuisance issues and associated corrective measures during construction. Consideration of equipment noise, vibration levels shall be part of each stage of Project planning.
2. The work zones for this Project are on, adjacent to or in close proximity to sensitive receptors such as schools and residential properties. The DEPARTMENT has zero tolerance for nuisance emissions, including fugitive dust, noise, vibration, turbidity, disruptive lighting or other situations which may give rise to complaints from the community.
3. The requirements presented in this specification supplement other nuisance monitoring requirements in the Contract, e.g. air monitoring. This specification does not relieve the CONTRACTOR from other Contract Requirements and where there is a conflict in monitoring requirements, the more stringent action level shall be applied.
4. The CONTRACTOR is responsible for developing means and methods as well as accounting for these requirements or proposing alternate best management practices which meet the intent of these provisions (i.e., minimizing nuisance conditions which may adversely impact the public or the environment through appropriate engineering controls).

B. Performance Requirements:

1. The intent of this Section is to document and formalize the CONTRACTOR's plan for managing, controlling nuisance issues and associated corrective measures during construction per the Contract Documents.
2. The CONTRACTOR shall provide advance notification to the ENGINEER of any work activities that will generate nuisances in the community in accordance with this specification. The minimum notification period is 48 hours before noisy work is scheduled. Longer notification periods of a week or more may apply to work likely to exceed the Local noise regulation or other levels or at the start of a project.
3. The point of compliance for fugitive dust, turbidity, vibration, noise, lighting or other nuisance management issues will be at the limit of the Work zone. At the point of compliance, no visible dust (or visible contrast in water clarity) is allowed. Complaints from the community will result in work stoppage until corrective measures are implemented to the satisfaction of the ENGINEER.
4. The CONTRACTOR shall provide a competent and reliable community relations liaison, who shall not be replaced without written approval of DEPARTMENT. The community relations liaison will be the CONTRACTOR's representative and shall interface with the ENGINEER's communications representative and the DEPARTMENT's Public Participation Specialist. The intent is to increase public

awareness and understanding of remedial activities taking place in their community, as well as understand environmental data developed during the Project.

1.2 REFERENCES

- A. 42 US Code, Chapter 65 Noise Control
- B. Local Government Noise Ordinances
- C. Turbidity - 6NYCRR 703.2 - No increase that will cause a substantial visible contrast to natural conditions.
- D. Light Trespass – In accordance with Local Ordinances
- E. Odor - TITLE 6. DEPARTMENT OF ENVIRONMENTAL CONSERVATION CHAPTER III. AIR RESOURCES SUBCHAPTER A. PREVENTION AND CONTROL OF AIR CONTAMINATION AND AIR POLLUTION - Air pollution is the presence of an air contaminant, including odor, "which unreasonably interferes with the comfortable enjoyment of life and property."
- F. Fugitive Dust - Clean Air Act - Particulate Matter (PM) Air Quality Standards.
- G. Vibration – New York State Department of Transportation Engineering Instruction 05- 045.

1.3 SUBMITTALS

- A. Nuisance Controls and Management Plan
 - 1. Plan to provide advance notification.
 - 2. Nuisance monitoring plan.
 - 3. Complaint resolution approach (and Summary Form).
 - 4. Issues of concern with existing and anticipated nuisances must be defined within the Nuisance Control and Management Plan, including the CONTRACTOR's resolution to complete the Work of the Contract Documents.
- B. The CONTRACTOR shall develop a one-page summary of general practices for nuisance management and clearly display on-Site. Operating hours, delivery times, truck routes, and extra considerations for works during sensitive times could also be included in the summary.
- C. Monitoring Reports.
- D. Community Relations Liaison Qualifications
 - 1. The CONTRACTOR will submit resume/qualifications of their Community Relations Liaison person.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION

3.1 COMMUNITY CONSULTATION

- A. Community consultation is an essential part of managing nuisances associated with the construction Project. All communications shall be coordinated with the ENGINEER and the DEPARTMENT.
- B. CONTRACTOR shall:
 - 1. Establish good working relationships with community stakeholders such as nearby residents, the school district, and businesses.
 - 2. Give and receive feedback on construction activity and performance during the Project.
 - 3. Discuss the community's concerns with CONTRACTOR, DEPARTMENT, ENGINEER, and Community stakeholders, and be proactive in complaint resolution.
 - 4. As part of a community consultation strategy, neighboring premises shall be given written notification of upcoming work activities in their vicinity. The information should outline the type and duration of works, likely nuisance impacts, and provide contact details (mobile phone number of Community Liaison Person) for feedback and/or complaints resolution.
 - 5. The minimum notification period shall be 48 hours before noisy work is scheduled. Longer notification periods of a week or more may apply to work likely to exceed the Local regulation noise or other levels or at the start of a project.
 - 6. Methods of notification for work and ongoing communication about Project progress can include:
 - a. letterbox drops.
 - b. meetings.
 - c. individual contact.
 - d. direct emails to all stakeholders.

3.2 COMPLAINT RESOLUTION

- A. The CONTRACTOR shall immediately notify DEPARTMENT and the ENGINEER of any and all complaints. The CONTRACTOR shall respond to all complaints and implement all feasible and reasonable measures to address the issue.
- B. It is particularly important to respond when the complaint refers to disturbed sleep and/or noise that is tonal (beeping, metal-on-metal), impulsive (hammering, pile driving) or low frequency (truck engine, heavy machinery).
- C. The CONTRACTOR shall have a readily accessible contact point (mobile phone number of Community Liaison Person) for managing complaints. The CONTRACTOR shall call back as soon as possible, and then maintain communication about how the issue is to be resolved.
- D. The complaint management process shall be well documented, with details about the following:
 - 1. the nuisance in question;
 - 2. the time of the complaint and the person making it;

3. the person dealing with the complaint and planned corrective action;
4. how resolution of the complaint is to be communicated to the person who made the complaint, the community and the ENGINEER;
5. who shall be contacted if the complaint cannot be resolved; and
6. the time taken for responses.

3.3 SCHEDULING WORK AND RESPITE PERIODS

- A. In general, the instance and duration of work expected to adversely disturb the community should be minimized. This is particularly important for night and other out- of-hours work.
- B. Scheduling work to provide respite and avoid sensitive times is a vital part of responsible nuisance management.
- C. The following are examples of sensitive times that may require special consideration:
 1. resident sleep periods.
 2. shopping plaza deliveries.
 3. school activities (e.g. outdoor classes, sporting events, exams, etc.).
- D. The CONTRACTOR shall consult with affected parties, such as the examples given above, and then arrange appropriate periods of respite from work likely to disturb them. The scheduled respite times shall then be communicated to the relevant parties.
- E. On a typical weekday, more frequent respite periods shall be provided where possible, especially during very disturbing work. For example, a break of 15-20 minutes for every hour of jack-hammering may be a suitable way to manage noise impacts, if there has been appropriate communication.
- F. The CONTRACTOR shall consider the option of relocating people for short periods of time, such as when high noise levels from construction occur at night and there is no other feasible or reasonable way to reduce noise levels.
- G. The CONTRACTOR shall weigh the benefits of avoiding sensitive periods against the increased costs and additional time taken on the job. Explaining the various options to affected parties will help develop a fair and balanced approach.

3.4 WORK PRACTICES

- A. General:
 1. CONTRACTOR shall communicate nuisance reduction commitments to staff. Workers and subcontractors shall be trained to follow nuisance management practices. Nuisance management issues shall be integrated into Health and Safety “tail-gate” meetings.
 2. The CONTRACTOR shall develop a one-page summary of general practices for nuisance management and clearly display on-Site. Operating hours, delivery times, truck routes, and extra considerations for works during sensitive times could also be included in the summary. Workers shall be reminded about these commitments during daily “tail-gate” meetings.

3. Monitoring - The CONTRACTOR shall periodically check the Site and local area for nuisance problems and actively manage nuisance issues before and as they arise.

B. Noise and Vibration:

1. The CONTRACTOR shall implement work practices to reduce noise complaints, particularly important at night or during sensitive times.
2. General construction activities shall be carried out in the following ways:
 - a. Minimize metal-on-metal contact.
 - b. Avoid dropping items from a height.
 - c. Use equipment sensibly: Turn off equipment when not in use. Throttle settings shall be reduced if possible.
 - d. Require appropriate staff conduct: Staff shall not use loud radios and/or stereos outdoors during sensitive times, such as early in the morning in a residential area. Shouting or swearing, loud talking and slamming vehicle doors should be avoided.
 - e. Public Announcement (PA) systems are not allowed.
 - f. Use noise shields/acoustic curtains around higher noise operations.
 - g. Manage truck noise: Noise from trucks is a common issue, especially near residences. Scheduling and management of truck movements is important to reduce issues associated with reverse beepers, engine noise and general off-Site activity.
 - h. Plant and equipment – CONTRACTOR shall endeavor to use low-noise, low-vibration, well-maintained equipment where feasible and reasonable.
 - i. Equipment Selection – Consideration of equipment noise and vibration levels shall be part of each stage of Project planning and Contract specification.
3. The CONTRACTOR shall evaluate different types of equipment that do the same job and compare the noise and vibration level data. Noise and vibration emission labels are often provided on equipment and can be used to assist in this process. The following items shall be considered in the evaluation; high-quality mufflers, acoustic enclosures, low-noise tool bits/blades and inquire from suppliers about lower-noise equipment.
4. Alternative equipment – Compressors for pneumatic equipment shall be silenced, enclosed and located appropriately. Hydraulic or electrical equipment shall be considered as viable alternatives. Care must be taken with the location of any generators and supply lines when electrical equipment is proposed to be used to replace diesel or petrol engines. Impacts from noisy excavation and demolition works shall be reduced by alternative work methods.
5. Maintenance – A key commitment for any project is to ensure that:
 - a. equipment is not operated if maintenance or repairs would eliminate or significantly reduce a characteristic of noise, vibration or other disturbance resulting from its operation.
 - b. Equipment shall be in good working order, and where there is a fault or maintenance issue creating the disturbance, it must be dealt with before it is used.
 - c. CONTRACTOR shall regularly check the condition of mufflers, enclosures and air lines, for example, to make sure they are in good working order and that there are no gaps or leaks. An ongoing inspection and maintenance process shall be established and included in the Work Plan.
 - d. Equipment that is causing excessive nuisance impacts in a manner that is not typical for the equipment shall be removed from the Site.
6. Alternatives to traditional ‘beeper’ alarms

- a. The traditional ‘beeper’ alarms for mobile equipment can create a nuisance during projects where there is a lot of movement (such as prolonged use of scissor lifts) or if works are being conducted at night.
- b. Some examples of alternatives that are less disturbing include:
- c. ‘Smart alarms’ that adjust their volume depending on the ambient level of noise. These are particularly useful during operations in quieter suburban areas, where other noise on the Site is less, or when works take place during quieter periods such as early morning.
- d. ‘Broadband’ or ‘quacker’ alarms. These emit a less annoying sound and are more directional. This means the sound is focused to the area of concern and is less likely to travel to noise-sensitive areas.
- e. The use of these alternative technologies must be:
 - 1) determined by a competent person based on an assessment of the Site, its conditions and on the machines involved;
 - 2) compatible with the machines so it does not adversely affect their operation;
 - 3) accompanied by specific procedures for installation and maintenance to ensure correct operation;
 - 4) communicated to all Site staff to ensure they are aware of the new alarm and how it works; and
 - 5) the requirements of relevant occupational health and safety must be complied with in all cases.

C. Site planning, barriers and layout:

- 1. Disturbances shall be managed by appropriately arranging Site orientation and operations. These principles need to be addressed during early Project stages, when there is greater flexibility to plan for nuisance management.

D. Managing disturbances from trucks/mobile equipment:

- 1. The Site layout shall be arranged to avoid the need for truck reversing. Drive- through parking and deliveries with a one-way thoroughfare is one method that shall be investigated.
- 2. An area away from residential dwellings shall be selected for off-Site truck parking when vehicles arrive before Site opening hours. ENGINEER may require that trucks wait away from the Site in a less sensitive area or other areas/options may be suggested depending on the nature of the Site. For larger projects, traffic controllers can be used to direct trucks that arrive out of approved times or to instruct drivers to turn off their engines when stationary.
- 3. The CONTRACTOR shall designate a truck route that minimizes noise impacts and clearly communicate to drivers the requirements for arrival times, vehicle movements, idling reduction and general conduct, and/or include these requirements as a condition of the sub-contract.
- 4. Deliveries to construction sites shall be scheduled to occur only within the allowed times. Fewer vehicles with larger loads, rather than a number of smaller vehicles, can help reduce noise impacts. Options may be limited by Site access and scale, with larger sites usually providing a greater level of flexibility.
- 5. Other considerations, such as safety and traffic impacts, will apply when looking at truck access and routes.

E. Location of plant and equipment:

1. The CONTRACTOR shall aim to locate plant and equipment away from sensitive sites, thereby maximizing the distance from affected parties.
2. When plant and equipment needs to be located close to noise sensitive areas, restricting the hours of operation should be considered.
3. When possible, noisy fabrication work shall be done off-Site and transported to the Site at a later date.
4. Use the Site to shield sources of noise.
5. Temporary barriers shall be constructed and existing Site materials may be useful in this regard.
6. General principles for barriers – breaking ‘line of sight’.
7. Barriers shall be used to break the ‘line of sight’ between the noisy works and the noise-sensitive areas (when looking towards the noise source from the location receiving the noise).
8. Barriers shall be located as close as possible to the noise source or sensitive receiver. There shall be no gaps or openings at joints in the barrier material and barriers need to be sufficiently dense. In general, material weighing at least 10 kg/m² should be used.
9. Barriers shall be sufficiently high and wide, as sound can carry around the structure. In cases where the affected location is in a high-rise development, barriers may not be useful, as the height will not be enough to break ‘line of sight’ to the noise received.
10. Barriers around a noise source shall be constructed with a length at least 10 times greater than its height. For shorter barriers, it may help to bend or wrap the barrier around the equipment.
11. Acoustic sheds shall be considered for very noisy operations where it is possible to contain the plant and equipment. As with barriers, the shed shall be of sufficient density and suitable construction, with seals on doors and internal treatments to reduce noise reverberation. Ventilation and general occupational health and safety requirements also need to be considered.
12. It is important to recognize that large reflecting surfaces, such as concrete or glass walls, may increase noise levels, as the sound can ‘bounce’ off and be magnified. The CONTRACTOR shall avoid placing equipment in locations where reflected noise will increase noise exposure.
13. In most cases, vibration induced by typical construction equipment may not result in adverse effects on people or structures. Noise from the equipment typically overshadows any meaningful ground vibration effects on people. Some equipment, however, including vibratory rollers, can create high vibration levels. Because of the nature of these types of devices, the options for reducing vibration may be limited. Maximizing the distance between the source and receiver should be considered to the extent practical. Conducting work when most people are not in the area (e.g., at work) or when sensitive equipment is not operating can avoid or minimize adverse impacts.
14. In some circumstances, temporary relocation of residents during these operations may be appropriate. In the absence of measures that can physically reduce induced ground vibration, informing the public about the Project and potential vibratory impacts should be performed to avoid adverse reactions from the public. The CONTRACTOR must be sensitive to the needs of the community, including testing timeframes at the schools and other nearby activities which may result in adverse reactions from the public.

15. Requiring trucks delivering and picking up at the Site to reduce unnecessary engine idling.

F. Fugitive Dust:

1. Control of dust will be a high priority during remediation activities. The primary mechanism for dust control will be the use of water trucks for example with a spray bar and hose(s) or other appropriate methods for the Work being performed. Only potable water will be used for dust control purposes. Proactive controls will be instituted to reduce the amount of dust generation during Site activities, including enforcement of low-speed limits for vehicular traffic, decontamination of trucks leaving the remediation work areas and height limits for stockpiles, if applicable.
2. The CONTRACTOR will implement a dust control training program for all Site personnel. This training program will review the potential sources of dust, individual responsibilities, and actions for controlling dust as described in this plan. The training will emphasize the importance of dust control to the overall success of the remedial activities and familiarize Site personnel with the air monitoring requirements and appropriate dust control procedures that must be adhered to in accordance with this plan to minimize dust generation.
3. Bulk material piles will not be created other than while gathering material to load into trucks (e.g., pulling soil into a pile for the excavator to load into trucks). If any bulk material piles are left on the Site overnight (e.g., due to equipment failure, transportation delays, etc.), they will be tarped as necessary to limit wind-blown dust. All trucks being utilized for transport and disposal of excavated material at the Site are required to be fitted with solid, sliding or slot-top type covers with no gaps when fully deployed. Trucks shall be covered immediately after loading and are to remain covered throughout the transportation and disposal of excavated material. The cover must not contact the excavated material and must be installed in such a way to prevent wind from entering over the leading edge of the trailer rim.
4. Following the soil excavation, when specific in the Contract Documents, a geotextile marker barrier will be installed prior to backfilling the excavated area with clean fill material. The geotextile barrier will minimize any visible dust generation from this soil layer during backfilling activities.
5. The CONTRACTOR shall conduct operations and maintain the Site as to minimize the creation and dispersion of visible dust. Clean water, provided by the CONTRACTOR, shall be applied to the Site as necessary to prevent dust during excavation, loading/unloading, and backfilling activities. Excavation areas and on-Site roadways will be kept damp, as necessary, without creating ponding or mists that travel beyond the defined boundaries of the Work. The watering operations shall be sufficient to control fugitive dust. Tanker trucks will be utilized to provide and apply clean water as needed.
6. Water shall be applied in a manner to prevent runoff. As a contingency measure, the CONTRACTOR will have erosion and sedimentation controls, such as silt fencing, sediment logs, or manhole silt screens, installed as necessary to manage runoff.
7. Transfer points refer to any time material is loaded or unloaded during removal activities. For the purposes of this Project, the primary transfer points of concern will be the transfer of soil material from the excavator or processing area to a waiting truck. The secondary transfer points of concern will be the unloading of the clean soil for use in

backfilling of excavated areas. At all transfer points, the following guidelines will be maintained:

- a. During loading of impacted soil, the material must be moist during the transfer, and the transfer shall be into an overhead truck trailer only. The material drop into the trailer must not exceed four feet.
8. All trucks entering and leaving the Site will adhere to the posted speed limit, which shall be no more than eight miles per hour (mph).
9. All trucks shall adhere to the established tarping policy.
10. All trucks leaving unpaved areas to paved areas of the public ROW (i.e., sidewalk or street), whether full or empty, will be visually inspected for loose material. Stabilized construction exits (e.g., 3- to 6-inch cobblestone or rip rap placed on top of a geotextile) will be used to assist with cleaning of truck tires as the vehicles leave unpaved areas. Any loose material is to be removed and placed into the truck trailer.
11. In order to keep roadways clean and free of accumulation, the CONTRACTOR will coordinate with the Town of Granville and the local waste disposal facility for routine street sweeping during removal activities. The street sweeper must be equipped with a water spray and vacuum system to prevent fugitive dust. Street sweeping must be completed at the end of every day or as needed, but at a minimum of once a day.
12. Sidewalks and rights of way and public, where trucks will need to cross the sidewalk to enter/exit the Site, will be maintained in a "broom clean" condition at all times by using a skid steer loader (e.g., BobCat) equipped with a power broom or manual tools (e.g., push broom, shovels, etc.).
13. All trucks are to take the most efficient and direct route to the disposal facility as possible.
14. Spraying dusty wastes with water as they are unloaded.
15. Ensuring that street sweeping operations use enough water to avoid kicking up dust.

G. Turbidity:

1. Best Management Practices (BMP) are the actual practices--including the forms, procedures, charts, software references, etc.--actually used by dredgers to minimize consequences of dredging and disposal on water quality. Common BMPs include Silt Curtains, Gunderbooms, and Operational Controls.
2. Silt curtains are intended to allow suspended sediment at a dredging site to settle out of the water column in a controlled area, minimizing the area that is affected by the increased suspended sediment usually present at a dredging site. A silt curtain is an impermeable barrier. They are constructed of a flexible reinforced thermoplastic material. The upper hem has floatation material and the lower hem has ballast material. Silt curtains are most effective when used on a project where they are not opened and closed to allow equipment access to the dredging or disposal area. Silt curtains are also limited to project locations with less than one - two knot currents.
3. There are three fundamental controls possible with mechanical dredges:
 - a. Increase cycle time. Longer cycle time reduces the velocity of the ascending loaded bucket through the water column, which reduces potential to wash sediment from the bucket. However, limiting the velocity of the descending bucket reduces the volume of sediment that is picked up and requires more total bites to remove the project material. The majority of the sediment resuspension, for a clamshell dredge, occurs when the bucket hits the bottom.

- b. Eliminate multiple bites. When the clamshell bucket hits the bottom, an impact wave of suspended sediment travels along the bottom away from the dredge bucket. When the clamshell bucket takes multiple bites, the bucket loses sediment as it is reopened for subsequent bites. Sediment is also released higher in the water column, as the bucket is raised, opened, and lowered.
 - c. Eliminate bottom stockpiling. Bottom stockpiling of the dredged sediment in silty sediment has a similar effect as multiple bite dredging; an increased volume of sediment is released into the water column from the operation.
- 4. There are three fundamental controls possible with hydraulic dredges:
 - a. Reduce cutterhead rotation speed. Reducing cutterhead rotation speed reduces the potential for side casting the excavated sediment away from the suction entrance and resuspending sediment. This measure is typically effective only on maintenance or relatively loose, fine grain sediment.
 - b. Reduce swing speed. Reducing the swing speed ensures that the dredge head does not move through the cut faster than it can hydraulically pump the sediment. Reducing swing speed reduces the volume of resuspended sediment. The goal is to swing the dredge head at a speed that allows as much of the disturbed sediment as possible to be removed with the hydraulic flow. Typical swing speeds are 5-30 feet/minute.
 - c. Eliminate bank undercutting. Dredgers should remove the sediment in maximum lifts equal to 80% or less of the cutterhead diameter.
- 5. There are three controls possible with dredges and barges:
 - a. Eliminate or reduce hopper overflow. Eliminating or reducing hopper overflow reduces the volume of fine material which flows from the hopper in the overflow. One caution is that this control may significantly reduce project production for hopper dredges or when hydraulic dredging into a barge.
 - b. Lower hopper fill level. Lowering the hopper fill level in rough sea conditions can prevent material loss during transport.
 - c. Recirculation system. Water from the hopper overflow can be recirculated to the draghead and is used to transport more material into the hopper.
- 6. Pneuma Pump. The Pneuma pump is used primarily for removal of fine-grained sediment. The Pneuma pump offers high solids concentration (up to 90%) in the dredge slurry, with minimal turbidity.
- 7. Closed or environmental bucket. Specially constructed dredging buckets designed to reduce or eliminate increased turbidity of suspended solids from entering a waterway.
- 8. Large capacity dredges. Larger than normal dredges designed to carry larger loads. This allows less traffic and fewer dumps, thereby providing less disturbance at a disposal site.
- 9. Precision Dredging. Dredging utilizing special tools and techniques to restrict the material dredged to that specifically identified. This may mean thin layers, either surficial or imbedded, or specific boundaries.

H. Disruptive Lighting:

- 1. Light Trespass. The lighting system shall be designed to effectively light the Work area without spilling over to adjoining property. When, in the opinion of the ENGINEER, the lighting is disturbing adjoining property, the CONTRACTOR shall modify the lighting arrangement or add hardware to shield the light trespass.
- 2. Every effort should be made to control artificial light escaping from a site for example

- the fitting of diffusers/guards, ensuring there is no light overspill into neighboring properties.
3. All lighting shall be designed, installed, and operated to avoid glare that affects traffic on the roadway or that causes annoyance or discomfort for residences. The CONTRACTOR shall locate and aim lighting fixtures to provide the required level of illumination and uniformity in the Work zone without the creation of objectionable light trespass.

I. Odor:

1. Proper Drainage: Standing water is a potential source of odors. The operations area will be on a surface that is sloped to facilitate drainage and prevent standing water. The grade will be maintained to prevent ponding. General spill control programs and curbing will be in place as appropriate. The material handling areas are covered by a canopy and protected from storm water if needed to control ponding of water which has been in contact with contaminated sediments.
2. Personnel training: Personnel will be trained in the proper use of equipment. Potential hazards and safety features will be stressed as well as handling procedures to minimize the potential production of odors, such as leaving stockpiled sediments uncovered unnecessarily.
3. Some of the operating procedures that can help reduce odors include:
 - a. "First-in, first-out" waste handling practices that keep waste on-Site only for short periods of time.
 - b. Removing all waste from loading areas by the end of each operating day so that these surfaces can be swept clean and washed down as needed.
 - c. "Good housekeeping" measures, including regular cleaning and disinfecting of surfaces if appropriate and equipment that come into contact with waste.
 - d. Water misting and/or deodorizing systems.
4. Below are the activities that can cause odor nuisances on-Site along with Reasonable Available Control Measures & Methods to help reduce potential odors:
 - a. Movement of Transport Trucks Entering/ Exiting Site - Hauling materials in properly tarped or watertight containers to prevent odor; Limit haul trucks to three minutes idle time; and Applying foam suppressant such as BioSolve.
 - b. Equipment Operating On-Site -Turning off equipment that is not in active use; Limiting the amount of equipment used at one time while on-Site; and Applying foam suppressant such as BioSolve.
 - c. Excavated Materials - Limiting amount of exposed areas or amount of time materials are exposed to the open atmosphere; and Applying foam suppressant such as BioSolve.
 - d. Soil/Debris moved by equipment to Stockpile Areas - Limiting amount of exposed areas or amount of time materials is exposed to the open atmosphere; Turning off equipment that is not in active use; Limiting the amount of equipment used at one time while on-Site; and Applying foam suppressant such as BioSolve.
 - e. Stockpiles - Covering stockpiles and material after activity ceases with Poly Sheeting & securing with sandbags (or equivalent); and Applying foam suppressant such as BioSolve.
 - f. Removed water prior to treatment or disposal - Setting up Site drainage & preventing standing water.

- g. Work Zones (Exclusion Zone) - Performing Housekeeping; Daily cleaning up (Free of trash, garbage, & debris); Properly disposing of any odorous material; and Applying foam suppressant such as BioSolve.

3.5 CORRECTIVE MEASURES

- A. Nuisance conditions which represent a potential health and safety concern and/or migration of contaminated materials (e.g., visible dust or visible contrast from turbidity) will result in an immediate stoppage of the Work.
- B. Following a work stoppage, appropriate corrective measures as determined by ENGINEER will be implemented prior to work resuming.
- C. Chronic or repeated incidents of nuisance issues will result in the disallowance of a day of compensation for Site services and health and safety.
- D. A written Corrective Measures Plan will be submitted for any work stoppage, or chronic or repeated incidents of nuisance issues, if requested by the ENGINEER.

++ END OF SECTION ++

SECTION 01 77 19

CLOSEOUT REQUIREMENTS

PART 1 – GENERAL

1.1 GENERAL

- A. Scope:
1. Close-out procedures shall conform with General Conditions, Section VIII, Article 13 for:
 - a. Substantial Completion.
 - b. Final inspection.
 - c. Request for final payment and acceptance of the Work.

1.2 SUBSTANTIAL COMPLETION

- A. Substantial Completion – General:
1. Prior to requesting Substantial Completion, perform the following for the substantially completed Work:
 - a. Materials and equipment for which Substantial Completion is requested shall be fully ready for their intended use, including full operating and monitoring capability in automatic and manual modes.
 - b. Complete field quality control Work, including testing at the Site, indicated in Specifications Sections for individual materials and equipment items. Submit results of, and obtain ENGINEER's acceptance of, field quality control tests required by the Contract Documents.
 - c. Submit and obtain ENGINEER's acceptance of final operations and maintenance manuals.
 - d. Obtain and submit to ENGINEER all required permits, inspections, and approvals of authorities having jurisdiction for the substantially completed Work to be occupied and used by DEPARTMENT.
 - e. Complete other tasks that the Contract require be completed prior to Substantial Completion.
 2. Procedures for requesting and documenting Substantial Completion are in the General Conditions, Section VIII, Article 13.6.
 3. Sample letter for CONTRACTOR to request inspection for Substantial Completion is attached to this Specifications Section. Use the model language of the sample letter, modified to suit the Project.
 4. Unless decided otherwise by DEPARTMENT and ENGINEER, form of certificate of Substantial Completion will be EJCDC® C-625, "Certificate of Substantial Completion" (2013 edition), prepared by ENGINEER.
 5. Refer to the General Conditions, Section VIII, Article 13.8, for requirements regarding consent of surety to partial release of or reduction in retainage.

1.3 FINAL INSPECTION

- A. Final Inspection shall be performed in accordance with General Conditions, Section VIII, Article 13.9:
1. Prior to requesting final inspection, CONTRACTOR shall verify that all of the Work is fully complete and ready for final payment. A checklist for this purpose is attached to this Specifications Section.
 2. Sample letter for CONTRACTOR to request final inspection is attached to this Specifications Section. Use the model language of the sample letter, modified to suit the Project.
 3. Procedures for requesting and documenting the final inspection are in the General Conditions, as may be modified by the Supplementary Conditions, and as augmented in this Section.

1.4 REQUEST FOR FINAL PAYMENT AND ACCEPTANCE OF THE WORK

- A. Procedure:
1. Submit request for final payment in accordance with the Agreement and General Conditions, as may be modified by the Supplementary Conditions, and using procedure specified in Section 01 29 76, Progress Payment Procedures, and this Section.
 2. Acceptance of the Work:
 - a. Upon ENGINEER's receipt of the final Application for Payment, accompanied by other required Contract closeout documentation in accordance with the Contract Documents, ENGINEER will issue to DEPARTMENT and CONTRACTOR a notice of acceptability of the Work, in accordance with the General Conditions, as may be modified by the Supplementary Conditions.
 - b. Nothing other than receipt of such notice of acceptability from ENGINEER constitutes acceptance of the Work.
 - c. Unless decided otherwise by DEPARTMENT and ENGINEER, form of acceptance will be EJCDC® C-626, "Notice of Acceptability of Work", (2014 edition).
- B. Request for final payment shall include:
1. Documents required for progress payments in Section 01 29 76, Progress Payment Procedures.
 2. Documents required in the General Conditions, as may be modified by the Supplementary Conditions.
 3. List of all disputes that CONTRACTOR believes are unsettled.
 4. Consent of Surety to Final Payment:
 - a. Acceptable form includes AIA® G707™, "Consent of Surety to Final Payment" (1994 or later edition), or other form acceptable to DEPARTMENT.
 5. Releases or Waivers of Lien Rights:
 - a. When submitting releases or waivers of Lien rights, furnish release or waiver by CONTRACTOR and each Subcontractor and Supplier that

- provided CONTRACTOR, Subcontractor, or Supplier with labor, material, or equipment totaling \$1,000.00 or more for the Contract.
- b. Furnish final list of Subcontractors and Suppliers, using the form included in Section 01 29 76, Progress Payment Procedures, indicating final amount of the associated subcontract or purchase order for each. Include on the list all lower-tier Subcontractors and Suppliers retained by Subcontractors and Suppliers with direct subcontract or purchase order with CONTRACTOR.
 - c. Each release or waiver of Lien shall be signed by an authorized representative of the entity submitting release or waiver of Lien, and shall include CONTRACTOR's, Subcontractor's, or Supplier's (as applicable) corporate seal, when applicable.
 - d. Release or waiver of Lien may be conditional upon receipt of final payment.
6. Affidavits:
- a. In lieu of the release or waiver of Liens, CONTRACTOR may submit the following, for CONTRACTOR and each Subcontractor and Supplier that provided CONTRACTOR, Subcontractor, or Supplier with labor, material, or equipment totaling \$1000 or more, to DEPARTMENT's satisfaction:
 - 1) Affidavit of payment of debts and claims. Acceptable form includes AIA® G706™, "Contractor's Affidavit of Payment of Debts and Claims" (1994 or later edition), or other form acceptable to DEPARTMENT, and;
 - 2) Affidavit of release of Liens. Acceptable form includes AIA® G706A™, "Affidavit of Release of Liens" (1994 or later edition), or other form acceptable to DEPARTMENT.
 - b. Affidavits and supporting documents furnished under this Paragraph 1.4.B.6 shall comply with the requirements of the General Conditions, as may be modified by the Supplementary Conditions.
 - c. Each affidavit furnished shall be signed by an authorized representative of the entity furnishing the affidavit, and shall include CONTRACTOR's, Subcontractor's, or Supplier's (as applicable) corporate seal, when applicable.
7. Evidence satisfactory to DEPARTMENT that all title issues have been resolved such that title to all Work, materials, and equipment has passed to DEPARTMENT free and clear of Liens or other title defects or will so pass upon final payment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

- A. The documents listed below, following this Section’s “End of Section” designation, are part of this Specifications Section:
1. Sample letter for CONTRACTOR’s use in requesting inspection for Substantial Completion (two pages).
 2. Sample partial checklist to identify readiness for final inspection (four pages).
 3. Sample letter for CONTRACTOR’s use in requesting final inspection (one page).
- B. In the model language of the attached sample letters for the CONTRACTOR to request inspection for Substantial Completion and the final inspection, italicized language in brackets, e.g., “[*insert date*]” indicates instructions to the drafter of the letter and often indicates specific information to be inserted by CONTRACTOR; do not include bracketed, italicized text in the final version of the letter(s) prepared for the Project. Non-italicized language in brackets is optional language; use the appropriate language to complete the actual letter for the Project and edit where required to suit the specific circumstances.

+ + END OF SECTION + +

**SAMPLE LETTER FOR CONTRACTOR’S USE IN REQUESTING
INSPECTION FOR SUBSTANTIAL COMPLETION**

**SENT VIA E-MAIL AND U.S. CERTIFIED MAIL/RETURN RECEIPT
REQUESTED**

[Date]

[Name of ENGINEER’s contact person]

[ENGINEER’s Name]

[Street address]

[City, state, postal code]

Subject:

[Project name, Contract designation]

Request for Inspection for Substantial Completion

Dear [addressee]:

In our opinion, [all of] [or] [a portion of] the Work under the above-referenced Contract is substantially complete as of [insert month, day, year on which Substantial Completion was achieved]. [The specific portion of the Work that we believe is substantially complete is [insert identification of that portion of the Work that is substantially complete].]

Enclosed is our listing of uncompleted Work items (“punch list”). In accordance with the General Conditions, we hereby request: 1) That the ENGINEER schedule and perform the inspection for Substantial Completion as soon as possible, and 2) Issuance of the certificate of Substantial Completion.

In accordance with the General Conditions, upon Substantial Completion, we propose the following relative to apportionment of responsibilities between the DEPARTMENT and the CONTRACTOR:

1. Security, Protection, Insurance:

- a. Site Security: [insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for security of the Site].
- b. Protection of the Substantially Completed Work: [insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for protection].
- c. Property Insurance: [insert proposal; typically DEPARTMENT assumes responsibility for property insurance upon Substantial Completion]

2. Operation and Maintenance:

- a. Operation: [insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for operating the substantially completed Work].

- b. Maintenance: *[insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for maintaining the substantially completed Work]*.
- 3. Utilities: *[for each of the following, indicate whether DEPARTMENT or CONTRACTOR will be responsible for utilities and services, or whether responsibility will be shared; if shared, indicate proposed cost-sharing]*
 - a. Electricity: *[insert proposal]*.
 - b. Natural Gas/Fuel/Heating: *[insert proposal]*.
 - c. Water Supply: *[insert proposal]*.
 - d. Wastewater: *[insert proposal]*.
 - e. Communications (Telephone, Internet, Video): *[insert proposal]*.

In accordance with the General Conditions, we understand that the Contract's correction period for the Work covered by the certificate of Substantial Completion commences on the Substantial Completion date documented in said certificate.

Should you have questions or comments regarding this notice, please contact [the undersigned] *[or] [insert other contact person's name]*, at *[insert telephone number and e-mail address]*.

Sincerely,

[CONTRACTOR's company name]

[Signatory name]

[Signatory's title]

Attachments:

Preliminary list of uncompleted Work items ("punch list"; [##] pages)

Copies:

[DEPARTMENT's project manager]

SAMPLE CHECKLIST TO IDENTIFY READINESS FOR FINAL INSPECTION

Project: _____

Contract: _____

Contractor: _____

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
1. All Shop Drawings, Samples, and Submittals approved by Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
2. Final services completed by Suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
3. Final Work completed by Subcontractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
4. Permits closed out and regulatory compliance transitioned from construction to operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
5. All outstanding change issues are addressed and all Change Proposals submitted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
6. All Claims are resolved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
7. All defective Work of which Contractor is aware has been corrected in accordance with the Contract Documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
8. Issues related to Constituents of Concern and potential Hazardous Environmental Condition have been fully addressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
9. All spare parts, tools, and extra stock materials have been furnished in accordance with the Contract Documents, and documentation thereof submitted to Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
10. All final Operations & Maintenance manuals have been submitted and accepted by Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
11. Manufacturer warranties and software license(s) furnished	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
12. Instruction and training of operations and maintenance personnel is complete and records of training submitted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
13. MBE/WBE/DBE compliance report(s) submitted (when applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
14. All field engineering submittals, including survey data, furnished	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
15. All Work on "punch list" is complete in accordance with the Contract Documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
16. All record documents submitted to and accepted by Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
17. Contractor is fully demobilized from Site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
18. All Site restoration is complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
19. Final cleaning of all Work areas is complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
20. Lien waivers or affidavits of payment obtained from Subcontractors and Suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
21. Evidence of Contractor liability insurance furnished for correction period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						
22. All other required Contract closeout documents obtained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Remarks:						

**SAMPLE LETTER FOR CONTRACTOR'S USE IN REQUESTING
FINAL INSPECTION**

**SENT VIA E-MAIL AND U.S. CERTIFIED MAIL/RETURN RECEIPT
REQUESTED**

[Date]

[Name of ENGINEER's contact person]

[ENGINEER's Name]

[Street address]

[City, state, postal code]

Subject:

[Project name, Contract designation]

Request for Final Inspection

Dear [addressee]:

In our opinion, all of the Work under the above-referenced Contract is complete and ready for final payment as of [insert month, day, year on which final completion was achieved]. In accordance with the General Conditions, we hereby request that the ENGINEER schedule and perform the final inspection as soon as possible. Upon successful completion of the final inspection, we will submit our final Application for Payment accompanied by the required Contract closeout documentation in accordance with the Contract Documents.

Should you have questions or comments regarding this notice, please contact [the undersigned] [or] [insert other contact person's name], at [insert telephone number and e-mail address].

Sincerely,

[CONTRACTOR's company name]

[Signatory name]

[Signatory's title]

Attachments:

None

Copies:

[DEPARTMENT's project manager]

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SECTION 01 77 23

INSPECTIONS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Scope:
1. This Section includes requirements for the Substantial Completion, Final Completion, and any specified Warranty inspections and is coordinated with the payment provisions of the General Conditions, Section VIII, Articles 13.6 through 13.13.
 2. When CONTRACTOR considers all or part of the Work ready for its intended use, CONTRACTOR shall notify DEPARTMENT and ENGINEER in writing that the Work specified is substantially complete. Within a reasonable time thereafter, not to exceed 30 days, DEPARTMENT, CONTRACTOR, and ENGINEER shall make an inspection of the Work, or portion thereof, to determine status of completion. A tentative certificate of Substantial Completion shall fix the date of Substantial Completion, with an attached list of items to be completed or corrected prior to final payment.
 3. Shortly before the end of the Substantial completion period required under the General Conditions, ENGINEER will schedule with DEPARTMENT and CONTRACTOR the inspection and will advise DEPARTMENT and CONTRACTOR in writing of the date and time for the inspection.
- B. CONTRACTOR's project manager shall attend the inspection.
- C. Upon written notice from CONTRACTOR that the entire Work or agreed portion is complete, ENGINEER will make a final inspection with DEPARTMENT and CONTRACTOR. ENGINEER will notify CONTRACTOR in writing of all particulars in which this inspection reveals that work is either accepted or incomplete or defective.
- D. After the final inspection, CONTRACTOR shall submit "final" Application for Payment in accordance with the final Application for Payment procedures of the General Conditions, as may be modified by the Supplementary Conditions, and the Specifications, including furnishing all required Contract closeout documentation and completion of all Work except for the inspection and associated correction Work (if any). DEPARTMENT will release remaining retainage withheld for the inspection following the inspection and completion of correction Work (if any), in accordance with progress payment procedures of the Contract, except that consent of surety to final payment shall accompany the last Application for Payment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes requirements for Project record documents, to supplement the requirements of the Section VI Agreement including the General Conditions, as may be modified by the Supplementary Conditions.
2. CONTRACTOR shall provide all labor, materials, equipment, and services to maintain and submit to ENGINEER Project record documents in accordance with the Contract Documents.
3. Supplemental requirements to those stated in Section VIII, General Conditions, Article 5.19 for recording of field modifications made during construction, to be marked on a clean set of Contract documents by the CONTRACTOR (As-Built Documents) and for preparing Supplemental Record Drawings by the Surveyor to be submitted to the DEPARTMENT and ENGINEER. The As-Built Documents and Supplemental Record Drawings shall constitute the Project Record Documents.

B. Maintenance of Record Documents:

1. Maintain in CONTRACTOR's field office, in clean, dry, legible condition, complete sets of the following record documents: Drawings, Specifications, Addenda, written amendments, Change Orders, Proposed Change Orders, field test records, construction photographs, Field Orders and written interpretations and clarifications in good order and annotated to show all changes made during construction. CONTRACTOR will be required to review with ENGINEER the status of all As-Built Documents in connection with ENGINEER's evaluation of an Application for Payment. All changes from the Contract which are made in the work, or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes.
2. Provide files and racks for proper storage and easy access to record documents. File record documents in accordance with the edition of the Construction Specification Institute's *MasterFormat*TM used for organizing the Project Manual, unless otherwise accepted by ENGINEER.
3. Promptly make record documents available for observation and review upon request of ENGINEER or DEPARTMENT. Requirements for review of record documents status as a condition precedent to progress payments in conformance with Section VIII, Article 13.

4. Maintain in CONTRACTOR's field office in clean, dry, legible condition complete sets of the following:
 - a. Drawings
 - b. Specifications
 - c. Addenda
 - d. Approved Shop Drawings
 - e. Samples, Photographs
 - f. Change Orders
 - g. Other modifications to Contract Documents
 - h. Test Records
 - i. Survey Data
 - j. Field Orders
 - k. Other documents pertinent to CONTRACTOR's work
 - l. CONTRACTOR Daily Work Reports
5. Do not use record documents for any purpose other than serving as Project record. Do not remove record documents from CONTRACTOR's field office without ENGINEER's approval.
6. Make documents available at all times for inspection by ENGINEER and DEPARTMENT.

1.2 SUBMITTALS

A. Closeout Submittals: Submit the following:

1. Preliminary Record Documents:
 - a. The CONTRACTOR shall prepare As-Built Documents and the Surveyor shall prepare Supplemental Record Drawings. These documents (Project Record Documents) shall be submitted to the ENGINEER following substantial completion of the work (within 7 calendar days) for review and approval.
 - b. These documents shall be neat, legible and accurate.
 - c. If upon review, the documents are found to contain errors and/or omissions, they shall be returned to the CONTRACTOR and or Surveyor for corrections.
 - d. The CONTRACTOR and/or Surveyor shall complete the corrections and return the drawings to the ENGINEER within 10 calendar days for subsequent review.
 - e. Submit certified PDF electronic files which include the signature and stamp of the New York State licensed land surveyor.
 - f. Submit both printed record documents and electronic record documents, in accordance with Section 01 31 26, Electronic Communication Protocols.
 - g. Submit record documents with transmittal letter on CONTRACTOR letterhead in accordance with requirements in Section 01 33 00, Submittal Procedures.

2. Certifications:
 - a. Record documents submittal shall include certification, with original signature of official authorized to execute legal agreements on behalf of CONTRACTOR, reading as follows:

“[Insert CONTRACTOR’s corporate name] has maintained and submitted Project record documentation in accordance with the General Conditions and Supplementary Conditions, Section 01 78 39, Project Record Documents, and other elements of Contract Documents, for the New York State Department of Environmental Conservation, Village of Granville, Washington County, New York, Remedial Construction Project – Katzman Recycling Site. We certify that each record document submitted is complete, accurate, and legible relative to the Work performed under our Contract, and that the record documents comply with the requirements of the Contract Documents.

[Provide signature, print name, print signing party’s corporate title, and date]”

1.3 RECORDING CHANGES

- A. Recording Changes – General:
 1. At the start of the Project, label each record document to be submitted as, “PROJECT RECORD” using legible, printed letters. Letters on record copy of the Drawings shall be two inches high.
 2. Keep record documents current consistent with the progress of the Work. Make entries on record documents within two working days of receipt of information required to record the change.
 3. Do not permanently conceal the Work until required information has been recorded for Project record documents.
 4. Accuracy of record documents shall be such that future searches for items shown on the record documents may rely reasonably on information obtained from ENGINEER-accepted record documents.
 5. Marking of Entries:
 - a. Use erasable, colored pencils (not ink or indelible pencil) for marking changes, revisions, additions, and deletions to record documents.
 - b. Clearly describe the change by graphic line and make notations as required. Use straight-edge to mark straight lines. Writing shall be legible and sufficiently dark to allow scanning of record documents into legible electronic files in portable document format (“.PDF”).
 - c. Date each entry on record documents.
 - d. Indicate changes by drawing a “cloud” around the change(s) indicated.
 - e. Mark initial revisions in red. In the event of overlapping changes, use different colors for subsequent changes.

B. Drawings:

1. Record changes on copy of the Drawings. Submittal of CONTRACTOR-originated or -produced drawings as a substitute for recording changes on a copy of the Drawings is unacceptable.
2. Record changes on plans, sections, elevations, schematics, schedules, and details as required for clarity, making reference dimensions and elevations (to Project datum) for complete record documentation.
3. Record actual construction including:
 - a. Installations of any kind or description known to exist within the construction area. The locations shall include dimensions to permanent features.
 - b. The location and dimensions of any changes within the design features of any kind or description known to exist within the construction area. The locations shall include dimensions to permanent features.
 - c. Correct grade or alignment of roads, structures, utilities, or Project components.
 - d. Correct elevations.
 - e. Changes in details or dimensions.
 - f. The topography and grades of all drainage structures installed or affected as part of the Project construction.
 - g. Additional information obtained from working drawings.
 - h. Where contract drawings or specifications allow options, only the option selected for construction shall be shown on the As-Built Documents.
 - i. Additional work ordered by the ENGINEER or DEPARTMENT.
 - j. Depths of various elements of foundation in relation to datum.
 - k. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvement.
 - l. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - m. The Surveyor retained by the CONTRACTOR shall prepare Supplemental Record Drawings (see Section 01 71 23, Field Engineering). A topographic survey of the Site prior to and following earthwork. The survey should, at a minimum, show ground surface elevations on the specified grid and at all grade changes and also indicate the thickness of cover layers. The survey should adequately extend beyond the limits of work to properly overlap existing conditions. Survey shall show locations and elevations of all groundwater monitoring wells and survey control points.
4. Recording Changes for Schematic Layouts:
 - a. In some cases, on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items are shown schematically and are not intended to portray physical layout. For such cases, the final physical arrangement shall be determined by CONTRACTOR subject to acceptance by ENGINEER.

- b. Record on the Project record documents all revisions to schematics on the Drawings, including: piping schematics, ducting schematics, process and instrumentation diagrams, control and circuitry diagrams, electrical one-line diagrams, motor control center layouts, and other schematics when included in the Drawings. Show and indicate actual locations of equipment, lighting fixtures, in-place grounding system, and other pertinent data.
 - c. When dimensioned plans and dimensioned sections or elevations on the Drawings show the Work schematically, indicate on the record documents, by dimensions accurate to within one inch in the field, centerline location of items of Work such as conduit, piping, ducts, and similar items
 - 1) Clearly identify each item of the Work by accurate notations such as “cast iron drain”, “rigid electrical conduit”, “copper waterline”, and similar descriptions.
 - 2) Show by symbol or by note the vertical location of each item of the Work; for example, “embedded in slab”, “under slab”, “in ceiling plenum”, “exposed”, and similar designations. For piping not embedded, also indicate elevation dimension relative to Project elevation datum.
 - 3) Descriptions shall be sufficiently detailed to be related to the Specifications.
 - d. ENGINEER may furnish written waiver of requirements relative to schematic layouts shown on plans, sections, and elevations when, in ENGINEER’s judgment, dimensioned layouts of Work shown schematically will serve no useful purpose. Do not rely on such waiver(s) being issued.
5. Supplemental Drawings:
- a. In some cases, drawings produced during construction by ENGINEER or CONTRACTOR supplement the Drawings and shall be included with Project record documents submitted by CONTRACTOR. Supplemental record drawings shall include drawings or sketches that are part of Change Orders, Work Change Directives, and Field Orders and that cannot be incorporated into the Drawings because of space limitations.
 - b. Supplemental drawings submitted with record drawings shall be integrated with the Drawings and include necessary cross-references between drawings. Supplemental record drawings shall be on sheets the same size as the Drawings.
 - c. When supplemental drawings developed by CONTRACTOR using computer-aided drafting/design (CADD) software are to be included in record drawings, submit electronic files for such drawings in accordance with Section 01 31 26, Electronic Communication Protocols, as part of record drawing submittal. Label such files, “Supplemental Record Drawings”, including with CONTRACTOR’s name, Project name, and Contract designation.

- C. Specifications and Addenda:
1. Mark each Specifications Section to record:
 - a. Manufacturer, trade name, catalog number, and Supplier of each material and equipment item actually provided.
 - b. Changes made by Addendum, Change Orders, Work Change Directives, and Field Orders.

1.4 ELECTRONIC FILES FURNISHED BY ENGINEER

- A. CADD files of the Drawings will be furnished by ENGINEER upon the following conditions:
1. CONTRACTOR shall submit to ENGINEER a letter on CONTRACTOR letterhead requesting CADD files of the Drawings and indicating specific definition(s) or description(s) of how such files will be used, and specific description of benefits to DEPARTMENT (including credit proposal, if applicable) if the request is granted.
 2. CONTRACTOR shall execute ENGINEER's standard agreement for release of electronic files and shall abide by the provisions of such agreement for release of electronic files.
 3. Layering system incorporated in CADD files shall be maintained as transmitted by ENGINEER. CADD files transmitted by ENGINEER containing cross-referenced files shall not be bound by CONTRACTOR. Drawing cross-references and paths shall be maintained. If CONTRACTOR alters layers or cross-reference files, CONTRACTOR shall restore all layers and cross-references prior to submitting record documents to ENGINEER.
 4. CONTRACTOR shall submit record drawings to ENGINEER in same CADD format that files were furnished to CONTRACTOR.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +



Section 01 89 29, Form A Summary of Green Remediation Metrics

Site Name: _____ Site Code: _____ Operable Unit: _____
Address: _____ City: _____
State: _____ Zip: _____ County: _____

Reporting Period

Contract Period From: _____ To: _____
Reporting Period From: _____ To: _____ Is this a Final Report? Yes ☐ No ☐

Contact Information

Preparer's Name: _____ Phone No.: _____
Preparer's Affiliation: _____ Company Code: _____
Contract No.: _____

Materials & Waste Generation: Quantify the materials used or consumed and the management of waste generated on-site.

	Current Reporting Period (Include Units)	Total to Date (Include Units)
Materials Brought to the site		
• Topsoil		
• Fill		
• Silt Fence		
• Silt Logs		
• Aggregate Base Course		
• Geotextile		
• Solidification Additives		
• Activated Carbon		
• Tarps/Polyethylene Sheeting		
• Diesel Fuel		
• Chain Link Fence		
• Other:		
• Other:		
Total waste generated on-site		
• Remedy generated waste		
• Contractor generated waste		
• Other:		
• Other:		
• Other:		
Of that total amount, provide quantity:		
• Transported off-site to landfills		
• Transported off-site to other disposal facilities		
• Transported off-site for recycling/reuse		
• Reused on-site		
• Other:		
• Other:		
• Other:		

Provide a description of any implemented waste reduction programs appropriate for this project in the space provided on the certification page.

Recycled and Bio-Based Content in Imported Products and Materials: Quantify all materials and products imported to the site, including cost of materials/dollar values. Provide total percentages of recycled and bio-based of products and materials.

List Products and Materials Below (include quantity and units)	Total \$ Value Provided	Total Percent of Recycled Content	Total Percent of Bio-based Content

Provide additional descriptions, as necessary, in the space provided on certification page.

Solid Waste Disposal and Diversion: Quantify all solid wastes generated, and indicate whether material was disposed or diverted for recycling or reuse.

Solid Waste Material	Date	Disposed or Diverted	Volume (Ton or CY)	Disposal/Recycling Facility Name	Comments (if not diverted, state why)
Asbestos					
Contaminated Soil & Debris					
TSCA Contaminated Soil & Debris					
Non-TSCA Contaminated Soil & Debris					
Cleared Vegetation					
Spent Granular Activated Carbon					
Monitoring Well Removal Debris					
Clean Metal Debris					
Concrete Debris					
Other:					
Other:					
Other:					

Provide descriptions in the space provided on the certification page of all wastes that were redirected for recycling or reuse. Indicate full names and addresses of facilities.

Energy Usage: Quantify the amount of energy used on-site and portion of that voluntarily derived from renewable energy sources.

	Current Reporting Period (KWh)	Total to Date (KWh)
Total electricity usage		
Of that total amount, provide quantity:		
• Derived from renewable source (i.e., solar, wind)		
• Other:		

Provide descriptions in the space provided on the certification page of all reported energy use reduction programs appropriate to this project, including use of electricity derived from renewable sources.

Water Usage: Quantify the volume of water used on-site from difference sources.

	Current Reporting Period (Gallons)	Total to Date (Gallons)
Total quantity of water used on-site		
Of that total amount, provide the quantity obtained from:		
• Public potable water supply		
• Surface water		
• On-site treated groundwater		
• Reclaimed treated water		
• Collected or diverted storm water		
• Re-Injected groundwater		
• Other:		
• Other:		
• Other:		
•		
Total amount of water discharged to municipal sewer		

Provide descriptions in the space provided on the certification page of any reported water use reduction programs applied. Please note if reused/injected groundwater is pre-treated.

Emissions: Quantify the distance traveled for delivery of supplies and removal of waste.

Transportation Activity	Current Reporting Period (Miles)	Total to Date (Miles)
• Staff Commuter Miles (diesel)		
• Staff Commuter Miles (gasoline)		
• Staff Commuter Miles (hybrid)		
• Staff Commuter Miles (EV)		
• Equipment Deliveries		
• Materials Deliveries		
• Transportation / Disposal (TSCA/Haz)		
• Transportation / Disposal (Non-TSCA, Non-Haz)		
• Other:		
• Other:		

Provide descriptions in the space provided on the certification page of practices such as use of local vendors within 150 miles of the site and on-site stationary fuel use reduction programs.

Quantify the number of hours that diesel and other equipment with the potential to emit hazardous air pollutants (HAPs) or greenhouse gas (GHG) emissions was operated on-site.

List of Contractor Equipment on-Site* (e.g. Cat D6 Bulldozer)	Current Reporting Period (Hours)	Total to Date (Hours)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
Other:		
*include make, model, fuel type, Hp		

Quantify the VOC emissions from active remediation systems on-site.

	Current Reporting Period (lbs VOCs emitted)	Total to Date (lbs VOCs emitted)
Operating soil remediation equipment		
Operating groundwater remediation equipment		
Other:		
Other:		
Other:		
Other:		

Provide descriptions in the space provided on the certification page of the type of equipment used, rating, emission control devices used and other means to reduce emissions.

Land and Ecosystem: Quantify the amount of land and/or ecosystems disturbed by construction and the area of land and/or ecosystems restored to a natural condition.

	Current Reporting Period (Acres)	Total to Date (Acres)
Total land area disturbed		
Total land area restored		
Increase in area for storm water infiltration (vs pre-disturbed conditions)		
Increase in area of native species plantings (vs pre-disturbed conditions)		
Other:		
Other:		
Other:		
Other:		

Quantify the amount of land and/or ecosystems remediated.

	Current Reporting Period (Acres)	Total to Date (Acres)
Total area of land impacted by contamination		
Total area of land remediated to unrestricted use		
Total area of land remediated to other future site use		
Other:		
Other:		

Additional Comments on Green Remediation Programs Implemented: *Provide descriptions in the space provided of other green remediation practices performed during the project.*

Descriptions of green remediation programs reported above (Attach additional sheet if needed)
Materials and Products Imported:
Waste Generation:
Recycled and Bio-Based Content in Imported Products and Materials:
Solid Waste Disposal and Diversion:
Energy Use:
Water Use:

Descriptions of green remediation programs reported above (Attach additional sheet if needed)
Emissions:
Land and Ecosystem:
Other:

CERTIFICATION BY CONTRACTOR
I, _____ (Name) do hereby certify that I am _____ (Title) of the Company/Corporation herein referenced and contractor for the work described in the foregoing application for payment. According to my knowledge and belief, all items and amounts shown on the face of this application for payment are correct, all work has been performed and/or materials supplied, the foregoing is a true and correct statement of the contract account up to and including the last day of the period covered by this application.
_____ Date
_____ Contractor

SECTION 01 89 29

GREEN REMEDIATION PRACTICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Work includes practices related to reducing waste generation, energy use, emissions including greenhouse gases (GHGs), nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter and hazardous air pollutants (HAPs), water use, and land and ecosystem disturbance.
- B. The CONTRACTOR shall implement green remediation practices in the performance of the requirements of the Work to maximize sustainability, reduce energy and water usage, promote carbon neutrality, promote materials reuse and recycling, and protect and preserve natural resources.
- C. The CONTRACTOR shall utilize concepts and techniques in the DEPARTMENT Program Policy DER-31/Green Remediation, latest edition, as amended.
- D. The CONTRACTOR shall implement practices and procedures to meet the environmental performance goals of the DEPARTMENT consistent with NYSDEC Program Policy DER-31/Green Remediation. In general, such practices and procedures shall include, but are not limited to:
 - 1. Reducing direct and indirect Green House Gas (GHG) and other air emissions;
 - 2. Increasing energy efficiency and minimizing use of non-renewable energy and resources;
 - 3. Conserving and efficiently managing natural resources such as soil, water and habitat, while giving special attention to habitats for critical species (e.g., pollinators), and threatened or endangered species;
 - 4. Minimizing waste, increasing recycling, increasing reuse of materials, furnishing materials from local sources, and minimizing the disposal transport distance using local facilities;
 - 5. Maximizing the reuse of land and the recycling of on-Site materials; and,

6. Applying green remediation concepts, such as minimizing energy intensive operations, which, at a minimum:
 - a. Protect public health and the environment;
 - b. Address source removal and control;
 - c. Address groundwater protection and restoration, and;
 - d. Achieve the cleanup goals for the Site remediation.
- E. Specifically, the CONTRACTOR shall include as part of the Work the following:
 1. Beneficial reuse of materials that would otherwise be considered a waste (e.g., crushed clean concrete as base or fill).
 2. Establish support zone and storage/laydown areas to minimize the disturbance of habitats and vegetated areas outside of the Work zone.
 3. Include energy saving measures in all proposed structures, facilities, and operating systems to minimize electricity and water consumption/disposal, such as using variable speed drives for motors, incorporation of appropriately selected insulation and energy saving fixtures and lighting, or using extracted groundwater to provide heating and cooling through the use of heat exchangers.
 4. Use of renewable energy and/or the purchase of renewable energy credits (RECs) or a combination of the two techniques to offset electrical use at the Site.
 5. Reduce vehicle idling. All vehicles, both on and off road (including construction equipment) shall be shut off when not in use for more than five minutes, consistent with 6 NYCRR Part 217 Motor Vehicle Emissions, Subpart 217-3 Idling Prohibition For Heavy Duty Vehicles.
 6. Use equipment and vehicles that reduce emissions, specifically from compression-ignition engines, and especially in urban areas.
 7. Incorporate the use of blended bio-diesel fuel for all compression-ignition powered equipment.
 8. Establish minimally invasive and well-designed traffic patterns for on-Site activities to reduce impacts to land and ecosystems.

9. Use native drought resistant species for re-vegetation during Site restoration.
- F. CONTRACTOR shall comply with the DEPARTMENT's policy to utilize, as approved by the DEPARTMENT, recycled content materials, locally manufactured materials and low-emitting materials.
- G. CONTRACTOR shall ensure that the requirements related to the goals of the DEPARTMENT and as defined in the Contract Documents, are implemented to the fullest extent.
- H. SOLID WASTE MANAGEMENT
 1. Develop and implement a waste management program in accordance with ASTM E1609 and as specified herein.
 2. Collection: Implement a recycling/reuse program that includes separate collection of waste materials of the following types as appropriate to the Project waste and to the available recycling and reuse programs in the Project area:
 - a. Land clearing debris – re-use for habitat development to the extent practicable.
 - b. Spent Activated Carbon – send to regeneration facility for reuse rather than to a landfill for disposal.
 - c. Recovered LNAPL – separate from aqueous fraction and send to a recycling facility.
 - d. Shipping containers – use bulk sized containers (i.e., drums or totes) that can be recycled or re-used for chemical deliveries.
 - e. Masonry/Asphalt – sample and re-use or recycle these materials if uncontaminated.

1.2 DEFINITIONS:

- A. Green Remediation Definitions
 1. Renewable Energy: Energy from a source which is not depleted when used, such as solar, wind, geothermal, biomass and biogas.
 2. Locally Manufactured: manufactured within 150 miles of the work.
 3. Recovered Materials: Waste materials and by-products that have been recovered from solid waste streams, but does not include

materials and by-products generated from, and commonly reused within, an original manufacturing process.

4. Biobased Materials: As defined in the Farm Security and Rural Investment Act, for purposes of Federal procurement of biobased products, “biobased” means a “commercial or industrial product (other than food or feed) that is composed, in whole or in significant part, of biological products or renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials.” Biobased materials also include fuels, chemicals, building materials, or electric power or heat produced from biomass as defined by The Biomass Research and Development Act of 2000.
5. Biobased Content: The amount of biobased carbon in the material or product as a percentage of weight (mass) of the total organic carbon in the material or product.
6. Recovered Materials: Waste materials and by-products that have been recovered from solid waste, but does not include materials and by-products generated from, and commonly reused within, an original manufacturing process.

1.3 REFERENCES

- A. NYSDEC DER-31 – Green Remediation, New York State Department of Environmental Conservation, DEC Program Policy.
- B. CP-49 – Climate Change and DEC Action, New York State Department of Environmental Conservation, DEC Policy.
- C. NYSDEC Guide for Implementing GSR, New York State Department of Environmental Conservation <https://dec.ny.gov/sites/default/files/2024-01/dergsrguide.pdf>
- D. In-Situ Chemical Oxidation (ISCO) GSR Fact Sheet, New York State Department of Environmental Conservation. <https://dec.ny.gov/sites/default/files/2024-01/iscofactsheet.pdf>
- E. In-Situ Solidification/Stabilization (ISS) Fact Sheet, New York State Department of Environmental Conservation. <https://dec.ny.gov/sites/default/files/2024-01/issfactsheet.pdf>
- F. United States Environmental Protection Agency (USEPA):
 1. Consider USEPA Best Management Practices (BMPs) related to green remediation for the applicable program elements listed below:

- a. Site investigation:
 - i. https://clu-in.org/greenremediation/docs/GR_Fact_Sheet_SI&EM.pdf.
- b. Excavation and surface restoration:
 - i. https://clu-in.org/greenremediation/docs/GR_Quick_Ref_FS_exc_rest.pdf
- c. Soil vapor extraction and air sparging technologies:
 - i. https://clu-in.org/greenremediation/docs/GR_factsheet_SVE_AS_032410.pdf.
- d. Pump and treat technologies:
 - i. https://clu-in.org/greenremediation/docs/GR_Fact_Sheet_P&T_12-31-2009.pdf.
- e. Bioremediation:
 - i. https://clu-in.org/greenremediation/docs/GR_factsheet_biorem_32410.pdf.
- f. In situ thermal technologies:
 - i. https://clu-in.org/greenremediation/docs/GR_factsheet_IST.pdf.
- g. Landfill cover systems and associated energy production:
 - i. https://clu-in.org/greenremediation/docs/GR_factsheet_landfill_covers_and_energy.pdf.
- h. Materials and waste management:
 - i. https://clu-in.org/greenremediation/docs/GR%20BMP%20fact%20sheet_materials&waste.pdf.
- i. Cleaner fuels and air emissions for site cleanups:
 - i. https://clu-in.org/greenremediation/docs/GR_BMP_fact_sheet_cleaner_fuels_emissions.pdf

- j. Integrating renewable energy:
 - i. https://clu-in.org/greenremediation/docs/GR_fact_sheet_renewable_energy.pdf
- 2. Consider USEPA climate resiliency fact sheets related to:
 - a. Sediment cleanups:
 - i. https://www.epa.gov/sites/default/files/2019-12/documents/cr_sediment_sites_fact_sheet_update.pdf.
 - b. Containment remedies:
 - i. https://www.epa.gov/sites/default/files/2019-12/documents/cr_containment_fact_sheet_2019_update.pdf.
 - c. Groundwater treatment remedies:
 - i. https://www.epa.gov/sites/default/files/2019-12/documents/cr_groundwater_systems_fact_sheet_2019_update.pdf.
- G. ITRC Green and Sustainable Remediation, A Practical Framework:
 - 1. <https://connect.itrcweb.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=8e842294-64ce-4e56-a80b-cd3dc1aa4af3>.
- H. ITRC Sustainable Resilient Remediation:
 - 1. <https://srr-1.itrcweb.org/>
- I. ASTM – E2893-16e1: Standard Guide for Greener Cleanups:
 - 1. <https://www.astm.org/e2893-16e01.html>.
- J. Naval Facilities Engineering Command (NAVFAC), Department of the Navy Guidance on Green and Sustainable Remediation:
 - 1. https://www.navfac.navy.mil/content/dam/navfac/Specialty%20Centers/Engineering%20and%20Expeditionary%20Warfare%20Center/Environmental/Restoration/er_pdfs/gpr/navfacesc-ev-ug-2093-env-gsr-20120405r1.pdf.

- K. EPA Energy Smart Resources Guide:
1. https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NRMR&dirEntryId=190014.
- L. Sustainable Remediation Forum (SURF):
1. <https://www.sustainableremediation.org/>.
- M. US Army Corps of Engineers – Evaluation of Consideration and Incorporation of Green and Sustainable Remediation Practices in Army Environmental Remediation:
1. <https://usace.contentdm.oclc.org/digital/collection/p266001coll1/id/2298/>.
- N. American Society of Civil Engineering – Adapting Infrastructure and Civil Engineering Practice to a Changing Climate:
1. <https://ascelibrary.org/doi/pdf/10.1061/9780784479193>

1.4 ENVIRONMENTAL GOALS

- A. The CONTRACTOR, to the extent practicable, shall:
1. Minimize the amount of waste generated from the Site and maximize the use of recycling/reuse facilities for disposal of the waste to the extent practicable and as approved by the DEPARTMENT.
 2. Maximize use of energy derived from renewable resources.
 3. Minimize on- and off-Site fuel combustion.
 4. Minimize use of water and maximize water recycling.
 5. Minimize disturbance to land and ecosystems.
 6. Minimize use of water for dust control and utilize sustainable dust control products.
 7. Green Power Requirements
 - a. Utilize the New York State Green Power Program to determine which suppliers offer Green Power options by searching the Site zip code. Document the date of the Green

Power Program search, as prices and offer details are subject to change: <https://documents.dps.ny.gov/PTC/home>

- b. Based on what is available within the Site zip code (12832), review the options and minimum term offer details. Choose the company, offer details, and pricing with renewable energy available for duration of the project. Arrange for Green Power sufficient to provide 100 percent of the Project total energy needs. <https://cleanchoiceenergy.com/>
 - c. Comply with renewable energy requirements in accordance with the Center for Resource Solutions (CRS) Green-e Standard for Electricity Products.
- 8. Long-Term Operation and Maintenance [Not Applicable to this Project]
 - a. Green Power: Provide service contract(s) for [xxxx] years with options for annual renewal thereafter.
 - i. Comply with the Center for Resource Solutions (CRS) Green-e Standard for Electricity Products for the duration of the Contract. Comply with requirements of the CRS Green-e Annual Verification Protocol.
 - ii. Immediately notify DEPARTMENT if electricity product fails to comply with Green-e certification criteria during Contract period.
 - b. On an annual basis, or at the end of the Contract period, submit:
 - i. A report that includes data on the resources used to generate the electricity consumed during the Contract or over the past year.
 - ii. Disclosure statement that lists the resources or fuel sources from which the electricity will be generated in the following year.
- 9. Use the Electronic Product Environmental Assessment Tool (EPEAT) to find electronic products with reduced impacts on the environment.
- 10. Resource Conservation and Green Materials
 - a. During construction activities and associated landscape alteration activities, green building strategies such as those

outlined in the USGBC LEED should be implemented. LEED includes guidelines and recommendations for new construction, and existing building operations and management that fall under six categories important for reducing the environmental impact of facilities of all types:

- i. Sustainable sites.
- ii. Water efficiency.
- iii. Energy and atmosphere.
- iv. Materials and resources.
- v. Indoor environmental quality.
- vi. Innovation in operations.

11. As noted across the LEED categories, resources other than energy that can be conserved include water, raw materials for articles consumed, topsoil, paper for reports and landfill space. Conserving one resource typically conserves other resources and has other sustainability benefits. For example, recycling of construction and demolition debris or metal recovered at a munitions site will reduce consumption of landfill space and may also save energy and reduce air emissions by minimizing material transportation. Another example is the use of waste-to-energy plants for waste disposal rather than landfills in states where these plants are currently operating. This too reduces the consumption of landfill space and also results in energy production from the waste processing. Other examples of resource conservation include: treated water reuse or reinjection, the reuse of treated soil on-Site, and the beneficial reuse of sediments.
12. The use of “green” construction and project management tools and materials such as eco-friendly concrete or the use of native plants for Site restoration also advances the sustainability objectives of the Project. It is important to understand that green remediation implies minimizing the entire footprint of the remediation Project, which includes the environmental impacts of products and materials associated with the Project. For example, eco-friendly concrete refers to concrete that is produced with a certain percentage of cement replaced by recovered cementitious materials such as fly ash, slag or glass. This type of reduced cement concrete takes a problematic substance out of the waste stream and reduces the cumulative amount of energy associated with the production of concrete. The use of native plants for Site restoration helps to

conserve water and eliminate the need for potentially harmful fertilizers and pesticides.

1.5 SUBMITTALS

- A. Form “A” - Summary of Green Remediation Metrics:
1. Consistent with NYSDEC Program Policy DER-31/Green Remediation requirements, the CONTRACTOR shall complete *Form A - Summary of Green Remediation Metrics*, in its entirety and sign the certification as to its accuracy.
 2. The CONTRACTOR shall submit properly completed Form A to the DEPARTMENT along with each CONTRACTOR’s Application for Payment.
 3. Consistent with NYSDEC’s Part 248 Annual Emission Reporting requirements, CONTRACTOR is required to report annual emission for vehicles used under the Contract reporting period (even those exempt from Best Available Retrofit Technology [BART] requirements) on both the Annual Report and Vehicle Inventory forms. These forms are not intended to be cumulative lists of a Prime Contractor's fleet over time and should only reflect vehicles used during the Contract or Reporting period. Reporting forms and requirements can be accessed at <https://dec.ny.gov/environmental-protection/air-quality/controlling-motor-vehicle-pollution/heavy-duty-vehicles>.
 4. Submit product data for all products and equipment specified within this specification and other Project specifications. As appropriate, include data presenting energy consumption ratings, air discharge ratings, bio-content analysis, and other sustainability measures indicated in this section.
- B. A Green Remediation Plan submitted as a component of the CONTRACTOR’s Work Plan (as required by Standard Specifications Section 01 33 00 – Submittal Procedures) that includes a description of the green remediation elements incorporated into the CONTRACTOR’s approach whether required by the Contract Documents or independently proposed by the CONTRACTOR, including but not limited to the following:
1. Emission reduction control and policies which shall include a plan for clean diesel practices. At a minimum the plan must incorporate the first two bullets below.

- a. Reduce unnecessary idling through the use of auxiliary power units, electric equipment, and strict enforcement of idling limits.
 - b. Practice good engine maintenance to meet original standards, and properly train operators to run equipment efficiently.
 - c. Use verified diesel emission control technology ("VDEC"), including verified diesel particulate filters ("DPFs") or diesel oxidation catalysts ("DOCs").
2. Transportation minimization and green transportation evaluation.
3. Recycling, reuse and waste minimization.
4. Use of local materials and facilities.
5. Approach to tracking emissions reductions and other green remediation metrics.
6. Justification for any proposed approach that does not meet the minimum green remediation requirements and/or preferences included in the Contract Documents.

1.6 QUALITY ASSURANCE

A. Environmental Project Management and Coordination:

1. CONTRACTOR shall designate an employee who shall be responsible for implementation of green remediation elements; coordinate work of subcontractors and suppliers; instruct workers relating to environmental issues; ensure that green remediation metrics are collected, recorded on *Form A - Summary of Green Remediation Metrics* and submitted with the CONTRACTOR's Applications for Payment, and oversee Project environmental goals.

PART 2 – PRODUCTS

- A. Evaluate the products and materials needed for the Project and identify "sustainable" materials to be used. Focused effort shall be directed to identify materials and products that are needed in large quantities that will have the largest impact on the Project. For example, projects requiring a large amount of crushed stone for temporary roadway construction shall be evaluated for sustainable solutions (e.g., recycled crushed concrete and local sources).
- B. Materials with a high carbon footprint (such as concrete, because of the manufacture of the Portland cement in the material) shall also be evaluated

to identify more sustainable solutions. Green concrete shall be considered for such situations.

C. CONTRACTOR shall use environmentally preferable products, including, but not limited to:

1. Compact Fluorescent Lights (CFL) or LED.
2. Reused PVC pipe.
3. Environmentally friendly electronics (e.g., ENERGY STAR).
4. Items composed of recovered materials such as recycled asphalt, concrete and rubble; recycled wood including mulch products; recycled metals including steel, copper, and brass; and items/products composed of recycled cardboard.
5. Items constructed using renewable resources such as biomass energy (such as ethanol), hydropower, geothermal power, wind energy, and solar energy.
6. Bio-based cleaning products.
7. Bio-based dust control agents and dust suppressants: Products formulated to reduce or eliminate the spread of dust associated with gravel roads, dirt parking lots, open excavations, stockpiled materials or similar sources of dust. Provide minimum 85% biobased content.
8. Geotextile fabrics/tarps made of recycled or recovered material.
9. Hydraulic fluids that are biodegradable for operating hydraulic equipment such as excavators, bulldozers, and drill rigs.
10. Phosphate-free detergents instead of organic solvents or acids to decontaminate equipment not used directly for sample collection.
11. Substitute temporary silt fences with biodegradable erosion controls such as tubular devices filled with organic materials.
12. Products must be certified environmentally clean before delivery to the Project Site. ENGINEER'S approval shall be required for all products.

PART 3 - EXECUTION

A. The CONTRACTOR shall:

1. General Site Requirements:

- a. Set up an on-Site recycling program for CONTRACTOR-generated wastes.
- b. Provide all required documentation in electronic format, eliminating the need for printing, inks, paper, and mail/delivery impacts, unless a printed submittal is specifically requested by the ENGINEER.
- c. Sequence work to minimize double-handling (e.g., direct stockpiling of waste, direct placement of backfill, etc.) of materials.
- d. Provide locally made materials that are composed of recovered materials to the maximum amount practicable.
- e. Provide materials that generate the least amount of pollution during mining, manufacturing, transport, installation, use and disposal.
- f. Maintain office trailer heating and cooling systems at efficient set points. Utilize renewable energy (i.e., solar) for trailer power and lighting. Utilize programmable or smart devices to efficiently control lights and HVAC equipment.
- g. If alternatives are available, do not use materials that contain ozone-depleting chemicals (e.g., CFCs or HCFCs) and that emit potentially harmful volatile organic compounds (VOCs).
- h. Employ construction practices that minimize the generation of excessive dust and combustion by-products.
- i. CONTRACTOR shall not use or cause to be used scarce, irreplaceable and endangered resources.
- j. Reduce impact to land and ecosystems.
- k. Contain and reuse water on-Site, to the extent practicable, as approved by the DEPARTMENT.

- l. Ensure temporary facilities (e.g., field offices and sanitary facilities) and permanent structures (e.g., treatment plants and offices) are thoroughly and properly insulated.
 - m. Design structures to take full advantage of passive solar heating and cooling.
 - n. Chip all cleared woody vegetation not designated for off-Site disposal. Stage onsite for reuse as mulch. This applies to trees beyond the limits of specified excavation.
 - o. Identify on-Site or nearby sources of backfill material such as crushed stone.
 - p. Incorporate green requirements into cleanup and supporting service procurements.
 - q. Choose service providers with local offices, to minimize the distance of worker commutes and machinery transport.
 - r. Choose equipment and product vendors with nearby production or distribution centers, to minimize delivery-related fuel use.
2. Equipment Requirements:
- a. Minimize equipment engine idling.
 - b. Utilize properly sized equipment and minimize the number of mobilizations needed to deliver and remove heavy equipment. Utilize an automated coupling system for equipment, rather than a manual pin-on system for changing excavator attachments, to reduce machine operating time.
 - c. Use machine models capable of performing assorted tasks, whenever feasible, to avoid field deployment of multiple types of machines. For instance, a single excavator can be equipped with a bucket for digging, a breaker for demolition or a grapple for land clearing.
 - d. Incorporate electronic intelligence systems to improve productivity within and among field machines. “Smart” systems enable work managers to remotely monitor field operations via machine-to-machine communications and identify changes to be made by machinery operators accordingly.

- e. Use machines with variable-speed control technology, which automatically reduces engine speed during low workload requirements, or with pump torque control, which allows a machine operator to change a machine's hydraulic pump torque.
- f. Use machines with repowered or newer engines that are more fuel efficient.
- g. Implement an engine idle reduction plan to avoid fuel consumption when machinery is not actively engaged. Options include manual shutdown after a specified time such as five minutes, engagement of automatic shutdown devices, or use of auxiliary power units to heat or cool machinery cabs.
- h. Minimize emissions during Site work (e.g., replace or retrofit older engines or use newer efficient models or use low-sulfur fuel).
- i. Deploy direct-push technology (DPT) instead of rotary drilling rigs whenever feasible for additional subsurface sampling or for monitoring well installation. DPT can reduce drilling duration by as much as 50-60% while minimizing generation of drill cuttings or the need to dispose of drilling fluids.
- j. Employ transportation methods, such as rail, which have demonstrated low emissions.
- k. Choose trucking methods and fleets that use vehicles equipped with fuel efficiency options such as tractor trailer skirts and air tabs, as well as clean diesel technology.
- l. Practice engine maintenance in accordance with manufacturers' recommendations and properly train operators to run equipment efficiently.
- m. Perform all required equipment inspections to reduce the potential for breakdowns, hydraulic fluid spills, and other negative impacts due to lack of inspections.
- n. Use 2007 or newer on-road diesel trucks or retrofitted diesel trucks with equivalent emissions reductions that get better fuel mileage, reduce air toxics and use low sulfur fuel or alternative fuel.

- o. Identify on-Site or nearby sources of topsoil, to avoid long-distance transport of clean soil. Options may include on-Site manufacturing of topsoil through use of locally sourced industrial byproducts such as compost or silica-based spent foundry sands.
 - p. Use solar power packs to recharge batteries in small electronic devices such as small hand tools, cell phones, laptop computers and sensors.
 - q. Install a ground-mounted PV array, wind turbine or mechanical windmill to power equipment needed for Site monitoring or maintenance. Properly scale and configure such equipment to provide power to other remediation equipment if possible.
 - r. Use high efficiency variable speed pumps for dewatering and groundwater extraction and treatment plant operations.
 - s. Optimize pump-and-treat and dewatering systems using properly sized equipment to minimize excess extraction or energy usage.
3. Restoration and Revegetation Requirements:
- a. Revegetate backfilled areas as quickly as possible through use of a diverse mix of native grasses, shrubs, forbs and trees supporting many habitat types.
 - b. Include plant species that promote colonization of bees and other pollinators.
 - c. Seed or install native rather than non-native species, which typically increases the rate of plant survival and minimizes the need for irrigation and soil or plant inputs.
 - d. Choose grass species requiring little or no mowing.
 - e. Utilize wood chips generated during site clearing for mulch.
 - f. Substitute chemical fertilizers, herbicides or pesticides with non-synthetic inputs, integrated pest management methods, and soil solarizing techniques during vegetation planting, transplanting or ongoing maintenance.
 - g. Retain native, noninvasive plants for later replanting.

Table 00030-1: Greener Cleanup BMPs The CONTRACTOR shall implement the following. The following is not intended to be all-inclusive. Refer to specifications for additional project requirements.	
Green Energy Requirements	Solar-powered construction lights
	Solar-power supplied construction trailer for ancillary power, battery charging and small equipment
	Solar-powered dewatering pumps (Example: RPS Solar Pumps). Select equipment with dual power option to run on alternate (traditional) power source when solar is not sufficient
	Maximize the use of other solar-powered and battery-powered equipment
Required Green Remediation Activities	Source backfill, especially topsoil, from a local suppliers
	Furnish products (e.g., silt fence, silt logs) with recycled and biobased content
	Use bio-fuels for equipment and vehicles
	Identify and implement beneficial use for clearing and grubbing debris
	Store treated dewatering effluent and use for dust suppression
	Limit extent/control of on-site traffic to reduce disturbance area
	Furnish storm water collection/storage system for watering and maintenance of plantings
	Use local contractors for planting maintenance and source water locally for plant upkeep
	Install commercially available low cost bees nests in the planting areas to encourage pollinators (keep away from commonly trafficked areas)
	Use local facilities for waste disposal, to the extent possible
	Minimize idling of equipment and vehicles

++ END OF SECTION ++

SECTION 34 78 13

PORTABLE TRUCK SCALES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. A portable truck scale is not specifically required under this Contract. However, in the event that CONTRACTOR deems it necessary to install a portable truck scale for the Work, CONTRACTOR shall:
 - 1. provide all labor, materials, equipment and incidentals as required to furnish and install and operate a portable truck scale.
 - 2. provide all necessary foundations, weigh deck, load cells, control panel, anchorage systems, electrical connections and supply, and all appurtenances.
 - 3. obtain necessary weights and measures certifications and operate scale with a certified weigh master.
 - 4. comply with all articles of this specification.

1.2 REFERENCES

- A. Standards referenced in this Section are listed below:
 - 1. American Welding Society, (AWS).
 - a. AWS D1.1, Structural Welding Code.
 - 2. National Bureau of Standards, (NBS).
 - 3. National Electrical Code, (NEC).
 - 4. National Electrical Manufacturers Association, (NEMA).
 - 5. Scale Manufacturers Association, (SMA)

1.3 QUALITY ASSURANCE

- A. Equipment Manufacturer's Qualifications:
 - 1. Manufacturer shall have a minimum of five years of experience of producing substantially similar equipment and shall be able to show evidence of at least five installations in satisfactory operation for at least five years.
- B. Component Supply and Compatibility:
 - 1. Obtain all equipment included in this Section, regardless of the component manufacturer, from a single portable truck scale equipment manufacturer.
 - 2. The portable truck scale equipment manufacturer shall review and approve or shall prepare all Shop Drawings and other submittals for all components furnished under this Section.
 - 3. All components shall be specifically designed for portable truck weighing service and shall be integrated into the overall equipment design by the portable truck scale equipment manufacturer.

C. Source Quality Control:

1. Visual Inspection: Verify that equipment complies with these Specifications and approved Shop Drawings.
2. Packing:
 - a. Inspect prior to packing to ensure that assemblies and components are complete and undamaged.
 - b. Protect machined surfaces and mating connections.
 - c. Protect bearings with a shop applied corrosion prevention coating.
 - d. Crate in a manner which will prevent damage during shipment, delivery and storage.
 - e. Identify crate contents by a packing slip fastened to the outside of the crate.

1.4 SUBMITTALS

A. Action Submittals: Submit the following:

1. Product Data:
 - a. Manufacturer's literature, illustrations, specifications and engineering data.
2. Shop Drawings:
 - b. Drawings showing fabrication methods, assembly, installation and wiring diagrams.
 - c. Setting drawings, templates, and directions for the installation of anchor bolts and other anchorages.

B. Informational Submittals: Submit the following:

1. Source Quality Control Submittals:
 - a. Submit results of required control panel shop tests.
2. Site Quality Control Submittals:
 - a. Submit a written report providing the results of the required field tests.
 - b. Submit a written report of the results of each visit by a manufacturer's serviceman, including purpose and time of visit, tasks performed and results obtained.

C. Closeout Submittals: Submit the following:

1. Operation and Maintenance Manuals:
 - a. Submit complete installation, operation and maintenance manuals including test reports, maintenance data and schedules, description of operation and spare parts information.

D. Maintenance Material Submittals: Submit the following:

1. Extra Stock Materials:
 - a. Load Cell Fluid: Furnish a load cell fluid specification for the type and grade necessary to meet the requirements of the equipment if required.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the Site to ensure uninterrupted progress of the Work. Deliver anchor bolts and anchorage devices, which are to be embedded in cast-in-place concrete in ample time to not delay that Work.
- B. All boxes, crates and packages shall be inspected by CONTRACTOR upon delivery to the Site. CONTRACTOR shall notify ENGINEER, in writing, of any loss or damage to equipment or components. Replace losses and repair damage to new condition, in accordance with manufacturer's instructions.
- C. Store materials to permit easy access for inspection and identification. Keep all material off the ground using pallets, platforms, or other supports. Protect equipment including packaged materials from corrosion and deterioration.

PART 2 - PRODUCTS

2.1 SERVICE CONDITIONS

- A. General: Equipment shall be designed to be suitable for the process and service conditions described below and in the Schedule of Service Conditions.
 - 1. Portable scale shall be of capable of weighing trucks and being certified by weights and measures.
- B. Schedule of Service Conditions:
 - 1. No. of Scales: 1
 - 2. Platform Size: Determined by CONTRACTOR
 - 3. Total Capacity: Determined by CONTRACTOR
 - 4. Sectional Capacity: Determined by CONTRACTOR
 - 5. Mid-Span Capacity:
 - a. Single Axle Determined by CONTRACTOR
 - b. Tandem Axle Determined by CONTRACTOR
 - c. Tri-axle Determined by CONTRACTOR

2.2 PRODUCT AND MANUFACTURER

- A. Products and Manufacturers: Provide one of the following:
 - 1. Cardinal Scales.
 - 2. Fairbanks Scales.
 - 3. Or equal.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspection:
 - 1. Inspect and verify that structures or surfaces on which the equipment will be installed have no defects which will adversely affect installation.
 - 2. Inspect all equipment prior to installation.
 - 3. Promptly report defects which may affect the Work to the ENGINEER, in writing.

3.2 START-UP AND TEST

- A. Perform operating tests to demonstrate that the equipment operates properly.
- B. Make adjustments required to place equipment in proper operating condition.
- C. Submit report of test results.

3.3 MANUFACTURER'S FIELD SERVICES

- A. A factory trained representative shall be provided for installation supervision, start-up and test services and operation and maintenance personnel training services. Manufacturer's representative shall test operate the system in the presence of the ENGINEER and verify that the equipment conforms to requirements. Representative shall revisit the Site as often as necessary until all trouble is corrected and the installation is entirely satisfactory.
- B. All costs, including travel, lodging, meals and incidentals, shall be considered as included in CONTRACTOR'S bid price.

3.4 MANUFACTURER'S REPAIR SERVICES

- A. Provide services of factory-trained representatives of the manufacturer to maintain the scale during the Contract period.

+ + END OF SECTION + +

SECTION XI

Supplementary Specifications

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FINAL DESIGN SUBMITTAL
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

KATZMAN RECYCLING SITE
SITE NO. 558035

SECTION XI - SUPPLEMENTARY SPECIFICATIONS

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END OF SECTION

SECTION 00 01 15
LIST OF DRAWING SHEETS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. List of Contract Drawings titled Katzman Recycling Site (Site No. 558035), Town of Granville, Washington County, New York.
- B. The Work shall conform to the Contract Drawings, including the following.

Sheet Number	Sheet Title
G-001	Title Sheet, Site Location, and Drawing Index
G-002	Legend and Notes
G-100	Existing Site Conditions – Topographical Survey
G-101	Site Preparation – Sediment and Erosion Controls
C-100	Excavation Areas – Key Plan
C-101	Excavation Plan – Elevation Ground Surface to 425.0'
C-102	Excavation Plan – Elevations 425.0' to 423.0
C-103	Excavation Plan – Elevations 423.0' to 421.0'
C-104	Excavation Plan – Elevations 421.0' to 419.0'
C-105	Excavation Plan – Elevations 419.0' to 417.0'
C-106	Excavation Plan – Elevations 417.0' to 415.0'
C-107	Excavation Plan – Elevations 415.0' to 413.0'
C-108	Excavation Plan – Elevations 413.0' to 411.0'
C-109	Excavation Plan – Elevations 411.0' to 409.0'
C-110	Excavation Plan – Elevations 409.0' to 407.0'
C-111	Excavation Plan – Elevations 407.0' to 405.0'
C-112	Excavation Plans – Areas A through E
C-113	Site Restoration Plan
C-500	Details 1
C-501	Details 2

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 00 31 24
ENVIRONMENTAL ASSESSMENT INFORMATION

PART 4. GENERAL

4.1 ATTACHMENTS

- A. TRC Engineers, Inc. 2018. Remedial Investigation Report. Katzman Recycling Site. July 2018. Available at: <https://extapps.dec.ny.gov/data/DecDocs/558035/>
- B. TRC Engineers, Inc. 2022. Limited Asbestos Survey Report. Katzman Recycling. April 2022. Available at: <https://extapps.dec.ny.gov/data/DecDocs/558035/>
- C. TRC Engineers, Inc. 2024. TSCA PCB Self-Implementing Cleanup and Disposal Plan. January 2024. <https://extapps.dec.ny.gov/data/DecDocs/558035/>
- D. TRC Engineers, Inc. 2024. Basis of Design Report. Katzman Recycling Site. March 2024. Available at: <https://extapps.dec.ny.gov/data/DecDocs/558035/>
- E. TRC Engineers, Inc. 2024. Limited Site Data Document. February 2025. Available at: <https://extapps.dec.ny.gov/data/DecDocs/558035/>

PART 5. PRODUCTS

NOT USED.

PART 6. EXECUTION

NOT USED.

END OF SECTION

SECTION 00 31 46
PERMITS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the requirements for project permits and identifies the permits applied for by the ENGINEER. CONTRACTOR shall obtain all other permits, variances, and approvals required for the Work.

1.2 ENGINEER PERMITS

- A. ENGINEER will obtain the following in advance of Award of Contract. Relevant permit documentation is provided in Section IX of the Contract.
 - 1. New York State Pollutant Discharge Elimination System Permit Equivalency covering water handling, treatment and discharge to surface water.
 - 2. Approved Asbestos Decision Amendment (No. 24-0550) and Asbestos Site-Specific Variance Petition, June 13, 2024.

1.3 CONTRACTOR PERMITS

- A. CONTRACTOR shall obtain all other permits required for the Work. Upon receipt of each permit, CONTRACTOR shall provide a copy to ENGINEER.
- B. CONTRACTOR shall submit applications for permits and approvals to ENGINEER and obtain ENGINEER's approval before submittal to agency having jurisdiction.
- C. Obtain and pay for all construction permits and licenses for Work and all required insurance coverage.
- D. Pay all governmental charges and inspection fees necessary for execution of the Work.
- E. The following additional permits may be necessary for the Work. This is not a comprehensive list, and it is CONTRACTOR'S responsibility to identify and obtain all necessary permits.
 - 1. NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-23-001 (SPDES General Permit). The SPDES General Permit requires completion of a Notice of Intent, preparation of a Stormwater Pollution Prevention Plan, and completion of the Contractor/Subcontractor SPDES Permit Certification.
 - 2. The CONTRACTOR shall obtain at his own expense appropriate permits from regulatory agencies, including New York State Department of Labor (NYSDOL), as required to complete the safe removal of asbestos containing soil and debris. Refer to Supplementary Specification Section 02 82 33 – Removal and Disposal of Asbestos Containing Soil and Debris for additional requirements related to asbestos containing soil and debris management. ENGINEER has obtained an Approved Asbestos Variance Decision Amendment (No. 24-0550) and Asbestos

Site Specific Variance Petition, June 13, 2024 (refer to Contract Documents, Section IX – Special Conditions).

3. Washington County Demolition Permit, as required for demolition of the Pole Barn. Refer to Supplementary Specification Section 02 41 00, Pole Barn Demolition.
4. Local permits from Town of Granville, Washington County, and local soil and water conservation districts, as required for the project.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 11 00
SUMMARY OF WORK

PART 1. GENERAL REQUIREMENTS

1.1 SUMMARY

- A. The Katzman Recycling Site (NYSDEC Site No. 558035) is located in the Town of Granville, Washington County, New York. The approximately 21-acre Site is bounded by County Route 26 and commercial properties to the west. Adjacent to the Site along the southwestern boundary is a tractor equipment supplier and New York State Route 22. Warner's Auto Body, an auto sales and repair business, is directly north of the western portion of the property, and vehicles associated with the auto body property have been observed encroaching on the Site. Directly east of the property is a former Delaware and Hudson Railroad roadbed that has been converted into a recreational trail. The Site was operated as a facility which accepted various metal products for recovery and recycling. As part of the Pre-Design Investigation (PDI) performed in 2022 and 2023, the Site was cleared of larger debris, various piles of rubbish and debris were sorted and consolidated on-Site, and the former Incinerator Building was partially demolished. There is a dilapidated pole barn, which was potentially used for storage and mechanical work, near the northwestern corner of the Site. Refer to Supplementary Specification Section 00 31 24 – Environmental Assessment Information for the Basis of Design Report.
- B. The project includes the removal, by excavation, of asbestos containing soil and debris and PCB-contaminated soil and debris from the Site, as shown in the Contract Drawings and as described in these documents. After ENGINEER approval of the removal of contaminated soil and debris, the CONTRACTOR shall restore the Site, including backfilling with imported fill and topsoil, and seeding. The CONTRACTOR shall not disturb any area outside of the Limits of Work shown and specified.
- C. The CONTRACTOR shall furnish all labor, equipment, materials, supplies, facilities, power, and incidentals necessary to fully complete the Work as shown, as specified, and as directed by the DEPARTMENT. The CONTRACTOR shall be responsible for performing all the Work described in the Contract Documents, including items not specifically identified, as required to complete the Work.
- D. CONTRACTOR shall be solely and entirely responsible to ensure the health and safety of all individuals which could be impacted by the Work. The DEPARTMENT and/or the ENGINEER shall have the authority to stop Work at CONTRACTOR's expense at any time CONTRACTOR is not operating in accordance with applicable safety regulations, where any unsafe working conditions exist, where site hazards exist, or when unsafe practices are employed. Additional safety requirements are specified throughout the Contract Documents and in particular in Standard Specification Section 01 35 29, CONTRACTOR's Health and Safety Plan.
- E. The Work shall conform to the requirements of these Specifications and shall be performed and supervised by personnel who are experienced and knowledgeable in the crafts and trades required by the Scope of Work. The Work shall be performed exclusively by CONTRACTOR's trained and competent personnel or, where permitted, that of its subcontractor(s); and shall comply with all the applicable safety laws, regulations, programs and practices to ensure the safety of all people on and near the Site.

- F. The Work includes furnishing all coordination, supervision, labor, materials, power, equipment and incidentals, and performing all operations for the Work.
- G. The type and quantity of Work specified are estimates that have been shown solely for the convenience of the DEPARTMENT, ENGINEER, and CONTRACTOR, and may not necessarily include all of the items of Work required.
- H. All of the Work shall be performed in accordance with all applicable federal, state, and local laws, regulations, permits, approvals and the approved submittals. If any law, regulation, permit, approval and/or the Contract Documents have contradicting requirements, then the most stringent requirement shall apply, as determined by the DEPARTMENT. Local laws shall include any Village, Town, City, County, or other local regulatory authority having jurisdiction.
- I. The CONTRACTOR is restricted from performing any operation outside the Limits of Work shown on Drawings and specified, unless permission is granted, in writing, from the DEPARTMENT. The CONTRACTOR shall repair and/or restore any and all existing above ground and below ground structures and improvements that are removed, damaged, or in any way altered by the CONTRACTOR within the Work limits or beyond the Work limits unless the modifications are specifically the Work of this Contract.
- J. Material specified for excavation and removal is expected to be heterogenous. Debris that is encountered within the excavation areas is expected to be comingled with soil materials and is expected to be inseparable. CONTRACTOR is fully responsible for reducing the size of debris (if required by waste disposal/recycling facility), waste characterization sampling and analysis, waste profiling, and securing disposal facility acceptance, including determining waste treatment requirements for disposal.
- K. The CONTRACTOR shall be solely responsible for identifying, marking out, and protecting all aboveground and underground utilities and structures. This includes, but is not limited to, structures and features associated with the Site such as monitoring wells not designated for removal.
- L. The CONTRACTOR shall identify, apply for and obtain, pay all fees for, and comply with all requirements of all licenses, permits, approvals, and insurance required from federal, state, and local government and public agencies and authorities to perform the Work. The CONTRACTOR shall provide indemnifications to public and private agencies and authorities as required by the agencies and authorities to perform the Work. The CONTRACTOR shall issue all notices and observe and comply with all laws, rules, regulations, and ordinances applicable to the Work. Submit notices to ENGINEER for approval, prior to submittal to others.
- M. The CONTRACTOR shall acquire and complete all required manifest forms and bills of lading as required by applicable laws and regulations for transportation and disposal of materials off-Site.
- N. The CONTRACTOR shall be responsible for protecting, securing, and maintaining the Site and all materials and equipment during the Work.
- O. The CONTRACTOR shall notify the DEPARTMENT and ENGINEER a minimum of five days prior to the start of construction. In addition, if work should be stopped and restarted for any reason, the CONTRACTOR shall notify the DEPARTMENT a minimum of five days prior to resuming work.

- P. The CONTRACTOR shall coordinate the Work with any municipality, utility, railroad, or property owner/tenant having jurisdiction within the limits of this project.
- Q. CONTRACTOR shall perform the work continuously without any significant breaks in schedule, without prior approval by ENGINEER. Any time the CONTRACTOR will not be working at the Site for five consecutive days or more, the CONTRACTOR shall formally shut down work activities and secure the Site in accordance with the requirements of the Contract Documents. If excavation work is underway prior to the shutdown, the water pumping and treatment system shall be operational, and shall be monitored on a full-time basis by CONTRACTOR, throughout the shutdown period, unless directed otherwise by the ENGINEER.
- R. Throughout these specifications and the Contract Documents, "Contaminated Soil and Debris - TSCA" (also referred to as "TSCA Contaminated Soil and Debris" and "TSCA Soil and Debris") means material, debris, soil, and associated liquids and sludges with PCBs at concentrations equal to or greater than 50 milligrams per kilogram (mg/kg); "Contaminated Soil and Debris - Non-TSCA" (also referred to as "Non-TSCA Contaminated Soil and Debris" and "Non-TSCA Soil and Debris") means material, debris, soil, and associated liquids and sludges with PCBs at concentrations less than 50 mg/kg; and "Contaminated Soil and Debris – Asbestos" (also referred to as "Asbestos Containing Soil and Debris") means material, debris, soil, and associated liquids and sludges with asbestos at "trace" or greater concentrations. TSCA Contaminated Soil and Debris is TSCA-regulated PCB Remediation Waste and a New York State listed hazardous waste. "Material", "Soil" and "Debris" to be removed shall mean all materials, regardless of nature or type, within specified excavation limits, including cut back material which must be removed for excavation slope stabilization.
- S. Use only properly licensed trades persons for the Work, including, but not limited to, electrical, mechanical and plumbing.

1.2 SCOPE OF WORK

Principal features of the Work to be performed by the CONTRACTOR include, but are not limited to:

- A. Mobilization and Demobilization
1. Submittals, including: Work Plan, as specified in Supplementary Specification Section 01 15 00 – Minimum Requirements for Work Plan; Asbestos Containing Soil and Debris Removal and Disposal Work Plan, as specified in Supplementary Specification Section 02 82 33 – Removal and Disposal of Asbestos Containing Soil and Debris, and all other submittals required by the Contract Documents.
 2. Obtain required construction related permits, bonds, insurance, pay administration costs, and submit reports.
 3. Obtain appropriate permits from regulatory agencies, including NYSDOL, as specified in Supplementary Specification Section 02 82 33 – Removal and Disposal of Asbestos Containing Soil and Debris.
 4. Transport of equipment and materials to the Site for the Work.
 5. Clearly mark out at the Site the Limits of Work shown on the Contract Drawings. Markings shall be at no greater spacing than 25 feet.

6. Provide full time project Superintendent.
7. Provide licensed land surveyor and ELAP certified analytical laboratory.
8. Collect pre-construction surface soil samples.
9. Prepare access roads and parking areas, including stabilized construction entrance, improved access road, material staging and handling areas, equipment decontamination pad, Site worker parking areas, and water treatment system area.
10. Remove existing and install new entrance gate and modify existing fence, as specified, to safely secure the Site.
11. Remove and dispose off-Site the empty drums temporarily staged in and around the Pole Barn, and demolition and removal of the Pole Barn structure.
12. Protect all existing features and utilities to remain in place, including, but not limited to, the fence and gates, monitoring wells, and trees not identified for removal.
13. Provide all utility mark-outs identified in these specifications and required by law.
14. Clearing and grubbing including removal of trees within the Limits of Work.
15. Install temporary fencing, facilities and utilities, including offices, hygiene and sanitary facilities, project signs, electric and internet services, and remove after completion of Work.
16. Install erosion and sedimentation controls and remove after completion of Work.
17. Remove aboveground debris and debris piles within the specified limits of excavation.
18. Furnish, install, startup and test the dewatering and treatment systems.
19. Temporarily demobilize for winter shutdown and remobilize at the end of the winter shutdown period.
20. Remove all connections, equipment, and rubbish from the Site and staging areas for complete demobilization.
21. CONTRACTOR shall restore the Site conditions as shown and specified in the Contract Documents.
22. Perform all Work for any repairs identified by ENGINEER, DEPARTMENT, or CONTRACTOR, to the satisfaction of ENGINEER.

B. Site Services

1. Develop and implement Site security procedures. The CONTRACTOR is responsible for all security of the Site during the Work.
2. Storage, cleaning, grading, and maintenance of equipment and materials at the Site.

3. Perform all surveying required.
 4. Maintain staging areas and access road.
 5. Maintain temporary facilities and utilities. Utilities shall be uninterrupted throughout the construction. Lighting shall only be required during hours of work.
 6. Maintain erosion and sediment control measures.
 7. Repair existing damage and maintain existing fence and new gate and fence and temporary fence.
 8. Implement, place, and maintain other temporary facilities and controls for the Work.
 9. Attend progress meetings, prepare and submit schedules, perform required record keeping and reporting.
- C. Health and Safety Services
1. Develop and implement Site-Specific Health and Safety Plan (SSHASP).
 2. Provide a full-time Site Safety Officer (SO).
- D. Water pumping and treatment system operation, maintenance and monitoring.
- E. Excavation and management of Contaminated Soil and Debris – Asbestos.
- F. Excavation and management of Contaminated Soil and Debris – TSCA and Non-TSCA.
- G. Post-excavation sampling and analysis.
- H. Secure approvals from disposal facilities, including, but not limited to, waste characterization sampling, analysis, and waste profiling.
- I. Loading, transportation, and off-Site disposal of soil and debris.
- J. Furnishing of clean fill, geotextile in areas of soil cover where specified, and topsoil for backfilling of excavated and disturbed areas to specified grades and elevations and for Site restoration.
- K. Monitoring well decommissioning.
- L. Site restoration, installation of soil cover, planting, seeding, and installation of bluebird nesting boxes.
- M. Complete demobilization from the Site.

1.3 SEQUENCE OF WORK

In general, Work to be performed by the CONTRACTOR will likely occur in the following sequence:

- A. Submittals, permits, Work Plan(s) and mobilization.

- B. Installation of temporary controls, project sign, temporary facilities including offices, hygiene facility, sanitary facilities, and parking areas, and temporary utilities.
- C. Clearing and grubbing.
- D. Upgrade of Site fence/gate, installation of construction entrance and access roads, and construction of staging areas, including access roads to all areas of work.
- E. Pre-construction surveys for existing conditions and topography.
- F. Removal and off-Site disposal of the empty drums staged in the Pole Barn, followed by demolition and removal of the Pole Barn, and off-Site disposal of the demolition debris.
- G. Decommissioning of monitoring wells MW-3, MW-4, and MW-6.
- H. Installation and start-up of dewatering system and water treatment system, including start-up testing as required by permit(s) and the Contract Documents. Installation of the water treatment system is required prior to commencing excavation.
- I. Excavation of contaminated soil and debris, to be performed in 2-foot thick lifts and using a lift-by-lift process. Within each excavation lift the following steps shall be completed, as applicable:
 - 1. Excavation of Asbestos Containing Soil and Debris, followed by
 - 2. Excavation of Contaminated Soil and Debris – TSCA, followed by
 - 3. Excavation of Contaminated Soil and Debris – Non-TSCA.
 - 4. Post-Excavation samples shall be collected and analyzed and approval from the ENGINEER shall be required before proceeding with backfilling.
- J. Post-excavation surveys for excavation measurement for payment, post-excavation sampling grids and sample locations, and other surveys as required.
- K. Soil and debris staging and proper maintenance of staging areas while awaiting transportation and disposal approvals, including management of drainage/leachate from the soil and debris.
- L. Soil and debris waste characterization and profiling for disposal approvals.
- M. Excavated material dewatering and stabilization, management, loading, hauling, and off-Site disposal.
- N. Maintenance of the excavations in a dry condition to facilitate inspections by DEPARTMENT and ENGINEER.
- O. Backfill and restoration of Site.
- P. Post-backfill surveys for measurement and payment.
- Q. As-built surveying of all final conditions including monitoring wells and final Site topography.

- R. Removal and restoration of staging areas and other areas impacted by the Work.
- S. Installation of bluebird nesting boxes.
- T. Demobilization.

1.4 WINTER SHUTDOWN

- A. The Work includes temporarily demobilizing for winter shutdown and remobilizing after the winter shutdown period. Temporary demobilization for winter shutdown and remobilization after the winter shutdown period shall be completed at the times directed by the ENGINEER. It is expected, although not guaranteed, that winter shutdown will start on or around December 19 and end on or around March 20.
- B. Prior to winter shutdown backfilling to specified subgrade elevations shall be completed and ground surfaces shall be stabilized to the satisfaction of the ENGINEER. Subgrade is defined as 1'-0" below specified final grades. Ground surfaces shall be stabilized with Erosion Control Blanket, per Supplementary Specification Section 31 25 00, Erosion and Sedimentation Controls.
- C. Equipment, facilities, material and supplies which will remain on-site during the winter shutdown period shall be winterized and properly stored to prevent damage during the winter shutdown period. All waste shall be removed from the site before the start of the winter shutdown period. All contaminated equipment, materials and surfaces shall be decontaminated or covered before the start of the winter shutdown period. No excavated material or waste shall be left on site during the winter shutdown period. At the end of the winter shutdown period, all equipment and facilities shall be returned to fully operational status.
- D. Soil lost during winter shutdown, due to insufficient erosion controls or for any reason, shall be replaced by the CONTRACTOR after winter shutdown at no cost to the DEPARTMENT.

1.5 GENERAL NOTE REGARDING SUPPLEMENTARY SPECIFICATIONS

- A. Where articles of other sections of the Contract Documents are repeated in Supplementary Specifications, it is intended to elaborate or qualify such articles. It is not intended that other articles of the Contract Documents be omitted or that additional requirements set forth in the Supplementary Specifications shall exclude other sections of the Contract Document requirements unless specifically noted as such.

1.6 GENERAL ARRANGEMENT

- A. The Contract Documents indicate the extent and general arrangement of the Work. The specific equipment proposed for use by the CONTRACTOR on the project may require changes to the construction detailed in the specifications and/or Contract Drawings, and all such changes shall be submitted to the DEPARTMENT for review in accordance with the requirements of the Contract Documents and shall be made without additional cost to the DEPARTMENT.
- B. CONTRACTOR's Scope of Work shall include performing all Work which is indicated in the specifications, Contract Drawings and elsewhere in the Contract Documents, and which is normally considered necessary to properly complete the Work, whether or not such Work is fully detailed or listed in the Contract Documents.

- C. No demolition or removal of material other than specified and required by this Contract is allowed.
- D. Perform general Site maintenance, including, but not limited to the following:
 - 1. Removal of snow and ice as required to complete the Work.
 - 2. Prevent spills onto land, but if they occur, prevent contaminated water, fluids, etc. from leaving the Site and entering surface water or storm sewer collection systems. Maintain a spill response kit on-Site. The CONTRACTOR is responsible for paying costs for damage caused by and cleanup of all spills and releases caused by their work.
 - 3. Fugitive dust control.
 - 4. Inspection and maintenance of erosion and sediment control systems.
 - 5. Inspection and maintenance of dewatering and treatment systems.
 - 6. Repair and maintain roadways utilized for construction activities.
 - 7. CONTRACTOR shall provide all required temporary utilities for the Work. There are currently no active utilities on-Site available for the CONTRACTOR's use.
- E. Project Documentation
 - 1. CONTRACTOR shall maintain project documentation during performance of the Work, including Record/As-Built Drawings, photographic documentation, test results, disposal documentation, notifications, plans and permits, and all other requirements per the Contract Documents. These documents shall be available at the Site at all times. Record/As-Built Drawings shall be clearly marked as such, and shall be used only for recording changes pertinent to the construction operation for use in preparing the Record/As-Built Drawings and documents. All changes shall be clearly marked in red pencil. The Record/As-Built Drawings shall be available for inspection by ENGINEER at all times.
- F. The descriptions of the Work in this section are general descriptions only and are not intended to be complete descriptions of the Work.

1.7 WORK BY OTHERS

- A. Waste manifests will be signed by DEPARTMENT or by DEPARTMENT's designated representative.

1.8 EXISTING SITE CONDITIONS

- A. Examination of Site and Areas of the Work
 - 1. The Contract will be administered with the understanding that CONTRACTOR has visited the Site, and insofar as possible, is aware of the current design and condition of the areas of Work.
 - 2. CONTRACTOR's later plea of ignorance of existing or foreseeable conditions which create difficulties or hindrances in the execution of the Work will not be

considered as an excuse for any failure on the part of CONTRACTOR to fulfill in every detail the requirements of the project technical Specification and the Contract Drawings, nor will such a plea be acceptable as the basis of a claim for additional compensation or schedule delays.

B. Reference Points

1. The CONTRACTOR shall be responsible for laying out the Work and shall protect and preserve the established reference point(s). The CONTRACTOR shall report to the DEPARTMENT whenever any reference point is lost, destroyed, or requires relocation because of necessary changes in grade or location. The CONTRACTOR shall be responsible for replacement or relocation of such reference points by professionally qualified survey personnel licensed in the State of New York. The CONTRACTOR shall keep neat, legible notes of all measurements and calculations made while surveying and laying out the Work and notes shall be available for the DEPARTMENT's and ENGINEER's review during the Work.
2. The location of existing reference point(s) and their elevation(s) are shown on the Contract Drawings.

1.9 HOURS OF WORK AND SITE USE

- A. CONTRACTOR shall comply with the Contract specified "Normal Working Hours". Limit the operation of heavy equipment and machinery to Normal Working Hours, as required by the Contract. Comply with local ordinances regarding noise generation and allowable construction work hours, if more stringent than the Contract. The CONTRACTOR shall arrange and limit all vehicle movement, material deliveries, etc. to the specified "Normal Working Hours". Exception to this provision shall only be made with the expressed written approval of the DEPARTMENT.
- B. Work on site 24 hours per day, seven days per week will not be permitted, with the exception of operation and maintenance of the dewatering and water treatment systems, as required for dewatering, site security, and similar items of Work consistent with the intent of the Contract Documents and specifically approved by the DEPARTMENT for implementation beyond normal working hours. Refer to Contract Section VIII – General Conditions (Article 5.3) for additional Labor, Working Hours, Materials, and Equipment requirements.
- C. Unless otherwise specifically permitted, all work that could be subject to damage shall be stopped during inclement, stormy, or freezing weather. Other such work as will not suffer injury to workmanship or materials will be permitted. The CONTRACTOR shall carefully protect the Work against damage or injury from the weather and, when work is permitted during freezing weather, shall provide and maintain acceptable facilities for protecting, and if necessary, heating the Work.
- D. Unless scheduled to be working, CONTRACTOR shall not work, be present, or conduct any other activities at the Site.
- E. CONTRACTOR shall limit the use of premises to construction activities in the areas directed by ENGINEER and shall limit use of premises, when not engaged in the actual performance of the Work, to storage related to the execution of the Work.

- F. CONTRACTOR's and its employees' vehicles shall be parked in areas expressly set aside and approved by ENGINEER as parking areas. ENGINEER assumes no responsibility for loss or damage to vehicles.
- G. ENGINEER reserves the right to demand removal from the Site any personnel under the employment of CONTRACTOR whose presence is deemed undesirable, for any reason whatsoever so long as it is not contrary to federal, state, or local law. ENGINEER is not obligated to provide any reasons for such demands, nor to pay any expenses incurred by CONTRACTOR as a result of a demand.
- H. CONTRACTOR shall assume full and complete responsibility for protection and security of their materials and equipment stored at the Site. CONTRACTOR shall provide for security presence as necessary to protect CONTRACTOR's materials, equipment, etc. on the Site and to prevent access to CONTRACTOR's work areas. ENGINEER is not responsible for theft, loss, damage, etc., of or to CONTRACTOR's materials, equipment, etc. on the Site.

1.10 COOPERATION

- A. CONTRACTOR shall cooperate with ENGINEER at all times so that the interest of all parties concerned regarding the performance of the Work at the Site will be advanced. The CONTRACTOR shall perform phases of work continuously from start to finish, without delay.
- B. CONTRACTOR shall control the means and methods employed in the performance of the Work. CONTRACTOR shall coordinate with ENGINEER's personnel and other contractors to accomplish the Work.
- C. The DEPARTMENT reserves the right to order an increase or decrease in manpower and equipment to meet the Construction Schedule and maintain continuity.
- D. CONTRACTOR shall provide and permit access and inspection, and shall provide property and necessary facilities to do so, to representatives of the DEPARTMENT, ENGINEER, other regulatory agencies, and designees whenever construction work is in preparation or progress.
- E. Upon completion of excavation, CONTRACTOR shall maintain the excavation area in a dewatered condition to allow inspections by DEPARTMENT and ENGINEER. Maintenance of the excavation in this manner is expected to last for a duration of up to two business days.

1.11 DRAWINGS, TABLES, AND REPORTS – MATERIAL QUANTITIES

- A. The Contract Drawings forming a part of the Contract Documents (the "Contract Drawings") show approximate dimensions, details, etc., and are intended to represent the existing conditions and/or finished work. The quantities where shown on the Contract Drawings, tables, and/or reports are only approximate. CONTRACTOR shall verify final necessary quantities and assume full responsibility for those quantities actually required to complete the Work. In performance of the Work, CONTRACTOR shall supply every necessary detail to accomplish the Work in a professional manner even though such details may not be specifically described in the Specifications or shown on the Contract Drawings.

- B. CONTRACTOR is responsible for taking measurements of existing conditions and elevations before commencing work. These shall take precedence over dimensions provided in the Specifications and on the Contract Drawings. If a discrepancy should exist, deviations from the Specifications or Contract Drawings shall be made only after an agreement in writing is obtained from the DEPARTMENT. Failure to inspect in advance of work or verify dimensions shall not be cause for additional costs or time to the CONTRACT.
- C. CONTRACTOR shall not scale the Contract Drawings for construction purposes. The lists of equipment, tabulations of data, and schedules appearing in the Specifications and on the Contract Drawings are included only for the assistance and guidance of CONTRACTOR in arriving at a more complete understanding of the intended scope of work. They are not intended, or to be construed, as relieving the responsibility of CONTRACTOR for conducting their own take-offs. CONTRACTOR shall be responsible for material quantities and take-offs. If the Contract Documents are in error or appear to be in error, lack detail, or require further explanations, CONTRACTOR shall request the DEPARTMENT to clarify, explain, or provide additional drawings as may be necessary. CONTRACTOR shall conform to the new, corrected, or clarified Contract Documents. In the event of any doubt or question arising with respect to true meaning of the Contract Drawings or Specifications, the DEPARTMENT's decisions shall be final and binding.

1.12 CONTROL AND CHARGE OF CONTRACTOR'S WORK

- A. The DEPARTMENT, the ENGINEER, and their representatives/delegates shall have authority to stop the Work by CONTRACTOR for any reason, but particularly for real or perceived safety concerns, execution of Work that is not in compliance with the Contract Documents, or Work that is not properly permitted.
- B. The DEPARTMENT and the ENGINEER reserve the right to remove employees of CONTRACTOR for real or perceived safety violations.
- C. CONTRACTOR shall be responsible for the safety of its employees and subcontractors; and for maintaining the safety of the Site.
- D. CONTRACTOR shall be solely responsible for construction means, methods, techniques, sequences and procedures used in the execution of the Work.
- E. The DEPARTMENT, however, reserves the right to request, and CONTRACTOR shall supply, detailed information regarding the Work, such as procedures, equipment to be used, or Work methods. The DEPARTMENT reserves the right to reject a procedure or Work method if it is determined to be a potential health and safety risk to workers or the public, if it will cause a spill or other release of material to the environment, if it will not successfully meet the requirements of the Contract Documents, or generally if there are appropriate exceptions.

PART 2. PRODUCTS – NOT USED

PART 3. EXECUTION – NOT USED

END OF SECTION

SECTION 01 14 19
USE OF SITE

PART 1. GENERAL

1.1 DESCRIPTION

A. Scope:

1. This Section includes requirements for use of the Site during the Project, and includes requirements for use of existing facilities, as applicable.
2. CONTRACTOR shall provide all labor, materials, equipment, tools, and incidentals shown, specified, and required to comply with restrictions on CONTRACTOR's use of the Site and other areas.
3. Comply with requirements of the General Conditions, as may be modified by the Supplementary Conditions, regarding the CONTRACTOR's use of the Site and other areas.

1.2 USE OF PREMISES

- A. Limit use of premises at the Site to work areas shown or indicated on the Drawings. Do not disturb portions of the Site beyond areas of the Work.
- C. Promptly repair damage to premises caused by construction operations. Upon completion of the Work, restore premises to specified condition; if condition is not specified, restore to pre-construction condition.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 15 00
MINIMUM REQUIREMENTS FOR WORK PLAN

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the requirements for preparation and submittal of CONTRACTOR's Work Plan and Stormwater Pollution Prevention Plan (SWPPP), and specifies general Storm Water Management and Erosion Control requirements.
- B. Approval of each submittal by the ENGINEER is required prior to beginning the work which is the subject of the submittal.

1.2 REFERENCES

- A. NYSDEC, DER-10, Technical Guidance for Site Investigation and Remediation.
- B. New York State Pollutant Discharge Elimination System (SPDES) Individual Industrial Wastewater Discharge Permit – covering water handling, treatment and discharge to surface water.
- C. SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-23-001.
- D. 6 NYCRR Part 700 – Definitions, Samples, and Tests.
- E. Supplementary Specification Section 31 25 00, Erosion and Sedimentation Controls.

1.3 SUBMITTALS

- A. Work Plan.
- B. Stormwater Pollution Prevention Plan.
- C. Submit all submittals in accordance with Standard Specification Section 01 33 00, Submittal Procedures, and the Contract Documents.

1.4 WORK PLAN

- A. The Work Plan shall include, at a minimum, the following:
 - 1. CONTRACTOR's organizational chart including key personnel, subcontractors, laboratories, ENGINEER, and the DEPARTMENT.
 - 2. List of CONTRACTOR's key personnel including responsibilities for the Work, including Project Manager, Superintendent, Quality Assurance Officer, Safety Officer (SO), Foreman, Supervisors, and others. If Project Manager does not have signatory authority on behalf of the CONTRACTOR, include the person who does. CONTRACTOR's key personnel should all be listed in the organizational chart and contact information and resumes should be included for each.

3. List of CONTRACTOR's proposed subcontractors, including scope of work for each subcontractor. Identify all licensed trades persons, including, but not limited to, trades persons for electrical, mechanical and plumbing work.
4. Identification of CONTRACTOR's proposed licensed land surveyor.
5. Indicate which of the CONTRACTOR's key personnel have the following responsibilities:
 - a. Project management and coordination;
 - b. Health and safety;
 - c. Scheduling and schedule control;
 - d. Quality control;
 - e. Sampling, measurement, analysis, and data management;
 - f. Dewatering Plan and Water Treatment Plan development and implementation; and,
 - g. Overseeing and performing specific construction activities (such as site preparation, excavation, backfilling and restoration).
6. Include qualifications and credentials for operators, quality control personnel (including the Quality Assurance Officer), Site Safety Officer, Superintendent, supervisory engineering and technical staff, and others listed in the Contract Documents as requiring a qualification or credential.
 - a. CONTRACTOR's Safety Officer and Health and Safety Technicians, as required by Standard Specification Section 01 35 29, CONTRACTOR's Health and Safety Plan, shall be on-site on a full-time basis during all soil and debris excavation, handling, stabilization, loading, and shipping activities, and other earthwork and water pumping and treatment activities.
 - b. CONTRACTOR's Superintendent shall be on-site on a full-time basis during all work at the Site.
7. List of CONTRACTOR's proposed ELAP-certified analytical laboratories for use in post-excavation sample analysis, surface debris wipe sample analysis, treated water sample analysis, waste characterization sample analysis, and other specified and required analyses.
8. Procedures for implementation of the Work as required by the Contract Documents, including a description of all manpower and equipment to be used; description of appropriate safety devices needed to undertake the Work; spill contingency plans to prevent, contain, and recover spills during the Work; and a general description of the sequence and planned methodology to execute the Work.
9. Identification of permits, approvals, licenses, and notifications required to conduct the Work.

10. Identification and schedule for all submittals required under this Contract. CONTRACTOR shall refer to Table 01 15 00-1 of this Section for a list of submittal requirements. The table summarizes the major submittals required by the specifications and is not all inclusive. CONTRACTOR shall thoroughly review the Contract Documents and Drawings in their entirety and develop the final submittal list.
11. Scaled Site Layout Drawing including, at a minimum, equipment and material staging areas, trailers, decontamination stations, truck washing station, temporary and permanent fencing and gate, stockpile and material handling areas, access roads, parking areas, Site access and egress routes, dewatering treatment equipment, and truck staging area/routes/procedures. Show Limits of Work.
12. Detailed construction drawing(s) of the proposed decontamination station.
13. Procedures and equipment for safely clearing and grubbing, and for excavating, staging, handling, sampling, analyzing, storing, stabilizing, placing, loading and transporting all waste materials, including waste characterization sample collection and analysis.
14. Dewatering and excavation water management means and methods, including specific means and methods for hydraulic isolation of the excavation area from the surrounding surface water bodies, shall be described in detail in CONTRACTOR's Dewatering Plan, as specified in Supplementary Specification Section 31 23 19, Dewatering. The Dewatering Plan shall be incorporated into CONTRACTOR's Work Plan.
15. Procedures for containing, handling, treating and discharging liquid wastes, excavation water, and water drained from excavated soil and debris shall be described in detail in CONTRACTOR's Water Treatment Plan, as specified in Supplementary Specification Section 44 01 40, Water Treatment. The Water Treatment Plan shall be incorporated into the CONTRACTOR's Work Plan.
16. Procedures for soil and debris excavation, including equipment proposed for use in the asbestos, TSCA, and non-TSCA contaminated soil and debris excavation work and for reducing the size of debris, shall be described in detail in CONTRACTOR's Excavation Plan, as specified in Supplementary Specification Section 31 23 16, Excavation. The Excavation Plan shall be incorporated into CONTRACTOR's Work Plan.
17. Procedures for soil and debris staging, processing and stabilization, including equipment proposed and specific methods that may differ between the asbestos, TSCA, and non-TSCA contaminated soil and debris, shall be described in detail in CONTRACTOR's Stabilization Plan, as specified in Supplementary Specification Section 31 32 13, Excavated Material Dewatering and Stabilization. The Stabilization Plan shall be incorporated into CONTRACTOR's Work Plan.
18. Procedures for loading, transportation, and disposal of excavated soil and debris at the primary and backup disposal facilities shall be described in detail in CONTRACTOR's Transportation and Disposal Plan, as specified in Supplementary Specification Section 31 23 16, Excavation. The Transportation and Disposal Plan shall incorporate the requirements of the Traffic Control Plan, as specified in Supplementary Specification Section 01 55 26, Maintenance and

Protection of Traffic. The Transportation and Disposal Plan shall be incorporated into CONTRACTOR's Work Plan.

19. Procedures for procurement, testing, transporting, staging, placement, and compaction of fill and topsoil shall be described in detail in CONTRACTOR's Filling Plan, as specified in Supplementary Specification Section 31 23 23, Fill. The Fill Plan shall be incorporated into CONTRACTOR's Work Plan
20. Procedures for collection and analysis of Field Samples shall be described in detail in CONTRACTOR's Sampling Plan, as specified in Supplementary Specification Section 01 43 36, Field Samples and Analysis. The Sampling Plan shall be incorporated into CONTRACTOR's Work Plan.
21. Procedures for Construction Quality Control shall be described in detail in CONTRACTOR's Construction Quality Assurance/Quality Control (CQA) Plan as specified in Supplementary Specification Section 01 45 00, CONTRACTOR Quality Control. The CQA Plan shall be incorporated into CONTRACTOR's Work Plan.
22. Procedures and equipment to be used for surveying.
23. Procedures and sequence for decontamination of clearing, grading and excavation equipment, tools, sampling equipment, water pumping and treatment system tanks and components, and any other materials and equipment that will contact contaminated material.
24. Means, methods, and provisions for monitoring and control of fugitive air emissions and dust control. Refer to Standard Specification Section 01 35 29, Contractor's Health and Safety Plan for detailed air monitoring requirements including the requirements for preparation and implementation of a Community Protection Plan.
25. List of all products, chemicals, and fuels to be used, quantities of each to be stored, and methods for storage at the Site. Provide safety data sheets for all products to be delivered to the site.
26. Description of planned security operations.
27. Description of the procedures and equipment to be used to identify and protect aboveground and underground improvements, utilities and structures to remain. Aboveground structures include the monitoring wells and all appurtenances.
28. List of other plans and equipment needed to provide security, staging, sampling, testing, removal, and disposal of wastes.
29. Procedures for completing any other major aspect of the Work including:
 - a. Sequencing of Work.
 - b. New Gate Installation.
 - c. Soil Erosion and Sedimentation Control Measures.
 - d. Monitoring Well Decommissioning.

- e. Site Security.
 - f. Surveying, including the New York State licensed land surveyor.
 - g. Miscellaneous Requirements.
30. Letters of Commitment obtained by the CONTRACTOR from all waste transporters and from all transfer, treatment, storage, and disposal facilities to which the CONTRACTOR intends to ship any and all waste and other materials generated by the Work.
- a. At a minimum, for at least one Primary Disposal Facility and one Backup Facility, for each type of waste to be generated by the Work: Letters of Commitment specifically identifying the types and quantities of waste that each facility will be able to accept from the CONTRACTOR, the permit numbers for all facilities at which the waste will be accepted and all waste characterization requirements. Letters of Commitment from facilities to receive excavated soil and debris must include acknowledgement that the waste to be accepted may contain the specific stabilization additives to be used by the CONTRACTOR and their acknowledgement that the Site is listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites.
 - b. In the event that a facility (such as a privately owned treatment works) is prohibited from issuing a Letter of Commitment without a sample of the waste, a conditional letter will be acceptable. Such a conditional letter shall specifically state the types and quantities of waste the facility will accept.
 - c. For waste anticipated to be treated on-Site (e.g., water), a Letter of Commitment from the CONTRACTOR, subcontractor, or rental company as to the size and type of equipment to be provided to execute the Work is acceptable.
31. For each waste transporter, submit the following information:
- a. Name; federal and state identification/permit numbers; address; name and contact information (phone number) of responsible contact for the transporter; list of types and sizes of all transport vehicles and equipment to be used; the proposed transportation route (map and description); and copies of all necessary permits and authorizations (including 6 NYCRR Part 364 Waste Transporter Permit) for each type of waste to be transported.
32. For each Primary and Backup transfer, treatment, storage and disposal facility, submit the following information:
- a. Facility name; federal and state identification/permit numbers; address; name and contact information (phone number) of responsible contact for the facility; signed Letter of Commitment to accept waste as specified; waste characterization/sampling requirements for material acceptance; and unit of measure utilized at facility for costing purposes.

- b. If requested by the DEPARTMENT, copies of all permits, licenses, letters of approval, and other authorizations to operate, held by the proposed facility as they pertain to receipt and management of waste to be accepted during the Work.
 - c. Identify the unit(s) (e.g., cell numbers) that the facility will use to manage the waste.
 - d. Provide the names and phone numbers of the primary regulatory agency contacts for the facility.
 - e. List all active/unresolved compliance orders (or agreements), enforcement notices, or notices of violation issued to the permittees, owners, and operators of each facility.
 - f. Provide for each facility a comprehensive list identifying the waste characterization analytical parameters required for waste acceptance. Include for each facility whether analysis for emerging contaminants is required, including, but not limited to, per- and polyfluoroalkyl substances (PFAS), dioxins, furans, and 1,4-dioxane. Specifically indicate for each proposed facility if analysis for PFAS, dioxins, furans, and 1,4-dioxane is required. Analysis for PFAS, dioxins, furans, and 1,4-dioxane shall be performed as specified and in accordance with the requirements of disposal facilities. It is the responsibility of the CONTRACTOR to identify disposal facilities and comply with the testing requirements of each disposal facility.
33. After approval of the Work Plan, the DEPARTMENT shall be notified by the CONTRACTOR in writing a minimum of 14 calendar days prior to making any proposed changes or within 24 hours of making unavoidable/emergency changes to the Work Plan. All changes require the approval of the DEPARTMENT.

1.5 STORWATER POLLUTION PREVENTION PLAN

- A. The CONTRACTOR shall prepare and submit a site-specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP shall be prepared consistent with the New York Standards and Specifications for Erosion and Sediment Control and the requirements of the SPDES General Permit. The CONTRACTOR shall prepare and submit the SWPPP in accordance with the requirements of the Contract Documents, as directed by the DEPARTMENT, and as required by applicable federal, state, and local codes and regulations. The SWPPP shall include:
- 1. Describe the temporary structural and vegetative measures that will be used to control erosion and sedimentation for each stage of the project from land clearing to the finished stage.
 - 2. Information regarding site background, description of work, analysis of site stormwater facilities and their limitations, and potential impact to natural resources.
 - 3. Provide a to-scale map showing the location and types of erosion and sediment control measures.
 - 4. All calculations and assumptions used for the sizing and siting of proposed temporary erosion and sediment control facilities.

5. Manufacturers' information for all storm water management and erosion and sediment control features proposed including installation and maintenance instructions, inspection recommendations, and product limitations.
 6. If any facilities, improvements or structures for stormwater management and sediment and erosion control on or impacting the Site will be disturbed, the CONTRACTOR shall specifically identify same, and describe controls that will be put in place to control sediment and erosion resulting from the disturbance.
 7. Schedule for implementing the installation of erosion and sediment control facilities prior to and during construction.
 8. Explicitly describe ground stabilization measures to be implemented prior to demobilization for the winter shutdown period. Describe types and frequency of inspections to be conducted during winter shutdown period. Specifically identify plans for removal and disposal of ground stabilization products at completion of the winter shutdown period.
 9. Schedule for maintenance and inspection of soil erosion and sediment control facilities, including maintenance activities to be performed during active construction and during winter shutdown period.
 10. SWPPP Qualified Inspector: Submit name, certification, and training documentation for NYSDEC Qualified Inspector. Qualified Inspector, as defined in the SPDES General Permit, shall be a person that is knowledgeable in the principles and practices of erosion and sediment control, including a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or other DEPARTMENT endorsed individual(s).
- B. Any changes to the approved SWPPP will require resubmission of the plan to the ENGINEER and the DEPARTMENT for reapproval.
- C. In addition to the SPDES General Permit requirements, the CONTRACTOR shall adhere strictly to the provisions of the Town of Granville and Washington County regulations for sediment and erosion control.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

3.1 STORM WATER MANAGEMENT AND EROSION CONTROL

- A. The CONTRACTOR shall utilize a system of structural and vegetation control measures to control storm water, erosion, and sedimentation during the Work. Storm water management on this project is to include measures to mitigate pollutants carried by surface runoff from construction activities, such as stockpiling and loading of waste.

- B. Existing vegetation on the Site shall be maintained to the extent possible and protected to minimize soil loss and control erosion. Areas to be disturbed during construction are subject to erosion and sediment control measures and shall be identified in the SWPPP.
- C. Storm water management objectives for this project include:
1. Prevent runoff from construction activities.
 2. Minimize the erosion potential from the Site.
 3. Enhance the quality of storm water runoff to prevent water quality degradation in receiving water bodies and other natural resources.
- D. Mitigation of storm water impact shall:
1. Provide for erosion and sediment control during mobilization and throughout construction.
 2. Provide for attenuation of peak storm volume and discharge rate to prevent flooding, particularly of the excavation area.
 3. Provide restoration of the Site vegetation and ground surface coverings as specified to prevent any increased runoff from the Site after the Work.
 4. Provide for safe conveyance of storm water during the Work.
 5. Provide for protection of water quality.
 6. Prevent transport of contamination and waste.
- E. Storm water management systems such as retention and extended detention shall be used to capture and treat storm water. Infiltration is not acceptable due to the presence of the buried waste on the site. Supplemental storm water management practices include water quality inlets, open vegetated swales, vegetated buffer zones, and filter strips to provide water quality treatment by filtration, attenuation, buffering, sedimentation, biological removal, and practical retention.
- F. Three basic approaches for controlling erosion and sedimentation shall be employed:
1. Soil stabilization – initially control sheet and rill erosion to prevent channel erosion.
 2. Runoff control – control gully, channel, and stream erosion to prevent transport of sediment.
 3. Sediment control – control sediment transport to protect areas beyond the limits of work and off-site areas.
- G. Erosion and sediment control measures shall be constructed prior to beginning land disturbance. All runoff from disturbed areas shall be directed to the sediment control devices. These devices shall be maintained throughout the Work and shall not be removed until the disturbed areas are stabilized and approval for removal is issued by the ENGINEER.

- H. Upon completion of the Work and removal of the staging areas and other temporary facilities, all disturbed areas shall be seeded and stabilized with erosion control materials such as straw, jute mesh, or excelsior within five days.
- I. Surface water from undisturbed areas shall be prevented from entering areas where construction or disturbance is in progress and shall be prevented from entering contaminated areas.
- J. Surface water that enters the contaminated areas and material handling and staging areas shall be collected using the dewatering system and treated in the water treatment system. Disposal shall be in accordance with all applicable codes and regulations and the discharge permit for the Site.
- K. In the event surface runoff is causing existing clean areas or remediated (excavated and/or backfilled areas) to become contaminated, the affected areas shall be cleaned in accordance with the requirements for the Work and as directed by the ENGINEER or the DEPARTMENT. The CONTRACTOR shall be responsible for all costs associated with mitigating the effects of contaminated runoff migrating to clean areas, remediated areas, or off-Site during the duration of the Contract.
- L. The CONTRACTOR/SUBCONTRACTOR SPDES PERMIT CERTIFICATION shall be completed properly and kept on file at the Site.
- M. All sampling, inspection, recordkeeping, and reporting requirements shall be performed in accordance with the SPDES Permit Equivalent.

TABLE 01 15 00-1
SUMMARY OF MAJOR SUBMITTALS
(Not all required submittals are listed)

Section No.	Submittal Description
00030	Form A – Summary of Green Remediation Metrics
01 25 00	Substitution Requests
01 26 00	Contract Modification Documents
01 26 00	Change Order Submittals
01 26 00	MURK Forms
01 29 73	Schedule of Values
01 32 16	Progress Schedules
01 32 33	Photographic and Video Documentation
01 33 00	Schedule of Submittals
01 33 00	5-Day Submittal Package (refer to Contract Section III, Article 5)
01 33 00	14-Day Submittal Package (refer to Contract Section III, Article 5)
01 35 29	Site-Specific Health and Safety Plan
01 35 29	Site-Specific Health and Safety Plan Preparer
01 35 29	Job Safety Analyses
01 35 29	Reports (Accident Report, Daily Report)
01 35 43.13	Hazardous Materials Management Plan
01 35 43.13	USEPA Generator Identification Number
01 35 43.13	Chemicals proposed for use at the Site
01 35 43.13	Permits for chemicals to be used at the Site
01 45 29.13	Sampling Plan and Quality Assurance Project Plan
01 45 29.13	Test Reports
01 51 05	Shop Drawings (staging areas, and trailer and facilities areas)

01 52 11	Engineer's Field Office Submittals
01 57 33	Action Submittals (shop drawings, product data, qualifications)
01 57 33	Informational Submittals (employee information)
01 58 00	Project Signs, Action Submittals (shop drawings, product data, samples)
01 62 00	Or-Equal Submittals
01 71 23	Certificates of Surveys
01 71 23	Field Engineering Daily Reports
01 71 23	Surveying Submittals
01 71 23	Qualifications of Field Engineer and Surveyor
01 76 50	Nuisance Controls and Management Plan
01 76 50	Monitoring Reports
01 76 50	Community Relations Liaison Qualifications
01 76 50	Corrective Measures Plan
01 77 19	Substantial Completion Submittals
01 77 19	Request for Final Payment and Acceptance of the Work
01 78 39	Project Record Documents, Closeout Submittals
01 78 39	CADD Files of Drawings
34 78 13	Truck Scale Submittals
00 31 46	Applications for permits and approvals (also 01 41 00)
01 11 00	Notifications to permitting agencies
01 15 00	Work Plan (including all component plans)
01 15 00	Stormwater Pollution Prevention Plan
01 15 00	Waste transporter information
01 15 00	Transfer, treatment, storage and disposal facility (primary and backup) information
01 35 29.01	Safety Data Sheets for all materials
01 35 29.01	Electrical Job Safety Analysis
01 43 36	Sampling Plan
01 43 36	Results of laboratory analyses
01 43 36	Final Category A and B data deliverable reports including DUSRs
01 43 36	Calibration records for equipment and instrumentation
01 45 00	Construction Quality Assurance/Quality Control Plan
01 45 00	Results of materials qualification testing
01 45 00	Water treatment system sample results
01 45 00	Daily Construction Reports
01 45 29.13.01	Testing Laboratory Certifications
01 45 29.13.01	Copies of laboratory reports
01 55 26	Traffic Control Plan
01 57 26	Product Data for Odor Control Foam
01 57 26	Source, Testing and Certifications for Imported Water
01 71 23.01	Projection of work to be completed the following week
01 71 23.01	Work Layout Survey
01 71 23.01	Intermediate Surveys following completion of Asbestos excavation
01 71 23.01	Intermediate Surveys following completion of TSCA excavation
01 71 23.01	Intermediate Surveys following completion of non-TSCA excavation
01 71 23.01	Final Survey of As-Built Conditions
01 71 33	Gate and fence materials, dimensions, and installation information
01 74 19	All plans for waste management as part of the Work Plan
01 74 19	Preliminary waste profile for each disposal facility and type of waste
01 74 19	Counter-signed final waste profiles and proof of acceptance of waste
01 74 19	Counter-signed manifests, weight tickets, receipts, and invoices
01 79 39	Project record/closeout documents
02 82 33	Asbestos Containing Soil and Debris Removal and Disposal Work Plan
31 23 16	Excavation Plan
31 23 16	Transportation and Disposal Plan

31 23 19	Dewatering Plan
31 23 19	Dewatering system and water treatment system plans
31 23 23	Fill Plan
31 23 23	Clean Fill and Topsoil material testing documentation
31 23 23	All NYSDEC Request for Import/Reuse Fill or Soil Fill Forms
31 23 23	Planned compaction equipment information
31 23 23	Documentation of topsoil source(s) and testing data
31 23 23	Documentation of fill source and testing data
31 25 00	Erosion and sediment control products manufacturer's information
31 32 13	Excavated Material Dewatering and Stabilization Plan
31 32 13	Letter of Certification from disposal facilities that will accept waste
31 32 13	Product information on the proposed additive to be used for stabilization
32 11 23	Aggregate base course testing data and results
32 31 00	Fence and gate shop drawing and product data
32 31 00	Fence and gate certifications, design data, manufacturer's instructions, warranty
32 72 50	Seed vendor's certified statement for grass seed mixture
32 72 50	Seeding Schedule
32 72 50	Source of potable water for seed
32 72 50	Corrective Action Plan(s)
32 92 00	Manufacturer's product data and installation instructions for turf and grasses
32 92 00	Seed manufacturer's certification
32 92 00	Source of potable water for turf and grasses
33 11 53	Planned decommissioning methods for monitoring wells
33 11 53	Proposed waste transporter and disposal facility for drilling wastes
44 01 40	Water Treatment Plan

END OF SECTION

SECTION 01 32 26
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies CONTRACTOR's Construction Progress Documentation requirements including preparation, management, and submittal of routine progress reports, daily progress reports, progress presentations at weekly meetings, and other construction progress documentation submittals to ENGINEER.

1.2 CONTRACTOR REQUIREMENTS

- A. CONTRACTOR shall maintain all necessary documentation of construction progress. CONTRACTOR shall prepare a daily construction report including a summary of their daily construction activities and attached supporting inspection data sheets. The daily reports shall be signed by CONTRACTOR's Site Superintendent.
- B. CONTRACTOR shall provide updated documentation to ENGINEER prior to weekly progress meetings.
- C. CONTRACTOR shall provide a daily construction report to ENGINEER. The daily construction report shall include the following information.
 - 1. Date, project name, NYSDEC Site No., location, and other identification;
 - 2. Description of weather conditions, including temperature, cloud cover, and precipitation;
 - 3. Reports on any meetings held and their results, including Health and Safety;
 - 4. Locations of construction underway during that day;
 - 5. Equipment and personnel working in each activity, including subcontractors;
 - 6. Description of dewatering and water treatment activities;
 - 7. Load description and weigh tickets for all materials transported to and from the Site;
 - 8. Descriptions of inspections and test results;
 - 9. Decisions made regarding approval of units of material or of work, and corrective actions to be taken;
 - 10. Survey data;
 - 11. Description of problems or delays and resolution;
 - 12. Quantities of materials used;
 - 13. Construction activities completed and/or in progress;

14. Description of schedule for upcoming work;
15. Progress photos, refer to Standard Specification Section 01 32 33, Aerial and Ground Photographic and Video Documentation; and
16. Signature of the report preparer.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 35 29.01
MODIFICATIONS TO CONTRACTOR'S HEALTH AND SAFETY PLAN

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies Site Specific health and safety requirements, confined space entry requirements, and electrical safety requirements, and modifies and is supplementary to the Standard Specifications Section 01 35 29, CONTRACTOR's Health and Safety Plan.

1.2 REFERENCES

- A. Supplementary Specification Section 00 31 24, Environmental Assessment Information.
- B. EPA Standard Operating Safety Guides.
- C. Occupational Safety and Health Administration (OSHA):
 - 1. 29 CFR 1910.120 – HAZWOPER.
 - 2. 29 CFR 1910.134 – Air Quality.
 - 3. 29 CFR 1910.1200 – Hazard Communication.
 - 4. 29 CFR 1926 – Safety and Health Regulations for Construction.

1.3 HEALTH AND SAFETY

- A. CONTRACTOR and subcontractors shall comply with all applicable federal, state, and local health and safety regulations.
- B. CONTRACTOR is responsible for the safety of the public and will prohibit access to within the Limits of Work (shown on Contract Drawings) except for authorized personnel.
- C. CONTRACTOR shall maintain a copy of the SSHASP, including medical clearance certificates and all applicable health and safety and OSHA training documentation for all site workers, on the site at all times. CONTRACTOR shall make the SSHASP available for inspection by ENGINEER, DEPARTMENT, OSHA, or any other agency having jurisdiction.
- D. Abide by all regulations concerning health and safety for all Work. Prior to starting the Work, CONTRACTOR shall develop a SSHASP to cover all workers, including those of subcontractors, on the Site. Implement the SSHASP, direct the training of personnel, and provide safety equipment and incidentals as required. The plan shall incorporate the Standard Operating Safety Guidelines published by the EPA (June 1992) where applicable and meet requirements specified in OSHA Standard 29 CFR 1910.120. The CONTRACTOR alone shall be responsible for the safety of his/her employees and for execution of the work in accordance with all applicable health and safety requirements. Neither the DEPARTMENT nor the ENGINEER shall inspect the Work or the methods of construction for compliance with these requirements.

- E. Notify ENGINEER immediately of any required modifications to the SSHASP during the duration of the Work.
- F. Fully comply with OSHA Safety and Health Regulations for Construction 29 CFR Part 1926.
- G. ENGINEER shall not be responsible in any way for CONTRACTOR's preparation or implementation of their SSHASP, nor for the health and safety of CONTRACTOR's personnel, or the personnel of CONTRACTOR's subcontractors, suppliers, agents, or representatives.
- H. Prior to delivery to the site, obtain and submit to ENGINEER safety data sheets (SDSs) for all materials proposed for use on Site. Obtain ENGINEER's approval prior to deliver of products to the site. Follow manufacturer's guidelines for the safe handling and use of products.
- I. The information in Supplementary Specification Section 00 31 24, Environmental Assessment Information is provided to assist CONTRACTOR in establishing and implementing the required SSHASP. At a minimum, CONTRACTOR shall review the Environmental Assessment Information and shall incorporate Site control measures and personal protection equipment requirements relevant to the content. Additional Site data, if available, can be provided upon written request to ENGINEER.

1.4 CONFINED SPACE ENTRY REQUIREMENTS

- A. The CONTRACTOR shall be responsible for making determinations regarding confined spaces as defined by federal and state regulations governing confined space entry and safety procedures. The CONTRACTOR shall be responsible for compliance with OSHA and all applicable provisions of federal, state, and local laws and regulations pertaining to confined spaces in performing the Work.
- B. Provisions for confined space entry shall be included with the SSHASP.

1.5 ELECTRICAL SAFETY REQUIREMENTS

- A. CONTRACTOR shall submit an electrical Job Safety Analysis to ENGINEER for review.
- B. CONTRACTOR shall comply with all applicable federal, state, and local laws and regulations and codes concerning electrical safety.
- C. CONTRACTOR's employees, subcontractors, and equipment shall obtain electrical clearance and maintain safe working distances from energized systems.
- D. CONTRACTOR shall provide an experienced, licensed electrician to connect electrical systems required for the Work. During the Work, CONTRACTOR shall treat all electrical wiring, equipment, and controls as if they were energized until CONTRACTOR's licensed electrician certifies otherwise. Such procedures shall be identified in CONTRACTOR's SSHASP. Dismantling work shall not proceed on energized wires, equipment, or controls.
- E. CONTRACTOR shall provide electrical services and products that have ground-fault interrupter circuits, as specified by OSHA regulations in 29 CFR Part 1926 Subpart K, and other applicable regulations. CONTRACTOR shall test all ground- fault interruption circuits and document their compliance with the applicable regulations.

- F. Exposed electrical cords in outdoor services shall not be permitted. Electrical cords in outdoor service shall be protected and maintained in channel cable bridges specifically manufactured for outdoor service and the intended purpose.

1.6 DECONTAMINATION TRAILER AND PERSONAL HYGIENE FACILITY

- A. The Decontamination Trailer and Personal Hygiene Facility shall be required for the duration of the project.
- B.

PART 2. PRODUCTS

NOT USED

PART 3. EXECUTION

NOT USED

END OF SECTION

SECTION 01 41 00
REGULATORY REQUIREMENTS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies certain regulatory requirements applicable to the project and describes CONTRACTOR's responsibility to comply with all applicable regulatory requirements.

1.2 DESCRIPTION

- A. Give all notices, observe and comply with all laws, rules, regulations and ordinances applicable to the Work.
- B. Apply for, obtain, pay all fees for, maintain all required insurance, and comply with all necessary permits and approvals for the Work. Submit applications to ENGINEER for approval prior to submittal to authority having jurisdiction.
- C. Obtain copies of all permits obtained by ENGINEER and maintain them on-Site during the Work.
- D. Comply with all permits for the Work, whether obtained by ENGINEER, DEPARTMENT, or CONTRACTOR.
- E. Notify area utility companies before beginning Work, in accordance with state and local regulations.
- F. Identify utility locations on private property.
- G. Comply with New York State Standards and Specifications for Sediment and Erosion Control, latest edition.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 42 00.01
MODIFICATIONS TO REFERENCES

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies additional requirements related to references applicable to the project, CONTRACTOR's responsibility to obtain and comply with references that are cited, and is supplementary to Standard Specification Section 01 42 00, References.

1.2 APPLICABILITY

- A. Comply with requirements of the standard for products and workmanship specified by association, trade, and federal standards, except when more rigid requirements are specified or are required by applicable codes.
- B. When required by individual Specification Sections, obtain copy of standard. Maintain copy at Site during submittals, planning, and progress of the specific Work, until Substantial Completion. In the event any questions arise, CONTRACTOR shall provide a copy of the reference standard on-Site.
- C. Where published standards or specifications of a government agency, technical association, trade association, professional society or institute, testing agency, or other organization are referenced in the Specifications, the date of the standard or specification to be used is that in effect as of the effective date of the Contract, except when a publication date or edition is specified.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 43 36
FIELD SAMPLES AND ANALYSIS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section contains requirements for sampling and analysis of environmental media, such as materials to be excavated, removed, and transported off-Site; imported backfill materials and materials to remain on-Site; wastes requiring characterization; water to be discharged; and all other wastes identified by the CONTRACTOR or generated by CONTRACTOR in the course of the Work.
- B. This Section includes requirements for submittals, preparation of a Sampling Plan, sample collection, identification, handling and shipment, sample analyses, reporting, CONTRACTOR personnel including Quality Assurance Officer, and data evaluation.
- C. This Section provides specifications for the following Site-specific samples to be collected by CONTRACTOR:
 - 1. Pre-Mobilization and Post-Construction Surface Soil Samples.
 - 2. Post-Excavation Soil Samples.
 - 3. Imported Materials Samples.
 - 4. Waste Characterization Samples.
 - 5. Discharge Water Samples.
 - 6. Wipe Sampling of Decontaminated Equipment.

1.2 DESCRIPTION

- A. For the purposes of the Work, waste includes, but is not limited to: excavated soil, soil and debris, empty drums, contaminated excavation water and groundwater, decontamination wastewater, separate phase PCB product, drill cuttings, used personal protective equipment, construction and demolition debris, water generated from dewatering operations, waste vegetation, waste materials and products (e.g., silt fence) and all other waste generated during the Work. The CONTRACTOR shall identify all waste anticipated to be generated during the Work in the Sampling Plan.
- B. Samples collected as part of the Work shall be collected, analyzed, and evaluated in such a manner that the resulting data meets and supports the data use requirements. The data shall be generated and reported in a manner that assures the precision, accuracy, representativeness, comparability, and completeness requirements in the approved Sampling Plan.
- C. All sampling and analysis shall be conducted in accordance with United States Environmental Protection Agency (USEPA) and NYSDEC standards and requirements for environmental sampling and analysis.

1.3 REFERENCES

- A. Refer to Standard Specification Section 01 45 29.13, Testing Laboratory Services Furnished by CONTRACTOR, and Supplementary Specification Sections 01 45 00, Contractor Quality Control and 01 45 29.13.01, Modifications to Testing Laboratory Services Furnished by CONTRACTOR for additional requirements.
- B. Refer to Supplementary Specification Section 00 31 24, Environmental Assessment Information, for additional site characterization data.
- C. The publications listed below, latest edition unless otherwise noted, form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.
 - 1. New York State Department of Environmental Conservation "Analytical Services Protocol." (NYSDEC ASP); latest edition, as amended.
 - 2. New York State Department of Environmental Conservation "Technical Guidance for Site Investigation and Remediation"; DER-10 (NYSDEC DER-10); latest edition, as amended.

1.4 SUBMITTALS

- A. Sampling Plan. Approval of the Sampling Plan by the ENGINEER is required prior to start of sample collection.
- B. Results of laboratory analyses, including 48-hour turn-around-time and submittal of results. Results shall be approved by the ENGINEER prior to mobilization of water treatment equipment, construction of excavated material staging areas and decontamination areas, any removal of waste from the Site, import of fill to the Site, fill of excavation areas and reuse or removal of decontaminated equipment. Results shall be submitted as soon as possible and without exception within five days or less of sample collection.
 - 1. Results shall be submitted in the form of typed summary tables. Summary tables shall include type of sample (media), source of sample, the sample identification number, date and time of sample collection, results of the analysis for each parameter, and applicable regulatory limits, standards, guidance values, and/or clean-up objectives.
 - 2. Laboratory analytical results shall also be submitted in PDF format with the summary tables.
 - 3. Include to-scale drawing showing surveyed locations and elevations of samples.
- C. Final Category A and B data deliverable reports including Data Usability Summary Reports for all laboratory data generated during the Work.
- D. Final laboratory analytical reports shall be ASP Category A or B deliverables, as noted, and shall be transmitted in NYSDEC EQUiSTTM electronic data deliverable (EDD) format. Final analytical reports shall be provided to the ENGINEER and the DEPARTMENT as a Submittal within 28 days from receipt of the sample by the laboratory, unless otherwise agreed upon with the ENGINEER and the DEPARTMENT.

- E. Calibration records for all equipment and instrumentation for monitoring and sampling shall be provided in typed, tabular summary format at the end of each week.
- F. Sample Locations:
 - 1. Submit an Excel spreadsheet containing the compiled surveyed locations and elevations of each Post-Excavation Sample. Provide northings, eastings, and elevations as described in Standard Specification Section 01 71 23 – Field Engineering.
 - 2. Submit an Excel spreadsheet containing the compiled surveyed locations and elevations of each Pre-Mobilization Surface Soil Sample. Provide northings, eastings, and elevations as described in Standard Specification Section 01 71 23 – Field Engineering.
 - 3. Submit an Excel spreadsheet containing the compiled surveyed locations and elevations of each Post-Demobilization Surface Soil Sample. Provide northings, eastings, and elevations as described in Standard Specification Section 01 71 23 – Field Engineering.
- G. Additional submittal requirements are described in Standard Specification Section 01 33 00 – Submittal Procedures and specified below.

1.5 SAMPLING PLAN

- A. The Sampling Plan shall provide a comprehensive description of the procedures to be used for collection and analysis of environmental samples. The Sampling Plan shall include, but shall not be limited to, procedures for sample collection, labeling, preservation, storage, Chain of Custody requirements, and shipping; sample analysis including analytical methods and quality assurance/quality control samples; and data reduction, evaluation, and reporting.
- B. The Sampling Plan shall include at a minimum the following:
 - 1. Signature of the CONTRACTOR's Quality Assurance (QA) Officer.
 - 2. A list including each waste type to be generated at the Site and each material to be imported to the Site.
 - 3. Laboratory information for all laboratories to be used for each type of waste, imported material and environmental media sample, including name, address, telephone number, and qualifications (including records of licenses and certifications), including specific chemical analyses the laboratory is certified to perform in the State of New York.
 - 4. For each waste, environmental media and imported material, the following collection information:
 - a. Sample collection procedure(s) in sufficient detail that CONTRACTOR's on-Site personnel can perform all on-Site sample collection elements, including instrument calibration, maintenance, use, sample collection, labeling, preservation, shipment, equipment decontamination, and sample documentation, and procedures for data evaluation, and reporting.

5. For each waste, environmental media and imported material, the following analysis information:
 - a. Number and type of each sample to be collected and analyzed.
 - b. List of analytes to be identified and quantified, including analyses required by disposal facilities, regulatory agencies, and federal, state, and local authorities.
 - c. A table summarizing the number of samples to be collected, matrices, sample containers, sample volumes, holding times, analytical protocols for analysis, and anticipated quantities of QA/QC samples to be collected and analyzed.
 - d. List of analytical protocols to be employed, including any special handling procedures required. The CONTRACTOR shall designate by method number the specific protocols contained in the NYSDEC Analytical Services Protocol (ASP). The statement "ASP" is insufficient.
 - e. In accordance with ASP requirements, a table identifying the frequency and types of all required quality control samples including field duplicates, trip blanks, rinse blanks, field blanks, matrix spikes, matrix spike duplicates, matrix spike blanks, etc.
 - f. List the data quality objectives including precision, accuracy, representativeness, comparability, completeness, and method sensitivity for the Site and data uses.
 - g. List the required deliverables and supporting documentation where these differ from or are not part of the required analytical protocols.
 - h. List the matrix specific detection limits for each of the analytes and matrices. This value should generally be below the specific limit of concern.
 - i. List all field sampling equipment, manufacturer, model number, and equipment maintenance and calibration procedures.
 - j. Describe sample collection methods for each matrix, including containers, preservation, custody, packaging, storage, and shipping procedures. Identify allowable holding times for each matrix for each analytical method.
 - k. Describe sampling equipment decontamination procedures.
6. For all instruments to be used in sampling, include the following information:
 - a. Manufacturer's manual.
 - b. Step-by-step description of all calibration and maintenance procedures.
7. CONTRACTOR's organizational chart for sample management, including role of CONTRACTOR's staff that will collect and manage samples, CONTRACTOR's qualified QA Officer, laboratories, couriers/shipping services, and any other

CONTRACTOR or subcontractor entities with responsibilities related to sample collection, management, analysis, reporting and evaluation.

8. CONTRACTOR's QA Officer's resume. QA Officer cannot be an employee of any of the laboratories being used for sample analysis. Additional requirements of the QA Officer are specified below.
9. Statement that prior to any deviations from the approved Sampling Plan, the DEPARTMENT shall be notified at least 14 days in advance of any proposed changes/deviations, and the deviation shall be accepted in writing by the DEPARTMENT. Statement that any emergency/unavoidable deviations from the Sampling Plan will be described in writing to the DEPARTMENT within 24 hours of such an emergency/unavoidable deviation. All deviations/changes require the approval of the DEPARTMENT and should be marked in the Sampling Plan and/or be part of a revised submittal of the Sampling Plan. Acceptance of deviations does not limit the responsibility of the CONTRACTOR to meet all requirements of the Contract Documents.
10. Statement from all proposed laboratories that they have reviewed the Sampling Plan and the requirements of the specifications concerning the analyses they will be conducting, and that the laboratories take no exception to the requirements of the Sampling Plan and relevant portions of the Contract Documents.
11. A to-scale plan showing planned pre-mobilization surface soil, post-demobilization surface soil, and post-excavation sampling locations. Each location shown on the plan shall be labeled using the intended sample location identification number. Include a table with the coordinates of each proposed sample location. Describe how sampling locations will be identified in the field. Describe the planned sequence and schedule for collection of pre-mobilization surface soil, post-demobilization surface soil, and post-excavation samples and reporting of pre-mobilization surface soil, post-demobilization surface soil, and post-excavation sample results.

1.6 SAMPLE IDENTIFICATION

- A. Sample containers (preserved, if necessary), labels, shipping containers, Chain of Custody forms, custody seals, trip blanks, and field blank water shall be provided by the analyzing laboratory.
- B. Sample containers shall be labeled with the following information:
 1. Site identification code.
 2. Sample type (media) identification code.
 3. Sample location identification code and field quality control (QC) identification code (if applicable).
 4. Sample depth identifier (if applicable).
 5. Date and time of collection.
 6. Field handling annotation (e.g., filtration, if applicable).

7. Type of preservative (if applicable).
 8. Initials of sampler.
- C. Sample identification codes for each sample label shall utilize the following system:
1. First letter will indicate sample location abbreviation:
 - a. S for soil/granular material.
 - b. SP for stockpile (includes imported material and waste streams).
 - c. W for water (includes decontamination fluids and water generated from dewatering).
 - d. D for debris and waste (includes surface debris, separate phase product, used PPE and C&D debris).
 - e. Indicate additional letters for additional sampling streams in Sampling Plan.
 2. Following the first letter, list a unique identification number for the sample beginning with 001.
 3. For soil generated by excavation following the unique identification number, include a "space" and elevation of sample, such as S001 17.2' to indicate soil sample number one with a depth of four feet below ground surface.
 4. Include the eight-digit date of sample collection at the end of each sample identification code.
 5. An example soil sample code for a sample collected from elevation 17.2 feet on October 1, 2025 is: S001 17.2' 20251001. An example water sample code for a sample collected on October 1, 2025 is: W001 20251001.
- D. QC identifiers shall be as follows:
1. FD for field duplicate.
 2. FB for field blank.
 3. MS/MSD for matrix spike/matrix spike duplicate.
 4. TB for trip blank.
 5. Indicate additional identifiers for other QC samples in Sampling Plan.
- E. Maintain a record of each sequentially numbered sample for each media on-Site in the field documentation. Utilize the record to verify that sample numbers are not repeated or skipped. Provide the records to the DEPARTMENT upon request.

1.7 HANDLING AND SHIPMENT

- A. All samples shall be collected and handled according to the appropriate analytical protocols for each matrix.
- B. All samples shall be preserved appropriately at the time of sample collection and delivered to the appropriate laboratory within 24 hours of collection.
- C. For samples requiring chemical analysis(es), the following preservation, packing, and shipping procedures shall apply:
 - 1. Prepare cooler(s) for shipment: tape drain(s) of cooler closed, affix "This Side Up" arrow label and "Fragile" labels, and place mailing/courier label with laboratory name, address, and telephone number on top of cooler.
 - 2. Group sample containers by number as needed.
 - 3. Verify all sample container labels are completed correctly. Place clear tape over labels to prevent moisture accumulation from damaging the label.
 - 4. Individually seal sample containers within plastic zip-lock-type bags to prevent leakage.
 - 5. If needed for sample preservation, place double bagged ice at the bottom of the cooler.
 - 6. Place packing material at bottom (on top of ice) and sides of cooler.
 - 7. Place sample containers in cooler in a manner that they are not in contact with the cooler or other samples. Add packing material between samples as needed.
 - 8. Fill remaining space to top of cooler with packing material.
 - 9. Sign Chain of Custody form and indicate the time and date it is relinquished to carrier as appropriate.
 - 10. Separate copies of Chain of Custody forms and retain copy(ies) for record as appropriate. Seal laboratory copies within zip-lock bag and tape to inside of cooler lid.
 - 11. Close cooler and secure with signed and dated custody seals and tape.
 - 12. Complete items 9 through 11 at time of relinquishment to shipper/courier. Retain copy of air bill receipt/courier receipt for project records. All samples shall be shipped for Next Day delivery, including Saturday delivery if laboratory is open for receipt of samples on Saturdays. Avoid sample collection on Fridays if the laboratory cannot accept delivery on Saturdays.
 - 13. Forty-eight (48) hour turn-around-time is required for all sample analyses.

1.8 CONTRACTOR'S QUALITY ASSURANCE OFFICER

- A. The CONTRACTOR's Quality Assurance (QA) Officer shall have a minimum of a bachelor's degree in a relevant natural or physical science or engineering field. QA

Officer shall also have the relevant health and safety training and documentation for work at this Site, consistent with the requirements of the Contract Documents and regulatory authorities (i.e., OSHA) and with the requirements for all other CONTRACTOR personnel. Relevant health and safety training/screening includes 40-hour OSHA hazardous waste site operations training, current 8-hour OSHA hazardous waste site operations refresher, and medical screening/clearance. If a qualified QA officer is not employed by the CONTRACTOR, the CONTRACTOR may hire a qualified person as a subcontractor for the project if proposed and accepted by the DEPARTMENT.

- B. QA Officer shall be proficient in analytical methodology, data interpretation and validation, sampling plan development, quality control procedures, and auditing requirements and techniques.
- C. QA Officer shall assist the CONTRACTOR with preparation of the Sampling Plan, perform field, laboratory, and sampling audits, interface with the analytical laboratory to make requests and resolve problems, interface with the data validator, and develop project-specific data usability reports.
- D. QA Officer is responsible for calibration, maintenance, and operation of all instruments utilized during sample collection.
- E. QA Officer shall attend Site meetings between the CONTRACTOR, ENGINEER, and the DEPARTMENT when needed or specifically requested by the DEPARTMENT.
- F. QA Officer shall sign the Sampling Plan and all revisions.

1.9 DATA EVALUATION

- A. All data generated as part of this project shall be evaluated by the QA Officer. The QA Officer is required to identify to the DEPARTMENT in writing any and all problems or potential problems with regard to the validity of the data generated.
- B. The QA Officer shall provide final Category B data deliverable report submittals to the DEPARTMENT, for all pre-mobilization surface soil, post-demobilization surface soil, and post-excavation soil sample results. The submittal shall include a Data Usability Summary Report (DUSR), which evaluates the quality, validity, and usability of the data provided with respect to the intended use. The DUSR shall follow the guidelines as specified in Appendix 2B of NYSDEC DER-10 (Technical Guidance for Site Investigation and Remediation).
- C. The QA Officer shall provide final Category A data deliverable report submittals to the DEPARTMENT, for all other samples collected under this Contract and not specified for Category B deliverables. The submittal shall include a Data Applicability Report (DAR). The DAR shall follow the guidelines as specified in Appendix 2B of NYSDEC DER-10.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

3.1 HEALTH AND SAFETY

- A. Field personnel shall comply with the CONTRACTOR's Site-Specific Health and Safety Plan
- B. CONTRACTOR personnel shall review CONTRACTOR's Site-Specific Health and Safety Plan (SSHASP) and acknowledge that they have done so before initiating work.

3.2 PRE-MOBILIZATION AND POST-CONSTRUCTION SURFACE SOIL SAMPLING

- A. Surface soil samples shall be collected from areas which CONTRACTOR will use for excavated material staging and handling, and decontamination facilities.
 - 1. Pre-mobilization surface soil samples shall be collected prior to constructing soil and debris handling, management, and decontamination facilities.
 - 2. Post-construction surface soil samples shall be collected following removal of soil and debris handling, management, and decontamination facilities, and prior to final restoration.
- B. Pre-mobilization and post-construction surface soil samples shall be collected at the following frequencies:
 - 1. One composite sample for every 900 square feet of surface area which CONTRACTOR intends to use for soil and debris handling, management, and decontamination facilities (approximate 30-foot by 30-foot grid). Composite samples shall be comprised of four aliquots collected from 4 approximately equal size quadrants of each 900 square foot area (or grid).
- C. Soil sample locations shall be marked and surveyed to ensure that pre-mobilization and post-construction surface soil samples are collected from the same locations.
- D. Soil samples shall be collected with disposable polyethylene scoops, composited in disposable containers/bowls, and then containerized in laboratory-supplied containers.
- E. Samples shall be delivered to the laboratory consistent with the requirements above, including overnight shipping and 48-hour turn-around-time. Results of soil sample analysis shall be reported via email to the ENGINEER and to the DEPARTMENT within four hours of receipt.
- F. CONTRACTOR shall not construct soil and debris handling, management, or decontamination facilities prior to submittal of the pre-mobilization sampling results to ENGINEER, and ENGINEER approval of the submittal.
- G. Pre-mobilization and post-construction surface soil samples shall be analyzed for total PCBs by USEPA SW-846 Method 8082A, and the results evaluated against the site-specific cleanup criteria of 1 mg/kg. CONTRACTOR shall remove and dispose off-site contaminated soil which was not identified by pre-mobilization sampling.
- H. Applicable Site-specific and laboratory QA/QC samples, as described in the Sampling Plan, shall also be collected and analyzed.

- I. ASP Category B reporting and deliverables as described above are required.

3.3 POST-EXCAVATION SAMPLING

- A. Post-excavation samples shall be collected from the sidewalls and bottoms of excavations in accordance with the most recent version of NYSDEC DER-10, and as directed.
- B. Post-Excavation Samples shall be collected at the following frequencies:

1. Grab samples from excavation sidewalls at a spacing of not less than one sample for every 30 linear feet of sidewall, and at least one composite sample from the excavation bottom for every 900 square feet of bottom area (approximate 30-foot by 30-foot grid). Composite samples shall be comprised of four aliquots collected from 4 approximately equal size quadrants of each 900 square foot area (or grid box). If the limits of excavation within a grid box is less than 900 square feet, the number of samples per composite sample shall be determined by Table 1 below.
2. Excavation sidewall sampling - the CONTRACTOR shall collect and analyze Post-Excavation Samples from excavation sidewalls at a spacing of not less than one sample per every 30 linear feet of sidewall. A minimum of one sample shall be collected from sidewalls less than 30 feet. Sidewall sampling shall be completed at the horizontal extents of excavations.
3. Excavation bottom sampling - the CONTRACTOR shall collect and analyze Post-Excavation Samples from the bottom of each excavation at the vertical extents of excavations. Post-Excavation Samples shall be composed of one composite sample from the bottom of each excavation grid box collected as specified in Table 1 below.
4. Table 1 - Sampling Compositing Requirements Table.

PERCENT OF GRID BOX AREA EXCAVATED	SAMPLES PER COMPOSITE
100% TO 75%	4
75% TO 50%	3
50% TO 25%	2
25% TO 1%	1

5. If limits of excavation extend partially into any quadrant of an excavation grid box, sampling of the quadrant shall be required.
 6. The above sampling procedures apply to Excavation Areas A, B, C, and E with the following exception: in Excavation Areas A, B, C, and E, each area, regardless of size and dimensions, shall be sampled as specified above for a 30' by 30' grid box (i.e., as if each area was a 30' by 30' grid box).
- C. Waste characterization sampling and analysis shall be performed in accordance with the following:

1. The CONTRACTOR shall collect and analyze all waste characterization samples required by disposal facilities for the analytical parameters required and, at a minimum, at the frequency required by the disposal facility. Additionally, regardless of the disposal facility requirements, at a minimum, one representative sample shall be collected and analyzed for TCLP RCRA Metals for each 250 cubic yards of material excavated for disposal. Contractor shall identify and complete wipe testing requirements for debris in accordance with disposal facility acceptance requirements. The CONTRACTOR shall include analysis of all waste characterization samples for PFAS when required by the disposal facility.
- D. Soil samples shall be collected with disposable polyethylene scoops, composited in disposable containers/bowls, and then containerized in laboratory-supplied containers.
- E. Samples shall be delivered to the laboratory consistent with the requirements above, including overnight shipping and 48-hour turn-around-time. Results of post-excavation sample analysis shall be reported via email to the ENGINEER and to the DEPARTMENT within four hours of receipt.
- F. Keep the excavation area that has been sampled open and dry in the event Post-Excavation Sample results require additional excavation or sampling. Take no additional action on excavations which have been sampled until directed by the ENGINEER.
- G. Post-Excavation Samples shall be analyzed for total PCBs by USEPA SW-846 Method 8082A, and the results evaluated against the target cleanup criteria.
- H. Applicable Site-specific and laboratory QA/QC samples, as described in the Sampling Plan, shall also be collected and analyzed.
- I. ASP Category B reporting and deliverables as described above are required.

3.4 IMPORTED MATERIALS SAMPLING

- A. Samples of imported materials, including, but not limited to, aggregate, fill and topsoil, shall be analyzed for:
 1. Target Compound List (TCL) Volatile Organic Compounds (VOCs) (USEPA SW-846 Method 8260D),
 2. TCL Semi-volatile Organic Compounds (SVOCs) (USEPA SW-846 Method 8270E),
 3. TCL Pesticides (USEPA SW-846 Method 8081B),
 4. TCL Polychlorinated Biphenyls (PCBs) (SW-846 Method 8082A),
 5. Target Analyte List (TAL) Metals (USEPA SW-846 Method 6010D), and cyanide (USEPA SW-846 Method 9015),
 6. 1,4-Dioxane (USEPA Method 8270D – Selected Ion Monitoring (SIM)),
 7. Per-and polyfluoroalkyl substances (PFAS) (USEPA Modified Method 537), and

8. Additional parameters required by laws, regulations, and permits, including NYSDEC DER-10, and the parameters listed in DER-10 Appendix 5, 6 NYCRR 375-6.8, and CP-51/Soil Cleanup Guidance.
- B. Frequency of sampling shall be as specified in NYSDEC DER-10 Table 5.4(e)10.
- C. Before delivery to the Site, samples of imported materials shall be analyzed for grain size distribution and moisture/density as required in Supplementary Specification Section 31 23 23, Fill.
- D. Samples for fill and topsoil to be used in Site restoration shall in addition to the requirements above, be analyzed for the additional parameters described in Supplementary Specification Section 32 92 00, Turf and Grasses.
- E. ASP Category A reporting and deliverables as described above are required.
- F. Laboratory reporting limits shall be below applicable standards.
- G. ENGINEER approval of laboratory analyses shall be required prior to delivery of imported material to the site.
- H. Turn-around time for laboratory analytical results shall not exceed 48 hours.

3.5 WASTE CHARACTERIZATION SAMPLING

- A. Waste characterization samples shall be collected in accordance with all applicable federal, state, and local laws and regulations and the requirements of the disposal facility for each type of waste, including emerging contaminants such as PFAS. Collect waste characterization samples as required for every waste stream.
- B. Excavated soil and debris, surface debris, cleared vegetation and debris, drill cuttings, decontamination pad materials, bottom liners and covers used for staged materials, and entrance and exit road pads, and other spent materials to be removed from the Site shall be considered a waste stream. Disposable or contaminated sampling equipment is another waste stream. The foregoing is not a comprehensive list of wastes to be generated by the Work. CONTRACTOR shall sample and analyze all waste generated in accordance with the waste characterization requirements of approved disposal facilities.
- C. ASP Category A reporting and deliverables as described above are required.
- D. Turn-around time for laboratory analytical results shall not exceed 48 hours.

3.6 WASTEWATER DISCHARGE SAMPLING

- A. Decontamination liquids are a waste that will be generated during the Work. Wastewater and separate phase product generated from dewatering are also wastes that will be generated during the Work and that shall be sampled and analyzed in compliance with this Section.
- B. Samples shall be collected of all liquid waste proposed for discharge by the CONTRACTOR, and at the frequency specified in the SPDES Permit.

- C. CONTRACTOR shall comply with the analytical methods specified in Title 6 of New York Codes, Rules and Regulations (6 NYCRR) Part 700.3 and Title 40 of Code of Federal Regulations (40 CFR) Part 136 for analysis of all wastewater discharge samples.
- D. Wastewater discharge samples shall be analyzed for all parameters and at the frequency required by the SPDES Permit Equivalent, including but not limited to:
 - 1. pH;
 - 2. TCL VOCs;
 - 3. TCL SVOCs;
 - 4. TCL Pesticides;
 - 5. TCL Herbicides;
 - 6. TCL PCBs;
 - 7. TAL Metals, including Mercury and Cyanide;
 - 8. Total Suspended Solids (TSS); and
 - 9. 1,4-Dioxane and Per-and Polyfluoroalkyl Substances (PFAS).
- E. Laboratory reporting limits shall be below the Class A Surface Water Standards specified in NYSDEC Division of Water, Technical and Operational Guidance Series (TOGS) 1.1.1 – Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, latest edition as amended.
- F. ASP Category A reporting and deliverables as described above are required.
- G. Turn-around time for laboratory analytical results shall not exceed 48 hours.
- H. Samples and measurements shall be taken from the effluent side of the final treatment unit prior to discharge to the receiving water body.
- I. Monitoring and analysis shall be conducted using sufficiently sensitive test procedures approved under 40 CFR Part 136 unless other test procedures have been specified in the Permit.
- J. Only site generated wastewater is authorized for treatment and discharge.
- K. Authorization to discharge is valid only for the period noted above but may be renewed if appropriate. A request for renewal must be received 6 months prior to the expiration date to allow for a review of monitoring data and reassessment of monitoring requirements.
- L. Both concentration (mg/L or ug/L) and mass loadings (lbs/day) shall be reported to the ENGINEER and DEPARTMENT for all parameters except flow and pH.
- M. Any use of corrosion/scale inhibitors, biocidal-type compounds, or other water treatment chemicals used in the treatment process must be approved by the department prior to use.

- N. This discharge and administration of this discharge must comply with the substantive requirements of 6 NYCRR Part 750.

3.7 DECONTAMINATED EQUIPMENT SAMPLING

- A. Samples collected to confirm that equipment has been sufficiently decontaminated shall be collected in accordance with Supplementary Specification Section 02 51 00, Decontamination Procedures.
- B. The required volume, containerization methods, and sample preservation methods shall be directed by the testing laboratory.
- C. Wipe samples from decontaminated heavy equipment shall be analyzed by the CONTRACTOR's analytical laboratory in accordance with NYSDEC ASP for PCBs using USEPA Method 8082.
- D. ASP Category A reporting and deliverables as described above are required.
- E. Turn-around time for laboratory analytical results shall not exceed 48 hours.

3.8 ANALYTICAL TEST RESULT EVALUATION

- A. Waste Characterization sample analytical results shall be compared to the allowable limits for waste acceptance specific to the permitted treatment, storage, and disposal facilities approved to receive the waste.
- B. Imported fill and topsoil sample analytical results shall be compared to the Unrestricted Use Soil Cleanup Objectives in 6 NYCRR Part 375-6.8(a) and the Unrestricted Use Allowable Constituent Levels in Appendix 5 of DER-10.
- C. Post-Excavation Sample analytical results shall be compared to the Site-specific surface and subsurface soil cleanup goals of 1 mg/kg PCBs and 10 mg/kg PCBs, respectively.
- D. Construction water analytical results shall be compared to one of the following criteria:
 - 1. The discharge limits in the SPDES Permit Equivalent for treatment and discharge of water to the ground surface, as well as the limitations and monitoring requirements as listed in Supplementary Specification Section 44 01 40, Water Treatment.
 - 2. Approved disposal facility requirements if water is unsuitable for on-Site treatment and/or discharge.

3.9 ACCEPTANCE OF ANALYTICAL RESULTS AND CORRESPONDING ACTION

- A. Decisions regarding completion of excavation shall be based on the laboratory data and reports submitted to the ENGINEER within 3 business days of ENGINEER's receipt of laboratory reports. ENGINEER will review submitted information and, based on that information, indicate approval and/or provide direction to the CONTRACTOR. DUSR reports and other laboratory submittals shall be submitted with 45 days of sample collection.
- B. Waste characterization analytical results require the review and approval of the ENGINEER and the designated off-Site treatment, storage, and disposal facilities. Once

approval has been granted and acceptance of the waste has been confirmed, the waste may be transported off-Site for disposal in accordance with Supplementary Specification Section 31 23 16, Excavation and other requirements of the Contract Documents.

- C. Post-Excavation Sample analytical result less than the site-specific surface soil cleanup goal of 1 mg/kg PCBs or less than the subsurface soil cleanup goal of 10 mg/kg PCBs verify that the cleanup is complete, and the excavation limit has been achieved. If any result is greater than the cleanup goal, the remedial objective has not been achieved and additional excavation of soil and debris shall be conducted if directed by the ENGINEER. Additional sampling and testing shall be required after additional impacted material has been removed, if directed.
- D. Imported material source sample analytical results meeting the required Soil Cleanup Objectives (SCOs) and Allowable Constituent Levels are acceptable for remedial construction and the material may be imported and incorporated into the Work. No materials shall be delivered to the Site until analytical results are accepted by the ENGINEER.
- E. Construction water sample analytical results less than the discharge limits of the SPDES Permit Equivalent may be discharged at the designated location in the Permit. Sampled water which exhibits concentrations or characteristics which are not in compliance with the requirements of the discharge permit shall be re-treated or transported and disposed off-site at no cost to the DEPARTMENT.

3.10 DISPOSAL OF ADDITIONAL WASTES

- A. Disposable sampling equipment and personnel protective equipment (PPE) associated with sample collection shall be classified as PCB remediation waste and handled as described in Supplementary Specification 01 74 19, Construction Waste Management and Disposal.

3.11 DECONTAMINATION

- A. Contaminated sampling equipment can be washed with Liquinox®, or equivalent soap and water solution, rinsed with clean potable water, and finally rinsed with deionized water. Decontamination wastewater shall be treated in the on-site water treatment facility and sampled accordingly prior to discharge, in accordance with Supplementary Specification Section 44 01 40, Water Treatment.

END OF SECTION

SECTION 01 45 00
CONTRACTOR QUALITY CONTROL

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the project Quality Control requirements.
- B. This Section includes CONTRACTOR's Construction Quality Assurance/Quality Control Plan (CQA) Plan describing the procedures to be followed and testing to be completed, CONTRACTOR's Key Personnel, inspection and verification activities, identifying, addressing, and documenting construction deficiencies, requirements for documentation, and manufacturer's certificates. Perform quality control testing as required in the Contract Documents.

1.2 GENERAL QUALITY CONTROL

- A. Maintain quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship to produce Work of specified quality.
- B. Allow ENGINEER access to the Work as required to complete their own surveying, measurement, and other work as required to measure, inspect, and verify CONTRACTOR'S Work.

1.3 REFERENCES AND STANDARDS

- A. Conform to referenced standards with date of issue current on the date of the bid, except where stated otherwise or referenced differently by code.

1.4 SUBMITTALS

- A. Pre-Construction Submittals
 - 1. CONTRACTOR CQA Plan shall identify personnel, procedures, instructions, records, and forms to be used in carrying out the requirements of the Work. The CQA Plan shall provide the CONTRACTOR with a means to provide and maintain effective quality control for construction, sampling, and testing activities. No work on-Site shall be permitted until comments received are adequately addressed by the CONTRACTOR and the CQA Plan is approved by the ENGINEER and the DEPARTMENT.
- B. Construction Submittals include: Weekly CQA Reports, Test Reports, Deficiency Reports, and Project Summaries.

1.5 DEFINITIONS

- A. Quality Control: Activities undertaken by the CONTRACTOR including observing, measuring, sampling, and testing to determine that work performed and products/materials provided and installed meet the requirements of the Contract Documents and the quality specified therein.

1.6 QUALITY CONTROL SAMPLING AND TESTING

- A. The CONTRACTOR shall notify the ENGINEER and the DEPARTMENT a minimum of 72 hours prior to any quality control sampling and testing activities. The ENGINEER and DEPARTMENT reserve the right to collect duplicate quality control samples.
- B. All third-party quality control test reports shall be reported/sent directly to the ENGINEER and the DEPARTMENT and shall not be routed through the CONTRACTOR. The CONTRACTOR shall give their subcontracted laboratory permission to send reports directly to the ENGINEER and the DEPARTMENT.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

3.1 GENERAL REQUIREMENTS

- A. CONTRACTOR is responsible for the quality of work items.
- B. Inspect and test items of work continually, including that of subcontractors, to ensure conformance to applicable specifications and Contract Drawings with respect to the quality of materials, workmanship, construction, and functional performance.
- C. Provide qualified personnel, appropriate facilities, instruments, and testing devices necessary for the performance of the quality control function.
- D. Controls shall be adequate to cover all construction operations, shall be keyed to the proposed construction sequence, and shall be coordinated by the CONTRACTOR's quality control personnel.

3.2 CONTRACTOR'S CONSTRUCTION QUALITY ASSURANCE/QUALITY CONTROL PLAN

- A. CONTRACTOR shall provide its own CQA Plan to ensure construction, sampling, and testing activities are performed in accordance with the design. The CQA Plan shall provide a means to maintain effective quality control for work conducted on-Site.
- B. Prepare and submit a CQA Plan to the ENGINEER and the DEPARTMENT for approval.
- C. Comments or approval from the ENGINEER and DEPARTMENT will be submitted to the CONTRACTOR within 14 calendar days following receipt of the plan. The CONTRACTOR shall adequately respond to comments to the satisfaction of the ENGINEER and the DEPARTMENT within 14 calendar days following receipt of comments from the ENGINEER or the DEPARTMENT.
- D. No work on-Site is allowed until the comments received are adequately addressed by the CONTRACTOR and the CQA Plan is approved by the ENGINEER and the DEPARTMENT.
- E. The CQA Plan, at a minimum, shall include the following:

1. A description of the CONTRACTOR's Key Personnel, including charts showing lines of internal CONTRACTOR authority, and external CONTRACTOR, subcontractor, and ENGINEER relationships. The CONTRACTOR's Key Personnel shall include the names, qualifications, duties, and responsibilities of each person assigned to a quality control function. The CONTRACTOR's Key Personnel chart shall identify a CONTRACTOR's Quality Control Manager whose responsibilities and qualifications are described in Sub-Part 3.4 – CONTRACTOR's Key Personnel.
 2. Method of performing, documenting, and enforcing quality control operations of both CONTRACTOR and subcontractor work including inspection and testing.
 3. Inspections as described in this Section.
 4. Provide a list of analytical and testing laboratories to be used by the CONTRACTOR for testing required by the Specifications with listed test methods to be performed by each laboratory indicated. The analytical and testing laboratories to be used by the CONTRACTOR shall be New York State Department of Health Environmental Laboratory Approval Program (NYSDOH ELAP) certified, as applicable.
 5. Protocols describing corrective actions to be taken by the CONTRACTOR with specifically defined feedback systems. Personnel responsible for initiating and carrying out corrective action shall be indicated in the protocol.
- F. Submit Weekly CQA Reports, Test Reports, Deficiency Reports and Project Summaries as required by this Specification.
- G. Describe specifically how CONTRACTOR will assure depths of cut match elevations specified for each excavation lift on the Drawings. Identify equipment to be used, calibration procedures, and accuracy.
- H. Describe quality control procedures for all land surveying work.

3.3 NOTIFICATION OF CHANGE

- A. After submittal and approval of the CQA Plan, the ENGINEER and DEPARTMENT shall be notified in writing of any proposed changes to the CQA Plan and the CONTRACTOR shall implement the changes only after the DEPARTMENT's approval.

3.4 CONTRACTOR'S KEY PERSONNEL

- A. The Project Manager shall complete the overall management of activities related to the Work, including the implementation of the CQA Plan and the SSHASP, and have signature authority to act on behalf of CONTRACTOR.
- B. The Superintendent shall manage implementation of the Work, including the CQA Plan. The Superintendent shall be responsible for ensuring all QA/QC field inspection activities are conducted and documented in accordance with the CQA Plan and communicated to ENGINEER. All deviations from Contract Documents shall be immediately reported to ENGINEER.
- C. CQA Manager:

1. Identify an individual, within the CONTRACTOR's organization at the Site who shall be responsible for overall management of the CQA Plan and have the authority to act in CQA matters for the CONTRACTOR.
 2. The CQA Manager for this Contract shall be a qualified construction manager, engineer, or comparable individual with a minimum of two years of applicable experience, at the Project Manager, Project Engineer, Superintendent, or CQA Manager level, whose responsibility is to ensure compliance with the Construction Documents. The CQA Manager shall be independent of the Project Superintendent.
 3. The CQA Manager shall be on-site whenever work is in progress so that they may be in charge of implementation of the CQA Plan for the project.
 4. All submittals for approval shall be reviewed and modified or corrected as needed by the CQA Manager or authorized assigns before forwarding to the DEPARTMENT/ENGINEER.
- D. The CQA Plan shall include the names and qualifications of CONTRACTOR's key personnel and responsibilities and authorities of key personnel. The personnel may change throughout construction. However, CONTRACTOR shall maintain qualified staff in each position at all times. CONTRACTOR shall provide a list of QA/QC personnel on duty and resumes or other documentation demonstrating that each individual meets the required qualifications.

3.5 INSPECTIONS

- A. The CQA Plan shall include the following inspections and tests:
1. The CONTRACTOR shall perform preparatory inspections prior to beginning each feature of work on all on-site construction conducted by the CONTRACTOR or a subcontractor. Preparatory inspections for the applicable feature of work shall include:
 - a. Review of submittal requirements and all other Contract requirements for the performance of the work
 - b. Checks to assure that provision have been made to provide required field quality control testing.
 - c. Examination of the work area to ascertain that all preliminary work has been completed.
 - d. Verification of all field dimensions and advising the ENGINEER of any discrepancies
 - e. Performing physical examinations of materials and equipment to assure that they conform to approved shop drawings and submitted data and that all required materials and equipment are on hand and comply with the Contract requirements.
 2. Perform initial inspection as soon as work begins on a representative portion of the particular feature of work and include examination of the quality of workmanship

and review of quality control testing for compliance with the CONTRACT DOCUMENTS.

3. Perform follow-up inspections continuously as work progresses to ensure compliance with Contract requirements, including quality control testing, until completion of that feature of work.

3.6 QUALITY CONTROL TESTING

- A. The CONTRACTOR is responsible for required testing, documentation, and corrective measures. Perform tests specified to verify that control measures are adequate to provide a product which conforms to Contract requirements.
- B. Specific quality control testing requirements including types of tests, frequency of tests, and performance outcomes measured by the tests are indicated in each specification section associated with that component of the work.
- C. Materials: Perform materials qualification testing prior to delivery to the Site to verify that the materials comply with Specifications.
 1. Obtain representative test samples of the designated materials and submit to a third-party laboratory for analysis as listed in the Work Plan.
 2. Report all test results to ENGINEER as a submittal. ENGINEER will review the submittal to determine whether the materials meet the acceptance criteria.
- D. Water Treatment: Prior to discharge, perform permit-required testing of the water treatment system to ensure proposed discharge is within limits of permit in accordance with Supplementary Specification Section 44 01 40, Water Treatment.
 1. Obtain representative samples and submit to a third-party laboratory for analysis as listed in the Work Plan.
 2. Report all test results to ENGINEER as a submittal.
 3. CONTRACTOR shall review all test results to determine if water treatment system is operating within limits of permit.

3.7 DOCUMENTATION

- A. Daily Construction Report: The CONTRACTOR shall prepare and sign a daily construction report. Each report shall include a summary of CONTRACTOR's daily construction activities, as described in Supplementary Specification Section 01 32 26, Construction Progress Reporting. All inspection and verification activities completed during the day shall be recorded in the Daily Construction Report.
 1. CONTRACTOR shall submit a draft Daily Construction Report by noon the following day.
 2. ENGINEER will review the Daily Construction Report and compare the results of any inspection and verification activities with the ENGINEER's own measurements. Any discrepancies or changes shall be reconciled prior to finalization of the Daily Construction Report.

3. Upon completion of the review, CONTRACTOR shall prepare a final version of the Daily Construction Report.

- B. Record/As-Built Drawings: CONTRACTOR shall be responsible for maintaining a set of Contract Drawings in the field for red-lining as preparation for Record/As-Built Drawings. The Record/As-Built Drawings shall record approved actual field conditions upon completion of the Work. The original Contract Drawings shall be marked up by CONTRACTOR as the project progresses to indicate as-built conditions. Where there was a change to a specified material, dimension, location, or other feature, the Record/As-Built Drawings shall indicate the Work performed. Refer to Supplementary Specification Section 01 78 39, Project Record Documents for further requirements regarding Record/As-Built Drawings.

3.8 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform Work by persons qualified to produce workmanship of specified quality.

3.9 MANUFACTURER'S INSTRUCTIONS

- A. Comply with instructions in full detail, including each step-in sequence. Should instructions conflict with Contract Documents, request clarification from ENGINEER before proceeding.

3.10 MANUFACTURERS' CERTIFICATES

- A. When required by individual Specifications Section, submit manufacturer's certificate, in duplicate, that products meet or exceed specified requirements.

3.11 NONCONFORMING WORK

- A. If inspections or testing by the CQA Manager or other member of the CONTRACTOR's Key Personnel identify work as not meeting the required quality standard of the Contract Documents, the work shall be considered nonconforming.
- B. If quality assurance inspections or testing performed by the ENGINEER or the DEPARTMENT identify work as not meeting the required quality standard of the Contract Documents, the work shall be considered nonconforming.
- C. Nonconforming work shall be remedied by the CONTRACTOR through corrective action.
- D. Nonconforming work shall be reported in the CQA Weekly Report.

3.12 CORRECTIVE ACTION

- A. Corrective action of nonconforming work shall take place as soon as possible after identification of the nonconformance.
- B. Corrective action plans shall be communicated to the ENGINEER and shall include rework, as necessary along with all associated CQA Plan requirements including inspection and testing.

- C. At least 72 hours advance notification shall be provided to the ENGINEER for additional testing to be performed. The ENGINEER/DEPARTMENT reserves the right to collect duplicate samples for quality assurance testing.
- D. The corrective action performed to remedy the nonconforming work shall be reported in the CQA Weekly Report. Descriptions of differences in work means, methods, or testing protocols shall be included.

3.13 ACCEPTANCE OF THE WORK

- A. When appropriate, the ENGINEER/DEPARTMENT will accept, in writing, the Work completed by the CONTRACTOR as meeting the quality requirements for the project as set forth in the Contract Documents.
- B. The basis of acceptance shall be inspections and observations by the ENGINEER/DEPARTMENT; reported test results submitted to, reviewed by, and accepted by the ENGINEER; and the reported results of ENGINEER/DEPARTMENT performed quality assurance testing.

END OF SECTION

SECTION 01 45 29.13.01
MODIFICATIONS TO TESTING LABORATORY SERVICES FURNISHED BY CONTRACTOR

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies site specific testing laboratory services to be provided by CONTRACTOR under this contract. Also refer to Supplementary Specification Section 01 43 36, Field Samples. This Section is supplementary to Standard Specification Section 01 45 29.13, Testing Laboratory Services Furnished by CONTRACTOR.
- B. This Section specifies requirements for selection, quality control, submittals, laboratory responsibilities, limits on testing laboratory authority, and analytical requirements for the following samples to be collected under this Contract:
 - 1. Pre-Mobilization and Post-Demobilization Surface Soil Samples.
 - 2. Post-Excavation Soil Samples.
 - 3. Soil and Debris Waste Characterization Samples.
 - 4. Imported Soil and Aggregate Materials Samples.
 - 5. Wastewater Samples.
 - 6. Testing and/or Analysis of Samples of Other Wastes Generated.

1.2 REFERENCES

- A. ASTM D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
- B. ASTM D3740, Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- C. ASTM E329, Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection.
- D. USEPA SW-846, Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, Hazardous Waste Test Methods
- E. Supplementary Specification Section 01 43 36, Field Samples and Analysis.

1.3 SELECTION AND PAYMENT

- A. Employ and pay for services of an independent, licensed testing laboratory to perform specified inspection, testing, and analyses.
- B. The CONTRACTOR shall bear all costs associated with testing required to be performed in accordance with the Contract Documents. This includes, but is not limited to, sample

collection and preparation costs, shipping costs, insurance/lost sample replacement costs, and subcontractor (laboratory) costs.

1.4 QUALITY ASSURANCE

- A. Comply with requirements of ASTM E329 and ASTM D3740.
- B. Laboratory(ies) used for geotechnical and/or soil property analyses shall maintain a full time, registered engineer, licensed in the State of New York, on staff to review services.
- C. Geotechnical laboratories shall be accredited by the American Association of State Highway and Transportation Officials (AASHTO).
- D. Laboratory shall be authorized to operate in the State of New York and certified under the New York State Department of Health Environmental Laboratory Approval Program (ELAP) in all categories required under the Contract Documents.
- E. All laboratory analyses, and in particular all references to NYSDEC Superfund analytical chemistry, shall be in accordance with the most current edition of the NYSDEC Analytical Services Protocol (ASP). It is the CONTRACTOR's responsibility to obtain the services of laboratories familiar with the ASAP and all procedures and deliverables pertaining to NYSDEC Superfund work.
- F. Testing equipment shall be calibrated at reasonable intervals, but no less frequently than required by certifying authorities and recommended by manufacturers, with devices of an accuracy traceable to either NBS Standards or accepted values of natural physical constants.

1.5 SUBMITTALS

- A. Prior to start of Work, CONTRACTOR shall submit to ENGINEER for each testing laboratory: certifications, name, address, and telephone number, and names of full time, and responsible officer (and/or licensed professional engineer, for geotechnical laboratories).
- B. After each inspection and test, CONTRACTOR shall promptly submit copies of laboratory report to ENGINEER. CONTRACTOR shall include: Date issued, Project Title and number, name of inspector, date and time of sampling or inspection, identification of product and Specifications Section, location in the Project, type of inspection or test and test method, date of test, results of test, and conformance with Contract Documents. When requested by ENGINEER, provide interpretation of test results.

1.6 LABORATORY RESPONSIBILITIES

- A. Test samples of materials submitted by CONTRACTOR.
- B. Provide qualified personnel at Site if required for the Work after due notice; cooperate with ENGINEER and CONTRACTOR in performance of services.
- C. Perform specified inspection, and sampling and testing of products in accordance with specified standards.
- D. Determine compliance of materials with requirements of Contract Documents.

- E. Perform additional inspections and tests until compliance is achieved or as required by ENGINEER.
- F. Maintain required certifications and operate in accordance with approved protocols and procedures.

1.7 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory may not approve or accept any portion of the Work.
- B. Laboratory may not assume any duties of CONTRACTOR.
- C. Laboratory has no authority to stop Work without ENGINEER approval.

1.8 CONTRACTOR RESPONSIBILITIES

- A. Deliver to laboratory at designated location adequate samples of materials proposed to be used which require testing.
- B. Cooperate with laboratory personnel and provide access to Work, as needed.
- C. Provide incidental labor and facilities to provide access to Work to be tested, to obtain and handle samples at the Site or at the source of products to be tested, to facilitate tests and inspections, and for storage of test samples.
- D. Notify ENGINEER and laboratory of operations requiring inspection and testing services 24 hours before services are needed.
- E. If laboratory testing results indicate Work does not meet specified requirements, remove or expand Work, replace, and retest until compliance is achieved. Payment for expansion of Work will be consistent with the Contract Documents.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 51 05.01
MODIFICATIONS TO TEMPORARY UTILITIES AND CONTROLS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies Site-specific requirements for dust control, erosion and sediment control, rubbish control, water control, and decontamination trailer and personal hygiene facility. This Section is supplementary to Standard Specification Section 01 51 05, Temporary Utilities and Controls.

1.2 DUST CONTROL

- A. CONTRACTOR's Community Protection Plan and Air Monitoring Plan shall be fully implemented during all contaminated soil and debris excavation and handling activities. Refer to Standard Specification Section 01 35 29, Contractor's Health and Safety Plan for specific requirements for the Community Protection Plan.
- B. Execute Work by methods to minimize raising dust from construction operations. Provide positive means to prevent airborne dust from dispersing into atmosphere.
- C. Do not use oils, bitumen, or chlorides for dust control.
- D. Use water exclusively from a clean potable source.

1.3 EROSION AND SEDIMENT CONTROL

- A. Supply, install, inspect, maintain, and remove (upon approval by ENGINEER) all required erosion and sediment controls. Refer to Supplementary Specification Section 31 25 00, Erosion and Sedimentation Controls for additional details.
- B. Minimize amount of bare soil exposed at one time.
- C. Plan and execute construction by methods to control surface drainage from cuts and waste areas. Prevent erosion and sedimentation.
- D. Provide cover for all stockpiled materials, including but not limited to excavated and staged/stockpiles of contaminated soil and debris, in accordance with Supplementary Specification Section 31 23 16, Excavation.
- E. Conduct operations to avoid washing or deposition of materials into waterways or off-Site.
- F. Periodically, but no less frequently than daily, inspect earthwork (excavations, shoring, and bracing) to detect evidence of erosion and sedimentation; promptly apply corrective measures.
- G. Keep duration of exposure of construction materials before final finishing or cover as short as practical.

1.4 RUBBISH CONTROL (NONCONTAMINATED)

- A. Minimize accumulation of waste materials and rubbish. Remove at least weekly.
- B. Maintain Site in a clean and orderly condition.

1.5 WATER CONTROL

- A. Control surface water and groundwater during construction.
- B. Divert surface water from Work area and conduct Work in a manner to minimize surface water infiltration into the Work.
- C. If needed, rough grade Site to prevent standing water and to direct surface drainage away from Work area. Construct surface diversion berms or provide piping to direct surface water and rainwater away from excavation areas.
- D. Maintain or relocate existing ditches and spillways.
- E. Stockpile material such that it does not restrict surface drainage.
- F. If it is necessary to interrupt existing surface drainage, provide and maintain temporary piping or ditching until permanent drainage is available.
- G. Maintain excavations free of water. Provide and operate pumping equipment of a capacity to control water flow.
- H. Provide temporary protective covering of excavation and stockpiles to minimize contamination of surface water.
- I. Manage potentially contaminated surface water and groundwater and other liquid wastes in accordance with the Contract Documents.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 55 26
MAINTENANCE AND PROTECTION OF TRAFFIC

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the requirements for traffic control and roadway maintenance.

1.2 TRAFFIC CONTROL

- A. Prepare and submit a Traffic Control Plan to ENGINEER for acceptance, including signage and traffic controls required on County Route 26.
- B. Minimize safety hazards and prevent trespass. Place signs to prevent vehicular traffic entering the Site and display warning signs. Place and maintain appropriate traffic signage as required by the Manual on Uniform Traffic Control Devices developed by the National Advisory Committee on Uniform Traffic Control Devices, state, and local regulations and requirement of authorities.
 - 1. Provide temporary barricades, fences, lights, warning signs, watchmen, and take other precautionary measures for protecting persons, property, and the Work.
 - 2. Use appropriate barricades that are visible at night.
- C. CONTRACTOR shall be available 24 hours per day to respond to calls or notifications from ENGINEER or others regarding maintenance of signs or other traffic control devices.
- D. Local traffic shall be maintained, and access shall be provided to all adjacent properties. Do not block the right of way on County Route 26.
- E. CONTRACTOR is responsible for establishing traffic controls on the Site. Cuing of vehicles in public roadways and idling of vehicles is not allowed. CONTRACTOR shall minimize travel on secondary roadways and in residential areas, and comply with the approved Traffic Control Plan at all times.
- F. CONTRACTOR's responsibility for maintaining traffic control shall continue until the Work is complete in accordance with the Contract Documents. After final completion, protect Work and property during periods when corrective Work or other Work is underway.

1.3 ROADWAY MAINTENANCE

- A. Upon commencement of the Work, CONTRACTOR shall be responsible for maintenance of street surfaces within the construction limits of the project and the intersection of County Route 26 and the Stabilized Construction Entrance to the Site.
- B. Do not track or spill mud, clay, gravel, or other materials into adjacent streets or off-Site. Clean off inadvertent tracking and spills immediately. Maintain the intersection and adjacent portions of the paved public right-of-way free of gravel, dirt, mud, debris, or any material tracked from the Site. Sweep the roadway on a daily basis or more frequently if directed.

- C. If dirt or other material is tracked onto adjacent streets and is not cleaned within 24 hours, ENGINEER will have cleanup done at CONTRACTOR's expense.
- D. CONTRACTOR shall upgrade existing access roadway on the Site to maximize efficiency of operations. Repair/modification of deficiencies of the Site access roadway for the purpose of transport of labor, equipment and materials for the Work shall be the responsibility of the CONTRACTOR.
- E. CONTRACTOR shall construct access roadways to all areas of the Site as required to efficiently complete the Work.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 55 29
STORAGE OF MATERIAL

PART 1. GENERAL

1.1 SECTION INCLUDES

This Section specifies requirements for the storage of material and includes specifications for stockpiles, storage in roll-offs, storage of water in containers and tanks, and storage of other materials anticipated for the Work.

1.2 GENERAL

- A. Storage of materials at the Site shall be in a clean, orderly, and workmanlike manner. Store all materials per manufacturers' instructions and consistent with the Contract Documents. Store all materials so as not to injure, hinder, or interfere with any part of the Work and so that free access can be had at all times to the Site and Work areas.
- B. Carefully plan the layout of storage areas to prevent potentially contaminated materials from coming in contact with clean and imported materials.
- C. Store materials as shown on laydown drawings in the Work Plan prepared under Supplementary Specification Section 01 15 00, Minimum Requirements for Work Plan.
- D. The CONTRACTOR is responsible for security of all equipment and materials.

1.3 STOCKPILES

- A. Stockpile materials on-Site in the designated staging area.
- B. Stockpiles for potentially contaminated materials, including all excavated soil and debris, shall be placed on liners a minimum of 40-mil thick, consistent with the Contract Documents to prevent infiltration, leakage or spillage of contamination. Stockpiles of potentially contaminated materials shall also be covered with impermeable tarps of minimum 20-mil thickness to prevent contact with precipitation and minimize the potential for transport of contamination as dust. Additional requirements for contaminated material stockpiles are shown on the Contract Drawings.
- C. Stockpiles shall be covered at all times unless materials are actively being sampled, stockpiled, graded, or loaded for transportation.
- D. Stockpiles shall be limited to 10 feet in height and side slopes indicated on the Contract Drawings.
- E. Maintain records of stockpiled materials, quantities, and dates of generation/import. Excavated soil and debris records shall also include information on the source (specific area of excavation) of the material and contaminant concentration of the material stockpiled.
- F. Stockpile Clean Fill and Topsoil in sufficient quantities to meet project schedule and requirements.

- G. Maintain stockpiles during construction. Grade stockpiles to provide positive drainage to prevent erosion or deterioration of materials. Provide erosion control around stockpile.
- H. Regrade and restore stockpile areas at completion of the project. Characterize, remove, transport, and dispose off-Site all resulting waste.
- I. Soil and debris being excavated may be temporarily stockpiled within excavation areas to allow for passive dewatering. No stockpiles of soil and debris may be placed outside the limits of excavation for the Work, unless they are placed in a lined storage location with containment for free liquids. Refer to the Contract Drawings for stockpiling details.
- J. Separately stockpile Asbestos Containing Soil and Debris, TSCA Contaminated Soil and Debris, and Non-TSCA Contaminated Soil and Debris.
- K. Direct load excavated soil and debris to the extent possible, provided free liquids are not generated.
- L. Do not stockpile clean or fill materials in or adjacent to the excavation areas.

1.4 ROLL-OFFS

- A. Roll-offs shall be covered with watertight covers. Any liquid that accumulates within the roll-off shall be containerized, sampled, and disposed of in accordance with all applicable federal, state, and local laws and regulations.
- B. Any roll-offs being used to store potentially contaminated materials, including soil and debris, shall be placed in lined storage areas. Liner and control measures shall be the same as for stockpiles. Lined roll-offs are not considered liquid tight and shall be stored in lined storage areas.

1.5 CONTAINERIZATION OF WATER

- A. Containerize all potentially contaminated water in closed containers, including decontamination fluids and drainage from excavated soil and debris, for treatment unless it is directly pumped, with no accumulation, to the water treatment system. Label all containers.
- B. Manage potentially contaminated water consistent with Supplementary Specification Sections 01 43 36, Field Samples and Analysis, and 44 01 40, Water Treatment.
- C. Stormwater and clean run-off shall be managed consistent with the Work Plan and SWPPP.

1.6 STORAGE OF MATERIALS

- A. All materials shall be stored consistent with manufacturer recommendations and consistent with the type of material. Provide dry, lined storage. Dispose of improperly stored or damaged materials and provide replacement materials at no additional cost to the DEPARTMENT. Label all containers and materials.
- B. Ensure all personal protective equipment and equipment for lifting and securing loads are stored in an orderly manner for ease of access and to prevent damage to the equipment. Do not use damaged, worn, or otherwise unacceptable personal protective

equipment, equipment for lifting and securing loads, or other safety related equipment which could cause damage to personnel, property, or the Work.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 57 26
DUST AND ODOR CONTROL

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies dust and odor control measures to be implemented by the CONTRACTOR during the Work.

1.2 DESCRIPTION

- A. The CONTRACTOR shall execute the Work by methods that minimize the generation of dust and nuisance odors. The CONTRACTOR shall employ dust control measures to minimize the creation of airborne dust during execution of the Work. At a minimum, standard dust control techniques, such as applying water to ground surfaces, shall be employed in areas of heavy equipment traffic. The dust control measures will be such that, at a minimum, air quality is in compliance with applicable OSHA regulations, and the Community Protection Plan and Air Monitoring Plan requirements.
- B. Weathered petroleum-type and similar odors are expected during excavation. The CONTRACTOR shall provide an odor control system to control odors as necessary to address complaints from on-site workers and the local community during excavation, backfilling, compaction, stabilization, and material handling and processing activities. Odor control agents such as an odor-control foam, misting system, hydrocarbon vapor suppressing agents, detergents, or other method selected by the CONTRACTOR and approved by the ENGINEER or the DEPARTMENT shall be available on-Site and shall be applied as needed to control odors. Other systems may be required as necessary to meet the project performance objectives, including temporary enclosures for conducting material processing for excavation and/or stabilization.
- C. The performance objective for odor control will be to control, eliminate, or mask odors that generate complaints from neighboring residents, workers, subcontractors, the public, state or local officials, the ENGINEER, or the DEPARTMENT.
- D. No additional payments will be made due to shutdowns as a result of emissions whether exceeding standards or posing a nuisance. If the initial emission controls are found to be inadequate, the CONTRACTOR shall provide additional measures at no additional cost.
- E. Dust and odor control systems shall be implemented as necessary to meet local, state, and/or federal regulations for air emissions and dust and to control nuisance odors.
- F. Sufficient volumes of water and/or odor control foam shall be readily available or stored on-Site to address continuous application.

1.3 SUBMITTALS

- A. Potable Water Source: Submit identification of potable water source, up-to-date analytical reports and certifications provided by municipality, and/or results of independent Per- and Polyfluoroalkyl Substances (PFAS) analysis.
- B. Odor Control Foam: Submit product data, analytical testing for PFAS, and SDS for odor control foam.

PART 2. PRODUCTS

2.1 MATERIALS

- A. Water shall be free from oil, acid, and injurious alkali or vegetable matter, and other deleterious materials or contaminants. Water shall not be brackish. All water provided to the Site shall be potable water from an ENGINEER-approved municipal supply or from an alternate ENGINEER-approved source.
 - 1. Provide up-to-date analysis and certification reports from source providing the water.
 - 2. Water analysis reports shall demonstrate PFAS concentrations are below regulatory limits. In the absence of such data, CONTRACTOR shall collect samples, submit samples to the analytical laboratory for analysis of PFAS, and report concentrations of PFAS prior to import of water to the Site.
 - 3. Water samples from the water source shall be analyzed for PFAS via USEPA Method 1633.
- B. Odor control foam. Odor control foam shall be biodegradable, non-flammable, and non-toxic water-based material designed for the control of dusts and odors. It shall be capable of being spray applied to form a uniform encapsulation layer between contaminated materials and the environment, suppressing dusts and odors. Odor control foam shall be certified PFAS-free. If PFAS data is not available for the proposed foam, CONTRACTOR shall collect a sample of the material, submit the sample to the analytical laboratory for analysis of PFAS, independently confirm the absence of PFAS, and report the results of the analysis to the ENGINEER prior to delivery of odor control foam to the Site.
 - 1. Odor control foam sample shall be analyzed for PFAS via USEPA Method 1633.
 - 2. Provide the following or approved equal:
 - a. BioSolve Pinkwater, by The BioSolve Company
 - b. AC-645 Long-Duration Form, by Rusmar, Inc.

2.2 EQUIPMENT

- A. Equipment for dust and odor control shall include appropriate measures (e.g., heat tape, tank heaters) to prevent freezing or impair operation due to temperatures below freezing.
- B. Spray nozzles for water shall be capable of delivering a light spray to coat ground surfaces evenly without generating runoff.
- C. Spray nozzles for odor control dispersants or misting systems shall be capable of delivering a fine airborne vapor spray to minimize immediate settling to the ground.

PART 3. EXECUTION

3.1 SPRINKLING WATER

- A. Apply to access roads and disturbed areas of the Site by approved methods and with equipment including a tank with gauge-equipped pressure pump and a nozzle-equipped spray bar.
- B. Disperse through the nozzle under a minimum pressure of 20 pounds per square inch, gauge pressure.
- C. Apply water until the surface is wet, but avoid ponding, run off, or muddy conditions.

3.2 PAVEMENT SWEEPING

- A. Maintain clean pavement surfaces within the designated work areas and Site egress routes (including County Route 26 pavement). Do not permit construction equipment to track soil outside of the Limits of Work onto public or private roads.
- B. Sweep pavement surfaces during construction to prevent migration of soil outside of the limits of Work and to prevent the generation of dust.
- C. Sweep all truck ingress/egress routes at the end of construction each day, at a minimum, as a final cleanup task to remove residual construction debris and soils.

3.3 ODOR, VAPOR, AND DUST CONTROL

- A. General:
 - 1. Provide means, methods, and facilities required to control odors, vapors, and dust generated during the Work.
 - 2. Proactively employ odor, vapor, and dust controls during the Work, and evaluate and modify construction techniques and Site management practices, as necessary and appropriate, to:
 - a. Mitigate odor emissions to the extent practicable, and to the satisfaction of the ENGINEER and DEPARTMENT.
 - b. Prevent exceedances of requirements of the Community Protection Plan specified in Section 01 35 29 – Contractor's Health and Safety Plan.
 - 3. If CONTRACTOR's means, methods, and facilities are unsuccessful in controlling odors, vapors, and dust as specified in this Section, based on visual observations or the results of community air monitoring, Work shall be suspended until appropriate corrective actions are taken by CONTRACTOR to remedy the situation to ENGINEER's satisfaction. The DEPARTMENT will not be liable for any expense or delay resulting from CONTRACTOR's failure to control odors, vapors, and dust in accordance with this Section.
- B. Odor Mitigation Agents:
 - 1. Mobilize odor and vapor mitigation agents and means of storage and dispersion at the Site before initiating any ground-intrusive Work or dust generating Work.

2. Application of odor mitigation agents shall be in strict accordance with the respective manufacturer's instructions.

C. Construction Techniques and Site Management Practices:

1. Excavate and backfill, and load, handle, and unload excavated materials and clean fill materials, in manner that minimizes the generation of airborne dust and odors.
2. Haul excavated materials and clean fill materials in properly covered vehicles. All vehicles and containers transporting contaminated material shall be fully lined with polyethylene sheeting (minimum 6-mil thick), or equivalent material, or otherwise water-tight, and shall be equipped with functioning tailgate locks and non-mesh (solid), waterproof tarpaulins.
3. Restrict vehicle speeds on temporary access roads and active haul routes.
4. Cover open excavations, stockpiles, containers with odor mitigation foam and polyethylene liners before extended work breaks and at the end of each workday. Anchor liners to resist wind forces; slope to prevent accumulation of water.
5. Minimize the areas of bare soil exposed at one time to extent practical.
6. Minimize exposure of equipment coated with impacted materials, use active controls, wash off, or foam as required without compromising ability to achieve performance requirements.

3.4 STOCKPILE MANAGEMENT

- A. Maintain on-Site stockpiles and containers in a manner that prevents wind-blown dust and odor generation. During active use, provide periodic application of odor mitigation agents and water sprinkling and during inactive periods, cover stockpiles and containers with weighted tarps.

3.5 DISPOSAL

- A. Sweepings collected during pavement sweeping activities shall be managed on-Site as waste material and shall be characterized and disposed off-Site.
- B. The sweepings shall be properly disposed off-Site at an ENGINEER-approved, licensed disposal facility.

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the requirements for products to be incorporated into the Work and addresses transportation and handling, storage and protection, product options, substitutions, quality control and workmanship, and manufacturer's instructions and certification requirements.

1.2 PRODUCTS

- A. Products include material, equipment, and systems. Products may also include existing materials provided by ENGINEER.
- B. Do not use materials and equipment brought from other Sites or off-Site without decontamination or verification of quality prior to bringing to the Site. Materials or equipment removed from existing structures, systems, excavated on-Site, or brought from off-Site, except as specifically required or allowed by Contract Documents and approved by the ENGINEER, are not allowed.
- C. Do not use materials removed during the Work, except as specifically required or allowed by Contract Documents.
- D. Comply with Specifications and referenced standards as minimum requirements.
- E. Provide components of the same manufacturer, for interchangeable components.
- F. All construction materials shall be subject to the inspection and approval or rejection of ENGINEER.

1.3 TRANSPORTATION AND HANDLING

- A. Transport products by methods which prevent product damage; deliver in undamaged, dry condition in manufacturer's unopened containers or packing.
- B. Provide equipment and personnel to handle products by methods which prevent soiling or damage.
- C. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

1.4 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturers' instructions, with seals and labels intact and legible. Store sensitive products in weathertight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.
- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to prevent condensation.

- C. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.
- D. Arrange storage to provide access for inspection. Periodically, but no less frequently than daily, inspect to ensure products are undamaged and are maintained under required conditions.

1.5 PRODUCT OPTIONS

- A. Products Specified by References or by Description only: Any product meeting those standards may be used.
- B. Products Specified by Naming one or more Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not specifically named.
- C. Products Specified by Naming Several Manufacturers: Products of named manufacturers meeting Specifications: No options, no substitutions allowed.
- D. Products Specified by Naming Only One Manufacturer: No options, no substitutions allowed.

1.6 SUBSTITUTIONS

- A. ENGINEER will consider CONTRACTOR's request for substitutions up to 15 days prior to CONTRACTOR's product order to meet CONTRACTOR's schedule. Subsequently, substitutions will be considered only when a product becomes unavailable through no fault of CONTRACTOR.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. Request constitutes a representation that CONTRACTOR:
 - 1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 - 2. Will provide the same warranty for substitution as for the specified product.
 - 3. Will coordinate installation and make other changes which may be required for Work to be complete in all respects.
 - 4. Waives claims for additional costs or time which may subsequently become apparent.
- D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request, or when acceptance will require substantial revision of Contract Documents.
- E. ENGINEER will determine acceptability of proposed substitution and will notify CONTRACTOR of acceptance or rejection in writing within a reasonable time.
- F. Only one request for substitution will be considered for each product. When substitution is not accepted, provide specified product.

1.7 QUALITY CONTROL, WORKMANSHIP

- A. Maintain quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship to produce Work of specified quality.
- B. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- C. Perform Work with persons trained and qualified to produce workmanship of specified quality.

1.8 MANUFACTURER'S INSTRUCTIONS

- A. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Contract Documents, request clarification from ENGINEER before proceeding.

1.9 MANUFACTURER'S CERTIFICATES

- A. When required by individual Specifications Section, submit manufacturer's certificate, in duplicate, demonstrating that products meet or exceed specified requirements.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 71 23.01
MODIFICATIONS TO FIELD ENGINEERING

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section includes field engineering and surveying requirements that are supplementary to Standard Specification Section 01 71 23, Field Engineering.
- B. Specific surveying requirements addressed in this Section include:
 - 1. Initial Site survey and work area layout surveys.
 - 2. Intermediate surveys including measurement for payment surveys.
 - 3. Final surveys of As-Built Conditions.

1.2 DESCRIPTION

- A. This Section modifies Standard Specification Section 01 71 23, Field Engineering, as follows.

1.3 SCOPE

- A. Develop and make all detailed surveys and measurements needed for construction including:
 - 1. Initial pre-construction existing conditions surveys documenting the existing topography (including elevation of existing surfaces) throughout the Limits of Work, and other existing conditions such as monitoring wells, existing surface improvements (i.e., limits of grass and stone areas), limits of regulated wetland areas, utilities, structures, gate and fencing, trees, drainage features, surface debris, and other surface features.
 - 2. Work layout survey, including marking in the field, mapping and recording overall Limits of Work, areas for temporary facilities, access roads, temporary utility alignments, excavation areas, equipment staging areas, material staging areas, parking areas, water treatment system area, treated water discharge location, limits of regulated wetland areas, and all other layout required by these specifications and for execution of the Work.
 - 3. Clearly mark in the field, for initial excavation lift and each subsequent 2-foot thick excavation lift: limits of excavation of Asbestos Containing Soil and Debris, TSCA Contaminated Soil and Debris (soil and debris with PCBs at concentrations equal to or greater than 50 mg/kg), and Non-TSCA Contaminated Soil and Debris (soil and debris with PCBs at concentrations less than 50 mg/kg). Mark out all corners and changes in alignment of limits. Mark out shall show in the field limits and depths of proposed excavations. Approval of mark out by the ENGINEER shall be required prior to start of excavation and prior to start of excavation of each lift. Provide dry conditions for ENGINEER's inspection.

4. Post-excavation surveys of excavation bottom and sides separately after removal of Asbestos Containing Soil and Debris.
 5. Intermediate surveys of excavation bottom and sides for initial excavation lift and each subsequent 2-foot thick excavation lift, including following i) removal of Asbestos-containing soil and debris, ii) removal of TSCA Contaminated Soil and Debris, and iii) removal of Non-TSCA Contaminated Soil and Debris. Each 2-foot excavation lift survey shall show limits of excavation, elevations of excavation bottom, and limits of cutback.
 6. Mark out in the field for each 2-foot excavation lift the sampling grids shown on the Contract Drawings. Survey, map and record locations and elevations of Post-Excavation Samples.
 7. Sampling grids and specified limits of excavation shall be shown on all survey drawings; including, but not limited to, Asbestos Containing Soil and Debris post-excavation survey drawings, initial excavation lift survey drawings, and all subsequent 2-foot thick excavation lift survey drawings.
 8. Restoration surveys showing topography, limits of restoration, limits of demarcation layer fabric, property boundaries and physical features.
 9. Final As-Built Survey for Record/As-Built Drawing preparation.
 10. Additional surveys for control of earthwork cut and fill and measurement for payment.
 11. Note: In Excavation Areas A through E, excavation lift thickness requirements may vary, refer to Contract Drawings.
- B. Arrange for utility mark-outs.
- C. Do not change or relocate reference points or lines without specific approval from ENGINEER. Promptly inform ENGINEER when a reference point is lost, destroyed, or requires relocation.
- D. Refer to Contract Section VIII, Article 3 for protection of existing reference points.
- E. The CONTRACTOR shall protect and preserve the established reference points. Locate reference points throughout the Work. Refer to Supplementary Specification Section 01 11 00, Summary of Work.
- F. Mark out in the field with flagging or stakes surveyed limits of regulated wetland areas. Prior to start of ground disturbance activities, flagging and stakes shall be placed along limits of regulated wetland areas at a maximum spacing of 25 feet.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

3.1 EXECUTION

- A. A projection of work to be completed the following week shall be submitted to the ENGINEER/DEPARTMENT by 4:00 pm of the preceding Friday. This projection shall include:
 - 1. Location of all areas in which construction will be performed by the CONTRACTOR and any subcontractors;
 - 2. Major construction equipment to be utilized;
 - 3. Equipment and materials to be installed; and
 - 4. Materials to be removed (including excavated soil and debris).
- B. Maintain field office files, Record/As-Built Drawings, and a complete, accurate log of all control and survey work as it progresses. Coordinate engineering services for any subcontractors. Prepare layout and construction drawings for the Work.
- C. Check and coordinate Work for conflicts and interferences, and immediately advise the ENGINEER/DEPARTMENT of all discrepancies.
- D. Cooperate with the DEPARTMENT, ENGINEER, and representatives for field inspections.
- E. Follow, without delay, all instructions of the ENGINEER, the DEPARTMENT, and representatives in the prosecution and completion of the Work in conformity with the Contract Documents. The CONTRACTOR shall provide labor and materials as needed.
- F. The CONTRACTOR shall have a competent representative available to receive telephone messages and provide a reasonable reply as soon as possible and within 24 hours, including weekends. This includes a representative capable of responding to Site emergencies, including those related to the water treatment equipment.
- G. All survey submittals provided under this Section shall include ground and soil/debris surface elevations and topographic contour lines at one-foot intervals.

3.2 ELEMENTS OF SURVEY

- A. General
 - 1. All surveys shall include physical features, utilities, limits of ground surface coverings, vegetation, groundwater monitoring wells, property boundaries, and other features of the Work (either interim features or final, depending on the survey submittal). All surveys shall show and encompass the entire Limits of Work, unless otherwise approved by the ENGINEER.
 - 2. All surveys shall be performed using a survey rod equipped with a wide-base topo shoe. For surveying of soft surfaces that do not support the topo shoe from penetrating the surface, surveyor shall suspend the topo shoe upon the surface and prevent penetration beneath the surface.

3. Spot elevations shall all be at a maximum spacing of five feet on-center in the locations of the Work, meaning that the distance between spot elevations in all directions shall be five feet or less.
4. All surveys, drawings and submittals required by this section shall be signed and sealed by a Land Surveyor licensed to practice in New York State.
5. Horizontal and vertical datum shall be NAD 1983 and NAVD 1988.
6. The CONTRACTOR shall survey structures and improvements, establishing exact x, y and z coordinates at fixed points to act as benchmarks. The CONTRACTOR shall clearly identify benchmarks and record existing elevations. Datum level used to establish benchmark elevations shall be located at a sufficient distance so as not to be affected by movement resulting from excavation or construction operations.
7. During excavation, the CONTRACTOR shall resurvey benchmarks weekly, employing a New York State licensed Land Surveyor. The CONTRACTOR shall maintain an accurate log of surveyed elevations for comparison with original elevations. The CONTRACTOR shall promptly notify the Engineer if changes occur.
8. Perform a minimum of three initial readings on each monitoring point to establish a baseline. Consider variations in temperature or other environmental factors which could affect the readings. Present a baseline reading report to the ENGINEER which clearly shows how the baseline readings were used to establish a single value for comparison to subsequent readings. At the discretion of the ENGINEER, perform additional baseline readings to further confirm the value. Additional readings shall be at no cost to the ENGINEER or DEPARTMENT.
9. Accuracy of both the vertical and horizontal monitoring shall be a minimum of 0.05 inches.
10. Action Levels: Utilize a warning limit of 0.25 inches. For any monitoring point that reaches the warning limit, immediately report the data to the DEPARTMENT. Propose contingency plans that will prevent continued movement that could exceed the maximum limit. For any monitoring point that reaches 0.50 inches, the CONTRACTOR shall immediately stop the Work, re-evaluate the design, make necessary adjustments, and implement the remedial solutions proposed in the approved contingency plan that would prevent further movement.
11. Minimum submittal requirements for each survey: Electronic ARCGIS shape file and AutoCAD 2018 DWG file, to be transmitted via email or similar method. Surveyed points shall be entered with x, y and z coordinates consistent with the coordinate systems and datums. Also provide two print copies signed and sealed by a New York State licensed Land Surveyor and one electronic PDF version of the survey on USB flash drive. Obtain ENGINEER's approval for drawing scales.

B. Initial Site Survey

1. Perform an Initial Site Survey to establish existing Site conditions, baseline elevations and benchmarks for the layout and completion of Work as specified, as shown on the Contract Drawings and as specified in the Contract Documents. Any errors, omissions or apparent discrepancies found in the Contract Drawings as a

result of the completion of the Initial Site Survey shall be called to the ENGINEER's attention for interpretation prior to proceeding with the Work.

2. The Initial Site Survey shall be performed prior to the performance of ground disturbance to verify existing Site conditions and to establish benchmarks for the completion of Work, as specified. The Initial Site Survey shall show the exact surveyed location points, including, but not limited to:
 - a. Aboveground and buried utilities.
 - b. Property boundaries and established reference points.
 - c. Ground surface and material/debris surface elevations measured across the entire Limits of Work at the intersection points of a 30-foot by 30-foot square grid, as approved by the ENGINEER.
 - d. Existing Site features (e.g., Site structures, debris piles, limits of gravel areas, limits of surface water, fence, gate, trees, wetland limits, etc.).
 - e. Groundwater monitoring well locations and elevations. Groundwater monitoring well surveying shall include elevation of top of casings to within ± 0.01 foot.
 - f. The CONTRACTOR shall establish a minimum 30-foot by 30-foot grid network within the Limits of Work for use during construction. At areas near the Limits of Work, extra nodes may be required by the Engineer to properly delineate the limits of excavation. A minimum of four temporary benchmarks shall be established by the CONTRACTOR outside the Excavation Limits for use during the Work. Survey work required by the Contract shall consist of the measurement of spot elevations at each node of the grid network. Aerial surveys shall not be acceptable.

C. Work Layout Survey

1. Survey the layout of the Limits of Work as shown on the Contract Drawings. Provide, and maintain throughout the Work, sufficient markings and flagging to prevent any disturbance outside of this limit line. Install temporary stakes or flagging marking the Limits of Work, spaced a maximum distance of 25 feet between each marking and at all corners and changes in direction.
2. Survey the layout of the initial Excavation Areas, including the excavations within Areas A through E shown on the Drawings, prior to beginning ground disturbance Work. Clearly mark in the field the limits (horizontal and vertical) of Asbestos Containing Soil and Debris, TSCA Contaminated Soil and Debris, and Non-TSCA Contaminated Soil and Debris. Repeat work layout surveys for each consecutive 2-foot thick excavation lift.
3. Include the following in addition to requirements of Standard Specification Section 01 71 23, Field Engineering, Paragraph 1.5.C.
 - a. Show on a drawing and mark out in the field planned vertical and horizontal limits of excavations, and all physical features within the excavation limits and extending in all directions 25 feet beyond the limits of excavation, with spot elevations at a maximum spacing of five feet on-center (i.e., distance

between spot elevations shall be five feet or less in all directions) and spot elevations at each corner of each proposed excavation area. Clearly show on a drawing and mark in the field limits of excavation of Asbestos Containing Soil and Debris, TSCA Contaminated Soil and Debris, and Non-TSCA Contaminated Soil and Debris. Mark out and show on a drawing all corners and changes in alignment of limits. Mark out in the field and show on a drawing the depth and elevations of proposed excavations. Approval by the ENGINEER of drawing and mark out shall be required prior to start of excavation of each and every 2-foot thick excavation lift. Provide dry conditions for ENGINEER's inspection.

- b. Mark out and show on a drawing planned horizontal limits of access roads and staging areas. Approval by the ENGINEER of drawing and mark out shall be required prior to start of construction of access roads and staging areas.
 - c. Mark out and show on a drawing planned water treatment pad location and planned dewatering pump locations. Approval by the ENGINEER of drawing and mark out shall be required prior to mobilization of dewatering equipment to the site.
4. CONTRACTOR shall submit the Initial Site Survey and Work Layout Survey to ENGINEER, and shall not begin construction of access roads, construction of staging areas, ground surface disturbance, or excavation work prior to ENGINEER review and approval of the Initial Site Survey and Work Layout Survey.

D. Intermediate Surveys

- 1. Intermediate Surveys are to be used for Measurement for Payment purposes, in addition to documentation of the Work completed and evaluating compliance with the Contract requirements.
- 2. During progress of excavation and upon completion of the excavation of contaminated soil and debris, the CONTRACTOR shall perform Intermediate Surveys showing all dimensions, locations, angles and elevations of the final excavation limits, as well as the post-excavation sampling grids, and elevation and location of all post-excavation samples (and aliquots) collected. Planned sample locations shall be staked in the field prior to sample collection and survey. Obtain ENGINEER's approval prior to collection and survey of sample locations.
- 3. Perform and provide cut volume calculations documenting the amount of soil and debris removed based on comparison of the Intermediate Surveys and the Initial Site Survey. Separate surveys shall be required for Asbestos Containing Soil and Debris, TSCA Contaminated Soil and Debris and Non-TSCA Contaminated Soil and Debris. Calculations of cut volumes shall be shown on the survey drawings. The limits and volumes of excavation cut back for slope stabilization shall be clearly shown and reported separately with on the survey drawings. The Intermediate Surveys shall be used for payment purposes for excavation.
- 4. The Intermediate Surveys shall show the exact surveyed locations and elevations of all Work in relation to the accepted benchmarks and reference points, including, but not limited to:
 - a. Property boundaries and established reference points.

- b. All utilities identified or uncovered during the performance of the Work.
 - c. Limits of all excavations. Separately show limits of cut back beyond specified limits of excavation.
 - d. Locations of abandoned monitoring wells. If a portion remains, show elevations of top of remaining portions of abandoned wells. Label abandoned wells on survey drawing using identification numbers on Contract Drawings.
 - e. For small excavation areas ($\leq 900 \text{ ft}^2$) elevation of excavation bottom measured at each corner of and the center of (minimum five locations) the excavation area, as approved by the ENGINEER, and volume in cubic feet of soil and debris removed.
 - f. For larger excavation areas ($> 900 \text{ ft}^2$) elevation of excavation bottom, measured at each corner of the limits of excavation and at the intersection points of a maximum 30-foot by 30-foot square grid, as approved by the ENGINEER. The elevations of top of excavation sidewalls and bottom of excavation sidewalls shall be surveyed at maximum intervals of 30 feet along the perimeter of each excavation. Additionally, the elevations of tops and bottoms of excavation sidewalls shall be surveyed at each change in direction. If an excavation sidewall is less than 30 feet in length, at a minimum of two locations the elevations of tops and bottoms of the sidewall shall be surveyed.
 - g. Elevations and locations of all post-excavation soil samples collected.
- 5. CONTRACTOR shall submit Intermediate Surveys to ENGINEER following completion of the Asbestos Containing Soil and Debris removal and shall not commence excavation of TSCA and Non-TSCA Contaminated Soil and Debris until receipt of ENGINEER's approval.
 - 6. CONTRACTOR shall submit Intermediate Surveys to ENGINEER beginning with completion of excavation of the first lift of TSCA and Non-TSCA Contaminated Soil and Debris, and continuing with each subsequent lift (individual intermediate surveys), and shall not commence post-excavation sampling and additional excavation until receipt of ENGINEER's approval.
 - 7. Excavations shall not be considered final until post-excavation sample analyses are received and ENGINEER approves of the data submittal. The ENGINEER shall direct additional excavation as necessary to reach specified depths, and based on the soil sample analytical results.
 - 8. CONTRACTOR shall provide and maintain cut/fill stakes throughout the excavation and backfilling work.
- E. Final Survey of As-Built Conditions
- 1. During completion of construction activities and prior to final acceptance, the CONTRACTOR shall perform detailed physical/topographical surveys of the completed work. Final elevations shall match the grades shown on Drawing C-113 unless otherwise approved by ENGINEER.

2. CONTRACTOR'S survey shall be used to establish quantities for payment. Refer to Section XII - Measurement for Payment of the Contract Documents for additional requirements.
3. The Record/As-Built Drawings shall show the exact surveyed locations and elevations of all Work in relation to the accepted benchmarks and reference points, including, but not limited to:
 - a. Property boundaries, Limits of Work and established reference points.
 - b. Results of all construction activities.
 - c. All deviations from the Contract Documents.
 - d. All topographic and physical features shown on the approved Initial Site Survey.
 - e. Locations of identified utilities, including, if cut and capped, coordinates and elevations of terminations.
 - f. Limits of all planting and seeding including numbers of each plant species.
 - g. Metes and bounds, physical address of the Site, and Tax Map Section, Block and Lot.
 - h. On a separate signed and sealed survey drawing: Limits and elevations of top of in-place imported subgrade material (i.e., Clean Fill). Survey shall include in-place volume of imported Clean Fill in cubic yards. Provide spot elevations at maximum spacing of 25 feet on center.
 - i. On a separate signed and sealed survey drawing: Limits and elevations of top of in-place Demarcation Layer Fabric. Survey shall include in-place area of Demarcation Layer Fabric in square feet. Provide spot elevations at maximum spacing of 25 feet on center.
 - j. Limits and elevations of top of in-place imported Topsoil. Survey shall include in-place volume of imported Topsoil in cubic yards. Provide spot elevations at maximum spacing of 25 feet on center.
 - k. Limits and elevations of top of in-place imported Coarse Aggregate. Provide spot elevations at maximum spacing of 25 feet on center.
 - l. The survey must be drawn to a convenient scale, with that scale clearly indicated. A graphic scale, shown in feet and meters, must be included.
 - m. Clear identification of the boundaries of the real project subject to the environmental easement or other institutional controls, if different from the site boundaries.
 - n. The name, address, telephone number, signature, and certification of the professional land surveyor who performed the survey, his or her official seal and registration number, the date the survey was completed, the dates of all of the surveyor's revisions.

- o. The symbols and abbreviations that are used on the survey must be identified by the use of a legend.
- p. Diagrams must be accurately presented.
- q. The point of beginning of the legal description must be shown. The legal description must be correct. The legal description must state the acreage.
- r. If the deed(s) description differs from the measured bearings/angles/distances, both must be indicated on the survey.
- s. The survey must show the location of all buildings/monuments/overlaps/encroachments upon the surveyed property with their locations defined by measurement perpendicular to the nearest perimeter boundaries.
- t. The survey must depict the location of visible improvements within five feet of each side of boundary lines.
- u. The survey must show ponds, lakes, springs, rivers and natural water boundaries bordering on or running through the surveyed property; the survey must measure the location of the natural water boundary and note on the survey the date of the measurement.
- v. The survey must correctly depict the environmental easement area with corresponding metes & bounds description and acreage, and include the following sentence: *"This property is subject to an environmental easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law. The engineering and institutional controls for this Easement are set forth in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property. The SMP can be obtained from NYS Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@dec.ny.gov".* This reference must be located on the face of the survey and be in at least 15-point type.
- w. If the survey consists of more than one sheet, sheets must be numbered and the total number of sheets must be indicated on each sheet.
- x. Submit Final Survey of As-Built Conditions to ENGINEER for review. Upon approval, CONTRACTOR's licensed surveyor shall stamp and certify the As-Built survey.
- y. The CONTRACTOR shall submit the following as part of the final signed, stamped survey: a "D" sized copy (24" x 36") at 600 DPI resolution, and an Autocad .dwg or exported .dxf of the polyline (at minimum) of the final survey.

F. Document extent of excavations, including via weekly submittals during the Work.

END OF SECTION

SECTION 01 71 33
PROTECTION OF WORK AND PROPERTY

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the requirements for protection of existing utilities and other Site features using barricades and warning signs, fencing, and other protection measures.

1.2 DESCRIPTION

- A. The CONTRACTOR shall be responsible for taking all precautions, providing all programs, equipment, and materials, and taking all actions necessary to protect the Work and all public and private property and facilities from damage as specified in the Contract Documents.
- B. To prevent damage, injury, or loss, the CONTRACTOR's actions shall include the following:
 - 1. Store materials, supplies, and equipment in an orderly, safe manner that does not interfere with the progress of the Work.
 - 2. Provide suitable storage facilities for materials and equipment subject to damage or degradation by exposure to weather, theft, breakage, or other cause.
 - 3. Place only loads consistent with the safety and integrity of the Work and existing grades and facilities.
 - 4. Frequently remove and dispose of refuse, rubbish, scrap materials, and debris from the Work so that, at all times, the Site is safe, orderly, and workmanlike in appearance.
 - 5. Provide temporary barricades and guard rails around openings, stairs, ramps, excavations, staging and material handling areas, treatment equipment, elevated walkways, and other hazardous areas.
- C. The CONTRACTOR has the full responsibility for preserving public and private property and facilities on and adjacent to the Site. Direct or indirect damage done by or on account of any act, omission, neglect, or misconduct by the CONTRACTOR in executing the Work shall be restored by the CONTRACTOR at their expense to a condition equal to that existing before damage was done.

1.3 UTILITIES

- A. Protect existing structures, including subsurface utilities and overhead power lines which are not to be removed or disturbed. Contract Documents provide approximate utility locations. Locate, identify, and protect existing utilities and structures from damage. CONTRACTOR shall repair/replace any damage to utilities scheduled to remain at the completion of work.

1.4 BARRICADES AND WARNING SIGNS

- A. Provide temporary barricades and warning signs to protect personnel and property within or adjacent to transportation routes and vehicular traffic areas in accordance with laws and regulations.
- B. The CONTRACTOR's responsibility for maintaining barricades and warning signs shall continue until the Work is complete in accordance with the Contract Documents. After final completion, protect Work and property during periods when corrective Work or other Work is underway.

1.5 FENCING AND GATES

- A. Remove existing gate as shown and specified. Install new gate as shown and specified. Install new fence end post and connect fence fabric at location of pole barn as shown and specified. Following completion of the Work, repair or replace all improvements that were removed or damaged by the Work. Refer to Supplementary Specification Section 32 31 00 – Fences and Gates for additional requirements related to gate and fence.
 - 1. Fence and gate components not specified for removal and damaged by the Work shall be replaced. Entire section of chain link fence fabric between end posts or end posts and corner posts shall be replaced. Attaching new fence fabric beginning at a line post is not acceptable. Fence and gate posts, fabric, hardware, and installation methods shall be equal to or better than the existing fence components.
- B. Submit product information and details of planned fence and gate material, dimensions, and installation information to ENGINEER for review prior to installation.

1.6 PROTECTION OF EXISTING STRUCTURES AND FACILITIES

- A. Protect gravel surfaces, fences, poles/posts, gates, and monitoring wells within the limits of construction, as necessary to facilitate construction operations, unless specified for removal.
- B. Preserve and protect from damage existing monitoring wells, as shown on the Contract Drawings and as present in the areas of Work, except as specifically required for the Work. Notify ENGINEER of necessary alterations or damage to monitoring wells.
- C. Protect from damage all existing trees which do not interfere with the Work, unless designated for removal. Remove all trees and roots entirely within specified limits of excavation.
- D. If the CONTRACTOR damages existing structures or facilities, or the material supporting or surrounding the same, the CONTRACTOR shall immediately notify the ENGINEER and the DEPARTMENT. The CONTRACTOR shall then repair or restore to the pre-construction condition, in accordance with requirements of the DEPARTMENT and the Contract Documents. Such repair or restoration shall be performed at no additional cost to the DEPARTMENT. The final locations of repaired and restored components shall be surveyed for horizontal and vertical coordinates. Provide provisions for alternate or temporary service if needed until the damaged facility is repaired.

1.7 PROTECTION OF PLANT MATERIALS

- A. Existing plant materials indicated to remain and be protected which are injured or destroyed during construction shall be replaced by the CONTRACTOR and shall be of the same size and variety as those destroyed or damaged.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section includes a description of responsibilities and project requirements for on-Site management of wastes including removal, handling, and storage. Materials and wastes included in this Section are:
1. Land clearing debris.
 2. Non-hazardous, uncontaminated construction waste.
 3. Sanitary waste.
 4. Site refuse.
 5. Wastewater (refer to Supplementary Specification Section 44 01 40, Water Treatment for additional requirements related to wastewater and water treatment).
 6. Contaminated soil and debris (refer to Supplementary Specification Sections 31 23 16, Excavation and 02 82 33, Removal and Disposal of Asbestos Containing Soil and Debris for additional requirements related to management of contaminated soil and debris).
 7. Fifty (50) 55-gallon empty drums to be removed. The drums are damaged and partially rusted.
 8. Two (2) 55-gallon drums filled or partially filled with decontamination water to be removed. The drums are damaged and overpacking is required.
 9. Thirty-five (35) empty steel propane tanks of varying sizes (25-pound to 200-pound containers). The propane tanks are damaged and partially rusted.
 10. Waste, tarps, plastic sheeting and debris inside and around the pole barn.
 11. Demolished pole barn materials and related rubbish, waste and debris.
 12. Gate, fence and related appurtenances to be removed.
 13. Used hoses, used tarps and plastic sheeting.
 14. Used hand tools which can not be properly decontaminated.
 15. Coarse aggregate and gravel specified for removal.
 16. Other waste.

1.2 DESCRIPTION

- A. Practice efficient waste management during the Work by generating as little waste as possible and reusing or recycling non-hazardous, uncontaminated waste.
- B. Employ reasonable means to divert construction waste from landfills and incinerators. Facilitate recycling or reuse of materials, in particular the following: Site-clearing waste beyond the limits of contaminated soil and packaging (paper, cardboard, boxes, pallets, and wood crates).
- C. Dispose of construction waste only at facilities proposed and accepted as part of the Work Plan.

1.3 QUALITY ASSURANCE

- A. Obtain and submit required permits and approvals for transportation and disposal of waste.
- B. Comply with transport and disposal laws and regulations of authorities having jurisdiction.

1.4 SUBMITTALS

- A. Submit all plans for waste management as part of the Work Plan. Refer to Supplementary Specification Section 01 15 00, Minimum Requirements for Work Plan.
- B. Submit names, permits, and licenses for all waste transporters and disposal facilities proposed for use in the Work, for ENGINEER's review and approval.
- C. Waste Profiles
 - 1. Submit preliminary waste profile for each disposal facility and type of waste. The preliminary waste profile will be reviewed, and when acceptable, signed.
 - 2. Submit counter-signed final waste profile and proof of acceptance of waste for each disposal facility and type of waste.
- D. Disposal Records
 - 1. Submit counter-signed manifests, shipping papers, weight tickets, receipts, and invoices for all disposal facilities weekly as part of construction reports and as part of applications for payment.
- E. Manufacturer's data for all products including liner and cover for material stockpile containment areas.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. On a daily basis, move all wastes from the work area to acceptable containers and/or staging areas.
- B. Provide separate containers as required to meet waste transportation regulations and requirements of disposal facilities and as required to prevent contamination or co-mingling of materials, including protection from the elements as applicable.

- C. Replace loaded containers with empty containers as demand requires and at least weekly unless otherwise agreed upon with the ENGINEER and the DEPARTMENT.
- D. Containers shall be clean (free of mud, adhesives, solvents, petroleum, or other contamination) and debris-free prior to use.
- E. If materials designated for recycling or reuse become contaminated with excavated soil and debris or by other means, dispose of them as contaminated material, and ensure acceptance by the disposal facility.

1.6 WASTE CONTAINERS

- A. The CONTRACTOR shall provide:
 - 1. Trucks and other equipment as required for on-Site management and handling of all waste types in a manner that minimizes comingling and cross contamination.
 - 2. Appropriate containers and trucks for the off-Site transportation and disposal/recycling of all wastes.
 - 3. Containers (e.g., roll-off containers) for Site refuse collected during the course of the project and during final Site cleanup activities.
 - 4. Plastic bags for disposable personnel protection equipment. Plastic bags shall have a minimum thickness of six (6) mils.

1.7 HEALTH AND SAFETY

- A. Waste shall be removed, handled, and stored in consideration of worker and environment, health and safety.
- B. The CONTRACTOR shall follow its approved Site-specific Health and Safety Plan prepared as described in Standard Specifications Section 01 35 29 – Contractor's Health and Safety Plan. Monitor Site conditions for changes and modify personnel protective equipment (PPE) when action levels have been reached.
- C. The CONTRACTOR shall conduct work including removing, handling, and storing wastes in a manner that is protective of the environment in accordance with Standard Specifications Section 01 35 43.13 – Environmental Procedures for Hazardous Materials.
- D. Divert stormwater runoff from entering active waste removal areas.

1.8 WASTE HANDLING

- A. Segregate waste types as defined in the Contract Documents. Establish means and methods to prevent the comingling of waste types.
- B. Minimize the generation of additional waste by avoiding comingling or contacting waste materials with other uncontaminated Site media (soil, debris, and water).
- C. Provide temporary on-Site access roads to maintain separation between clean and contaminated materials.

- D. Decontaminate equipment and personnel in direct contact with waste during waste handling activities prior to exiting the Limits of Work.
- E. Waste handling activities are classified as clean if contaminated materials are confined in secure containers where spillage, leakage, or direct contact with equipment and personnel is not required.
 - 1. Waste transported in a truck, roll-off container, or frac tank over clean temporary access roads within the Limits of Work meets this criterion.
- F. Waste handling activities are classified as impacted if the contaminated materials are transported in an unsecured manner where direct contact with equipment and personnel occurs.
 - 1. Contaminated materials transported by front end loader, excavator, or bulldozer within the Limits of Work meet this criterion.
 - 2. Waste confined in a secure container but transported within the Limits of Work outside of the designated clean areas meets this criterion.
- G. Vehicles, equipment, and personnel involved in impacted waste handling activities shall be decontaminated prior to exiting the Limits of Work.

1.9 ON-SITE WASTE MANAGEMENT

- A. Comply with all Federal, State and local regulations regarding on-Site management of generated wastes. Management shall include removal, handling, segregating, testing, labeling and storing of wastes.
- B. Move all containers, trucks, etc. into positions required for proper loading and management of wastes.
- C. Load all waste containers, trucks, etc. with all removed or collected wastes.
- D. Manage wastes to limit on-Site stockpiling of waste materials.
- E. The CONTRACTOR shall not load waste containers, trucks, etc. with non-contaminated materials prior to inspection and determination by the ENGINEER that decontamination of the waste containers has been achieved.
- F. The CONTRACTOR shall not load hazardous waste containers, trucks, etc. with other waste materials prior to inspection and determination by the ENGINEER that decontamination of the waste containers has been achieved.
- G. Coordinate the schedule for delivery and pick-up of supplied waste containers. Manage the movement and storage of containers within the Site to allow the progress of the Work.

1.10 ON-SITE WASTE STORAGE

- A. The CONTRACTOR shall store/stockpile excavated material as delineated on the Contract Drawings or as agreed upon with the ENGINEER.
- B. Contaminated soil and debris removed from the excavation areas shall be transported directly to a designated storage/stockpile area, for characterization sampling.

- C. The CONTRACTOR shall place, grade, and shape the stockpiles to provide for proper drainage. Furthermore, stockpiles shall incorporate appropriate erosion and sediment control in accordance with Section 31 25 00 – Erosion and Sedimentation Control, to prevent the migration of sediments, and in accordance with the additional requirements of the Contract Documents.
- D. Storage of Contaminated Soil and Debris:
1. Stockpiles of contaminated soil and debris shall be constructed to isolate contaminated material from the environment. The maximum stockpile size shall be 500 cubic yards, unless otherwise approved by ENGINEER or DEPARTMENT. Under no circumstances shall the CONTRACTOR stockpile more than 1,000 cubic yards of excavated material at the site.
 2. Stockpiles of excavated material shall be constructed to include:
 - a. A chemically resistant synthetic bottom liner. The ground surface on which the geomembrane is to be placed shall be free of rocks greater than 0.5 inches in diameter and any other object which could damage the membrane.
 - b. Geomembrane cover or polyethylene sheeting cover to prevent precipitation from entering the stockpile. The cover material shall be anchored to prevent it from being removed by wind.
 - c. Berms surrounding the stockpile, a minimum of 12 inches in height. Vehicle access points shall also be bermed.
 - d. Contain, collect, remove and treat liquid which collects in the stockpile area in accordance with Supplementary Specification Section 44 01 40, Water Treatment.
 - e. Conduct inspections of the stockpile area on a daily basis and immediately following a significant precipitation event and as requested by the ENGINEER.
 3. Roll-Off Units:
 - a. Water-tight roll-off units may be used to temporarily store separately construction waste; remediation waste; and Site refuse.
 - b. An impermeable cover shall be placed over the units to prevent precipitation from contacting the stored material.
 - c. The units shall be located as directed by the ENGINEER.
 - d. Liquid which collects inside the units shall be removed and treated in accordance with Supplementary Specification Section 44 01 40, Water Treatment.
 4. Liquid Storage:
 - a. Liquids collected from excavations and other wastewater shall be conveyed to the on-Site water treatment.

- b. Liquid storage containers including in the treatment system, shall be watertight.
- E. Cover waste stockpiles with plastic sheeting and anchoring system to prevent storm water from contacting the waste.

1.11 WASTE CHARACTERIZATION SAMPLING AND TESTING

- A. Testing shall not be required for the following types of wastes:
 - 1. Land clearing debris (trees and shrubs) removed from above ground, excluding roots and comingled soil.
 - 2. Sanitary waste.
 - 3. Refuse.
 - 4. Empty drums and propane tanks.
- B. The CONTRACTOR shall be responsible for the sample collection and laboratory testing of the following types of wastes, including but not limited to:
 - 1. Excavated soil and debris.
 - 2. Waste products of the Water Treatment System.
 - 3. Decontamination pad materials.
 - 4. Surface debris.
 - 5. Two (2) full or partially full drums.
 - 6. Demolished pole barn materials and related rubbish, waste and debris.
 - 7. Used personal protection equipment.
 - 8. Bottom liners and covers used for staged materials.
 - 9. Drill cuttings and well abandonment-related waste.
 - 10. Wastewater not treated by the on-Site water treatment system.
 - 11. Other waste not listed under 1.11(A) above.
- C. Collect samples and perform testing in accordance with Section 01 45 29.13, Testing Laboratory Services Furnished by CONTRACTOR and Section 01 45 29.13.01, Modifications to Testing Laboratory Services Furnished by CONTRACTOR, the designated off-site Treatment, Storage and Disposal Facility (TSDF), and the ENGINEER.
- D. Laboratory testing of wastes shall be performed by a certified laboratory as required by the selected TSDF:

1. Laboratory testing of wastes shall be performed by the subcontracted laboratory in accordance with all requirements of the DEPARTMENT.
2. All laboratory test methods and frequencies shall be in accordance with the DEPARTMENT requirements.

PART 2. PRODUCTS

NOT USED

PART 3. EXECUTION

3.1 WASTE MANAGEMENT

- A. Provide handling, material staging areas, containers, storage, signage, transportation, pay for disposal, and any other items required to manage waste during the Work.
- B. Prepare waste manifests and shipping papers for each shipment of each type of waste.
- C. Remove excavated material from the Site in a timely manner, without delay, and in accordance with the CONTRACTOR's approved schedule.

3.2 RECYCLING WASTE

- A. Paper, plastic, and other commonly recyclable materials
 1. Recycle paper, plastic, beverage containers, and other commonly recyclable materials used by any personnel at the Site and as used for the Work.
 2. Separate recyclable waste from other waste material, trash, and debris. Provide separate, marked containers for recyclable waste. Break down packaging into flat sheets.
 3. Before removing from the Site, prepare and process recyclable waste as required by the receiving facility.
 4. Remove recyclable waste at least weekly unless otherwise agreed upon with the DEPARTMENT.
- B. Clearing Wastes
 1. Cut trees, branches, shrubs, brush, and logs into manageable lengths.
 2. If required by the receiving facility, chip the clearing waste before removing from the Site. Chipped clearing waste generated from vegetation beyond the limits of specified excavations may be used on-site.
 3. Clearing wastes removed from underground shall be managed as contaminated soil and debris waste.
- C. Pallets and Crates

1. For goods delivered on pallets or in crates, have the container removed from the Site by the vendor/manufacturer for reuse if possible. Arrange for reuse of the pallets or crates by others if possible.
2. For pallets or crates that remain on Site, break down the materials into component wood pieces. Separate lumber, engineered wood products, and treated wood materials for disposal at appropriate recycling or disposal facilities.

3.3 DISPOSAL OF WASTE

- A. Manage and dispose of contaminated soil and debris in accordance with Supplementary Specification Section 31 23 16, Excavation.
- B. Manage and dispose of construction wastewater in accordance with Supplementary Specification Section 44 01 40, Water Treatment.
- C. Remove waste using permitted and approved waste transporters and properly dispose of waste at approved disposal facilities in accordance with the Work Plan and at facilities permitted to accept the specific type of waste.
- D. Except as otherwise specifically planned, remove all waste and debris from the Work as it accumulates. Upon completion of the Work, remove materials, equipment, waste, and debris, and leave the Site clean, neat, and orderly. Comply with the Contract Documents regarding cleaning and removal of trash, debris, and waste.
- E. Remove and transport waste in a manner that prevents spillage.
- F. Do not burn waste or any materials at the Site.

END OF SECTION

SECTION 01 78 39.01
MODIFICATIONS TO PROJECT RECORD DOCUMENTS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the requirements for creating, maintaining, storing, and closeout submittal of Project Record Documents.

1.2 PROJECT RECORD DOCUMENTS

- A. Maintain on-Site one printed set of the following project record documents; record actual revisions of the Work:
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. CONTRACTOR's written plans.
 - 4. Addenda.
 - 5. Change Orders and other Modifications to the Contract.
 - 6. Reviewed shop drawings, product data, samples, and other submittals.
 - 7. Survey drawings.
- B. Store project record documents separately from construction documents.
- C. Keep documents current; do not permanently conceal any Work until required information has been recorded.
- D. At Contract closeout, submit documents with transmittal letter containing date, Project title, CONTRACTOR's name and address, list of documents, and signature of CONTRACTOR.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

NOT USED.

END OF SECTION

SECTION 02 41 00
POLE BARN DEMOLITION

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Work of this Section, as shown and specified, shall be in accordance with the requirements of the Contract Documents.

1.2 SUMMARY

- A. Obtain all required permits and approvals.
- B. Minimize impacts on adjacent and nearby properties.
- C. Completely demolish and remove the pole barn structure (the "Pole Barn") as shown on the Drawings, including, but not limited to: footings, foundation, columns and beams, walls, roof, sheathing, and appurtenances. Remove all waste and debris within and partially within the Pole Barn. All items shall be removed entirely, unless indicated otherwise.
- D. Remove all below-grade construction that is part of the Pole Barn to a minimum of 48 inches below finished grade, including but not limited to wood pole supports, foundations, and footings, unless in-place abandonment is specifically approved by ENGINEER.
- E. Remove and dispose of all demolished materials, rubbish, waste and debris as well as all miscellaneous waste and debris at an approved off-site disposal facility.
- F. Demolition, removal, and disposal work shall be in compliance with the requirements of all local, state and federal laws and regulations.
- G. Use of explosives and burning are expressly prohibited.

1.3 REFERENCES

- A. The Contractor shall comply with all applicable federal, state, and local laws, regulations, standards, and codes, including, but not limited to:
 - 1. 29 CFR Part 1926 Subpart T – Demolition;
 - 2. 6 NYCRR Parts 596-598 – Hazardous Substance Bulk Storage Regulations; List of Hazardous Substances, and; Handling and Storage of Hazardous Substances;
 - 3. ANSI/ASSE 10.6-2006, Safety Requirements for Demolition for Construction and Demolition Operations;
 - 4. NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations;
 - 5. National Association of Demolition Contractors (NADC) - Demolition Safety Manual, latest edition;

6. New York State Department of Environmental Conservation - Assessing and Mitigating Noise Impacts - Program Policy Department ID DEP-00-1;
7. New York State Department of Labor Industrial Code Rule No. 23 - Protection in Construction, Demolition and Excavation Operations;
8. Building Code of New York State Chapter 33 – Safeguards During Construction;
9. Fire Code of New York State Chapter 14 – Fire Safety during Construction and Demolition;
10. Washington County Department of Code Enforcement – Demolition Permit, Local Regulation Compliance Certificate (LRCC #), and associated permitting and notification requirements.
11. All other applicable federal, state, county and local statutes, regulations, rules, and ordinances;
12. Applicable health and safety standards and requirements listed and referenced in 01 35 29.01 – Modifications to Contractor's Health and Safety Plan. Note: not all hazards and required precautions are identified in this section and elsewhere in the Contract Documents;
13. All applicable OSHA requirements and other federal, state, and local codes, laws, ordinances, regulations, and guidelines for demolition and related work.

1.4 SUBMITTALS

A. Pre-Construction Submittals:

1. Demolition Permit: Washington County Department of Code Enforcement, Demolition Permit. Submit draft Demolition Permit Application for DEPARTMENT and ENGINEER review prior to submitting to Washington County. Submit all subsequent correspondence including final Demolition Permit granted by Washington County.
2. Demolition Plan: Obtain ENGINEER approval a minimum of 10 business days prior to start of Work specified in this Section. Demolition Plan shall be incorporated into the Work Plan (refer to Standard Specification Section 01 15 00, Minimum Requirements for Work Plan), and shall identify areas of demolition and removal locations, stockpile and laydown areas, proposed protections and controls, and details with descriptions of the various equipment types and construction aids to be used for work and removal of debris. No claims of delay shall be permitted due to the CONTRACTOR's failure to obtain approval of the Demolition Plan by the ENGINEER. The Demolition Plan must include at a minimum the following:
 - a. Written description of proposed means and methods;
 - b. Shop drawings for structural demolition showing demolition sequence indicating removal of structural members and walls and roof of the structure and means of interior and exterior shoring, bracing, and structural support to preserve stability and prevent movement.
 - c. Proposed Protection Measures: Submit informational reports, including

drawings that indicate the measures, equipment, instruments, and materials proposed for protecting individuals, property and the environment, and for dust control and noise control. Provide description of proposed ambient air monitoring plan for particulate and dust. Indicate proposed locations and construction of barriers, scaffolding, staging areas, etc. A Community Air Monitoring Program (CAMP) shall be implemented by CONTRACTOR in accordance with Supplementary Specification Section 01 35 29.01 – Modifications to Contractor's Health and Safety Plan.

- d. Description of methods for locating and disconnecting utilities, if any, including utility company requirements.
 - e. Fire Protection Plan.
 - f. Provide a listing, including company name, name of owner, and address of facility for each proposed off-site disposal and recycling facility for material disposal, in accordance with Standard Specification Section 01 15 00, Minimum Requirements for Work Plan.
 - g. Provide a listing, including company name and address, of proposed waste transporters in accordance with Standard Specification Section 01 15 00, Minimum Requirements for Work Plan.
- 3. Documentation of identification and markout of all utilities within the limits of disturbance must be submitted prior to start of work at the site.
 - 4. Description of source of potable water.
 - 5. Documentation of compliance with the laws and regulations of Washington County.
 - 6. Photographic documentation of existing conditions of surrounding properties.
 - 7. The CONTRACTOR shall provide written verification from a private exterminator, licensed by the DEPARTMENT, stating that the Pole Barn was inspected and checked for pests, insects, vermin, etc. and if any baiting was done.

B. Post-Construction Submittals:

- 1. Utility Certificate stating utilities, if any, have been properly capped. As part of Substantial Completion, the CONTRACTOR shall furnish a report signed and sealed by a Professional Engineer or Land Surveyor licensed to practice in the State of New York identifying locations and elevations of utilities at the boundaries of the Site. The report shall identify on a scaled drawing locations and elevations of utilities which have been cut and capped by the CONTRACTOR.
- 2. Locations and plan view dimensions of buried footings and foundation walls not entirely removed shall be shown on Record/As-Built Drawings. The Record/As-Built Drawings shall be signed and seal by the Professional Engineer. Refer to Standard Specification Section 01 78 39, Project Record Documents for additional requirements related to Record/As-Built Drawings.

3. Documentation acceptable to the ENGINEER, such as weight tickets and/or manifests, showing that material removed from the Site has been disposed or recycled at a facility approved by the ENGINEER and that recycling was maximized.
4. Results of all laboratory analyses. All analyses shall be performed by an ENGINEER-approved and New York State Department of Health ELAP certified laboratory.
5. Washington County Department of Code Enforcement, Local Regulation Compliance Certificate (LRCC #) certifying that the completed demolition project described in the demolition permit complies with all town and/or village zoning laws and requirements.

1.5 CONDITION OF PREMISES

- A. The CONTRACTOR shall accept the existing conditions of the premises and shall prepare the Site in accordance with the Contract Drawings and Supplementary Specification Section 01 71 33, Protection of Work and Property. The ENGINEER assumes no responsibility for the condition or the contents of the Pole Barn or appurtenances, or the continuance of the conditions existing at the time of bidding or thereafter. All damage or loss, whether by reason of fire, theft, or by other casualty or happening, to the Pole Barn and appurtenances covered by the Contract Documents shall be at the risk of the bidder from and after the date of award of Contract, and no such damage or loss shall relieve the successful bidder from any obligation under this Contract to complete all work as herein provided for the amounts bid.
- B. A Limited Asbestos Survey was performed at the Site in August 2022, which included visual inspection of the pole barn. The pole barn was determined to be constructed of wooden and sheet metal components. Fiberglass insulation is present in the pole barn. The CONTRACTOR shall comply with all Washington County Demolition Permit requirements. The Limited Asbestos Survey is available on the DECInfo Locator documents database. The link to the documents database is included in Contract Section IV – Supplementary Bidding Information and Requirements, Article 5 – Other Available Documents.
- C. The ENGINEER accepts no responsibility for existing conditions at variance with information shown on the Drawings.

1.6 MAINTENANCE OF TRAFFIC

- A. The CONTRACTOR shall conduct operations in a manner to ensure minimum interference with roads, streets, walks, and adjacent occupied and used facilities. Do not close, block, or otherwise obstruct streets, roadways, landscaped areas, walkways, and other occupied and used facilities without written permission from the authority having jurisdiction and the ENGINEER.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Prior to commencing demolition work, perform the following:

1. Visually inspect and photograph the adjacent areas, and structures and appurtenances of the surrounding properties. Record the existing conditions and submit all information to the ENGINEER.
2. The CONTRACTOR shall ensure that all utilities to the Pole Barn have been disconnected prior to commencing destructive activities.
3. The CONTRACTOR shall ensure that all electrical power supply to the Pole Barn has been deactivated prior to demolition and removal activities.
4. Verify that utilities have been disconnected and capped before starting demolition operations. Survey locations and elevations of capped utilities and show points of termination on Record/As-Built Drawings.
5. Verify that asbestos containing materials and hazardous materials have been removed before proceeding with demolition operations.
6. Survey the condition of structure and perform analysis as required to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during demolition.

3.2 PREPARATION AND PROTECTION

- A. Existing Utilities: Locate, identify, disconnect, and seal or cap off utilities serving the Pole Barn:
 1. Arrange to shut off and disconnect municipal water with the utility company.
 2. Verify all pipes have been capped, valved, or sealed according to requirements of authorities having jurisdiction prior to start of demolition.
 3. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing. Provide documentation to the ENGINEER.
- B. Temporary Shoring: The existing Pole Barn structure is damaged and exhibiting evidence of potential for additional structural failures. Provide and maintain engineered interior and exterior shoring, bracing, and structural support to prevent unexpected or uncontrolled movement or collapse of structure being demolished. Temporary shoring shall be in place, as determined by CONTRACTOR's registered Professional Engineer licensed to practice structural engineering in the State of New York, prior to CONTRACTOR employees entering the building. The CONTRACTOR shall ensure that structural elements are not overloaded, and shall be responsible for increasing structural supports and adding new supports as required as a result of any cutting, removal, or deconstruction work. Any support required shall be designed by a Professional Engineer licensed to practice structural engineering in the State of New York. Repairs, reinforcement, and structural replacement must have the ENGINEER's approval.
- C. Strengthen or add new supports when required during progress of demolition. Such recommended designs shall be solely provided by a registered Professional Engineer retained by the CONTRACTOR licensed to practice structural engineering in the State of New York.
- D. Temporary Protection: Erect temporary protection where required by authorities having jurisdiction and the ENGINEER, and as indicated:

1. Protect existing site improvements, electrical transmission poles, appurtenances, trees and vegetation to remain.
 2. Support piping on either side of openings created when adjacent sections are removed.
 3. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent property and facilities to remain.
 4. Provide protection to ensure safe passage of people and vehicles around demolition and decommissioning areas.
- E. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.
- F. If unmarked or unknown utilities are uncovered during work, notify the ENGINEER to receive further instructions prior to proceeding further. Should damage to adjacent construction or utilities occur due to the Work, all costs in connection with the repair of such damage and the restoration of damaged construction to its original condition shall be borne by the CONTRACTOR.
- G. Protection of Adjoining Property:
1. The Work of demolishing the Pole Barn shall be performed in a manner that will protect adjacent properties against damage from falling debris or other cause and not interfere with the use of adjacent properties or the free and safe passage to and from adjacent properties.
 2. The CONTRACTOR shall retain an exterminator licensed by the NYSDEC to inspect buildings for pests, insects, vermin, etc. prior to building demolition activities and implement appropriate action prior to demolition as conditions warrant.

3.3 CONTROL AND HANDLING OF LIQUIDS

- A. The CONTRACTOR shall notify ENGINEER immediately upon discovery of any underground tanks or other unexpected containers potentially containing liquids. The CONTRACTOR shall provide drip pans and/or containment when cutting and/or removing tanks, pipes and equipment to prevent releases to the environment.
- B. No fuel, oil, chemicals or other fluids shall be released.
- C. If liquids or sludges are encountered, the equipment or container shall be flushed and purged prior to any equipment removal or piping cutting/disconnection. Notify the ENGINEER immediately upon discovery of such piping and equipment and prior to proceeding.
- D. Piping to be removed shall be managed in accordance with ENGINEER's instructions.
- E. The CONTRACTOR shall provide all labor, materials, equipment, storage tanks, characterization sampling, laboratory analysis, and transportation to remove and dispose of all liquids and sludges.

- F. The removed liquids and sludges shall be characterized and disposed in accordance with applicable laws and regulations at ENGINEER-approved facilities.

3.4 DEMOLITION WORK

- A. Remove entire contents of the Pole Barn and appurtenances and characterize, transport off-Site and dispose or recycle at ENGINEER-approved facilities in accordance with applicable laws and regulations.
- B. Proceed with demolition of structural framing members systematically, from higher to lower level.
- C. Remove Pole Barn completely. Demolish and remove column footings and foundation walls to a minimum of 48 inches below finished grade.
- D. Perform all demolition work required to furnish the final site conditions shown on the Drawings regardless of whether specifically shown and specified or not. Final conditions in the location of the Pole Barn shall at a minimum consist of filling of voids to match surrounding grades, furnishing and installing a 12-inch thick layer of topsoil, and seeding, in accordance with the requirements of the Contract Documents.
- E. Dust Suppression:
 - 1. During the demolition of the Pole Barn and appurtenances, thoroughly wet down the Work with clean water to prevent airborne dust and dirt. The CONTRACTOR shall provide water from an ENGINEER-approved source, pumps, piping, hoses, etc. for this purpose and furnish all power and connections, at CONTRACTOR's own cost and expense. Do not use more water than necessary for dust control. Water shall be managed in accordance with the Contract Documents.
 - 2. Do not create hazardous or objectionable conditions such as ice, flooding and pollution.
- F. Utility Lines:
 - 1. CONTRACTOR shall completely disconnect and remove active and abandoned utilities and cap/seal at Site boundary, below final specified ground surface coverings.
- G. Immediately remove all debris from the Site, do not store or permit to accumulate on the Site. If the CONTRACTOR fails to remove debris promptly, the DEPARTMENT reserves the right to have it removed from the Site at the expense of the CONTRACTOR.
- H. Routine Cleaning: The CONTRACTOR shall keep adjacent streets and properties free of dirt, dust and debris produced by demolition at all times.
- I. Burning and use of explosives are not permitted at the Site.

3.5 WASTE TRANSPORTATION AND DISPOSAL

- A. Sample, characterize, containerize, label, transport and dispose or recycle of materials, waste and debris in accordance with the ENGINEER approved Demolition Plan. Comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure and environmental pollution.

- B. No material shall be transported off-site without the ENGINEER's approval.
- C. Comply with the requirements of Washington County.
- D. All waste transport containers shall be clean when provided to the Site, and shall be covered or tarped at all times when not actively filling.
- E. The Contractor shall transport and dispose of material which is not recyclable at an approved permitted off-site disposal facility meeting the requirements of 6 NYCRR Part 360 or equivalent out-of-state requirements.
- F. Prior to departure from the site, transport vehicles shipping waste shall be inspected and cleaned to prevent tracking material off-site. Contractor shall properly collect, containerize, test, label, transport and dispose of all waste generated from cleaning.

3.6 CLEAN-UP

- A. Upon completion of the Work under this Section and the Contract Documents, the CONTRACTOR shall remove all tools and materials, plant, apparatus, waste, rubbish and debris and shall leave the premises clean, neat and orderly. Comply with Contract Documents for site restoration.
- B. Return adjacent areas to condition existing before demolition operations began or as specified.

END OF SECTION

SECTION 02 51 00
DECONTAMINATION PROCEDURES

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section includes decontamination procedures for vehicles, equipment, personnel, and tools that contact remediation waste.

1.2 GENERAL REQUIREMENTS

- A. Perform decontamination of personnel, tools, small equipment, large equipment, and vehicles (trucks) as required to prevent off-Site migration of contamination and cross contamination of Asbestos Containing Soil and Debris, with Non-TSCA Contaminated Soil and Debris, and with TSCA Contaminated Soil and Debris.
- B. Construct and maintain at the Site in an approved location a vehicle decontamination pad. Equip the decontamination pad with a drainage system and holding tank on a level area capable of baring the intended loads.
- C. Multiple operational decontamination pads may be required depending on the CONTRACTOR's selected sequence of work and implemented means and methods. Coordinate with the DEPARTMENT/ENGINEER to confirm decontamination procedures are being followed at all times.
- D. Refer to Specification Section 02 82 33 – Removal and Disposal of Asbestos Containing Soil and Debris for specific considerations related to decontamination of equipment contaminated with asbestos.

1.3 SUBMITTALS

- A. Proposed method(s) of decontamination for small equipment and tools; personal protective equipment; and large equipment and vehicles included as a component of the Work Plan as described in Supplementary Specification Section 01 11 00, Summary of Work.
- B. Submit shop drawings of the decontamination pad to the ENGINEER for approval following Standard Specification Section 01 33 00, Submittal Procedures.

PART 2. PRODUCTS

2.1 DECONTAMINATION PAD

- A. Vehicle decontamination pad shall be constructed as shown on the Contract Drawings.
 - 1. General Clean Fill and Coarse Aggregate (refer to Supplementary Specification Section 31 23 23, Fill).
 - 2. Geomembrane shall be minimum 40-mil scrim-reinforced high-density polyethylene. Panels shall be sized so that no seams are required.

3. Geotextile shall be a minimum 16 ounce per square yard nonwoven geotextile.
 4. Size shall be adequate to contain all liquids during use.
- B. Hydraulic high-pressure wash equipment with ability to provide hot water and steam.
 - C. Furnish clean water storage facilities as described in Standard Specification Section 01 51 05, Temporary Utilities and Controls.
 - D. Construction water treatment facility as described in Supplementary Specification Section 44 01 40, Water Treatment.
 - E. Truck loading staging areas: areas lined with 40-mil scrim reinforced high density polyethylene geomembrane.
 - F. Cleaning appurtenances including brushes, brooms, and hand tools with industrial detergent or solvent such as Capsur by Integrated Chemistries, Inc. or an approved equal.

PART 3. EXECUTION

3.1 DECONTAMINATION PAD

- A. Construct decontamination pad as shown on Contract Drawings.
- B. Construct to facilitate the cleaning of equipment and trucks before leaving the Site. Provide adequate dimensions to contain wash water and debris from the largest sized vehicles and equipment to be used for the Work. All vehicles and construction equipment leaving the remediation area shall be decontaminated.
- C. Locate at the exit of remediation area to prevent contamination of non-contaminated areas during remedial activities. Construct and use multiple decontamination pads as needed.
- D. Locate as close to the active work as possible to prevent tracking of contaminated material beyond the contaminated areas of the Site.
- E. Decontamination Pad shall consist of an aggregate (sand and crushed stone) working base, impervious geomembrane liner, nonwoven geotextile, hard-surfaced tire tracks or timber mat for tracking tires, and a collection sump and pumping system as shown on the Contract Drawings.
- F. The subgrade surface beneath the liner shall be free of stones, debris, and other objects greater than one half inch in size.
- G. Collect and store decontamination fluids from the sump in a construction water storage facility adjacent to the Decontamination Pad.
- H. Sumps, pumping facilities, and temporary storage facilities to be adequate for anticipated use.

- I. Temporary storage facility may be mobile tankers or suitable fixed tanks. Locate fixed tanks within secondary containment areas sized to contain 110% of the tank capacity. The secondary containment area shall have a permeability of 1×10^{-7} cm/sec or less.
- J. Manage decontamination water following Supplementary Specification Section 44 01 40, Water Treatment.
- K. Clean the decontamination pad periodically as follows:
 - 1. Daily if used.
 - 2. Before each transition of handling TSCA Contaminated Soil and Debris to Non-TSCA Contaminated Soil and Debris or other non-hazardous waste.
 - 3. When accumulated deposits reduce the storage capacity of the sump.
 - 4. When accumulated deposits begin clogging and reducing the permeability of the crushed stone layer.
- L. Dismantle, characterize for disposal, remove, and dispose of the pad and appurtenances upon completion of the project.

3.2 VEHICLES AND EQUIPMENT

- A. Trucks loaded on truck loading staging areas and traveling exclusively on clean temporary on-Site access roads may follow the following decontamination procedure:
 - 1. Remove loose, dry soil from the exterior truck body using brooms and other hand implements.
 - 2. Sweep the staging area liner clean of loose material that has fallen outside of the truck/excavator bucket during loading.
 - 3. Proceed to the stabilized construction entrance using a defined route over clean on-Site access roads.
 - 4. Clean the staging area liner for the next truck to be loaded.
 - 5. As part of all operations, control potential for fugitive dust.
- B. Trucks shall pass through the on-Site Decontamination Pad for rinsing with high pressure water if additional decontamination measures are called for based on the following conditions:
 - 1. Wet material creates a film on the vehicle due to work during wet working conditions.
 - 2. A vehicle drives outside the defined clean access route.
- C. Trucks and equipment to be removed from the Site that have handled or contacted Asbestos Containing Soil and Debris, TSCA Contaminated Soil and Debris or Non-TSCA Contaminated Soil and Debris shall be decontaminated using the following procedures:

1. Wash equipment and vehicles with CAPSUR or approved equivalent product. Follow washing with a high-pressure, hot-water power-wash rinse. Perform cleaning on the decontamination pad to collect and treat rinsate. Washing shall continue until all visible material is removed.
 2. For equipment which contacts TSCA Contaminated Soil and Debris:
 - a. After the decontamination wash and rinse, collect wipe samples from equipment surfaces to provide a representative residual PCB concentration. Collect at least one wipe sample from each unique portion of the equipment (e.g., bucket, tracks) in contact with material from excavation areas or construction water. Collect an additional sample from another unique surface of the equipment where there is the potential for particulate accumulation (e.g., top of cap or undercarriage).
 - b. Wipe samples from decontaminated equipment shall be analyzed by the analytical laboratory in accordance with NYSDEC ASP for PCBs using USEPA Method 8082.
 - c. Wipe tests shall meet the standard of $\leq 10 \mu\text{g}/100 \text{ cm}^2$ for PCBs in 40 CFR 761.79(b)(3)(i)(A) using a standard wipe test as described in 40 CFR 761.123. Test standard wipe test samples following 40 CFR 761.272.
 - d. If the decontamination standard has not been met, repeat the decontamination procedure and testing until the standard is confirmed.
- D. When heavy equipment and trucks on-Site transition between handling of either Asbestos Containing Soil and Debris, or TSCA or Non-TSCA Contaminated Soil and Debris, or transition into clean areas or transport of clean material, use the following procedures to determine when wipe testing is required:
1. If equipment or trucks are transitioning from handling Asbestos Containing Soil and Debris to handling TSCA or Non-TSCA Contaminated Soil and Debris, wipe testing is not required after decontamination procedures outlined above. Equipment shall be visually inspected by Engineer.
 2. If equipment or trucks are transitioning from handling TSCA Contaminated Soil and Debris to handling Non-TSCA Contaminated Soil and Debris or clean backfill materials, wipe testing is required after decontamination procedures outlined above.
 3. If equipment or trucks are transitioning from handling TSCA or Non-TSCA Contaminated Soil and Debris to handling clean backfill materials, wipe testing is required after decontamination procedures outlined above.
 4. If equipment or trucks are transitioning from handling Non-TSCA Contaminated Soil and Debris to handling TSCA Contaminated Soil and Debris, wipe testing is not required after decontamination procedures outlined above.
 5. If equipment or trucks are transported across an area that has been classified as one containing a lesser concentration of PCBs, with the intent to transition between two similarly characterized areas of waste (e.g., moving between two hazardous waste areas), wipe testing is not required after decontamination procedures outlined above.

6. If equipment or trucks are transitioning from contacting TSCA Contaminated Soil and Debris, Non-TSCA Contaminated Soil and Debris, groundwater or wastewater to handling or transporting clean material or are transitioning into a clean area, wipe testing is required after decontamination procedures outlined above.

3.3 SMALL EQUIPMENT AND TOOLS

- A. Use disposable sampling equipment to the extent practicable to minimize costs and reduce the risk of cross contamination between samples. Disposable sampling equipment shall be delivered to the site in original manufacturer's packaging.
- B. Non-disposable small equipment and tools that have contacted any PCB impacted materials shall be decontaminated prior to reuse. Wash with CAPSUR or approved equivalent product. Follow washing with a high-pressure, hot-water power-wash rinse. Perform cleaning on the decontamination pad to collect and treat rinsate. Washing shall continue until all visible material is removed. For non-disposable sampling equipment, collect rinse samples and submit for analysis for PCBs in accordance with Standard Specification Section 01 45 29.13, Testing Laboratory Services Furnished by Contractor. Documentation that PCB concentrations in rinse samples are non-detect shall be required prior to reuse of equipment and tools.

3.4 PERSONNEL PROTECTIVE EQUIPMENT (PPE)

- A. PPE that have contacted PCB impacted materials shall be characterized and disposed off-Site in accordance with the requirements of the Contract Documents.

3.5 CLEAN DETERMINATION

- A. All trucks and equipment that have contacted contaminated soil, soil and debris shall be decontaminated and tested as specified. The equipment and trucks shall be inspected by the CONTRACTOR and confirmed clean before leaving the Site. Additional decontamination shall be implemented if cleaning is determined inadequate by the ENGINEER.
- B. All trucks and equipment that have contacted TSCA Contaminated Soil and Debris shall be tested using the standard wipe test described in 40 CFR 761.123 to confirm that the decontamination standard has been met. The decontamination standard ($\leq 10 \mu\text{g}/100 \text{ cm}^2$ PCBs) shall be used for confirmation that decontamination is complete.
- C. Wipe test frequency: wipe testing shall include at least one (1) sample from each distinct surface of the equipment in direct contact with the PCB impacted materials or construction water (e.g., tracks and excavator bucket) and at least one (1) sample from a distinct surface of the equipment where particulate (dust) accumulation is likely (e.g., top of cap or undercarriage).
- D. Wipe test standard: analysis of standard wipe test samples shall be performed in accordance with Standard Specification Section 01 45 29, Laboratory Testing Services Furnished by Contractor and Supplementary Specification Section 01 43 36, Field Samples and Analysis, and following 40 CFR 761.272.

3.6 TEMPORARY WORKS REMOVAL

- A. Regularly containerize, characterize, stage and treat all generated construction waste and water following Supplementary Specification Section 31 23 16, Excavation, and Supplementary Specification Section 44 01 40, Water Treatment.
- B. The subgrade surface beneath the area where contaminated material was staged and where the decontamination pad was located shall be sampled and tested to ensure no contamination has migrated beyond the decontamination pad. Sampling and analysis shall be performed following Standard Specification Section 01 45 29.13, Testing Laboratory Services Furnished by Contractor, and the confirmation sampling protocols described in Supplementary Specification Section 01 43 36, Field Samples and Analysis.
- C. If subgrade beneath the material staging areas or decontamination pad is determined to be contaminated with PCBs, perform excavation, removal, and post-excavation testing as described in Supplementary Specification Section 31 23 16, Excavation.

END OF SECTION

SECTION 02 82 00
REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING
SOIL AND DEBRIS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, equipment, tools, materials, notifications, and permits required to remove and dispose of asbestos-containing material (ACM) specified, or required to complete the Work, in accordance with Laws and Regulations. Refer to Section 00 31 24 – Environmental Assessment Information for documentation regarding ACM identified at the Site. ENGINEER has received approval from the New York State Department of Labor for a variance for removal of the asbestos-containing debris piles. The variance documentation is included in the Contract Documents.
2. CONTRACTOR shall remove all ACM debris piles as part of the Work, in accordance with this Specification Section, related work specified under other Sections, permits, approvals, laws and regulations.
3. Perform removal and disposal of ACM, including preparation, removal, cleaning, storage, transport, and disposal of ACM without damaging or contaminating adjacent work areas. Where such work areas are damaged or contaminated, CONTRACTOR shall restore the work areas to their original or specified condition, as directed by the ENGINEER.
4. CONTRACTOR shall be responsible for the safe and proper handling of friable and non-friable materials containing or contaminated with asbestos, and take all necessary precautions to protect workers, work areas, and others at the Site from contact with asbestos fibers, whether airborne or otherwise.

B. Coordination:

1. Coordinate and review subsequent demolition work specified under other Sections and coordinate such work with the Work under this Section.
2. Notify other contractors in advance of removing and disposing of ACM, to provide other contractors with sufficient time for coordination of interrelated items that are included in their Contracts and are to be performed before or in conjunction with removal and disposal of ACM.

1.2 REFERENCES

- A. Comply with applicable provisions and recommendations of the following, except where otherwise shown or specified:
1. New York State 12 NYCRR Part 56, Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York.
 2. ANSI/AIHA Z9.2, Fundamentals Governing the Design and Operation of Local Exhaust Ventilation Systems.
 3. ANSI/ISEA Z87.1, Occupational and Educational Eye and Protection Devices.
 4. ANSI Z88.2, Respiratory Protection.
 5. ASTM D4397, Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications.
 6. ASTM E84, Test Method for Surface Burning Characteristics of Building Materials.
 7. ASTM E119, Test Methods for Fire Tests of Building Construction and Materials.
 8. ASTM E1368, Practice for Visual Inspection of Asbestos Abatement Projects.
 9. NFPA 10, Portable Fire Extinguishers.
 10. NFPA 90A, Installation of Air Conditioning and Ventilating Systems.
 11. NFPA 101, Life Safety Code.
 12. NFPA 701, Methods of Fire Tests for Flame Propagation of Textiles and Films.
 13. NIOSH NMAM, NIOSH Manual of Analytical Methods.
 14. UL 586, High-Efficiency, Particulate, Air Filter Units.
 15. USEPA 340/1-90-018, Asbestos/NESHAP Regulated Asbestos Containing Materials Guidance.
 16. USEPA 340/1-90-019, Asbestos/NESHAP Adequately Wet Guidance.
 17. USEPA 560/5-85-024, Guidance for Controlling Asbestos Containing Materials in Building.

1.3 TERMINOLOGY

- A. The following words or terms are not defined but, when used in this Section, have the following meaning:
1. "Adequately wet": A term as defined in 40 CFR Part 61, Subpart M and USEPA 340/1-90-019 that means to sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from ACM, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wetted.

2. "Amended water": Water containing a wetting agent or surfactant with a surface tension of at least 29 dynes per square centimeter when tested in accordance with ASTM D1331.
3. "Area air monitoring": Sampling of Asbestos fiber concentrations within the Asbestos control area and outside of the Asbestos control area, which is representative of the airborne concentrations of Asbestos fibers that may reach the breathing zone.
4. "Asbestos": any naturally occurring hydrated mineral silicate separable into commercially usable fibers, including chrysotile, amosite, crocidolite, tremolite, anthophyllite and actinolite.
5. "Asbestos-containing material" or "ACM": Material composed of Asbestos of any type in an amount greater than one percent by weight, either alone or mixed with other fibrous or non-fibrous materials, as determined using the method specified in 40 CFR Part 763, Appendix A, Subpart F, Section 1, Polarized Light Microscopy.
6. "Asbestos control area": An area where Asbestos removal operations are performed which is isolated by physical boundaries to prevent the spread of Asbestos dust, fibers, and debris.
7. "Class I Asbestos Work": Activities involving the removal of thermal systems insulation, surfacing ACM and PACM.
8. "Class II Asbestos Work": Means activities involving the removal of ACM, that is not thermal system insulation or surfacing material. Class II includes, but is not limited to, removal of Asbestos-containing wallboard, floor tile, and sheeting, roofing and siding shingles, and construction mastics.
9. "Class III Asbestos Work": Means repair and maintenance operations, where ACM, including TSI and surfacing ACM and PACM, may be disturbed.
10. "Class IV Asbestos Work": Means maintenance and custodial activities during which employees contact but do not disturb ACM and PACM and activities to clean up dust, waste, and debris resulting from Class I, II, and III Asbestos Work.
11. "Competent person": In addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing Asbestos hazards in the workplace and selecting the appropriate control strategy for Asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f). In addition, for Class I and Class II Asbestos Work, one who is specially trained in a training course that complies with the criteria of USEPA's Model Accreditation Plan (40 CFR 763) for supervisor, or its equivalent; for Class II Asbestos roofing Work who is specially trained in a comprehensive course for the roofing trade that has been conducted by a USEPA or state-approved trainer, certified by the USEPA or MDCIS; and for Class II and IV Asbestos Work, who is trained in an operations and maintenance (O&M) course developed by USEPA under 40 CFR 763.92 (a)(2).
12. "Controlled demolition": CONTRACTOR operations or activities abiding by the Asbestos control protocols of the Contract Documents. Such operations or activities include those that have the potential to disturb Asbestos-containing materials.
13. "Encapsulant": An agent that seals the surface (bridging encapsulant) or penetrates the bulk (penetrating encapsulant) of ACM.

14. "Excursion limit": No person at any time, shall be exposed to airborne concentrations of Asbestos fibers that are equal to or greater than 1.0 fibers per cubic centimeter of air (cm³), averaged over a 30-minute time weighted average.
15. "Friable Asbestos": As defined in 40 CFR Part 61, Subpart M and USEPA 340/1-90-018, meaning any and all ACM that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, including previously non-friable material that becomes damaged to the extent that when dry, may be easily crumbled, pulverized, or reduced to powder by hand pressure.
16. "HEPA filter": A high-efficiency particulate air filter capable of removing particles 0.3 microns or larger in diameter with 99.97 percent efficiency.
17. "Negative pressure enclosure" or "NPE": An Asbestos abatement regulated area in which critical barriers, polyethylene sheeting walls and floor are installed and sealed air-tight. A minimum pressure differential of minus 0.02 inches of water column relative to adjacent unsealed areas and four air changes per hour shall be maintained within the NPE continuously 24 hours per day.
18. "Non-friable Asbestos": As defined in CFR 40 Part 61, Subpart M and USEPA 340/1-90-018 that means Asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products.
19. "Non-Friable ACM Category I": As defined in CFR 40 Part 61, Subpart M and USEPA 340/1-90-018 that means ACM material, excluding Category 1 non-friable ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
20. "Personal air monitoring": Sampling of Asbestos fiber concentrations within the breathing zone of a person to establish OSHA PEL values.
21. "Permissible exposure limit" or "PEL": No person shall be exposed to airborne concentrations of Asbestos fibers that are equal to or greater than 0.1 fibers per cubic centimeter of air (cm³), averaged over an eight-hour time weighted average.
22. "Presumed ACM" or "PACM": Presumed ACM that is thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as "PACM" may be rebutted pursuant to paragraph (k)(4) of 29 CFR 1926.1101.
23. "Regulated area": Area established by the employer to demarcate areas where Class I, II, and III Asbestos Work is conducted, and adjoining area(s) where debris and waste from such Asbestos Work accumulate; and a work area within which airborne concentrations of Asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit. Requirements for regulated areas are in paragraph (e)(6) of 29 CFR 1926.1101.
24. "Time weighted average" or "TWA": The average concentration of a contaminant in the air during a specific time period.
25. "Thermal system insulation" or "TSI": ACM applied to piping, valves, boilers, breaching, tanks, ducts or other equipment or structural components to prevent heat loss or gain. TSI ACM is thermal system insulation which contains more than one percent Asbestos.

26. "Debris Pile": Debris material as defined on the contract drawings that contains PACM. PACM confirmed as ACM in this material must be abated in place as Class I or Class II asbestos work in accordance with 12 NYCRR 56 and variance provided by ENGINEER.

1.4 QUALITY ASSURANCE

A. Qualifications:

1. Testing Laboratory:

- a. Testing laboratory shall be experienced with inspection of and testing and evaluation for ACM and shall be licensed for Asbestos work in the jurisdiction where the Project is located.
- b. Testing laboratory shall be AIHA- and NVLAP-accredited, and shall use ELAP 198.4, and NIOSH 7400 and PAT methodologies.
- c. Submit name, address, phone number, and website address for testing laboratory, including copies of associated certifications of laboratory by accrediting agencies.

2. ACM Removal and Disposal Subcontractor:

- a. ACM removal and disposal Subcontractor engaging in asbestos removal and disposal shall be certified in accordance with New York State 12 NYCRR Part 56.
- b. Subcontractor shall have successfully completed at least three projects of comparable size and scope as the ACM removal and disposal Work on this Project within the past three years.
- c. Submit Subcontractor qualifications including listing of completed past Asbestos removal and disposal projects, and current, ongoing projects, with the following submitted for each such project: name, address, and phone number for responsible individual of owner of facility, type of facility, name, address, and phone number of prime contractor that hired Subcontractor (as applicable) with name of the competent person in responsible charge of the work for that CONTRACTOR, volume of ACM removed, and approximate value of the ACM removal and disposal work for which Subcontractor was responsible.
- d. Competent Person:
 - 1) Subcontractor shall have on staff as a full-time employee and shall assign to the Project a competent person with not less than three years of experience in removing and disposing of ACM, and who has at least five years of experience in construction trades, and who has served as the competent person in responsible charge of not less than three ACM removal and disposal projects of comparable scope (or larger) and methodology to this Project. Submit the name of the proposed person and proof of training as a supervisor for Asbestos-related work.
 - 2) The competent person shall have qualifications and authority to ensure worker health and safety required by Subpart C, General Safety and Health Provisions for Construction (29 CFR 1926.20 through 1926.32). Competent person shall conduct frequent and regular inspections of the Site relative to Asbestos removal and disposal, materials, and equipment as required by 29 CFR Part 1926, Section 1926.20 and as described below.

- 3) The Competent Person shall perform or supervise the following duties, as applicable:
 - a) Set up the regulated area, enclosure, or other containment.
 - b) Supervise all employee exposure monitoring.
 - c) Ensure that employees working within the regulated area wear protective clothing and respiratory protection.
 - d) Ensure through Site supervision, that employees use work practices and personal protective equipment in compliance with all requirements.
 - e) Ensure that employees use the hygiene facilities and observe the decontamination procedures.
 - 4) The competent person shall be trained in all aspects of Asbestos removal and handling, including: abatement, installation, removal and handling; the contents of Laws and Regulations and the Contract Documents; identification of Asbestos; removal procedures, where appropriate; and other practices for reducing the hazard. Such training shall be obtained in a comprehensive course for supervisors, such as a course conducted by a USEPA or state-approved training provider, certified by the USEPA or the jurisdiction where the Project is located, or a course equivalent in stringency, content, and length.
- e. ACM Subcontractor Employees:
- 1) Each employee working on Asbestos removal and disposal in the State of New York shall possess valid Asbestos handling certification.
 - 2) Within one year prior to commencement of ACM removal and disposal Work on the Project, each worker directly involved in handling ACM and ACM generated wastes, including packaging and transporting such wastes for disposal, shall have successfully completed a course of Asbestos training as required by USEPA revised Asbestos Model Accreditation Plan (MAP), as mandated by the Asbestos School Hazard Abatement Reauthorization Act (ASHARA).
 - 3) Prior to the commencement of ACM removal and disposal Work, each worker shall be instructed by CONTRACTOR's CIH and CONTRACTOR's "competent person" supervisor in the following Project-specific training: Hazards and health effects of the specific types of ACM to be removed; content and requirements of the AHAP accepted by ENGINEER; work practices; the use requirements and limitations of the personal protective clothing, equipment, and respirators to be used; hands-on training for each Asbestos removal and disposal technique to be employed; heat and cold stress monitoring specific to this Project; personal hygiene and housekeeping requirements; air monitoring procedures; and additional requirements of 29 CFR Part 1926.1101.
 - 4) Maintain all employee training records for one year beyond the last date of employee's employment by that employer. Use of competent organizations such as industry trade associations and employee associations to maintain the records required by this Section is acceptable. Copy of the required training records and fit test certificates for each employee shall be maintained on file at the Site for review as requested by DEPARTMENT.

- 5) ACM removal and disposal Subcontractor shall furnish for the Project a sufficient number of properly-trained and experienced Asbestos removal and disposal workers each of whom shall: have completed training as an Asbestos removal worker; have at least one year experience in asbestos removal; and have worked on at least three projects of comparable scope to (or larger than) this Project.
 - 6) Submit employee qualifications and certifications.
 - 7) Prior to assigning personnel to Asbestos Work, instruct each employee in the hazards of Asbestos, safety, and health precautions, as well as the use and requirements for personal protective equipment, including clothing and respirators. Training shall cover engineering and other hazard control techniques and procedures. Establish a respirator program as required by Laws and Regulations.
3. Certified Industrial Hygienist (CIH):
- a. ACM removal and disposal operations shall be under the oversight of a CIH. CIH shall have at least five years of experience with ACM removal and disposal on projects similar in size to, or larger than, this Project.
 - b. CIH shall be accredited by the American Board of Industrial Hygiene (ABIH).
 - c. CIH Responsibilities:
 - 1) Assist Subcontractor with preparing the Asbestos removal and disposal plan submittal. CIH shall sign and date the submittal.
 - 2) Prepare protocols and procedures for, and review with Subcontractor and testing laboratory, the field quality control measures required for the Project.
 - 3) Review field quality control results and advise CONTRACTOR and Subcontractor on measures to be taken.
 - 4) CIH shall visit the Site not less than weekly during ACM removal and disposal Work and shall inspect the Asbestos control areas and related ACM facilities prior to the start of ACM removal operations and shall also inspect the ACM control areas and adjacent areas upon completion of all ACM removal and disposal Work. Prepare and submit to ENGINEER a written report of each visit to the Site by CIH detailing activities observed, problems encountered, and recommended procedures to resolve problems.
 - d. Submit proposed CIH's name, address, and telephone number, and record of CIH's experience relative to ACM removal and disposal and copy of accreditation from ABIH.

B. Regulatory Requirements:

1. Comply with Laws and Regulations regarding Asbestos removal and disposal, including but not limited to the USEPA, New York State Department of Labor (NYSDOL), and OSHA. Maintain at the Site copies of applicable Laws and Regulations and guidelines, make such documents immediately available to ENGINEER.
2. Federal Regulations:
 - a. 29 CFR 1910.1001, Asbestos Standard for General Industry

- b. 29 CFR 1910.134/ 29 CFR 1926.103 Respiratory Protection Standard
 - c. 29 CFR 1910.1200/ 29 CFR 1926.59, Hazard Communication Standard
 - d. 29 CFR 1926.1101, Asbestos Standard for the Construction Industry
 - e. 40 CFR 61, National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart M - National Emission Standards for Asbestos
 - f. 40 CFR 763, Asbestos Hazard Emergency Response Act (AHERA), Subpart E - Asbestos-Containing Materials in Schools, and Subpart G - Worker Protection Rule.
 - g. 49 CFR Parts 106 - Transportation Standards 107, 171 to 180.
3. New York State Regulations:
- a. Part 56, Asbestos.

C. Medical Requirements

- 1. **Examinations:** Before anticipated exposure to airborne Asbestos fibers, provide workers with a comprehensive medical examination as required by 29 CFR 1926.1101, 29 CFR 1910.120, and other Laws and Regulations. Examination is not required if adequate records demonstrate that employee was examined in accordance with 29 CFR 1926.1101, 29 CFR 1910.120, and other Laws and Regulations within the past year. The same medical examination shall be given on an annual basis to employees engaged in an occupation that has the potential to expose the employee to Asbestos in any amount, within 30 calendar days before and after the termination of employment in such an occupation.
- 2. **Medical Records:** Maintain complete and accurate records of each employee's medical examinations for a period of 30 years after termination of employment.

1.5 SUBMITTALS

A. Informational Submittals: Submit the following:

- 1. **Certificates:**
 - a. Certifications from authorities having jurisdiction, including state and local authorities as applicable, for each supervisor and worker employed on ACM removal and disposal.
 - b. Submit certificate for each employee working on ACM removal and disposal Work, said certificate to be signed by the associated employee, that the employee has received training in the proper handling of materials that contain Asbestos; understands the health implications and risks involved, including the possible illnesses that may develop from exposure to Asbestos fibers; understands the use and limitations of the respiratory equipment to be used; and understands the results of any air monitoring activities that will occur, in relation to his or her health and use of respiratory equipment.
- 2. **Procedural Submittals:**
 - a. Asbestos Removal and Disposal Plan (Asbestos Hazard Abatement Plan (AHAP)):

- 1) Submit a detailed Project-specific plan of the work procedures to be used in the removal and disposal of ACM. Submittal shall be prepared by, signed, and sealed including certification number, and dated by CONTRACTOR's certified industrial hygienist (CIH).
 - 2) Submittal shall include: a diagram showing the boundaries of Asbestos control areas, locations of decontamination facilities and HEPA filtration unit exhausts; locations of temporary electrical panels and hookups; the sequencing of Asbestos-related Work; ACM disposal plan; the type of wetting agent and Asbestos encapsulant proposed for use; air monitoring (both area and personal); and detailed description of the ACM containment and removal procedures to be used, type of wetting agent and Asbestos encapsulant to be used, planned air monitoring strategies, and detailed description of the method to be employed to control spread of ACM wastes and airborne fiber concentrations.
 - 3) Variances that have been obtained for the completion of the work and the conditions of said variances shall be incorporated into the AHAP.
 - 4) Current and valid medical examinations and respirator fit-tests for each person employed in ACM removal and disposal operations.
 - 5) Copy of each Project permit relative to ACM, and variances.
 - 6) Asbestos removal and disposal plan shall clearly indicate the starting and completion dates for each activity and each Asbestos control area, and shall allow adequate time for clean-up, observation, and monitoring activities.
 - 7) Transporter: Submit documentation that the transporter to be used for conveying ACM to the landfill is permitted for such services in the jurisdiction where the Project is located.
 - 8) Landfill: Submit documentation that the landfill to be used for ACM disposal is approved and permitted for Asbestos disposal by the USEPA and other authorities having jurisdiction, including the state environmental authority.
 - 9) Notarized Statement: Submit signed notarized statements from CONTRACTOR and ACM Subcontractor disclosing all OSHA and USEPA citations on Asbestos removal projects during the previous three years.
 - 10) Obtain ENGINEER's acceptance of the plan prior to starting of Asbestos-related work activities.
- 4 Field Quality Control Submittals:
- a. Reports of visits to Site by CIH.
 - b. Report of initial air monitoring results prior to start of ACM removal Work, and daily air monitoring results and calibration data.
5. Qualifications Statements: Obtain ENGINEER's acceptance of qualifications prior to utilizing the following on the Project:
- a. Testing laboratory.

- b. ACM removal and disposal Subcontractor, including name and qualifications of competent person to be assigned to the Project.
 - c. Certified industrial hygienist.
- B. Closeout Submittals: Submit the following:
 - 1. Log:
 - a. Maintain a permanently-bound log book that contains the Project name, as well as the names, addresses, and phone numbers of the air testing entity, and the ACM Subcontractor. Log book shall contain emergency contact information required in the General Requirements. Log book shall contain a list of personnel approved for entry into the Asbestos control area. Upon completion of ACM removal and disposal Work, submit the log book containing a day-to-day record of personnel entering the Asbestos control area, and description of significant events occurring during the ACM removal and disposal operations.
 - 2. Record Information:
 - a. Certification of completion of ACM removal and disposal Work, signed by CONTRACTOR and ACM Subcontractor, indicating the date that all ACM removal and disposal Work was completed, and stating that all ACM removal and disposal Work was performed in accordance with the Contract Documents, Laws and Regulations, applicable permits (if any), and requirements of authorities having jurisdiction.
 - b. Quantities of ACM removed and disposed.
 - c. Copy of completed waste manifest sheet for disposal of Asbestos, indicating weight of material disposed, name of disposal location and date of disposal.
 - d. Asbestos Waste Shipment: Final completed copies of the Waste Shipment Record for all shipments of ACM waste material as specified in 40 CFR Part 61, Subpart M and other required state waste manifest shipment records. Detailed information of Asbestos waste disposal on the "MANDATORY WASTE SHIPMENT RECORD" form in accordance with revised 40 CFR Part 61, Subpart M.
 - e. Copy of notifications of USEPA and other authorities having jurisdiction.

PART 2 – PRODUCTS

2.1 PERSONAL PROTECTIVE EQUIPMENT

- A. General:
 - 1. Provide workers with personal protective clothing and equipment as specified in this Section and as required by Laws and Regulations.
 - 2. Ensure that protective clothing and equipment is worn properly.
 - 3. CIH and competent person shall select and approve the required personal protective clothing and equipment to be used.

4. In addition to protective work clothing for ACM removal workers, make available at the Site four additional sets of protective work clothing and required respiratory equipment, each day for authorized personnel to enter and observe the Asbestos control area.

B. Respirators:

1. Respirators shall be selected and used in accordance with manufacturer's recommendations, 29 CFR Part 1926.1101, and shall be approved by NIOSH for use in environments containing airborne Asbestos fibers.
2. Personnel who handle ACM, enter Asbestos regulated work areas that require wearing of a respirator, or who are otherwise carrying out Asbestos abatement activities that require wearing a respirator, shall be provided with respirators that are fully protective of the worker at measured or anticipated airborne Asbestos concentration level to be encountered.
3. For air-purifying respirators, the particulate filter portion of the cartridges or canister suitable for use in airborne Asbestos environments shall be Type H, high-efficiency particulate air (HEPA). As a minimum a powered-air purifying respirator (PAPR) equipped with HEPA cartridges shall be worn during startup of Asbestos removal activities, unless otherwise approved in writing by the CIH.
4. Upgrading or downgrading of respirator type, from the minimum requirements specified for start-up, shall be made by the CIH based on the measured or airborne Asbestos fiber concentrations to be encountered.
5. Respiratory protection shall comply with 29 CFR Part 1926, CFR 11 Part 30, and 29 CFR Part 1910.
6. Fit Test:
 - a. Competent person shall perform qualitative or quantitative fit test complying with 29 CFR Part 1926, Appendix B, for each worker required to wear a respirator, and for DEPARTMENT and authorized visitors who enter an Asbestos regulated work area where respirators are required to be worn.
 - b. Perform respirator fit test for each worker prior to initially wearing a respirator on the Project and annually thereafter. If physical changes in a worker develops that will affect the fit, or a new size, make, or model of respirator is used, perform a new fit test.
 - c. Perform functional fit checks by employees each time a respirator is put on and in accordance with the respirator manufacturer's recommendation.

C. Whole Body Protection:

1. Provide personnel exposed to Asbestos with whole body protection as specified in this Section; such protection shall be worn properly.
2. CIH and competent person shall select and approve the whole body protection to be used.
3. Dispose of disposable whole body protection as Asbestos-contaminated waste upon exiting from the Asbestos regulated work area. Reusable whole body protection worn shall be either disposed of as Asbestos-contaminated waste upon exiting the Asbestos regulated work area or be properly laundered in accordance with 29 CFR Part 1926 and the AHAP accepted by ENGINEER.

4. Comply, at a minimum, with the following:
- a. Coveralls: Use disposable, zippered front coveralls with attached head and foot coverings. Sleeves shall be secured at the wrists.
 - b. Gloves: Use disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber gloves for comfort but shall not be used alone. Where there is potential for hand injuries (such as scrapes, punctures, cuts) use suitable outer gloves.
 - c. Under Clothing: Use disposable underwear, worn next to the skin or cloth under clothing.
 - d. Work Clothing: Use an additional coverall when Asbestos abatement and control method employed does not provide for the exit from the Asbestos regulated work area directly into an attached decontamination unit. Cloth work clothes shall be provided for wear under the protective coverall and foot coverings when work is being conducted in low-temperature conditions. Cloth work clothes shall be either disposed of as Asbestos-contaminated material or properly laundered in accordance with 29 CFR Part 1926 and AHAP accepted by ENGINEER.
 - e. Foot Coverings: Provide cloth socks, worn next to the skin. If rubber boots are not used, provide footwear and disposable foot coverings. Use rubber boots in moist or wet areas. Only rubber boots shall be removed from the Asbestos regulated work area after being thoroughly decontaminated. Dispose of other protective foot coverings as ACM.
 - f. Head Covering: Use hood type disposable head covering. Provide and use protective head gear (hard hats) as required. Remove hard hats from the Asbestos regulated work area only after thorough decontamination.
 - g. Protective Eye Wear: Do not wear contact lenses in Asbestos regulated work areas. When vision correction is necessary to perform the Work, use prescription safety eye wear. Safety glasses shall be worn by personnel engaged in Asbestos abatement activities in the Asbestos regulated work area when use of full face-piece respirator is not required. Eye protection provided shall be in accordance with ANSI Z87.1. Remove eyewear from Asbestos regulated work area only after thorough decontamination.
 - h. Other Items: Provide other items of whole body protection as required and approved by the CIH.

2.2 DECONTAMINATION

A. Decontamination Units – General:

- 1. Provide temporary decontamination unit for all Class I Asbestos Work abatement activities in which greater than 25 linear feet or 10 square feet of ACM are removed from a regulated area.
- 2. Decontamination units shall be adjacent to and contiguous with the Asbestos regulated area. Remote decontamination units may be used if adjacent decontamination units are not feasible. Use of prefabricated units or remote units shall be reviewed and approved by the CIH. Remote decontamination systems shall be in accordance with Laws and Regulations.

3. Decontamination unit shall be attached in a leak-tight manner to each Asbestos regulated work area.
4. Decontamination unit shall have a separate equipment locker room and a clean locker room with a shower in between (complying with 29 CFR Part 1910.141 and other Laws and Regulations).
5. Upon exiting from the Asbestos regulated work area to the equipment room, respirators shall be worn while Asbestos-contaminated protective clothing is HEPA-vacuumed, removed, and placed in approved labeled containers for disposal.

B. Use of Decontamination Units and Wastewater Discharge:

1. Workers shall shower before changing into street clothes.
2. Collect and filter used shower water to remove Asbestos contamination. Dispose of filters and residue as Asbestos-contaminated material. Discharge filtered water to the sanitary sewer system or haul filtered water off-Site for proper disposal.
3. Provide separate hot and cold water services for decontamination unit. Provide not less than 40-gallon electric hot water heater with minimum recovery rate of 20 gallons per hour and temperature controller for each showerhead. Instantaneous type in-line water heater may be incorporated at each shower head in lieu of hot water heaters. Locate functional flow and temperature controls within the shower, to be easily adjusted by user.
4. Size shower wastewater pump for 1.25 times the showerhead flow rate at a pressure head sufficient to satisfy the filter head loss and discharge line head losses.
5. Provide wastewater filters in series with first stage pore size of 50 micrometer (microns) and second stage pore size of five microns.

C. Decontamination Unit – Miscellaneous:

1. Keep floor of decontamination unit clean room dry and clean at all times. Water from the shower shall not wet the floor in the clean room.
2. Surfaces of the clean room and shower shall be wet-wiped two times after each shift change with a disinfectant solution.
3. Maintain proper housekeeping and hygiene.
4. Provide soap, shampoo, and clean towels for showering, washing, and drying in sufficient quantities to accommodate the number of Asbestos abatement workers.
5. Dispose of cloth towels as ACM waste or laundry in accordance with 29 CFR Part 1926 and AHAP accepted by ENGINEER.
6. Surfaces of the equipment room shall be wet-wiped two times after each shift change. Dispose of materials used for wet wiping as Asbestos-contaminated waste.

2.3 WARNING SIGNS AND TAPE

A. Warning Signs and Tape:

1. Provide temporary warning signs for Asbestos-related Work.
2. Ensure that workers and others at the Site understand the warning signs.
3. Provide warning signs and tape at the regulated boundaries and entrances to Asbestos regulated work areas. Provide signs at a distance that personnel may read the sign and take necessary protective steps before entering the area.
4. Warning signs shall comply with 29 CFR Part 1926.58(k)(l)(ii).
5. Warning signs shall be written in English, and in the predominant language spoken by the workers if other than English.

2.4 WARNING LABELS

A. Signs and Markings:

1. Provide temporary caution signs at all approaches to Asbestos control areas as required in 29 CFR 1926.1101 and 29 CFR 1910.1200. Locate signs at such a distance that personnel may read the signs and avoid the areas, or if allowed to enter the areas, take the necessary precautions before entering.
2. At minimum provide the following temporary signage:
 - a. Caution Sign: Vertical format complying with 29 CFR 1910.145(d)(4), minimum 20 inches by 14 inches displaying the following legend in the lower panel:

Legend	Characters/Type
ASBESTOS	1-inch high Sans Serif Gothic or block
DANGER	1-inch high Sans Serif Gothic or block
CANCER & LUNG DISEASE HAZARD	3/4-inch high Gothic
AUTHORIZED PERSONNEL ONLY	3/4-inch high Gothic
RESPIRATORS & PROTECTIVE CLOTHING REQUIRED IN THIS AREA	3/4-inch high Gothic

3. Warning Labels:
 - a. Provide labels affixed to all disposal bags and storage containers used for storage and transporting Asbestos materials, scrap, waste debris, and other materials contaminated with Asbestos, in accordance with OSHA 29 CFR 1926.1101(k)(8) and other Laws and Regulations.
 - b. Containers with preprinted warning labels complying with requirements specified in this Section are acceptable.
 - c. Labels shall include the name, address, and telephone number of the waste generator (DEPARTMENT) and the location at which the waste was generated in accordance with 40 CFR 61.150(a)(1).
 - d. Labels shall comply with 29 CFR 1910.1200(f), and shall include:

“DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
BREATHING AIRBORNE ASBESTOS FIBERS
IS HAZARDOUS TO YOUR HEALTH”

4. No other signage related to ACM removal is allowed at the Site without approval of the DEPARTMENT.
5. Upon completion of the ACM removal Work, remove temporary signage associated with ACM removal.

2.5 TOOLS AND LOCAL EXHAUST SYSTEM

A. Vacuum Capability for Asbestos Removal Equipment and Tools:

1. Vacuums shall be leak-proof to the filter, equipped with HEPA filters, of sufficient capacity, and provide necessary capture velocity at the nozzle or nozzle attachment to efficiently collect, transport and retain ACM waste material.
2. Do not use power tools to remove ACM unless the power tool is equipped with effective, integral HEPA filtered exhaust ventilation capture and collection system.
3. Remove residual Asbestos from reusable tools prior to storage and reuse. Decontaminate reusable tools prior to removal from Asbestos regulated work area in accordance with Laws and Regulations.

B. Local Exhaust System:

1. Provide local exhaust system in NPEs. Local exhaust systems, including filters, shall comply with ANSI/AIHA Z9.2.
2. Air filtration devices shall have HEPA filters.
3. Quantity of air filtration devices shall be sufficient to maintain a minimum pressure differential of minus 0.02 inch of water column relative to adjacent, unsealed areas, at an air flow rate not less than four air changes per hour.
4. Provide continuous, 24-hour per day monitoring of the pressure differential.
5. At start of Asbestos removal operations, open the units to verify filter integrity.
6. Use new flex duct for local exhaust system and one flex duct per HEPA unit.
7. Replace filters for air filtration devices in accordance with manufacturer's recommendations and Laws and Regulations.
8. Obtain required licenses and pay all fees that are associated with existing patent(s) on Asbestos exhaust systems.

2.6 RENTAL EQUIPMENT

- A. If rental equipment is used, give written notification to rental entity concerning the intended use of the equipment, the possibility of Asbestos contamination of equipment, and steps that will be taken to decontaminate such equipment. Obtain written acceptance of the terms of CONTRACTOR's notification from rental entity and submit a copy to DEPARTMENT.

2.7 EXPENDABLE SUPPLIES

- A. Glove Bag: Provide glove bags as described in 29 CFR Part 1926. Glove bag assembly shall be prefabricated of six-mil thick transparent polyethylene or PVC sheeting with preprinted OSHA warning label and shall typically be constructed of at least two inward projecting long sleeves and an internal pouch. Glove bag shall be constructed and installed in such a manner that it surrounds the object or material to be removed and contains all Asbestos fibers released during glove removal. Glove bag shall have sufficient capacity to hold removed materials and allow leak-tight sealing.
- B. Duct Tape: Provide industrial-grade duct tape in two-inch and three-inch widths, suitable for bonding sheet plastic and disposal containers required for the Asbestos Work.
- C. Disposal Containers: Provide leak-tight disposal containers for ACM generated wastes. Leak-tight means that solids, liquids, and dust cannot escape or spill out. Disposal containers shall be either pre-labeled or affixed with OSHA warning label in accordance with 29 CFR Part 1926.
- D. Disposal Bags: Shall be six-mil thick or thicker, leak-tight, pre-labeled with OSHA warning label, for placement of Asbestos generated waste.
- E. Leak-tight Wrapping: Use two layers of polyethylene sheet stock not less than six mils thick for containment of removed ACM such as reactor vessels, large tanks, boilers, insulated pipe segments, and other materials too large to be placed in disposal containers. Upon placement of ACM in wrapping, each layer shall be individually sealed leak-tight using duct tape.
- F. Fiberboard Drums: Provide fiberboard drums when required by Laws or Regulations, or authorities having jurisdiction.
- G. Sheet Plastic:
 - 1. Provide sheet plastic in the largest sheet size necessary to minimize seams.
 - 2. Not less than six-mil thick polyethylene film, clear or frosted, complying with ASTM D4397.
- H. Wetting Agents:
 - 1. Amended Water: Comply with ASTM D1331.
 - 2. Removal Encapsulant: Provide removal encapsulant (penetrating encapsulant) when conducting Asbestos removal activities that require a longer removal time or are subject to rapid evaporation of amended water. Removal encapsulant shall be capable of wetting ACM and retarding fiber release during disturbance of ACM equal to or greater than provided by amended water.

2.8 OTHER ITEMS

- A. Provide sufficient quantity of other items that may include, but not be limited to, the following: scrapers, brushes, brooms, staple guns, tarpaulins, shovels, rubber squeegees, dust pans, other tools, scaffolding, staging, enclosed chutes, non-conductive ladders, lumber necessary for

constructing Asbestos regulated containment work areas, UL-approved temporary electrical equipment, material and cords, ground fault circuit interrupters (GFCI), water hoses of sufficient length, fire extinguishers, first aid kits, logbooks, log forms, markers with indelible ink, spray paint in bright color to mark areas and temporary fencing where required.

- B. Scaffolding: Provide scaffolding of the type necessary to perform the Work, subject to requirements of Laws and Regulations.
- C. Air Monitoring Test Equipment: Furnish the following test equipment:
 - 1. Two portable high-volume area air sampling pumps, which shall be Gilian Model AirCon-2DC with appropriate power module, or equal. Each unit shall be in kit form containing a monitoring pump, hose, and clip assembly, three-part filter holder, 50-mm extension cowl, spare hose fitting, and 100 25-mm filter membranes. Test equipment shall remain property of Subcontractor and shall be maintained by Subcontractor.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine conditions under which removal and disposal of ACM will be performed and advise ENGINEER in writing of conditions detrimental to proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions are corrected.

3.2 PREPARATION

- A. Location of temporary facilities for removal and disposal of ACM shall be subject to acceptance of the DEPARTMENT. Prior to starting the Work obtain DEPARTMENT's acceptance of proposed location of temporary facilities required for the Work.
- B. Prepare the Asbestos control areas and post temporary signage required in Part 2 of this Section.

3.3 REMOVAL OF ASBESTOS-CONTAINING MATERIAL

- A. Exposure Control:
 - 1. Design, erect, install, and maintain temporary airtight enclosures and partitions suitable for Asbestos removal activities, to eliminate exposures to operations and maintenance employees, others, and the environment where applicable.
 - 2. Personnel working on removal and disposal of ACM shall wear and utilize protective clothing and protective equipment as required.
 - 3. Eating, smoking, drinking, applying cosmetics, and similar activities are not allowed in Asbestos regulated work areas.
 - 4. Personnel of other trades not engaged in Asbestos removal and disposal activities shall not be exposed to airborne Asbestos unless required training, administrative, and personal protective requirements are complied with.
 - 6. If an Asbestos spill or release occurs outside of Asbestos regulated work area, work shall be halted and immediately notify DEPARTMENT. Correct the spill or release to satisfaction of DEPARTMENT prior to resuming the Work.

7. Perform personal air sampling. An independent third-party industrial hygiene consultant hired by DEPARTMENT shall complete perimeter, work area, and final clearance air sampling.
8. Immediately halt ACM removal and disposal Work in Asbestos regulated work area when measured airborne total fiber concentration exceeds 0.01 fibers per cubic centimeter or the pre-removal concentration, whichever is greater, outside the Asbestos regulated work area. Correct the condition to the satisfaction of CONTRACTOR'S CIH at no cost to DEPARTMENT. CONTRACTOR shall document corrective actions taken.
9. Protection of Adjacent Areas:
 - a. Removal and disposal of ACM shall be performed without contaminating adjacent work and areas. Where such work or area is damaged or contaminated as verified by ENGINEER by visual inspection or sample analysis, decontaminate and restore the affected area to its original condition at no expense to DEPARTMENT, as deemed appropriate by DEPARTMENT and ENGINEER.
10. Critical Barriers: Isolate all openings to Asbestos regulated work areas with airtight seals that prevent contaminant spread in accordance with Laws and Regulations. Provide such critical barriers of six-mil thick polyethylene, sealed air-tight. Cover and seal wall, ceiling, and floor surfaces in accordance with Laws and Regulations.
11. Asbestos Control Area Requirements:
 - a. General: Establish and maintain NPEs for Class I Asbestos Work other than glove bag removal or wrap and cut removal. Provide a viewing window in the wall of the NPE at a location from which the ACM removal Work may be observed. Perform the following sequentially, completing each activity before proceeding to the next activity:
 - 1) Place tools, scaffolding, staging, and similar activities necessary for the ACM removal Work in the area to be isolated prior to erecting critical barriers.
 - 2) Pre-clean surface.
 - 3) Install decontamination units.
 - 4) Install critical barriers.
 - 5) Install local exhaust system and appurtenances.
 - 6) Remove ACM and perform monitoring.
 - 7) Perform required cleaning.
 - 8) After inspection and cleaning, remove barriers and containment materials.

B. Removal – General:

1. Perform ACM removal and disposal, including handling, storing, and transporting Asbestos waste materials, in accordance with the Asbestos removal and disposal plan (Asbestos hazard abatement plan (AHAP)) submittal accepted by ENGINEER; the Contract Documents; Laws and Regulations; applicable permits and approvals; and requirements of authorities having jurisdiction. Among the applicable requirements, comply with applicable

requirements of 12 NYCRR 56, 29 CFR Part 1910, 29 CFR Part 1926, 40 CFR Part 61, Subpart A and Subpart M, NFPA 10, NFPA 70, NFPA 90A, and NFPA 101. Matters of interpretation of standards shall be submitted to the appropriate administrative agency for resolution before starting Work. Where the requirements of the Contract Documents and Laws and Regulations differ, the most-stringent requirement as defined by ENGINEER shall apply.

2. Wastewater from Asbestos removal operations, including amended water, shall be collected and filtered through a system in the same manner specified in Part 2 of this Section for personnel decontamination shower discharge water. Discharge filtered wastewater in accordance with Laws and Regulations and requirements of the DEPARTMENT. Properly dispose of contaminated filters as Asbestos waste.
3. Demolition debris and Asbestos containing soil and debris shall be adequately wet during handling and loading into trailers or other equipment.
4. Debris shall be secured to prevent movement during transport.
4. Use corrugated cartons or drums for disposal of ACM having sharp-edged components such as nails, screws, tin sheeting, and other pointed or sharp surfaces, that may tear polyethylene bags. ACM within the drums or cartons shall be double-bagged.
5. Do not dump ACM, whether or not bagged, down chutes. Do not drop or toss ACM, whether or not bagged.

C. Compatibility:

1. Use only removal and cleaning materials and equipment that are compatible with the surface from which ACM is being removed and cleaned, as recommended by the manufacturer of the materials.
2. All vacuums used shall be equipped with HEPA filtration system, such as Model #GA-73 by "NILFISK" and Model #75ASA by Pullman/Holt, or equal.

D. Storage and Removal from the Site:

1. Retain all stored items in an orderly arrangement allowing maximum access, without impeding traffic, and providing the required protection of materials.
2. When ACM is kept in the Asbestos control area or adjacent work areas overnight or longer, ACM shall be maintained adequately wet and covered with polyethylene sheeting. Do not store ACM at the Site outside of the Asbestos control area.
3. Work Areas: Daily, and more often if necessary, inspect the work areas and adjoining spaces, and remove and dispose of all ACM scrap, debris, and waste materials.
4. After all Asbestos waste is removed from the Asbestos regulated work area, and final clean-up is completed, CONTRACTOR and CONTRACTOR's CIH will visually inspect all surfaces within the Asbestos regulated work area for residual material or accumulated debris. Re-clean all areas showing dust or residual materials. CONTRACTOR's CIH shall certify in writing that the area is safe before the warning signs and boundary warning tape are removed and prior to unrestricted entry is allowed.

- E. Results of air sampling, testing, and monitoring during ACM removal and disposal Work shall not exceed the limits indicated in Article 3.4 of this Section.

3.4 FIELD QUALITY CONTROL

A. Site Tests and Monitoring:

1. When performing ACM removal and disposal, and when airborne Asbestos dust or fibers are emitted, retain the services of a certified industrial hygienist (CIH), and testing laboratory for monitoring Asbestos exposure levels.
2. Responsibilities of the Testing Laboratory and CIH Relative to Site Tests and Monitoring:
 - a. Equipment: Collect samples of Airborne asbestos concentrations using appropriate air monitoring pumps and Asbestos sampling filters. Pumps shall be calibrated before each sampling cycle.
 - b. Perform Asbestos work area air monitoring and personal air monitoring for personnel.
 - c. Obtain personal air monitoring samples for the greater of the following: 25 percent of the ACM removal and disposal workers in each shift, or two workers per shift.
 - d. Work Area Sampling Procedures:
 - 1) Initial background air samples shall be taken prior to beginning preparation of the Asbestos control area or containment construction activities. Where proper sealing is not feasible, obtain initial air samples of the ambient conditions prior to installing barriers. Initial air monitoring described in this paragraph will establish the "reference" TWA.
 - 2) From start to completion of ACM removal operations, continuously monitor air quality in the Asbestos control area. Frequency of filter changes in sampling devices as required by final permit issued.
 - 3) Final clearance air sample results shall not exceed the limit indicated in this Article.
 - 4) Location of Sampling Devices: Locate sampling devices within each Work area, immediately outside decontamination area, downwind of equipment producing a negative pressure (if any), and in the vicinity of temporary Asbestos storage areas. Samples shall represent, with reasonable accuracy, the airborne concentrations of Asbestos fibers that may reach the breathing zones of personnel.
 - e. Personal Monitoring: Perform personal sampling and monitoring in accordance with 29 CFR Part 1926.1101 and other Laws and Regulations, and CONTRACTOR's AHAP accepted by ENGINEER.
 - f. Methods of Measurement: Determination of airborne concentrations of Asbestos fibers shall be made using phase contrast microscopy (PCM) and transmission electron microscopy (TEM). PCM is the OSHA Reference Method specified in Appendix A of 29 CFR 1926.1101, and includes NIOSH Pub No. 84-100 Method 7400. TEM is the USEPA (AHERA) method specified in 40 CFR 763, Subpart E, Appendix A.
 - g. Reporting:
 - 1) Calculate air monitoring results at the 95 percent confidence level.

- 2) Submit to ENGINEER documentation of fiber counts not more than 24 hours after completing each sampling cycle. Submit with monitoring results data from sampling equipment calibrations. Submit each sample's TWA average count, and the time, date, and exact location where each sample was obtained. Locations of air monitors shall be described by referencing physical features near the monitoring equipment.
 - 3) Post at a conspicuous location at the Site results of personal samples within 24 hours of sampling.
 - 4) Personal sampling results shall be made available to DEPARTMENT upon request.
- h. Acceptable Limits:
- 1) Maintain Asbestos fiber concentrations outside NPEs equal to or less than the greater of the following: 0.01 fibers per cubic centimeter or background levels, during Asbestos removal and disposal Work.
 - 2) When fiber concentrations rise above the required limit, immediately halt the Work and immediately investigate work procedures to determine the cause. Restart the Work when air quality is within specified limits.
 - 3) Personnel shall not be exposed to airborne fiber concentrations in excess of 0.1 fiber per cubic centimeter in an eight-hour TWA (OSHA PEL) and 1.0 fiber per cubic centimeter averaged over a sampling period of 30 minutes (OSHA excursion limit).
 - 4) If the PEL or excursion limit is exceeded inside the Asbestos regulated work area, immediately halt the Work and notify DEPARTMENT and ENGINEER. Implement additional engineering controls and work practice controls to reduce airborne Asbestos fiber levels below prescribed limits in the work areas. Do not restart the Work until air monitoring indicates fiber counts within required limits.
 - 5) When air testing and monitoring following final cleaning indicate a fiber count greater than the limit indicated in this Article in the Work areas, re-clean the areas with unacceptable monitoring results. Retest re-cleaned areas at CONTRACTOR's expense; ENGINEER reserves the right to require use of a third-party testing laboratory for such re-testing, at CONTRACTOR's expense. Perform repeated cycles of cleaning and clearance testing until fiber count is within limit indicated in this Article within the Work areas. All costs of re-cleaning and retesting will be at no additional cost to DEPARTMENT.
- j. Sampling After Final Clean-up (Clearance Sampling):
- 1) Prior to conducting final air clearance monitoring, conduct final visual inspection of final clean-up of each Asbestos regulated work area, accompanied by ENGINEER.
 - 2) Final clearance air monitoring shall not begin until final cleaning is acceptable to the CIH. CIH and CONTRACTOR's testing laboratory shall perform area sampling for airborne fibers using aggressive air sampling techniques as defined in Appendix A of 40 CFR Part 763, Subpart E, or as otherwise required by Laws and Regulations.
 - 3) Use PCM method as indicated in this Article.
 - 4) Submit results to ENGINEER. Results shall be within the limit indicated in this Article.

3.5 CLEANING

- A. Throughout the removal and disposal of ACM, maintain the Asbestos control area and adjacent work areas in a standard of cleanliness in accordance with the Contract Documents.

1. Prevent areas other than the Asbestos control area from becoming contaminated with Asbestos-containing dust and debris. Should areas outside the Asbestos control area become contaminated with Asbestos-containing dust or debris as a consequence of CONTRACTOR's actions, CONTRACTOR shall be responsible for all cleaning required to comply with Laws and Regulations.
2. All costs incurred in the cleaning or otherwise decontaminating of non-work areas and the contents thereof, shall be paid by CONTRACTOR at no additional cost to DEPARTMENT.
3. Work areas shall not be blown clean with compressed air. Dry sweeping of Asbestos work areas is prohibited.

B. Progress Cleaning:

1. Keep Asbestos control area and adjacent work areas clean on a daily, ongoing basis, to the extent practicable.
2. Prepare loose ACM for disposal by packaging the waste and removing it from the work area to the ACM load-out area.
3. Inspect and repair polyethylene sheeting and other critical barriers.

C. Final Cleaning:

1. Except as specified otherwise, "clean" (for the purpose of this Section) means the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.
2. After final cleaning, air monitoring results shall indicate fiber concentration in the work areas within the limit specified in Article 3.4 of this Section.
3. Prior to completing the ACM removal and disposal Work, remove all tools, surplus materials, equipment, scrap, debris, and waste from the Site.
4. Cleaning shall progress from the point of highest concentration toward the lowest, as well as from the highest point of the surface being cleaned (vertically) towards the lowest point.

3.6 DISPOSAL

- A. ACM removed by CONTRACTOR, is CONTRACTOR's property and shall be disposed of as specified and in accordance with Laws and Regulations. Dispose of ACM at an Asbestos approved and Asbestos-permitted landfill, approved by the ENGINEER.

END OF SECTION

SECTION 31 11 00
CLEARING AND GRUBBING

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the requirements for clearing and grubbing necessary to complete the Work.

1.2 DESCRIPTION

- A. The CONTRACTOR shall remove all trees, shrubs, and vegetation from areas designated for excavation, from routes needed for access to excavations, and for temporary facilities as needed to complete the Work. Remove additional trees designated for removal on the Contract Drawings.
- B. Minimize the removal of trees, shrubs, and woody vegetation from beyond the areas of work. If possible, construct access roads and staging areas away from trees and vegetation.
- C. The CONTRACTOR shall indicate on their drawings, submitted in the Work Plan, where clearing and grubbing is planned. Clearing and grubbing shall only be allowed if it is proposed by the CONTRACTOR and accepted by the DEPARTMENT as part of the approved Work Plan.
- D. Clearing and grubbing shall not start until approval by the ENGINEER.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

3.1 GENERAL

- A. Install all erosion and sedimentation controls prior to any clearing and grubbing, except in areas where clearing and grubbing is required to access an area for installation. Notify the ENGINEER and the DEPARTMENT of any access issues related to installation of erosion and sedimentation controls.
- B. The CONTRACTOR shall use means of clearing and grubbing that minimize disruption of the water and sediment and generation of potential sources of erosion. Limit the generation of soils and suspended solids during clearing and grubbing. Conduct clearing in a manner that prevents, to the extent possible, soil or soil-like material from being collected with cleared material.
- C. Cut and remove debris, timber, trees, stumps, brush, shrubs, roots, grass, weeds, rubbish, and any objectionable material resting on or protruding through the surface of the ground.

- D. Cut stumps off flush with ground surface or below, and if in the water, at water surface or below if needed for the Work.
- E. Remove waste from clearing and grubbing from the area and dispose of off-Site. Chipping for on-Site disposal of clearing debris from within the specified limits of excavation and burning of waste are not allowed.
- F. Do not remove trees beyond the Limits of Work shown on the Contract Drawings. Do not remove trees beyond what is shown in the approved Work Plan. If trees beyond the approved areas are damaged by the CONTRACTOR, the CONTRACTOR shall either trim, prune, or repair (e.g., replacement of topsoil around roots) the tree in a manner acceptable to the DEPARTMENT or replace the tree with a similarly sized tree.
- G. Do not operate heavy equipment or stockpile materials within the branch spread of existing trees to be protected.

END OF SECTION

SECTION 31 23 16 EXCAVATION

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Removal, handling, loading, hauling, and off-Site disposal of soil and debris as shown on the Contract Drawings and as specified.
- B. PCB contaminated (TSCA and Non-TSCA contaminated) soil and debris includes all materials and debris specified for removal within the limits shown on the Drawings such as vegetation and roots, in addition to soil and associated liquids and sludges.
- C. Compliance with all permits and approvals required for the Work.
- D. Refer to Supplementary Specification Section 02 82 33 – Removal and Disposal of Asbestos Containing Soil and Debris for additional requirements related to asbestos containing soil and debris removal.
- E. Provide all labor, materials, supplies, equipment, power, and incidentals necessary to excavate, handle, characterize, load, transport, and dispose of waste at off-Site disposal facilities.
- F. Implement the erosion and sedimentation controls prior to beginning excavation and modify as needed depending on the actual Work. Obtain ENGINEER's approval prior to modification.
- G. Remove all surface debris and debris piles within the Limits of Work and as specified and shown on the Drawings. Debris includes all non-naturally occurring items within the Limits of Work.

1.2 REFERENCES

- A. OSHA, Occupational Safety and Health Standards, 29 CFR 1910; Safety and Health Regulations for Construction, 29 CFR Part 1926.
- B. U.S. DOT, Shippers – General Requirements for Shipments and Packaging, 49 CFR Part 173; Carriage by Public Highway, 49 CFR Part 177.
- C. U.S. EPA, Identification and Listing of Hazardous Waste, 40 CFR Part 261; Standards Applicable to Generators of Hazardous Waste, 40 CFR Part 262; Standards Applicable to Transporters of Hazardous Waste, 40 CFR Part 263; Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, 40 CFR Part 264; Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, 40 CFR Part 265; Definition of PCB Remediation Waste, 40 CFR 761.3; Performance based disposal, 40 CFR 761.61(b); PCB remediation waste, 40 CFR 761.50(a)(3).
- D. All applicable New York State rules, regulations and guidance.
- E. Supplementary Specification Sections 00 31 24, Environmental Assessment Information and 31 25 00, Erosion and Sedimentation Controls.

- F. Refer to Supplementary Specification Section 02 82 33, Removal and Disposal of Asbestos Containing Soil and Debris for specific requirements related to excavation and management of asbestos containing soil and debris.

1.3 EXTENTS OF EXCAVATION

- A. Areas, grades, and extents as shown on the Contract Drawings for TSCA Contaminated and Non-TSCA Contaminated Soil and Debris. Asbestos Containing Soil and Debris is covered in Supplementary Specification Section 02 82 33, Removal and Disposal of Asbestos Containing Soil and Debris.
- B. Cut back shall be performed at excavation sidewalls beyond limits specified where required to maintain excavation stability. Cut back shall be minimized and only performed where required for excavation sidewall stability, as determined by CONTRACTOR'S OSHA Competent Person. Limits of required cut back are not shown on Contract Drawings. No payment shall be made for excavation cut back for stabilizing excavation side slopes above the minimum volume required for slope stabilization in the opinion of the ENGINEER. Excavation cut back volume for side slope stabilization shall not exceed the volume required for side slopes of 2:1 (horizontal : vertical).
- C. Where shown on the Contract Drawings, horizontal coordinates shall be used to locate the limits of excavation. Horizontal limits of excavation represent the limits of the required excavation at the bottom of the excavation area.

1.4 SUBMITTALS

- A. ENGINEER's approval of submittals is required prior to start of the related work.
- B. The CONTRACTOR shall prepare and submit an Excavation Plan as part of Supplementary Specification Section 01 15 00, Minimum Requirements for Work Plan. The Excavation Plan shall include, at a minimum, the following:
 - 1. Limits of clearing (which will not extend beyond the limits of clearing identified by the ENGINEER).
 - 2. Location(s), configuration(s), and orientation(s) of material handling/staging areas and access roads.
 - 3. Location of temporary water treatment system.
 - 4. Description of the excavation means and methods proposed for each phase of the excavation work (i.e., TSCA Contaminated Soil and Debris and Non-TSCA Contaminated Soil and Debris excavations; refer also to Supplementary Specification Section 02 82 33, Removal and Disposal of Asbestos Containing Soil and Debris for other excavation requirements).
 - 5. Identification of all equipment to be used.
 - 6. Procedures for the tracking/labeling of soil and debris excavation progression, determining/verifying location coordinates and elevations including global positioning system (GPS) or physical measurement equipment/methods.
 - 7. Means and methods proposed for controlling excavation extents and depths.

8. Means and methods proposed for moving excavated soil and debris to the staging and processing area ensuring that all free liquids are contained.
 9. Identification of locations for equipment and materials laydown areas, stockpile and soil and debris processing areas, water treatment equipment areas, and to-scale drawings showing laying out of these items.
 10. Complete coordination with Fill Plan, Stabilization Plan, and all work plans required by the Contract Documents.
 11. Drawings signed and sealed by a Professional Engineer licensed to practice in New York State for excavation sheeting and shoring.
- C. The CONTRACTOR shall prepare and submit a Transportation and Disposal Plan in accordance with Supplementary Specification Section 01 15 00, Minimum Requirements for Work Plan. The Transportation and Disposal Plan shall include, at a minimum, the following:
1. Transportation:
 - a. Truck (and rail, if used) routes from the Site to the disposal facility(ies).
 - b. Provide a listing, including company name and address, of proposed waste transporters. Provide for each proposed waste transporter a copy of the valid 6 NYCRR 364 Waste Transporter Permit and applicable permits for out-of-state transportation of waste. All proposed destination facilities shall be listed in the waste transporter permits provided.
 - c. Provide a listing, including company name and address, of any transfer stations, or other intermediary facility to be used in the transportation of waste.
 - d. Proposed procedures for traffic control on- and off-Site and loading procedures. This should include a description of how and where trucks will be staged for loading at the Site and a description of how trucks will be dispatched from the Site after loading. The location of the Site in a commercial/residential area with limited space for truck staging shall be considered.
 - e. Coordination with operations at adjacent properties. Describe how impacts to adjacent commercial operations will be minimized.
 - f. Methods for preventing spills and tracking material beyond the Limit of Work and onto public roads.
 - g. Contingency plan in case of spills or accidents.
 2. Disposal:
 - a. A Waste Characterization Plan that identifies number and locations of samples to be collected and describes methods to be used to collect, ship, analyze and report on excavated material characteristics and the characteristics of all other waste which will be generated, as required for disposal. Contractor shall determine and describe wipe testing

requirements for debris in accordance with disposal facility acceptance requirements. The New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certification of the proposed analytical laboratory for waste characterization analyses shall also be included.

- b. After ENGINEER's approval of and CONTRACTOR's implementation of the Waste Characterization Plan: submit analytical data packages for waste characterization sampling. Include a to-scale drawing showing the identification number and location and elevation of the point of collection of each waste characterization sample. Include a table summarizing the waste characterization sampling results. The summary table shall include for each sample: sample identification number, sample collection date, sample elevation and coordinates, and analytical results.
 - c. Information on the CONTRACTOR's Primary and Backup off-Site disposal facilities that are proposed to receive waste. Identify at least one Primary and one Backup facility for each type of waste. Approval by the ENGINEER of at least one Primary and one Backup disposal facility is required for each type of waste. Provide, at a minimum, for each proposed facility, the information listed below. Approval of the information listed below by the DEPARTMENT shall be required prior to waste shipment.
 - (1) Name, address, and location of the facility, including name, address, telephone number, and email address of the owner and at least one additional contact person at the facility.
 - (2) USEPA Identification Number.
 - (3) Facility testing requirements and acceptance criteria. Report specifically if testing for emerging contaminants, including, but not limited to, PFAS, is required by the facility.
 - (4) The names of the regulatory agencies which have jurisdiction over the facility.
 - (5) Copies of valid, existing operating permits for the facility from the applicable regulatory agencies.
 - (6) Correspondence from the proposed disposal facility confirming receipt of all required waste characterization data and their acknowledgement that the Site is listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites. Letters of Commitment from facilities to receive excavated soil and debris must include acknowledgement that the waste to be accepted may contain the stabilization additives to be used by the CONTRACTOR.
- D. ENGINEER shall provide U.S. EPA Identification Number for hazardous waste and TSCA waste management, shipment, and disposal.

PART 2. PRODUCTS

NOT USED.

PART 3. EXECUTION

3.1 PREPARATION

- A. Remove ice and snow before excavation, if present.
- B. Conduct all required construction survey control work, establish lines and datum, including pre-construction survey as specified in Section 01 71 23, Field Engineering, Section 01 71 23.01, Modifications to Field Engineering, and as required by the Contract Documents.
- C. Complete start-up and testing of the dewatering and water treatment systems, and ensure functionality prior to start of excavation.
- D. Survey and mark out in the field the excavation boundaries/limits. CONTRACTOR shall not begin any excavation work prior to ENGINEER's review and approval of the excavation boundary survey and mark out of excavation limits at the site.

3.2 PROTECTION

- A. Notify all area utility companies, as appropriate, prior to commencing work in accordance with state and local regulations.
- B. CONTRACTOR shall employ all means necessary to prevent areas outside the excavation limits from being contaminated during the remediation activities. In the event an area outside the excavation limits becomes contaminated due to the activities or the fault of the CONTRACTOR, the CONTRACTOR shall remove the contaminated areas and perform post-excavation soil sampling to the satisfaction of the DEPARTMENT at the CONTRACTOR's expense.
- C. Protect all aboveground components of the remedy including benchmarks, survey monuments, trees, monitoring wells, existing structures, fences and gates from damage by excavation equipment and vehicular traffic.
- D. Underpin adjacent structures which may be damaged by excavation Work, including service utilities.
- E. Excavations shall be open excavations, sloped, benched and/or sheeted and braced where necessary to prevent possible injury to personnel, equipment and structures. The CONTRACTOR shall sheet and brace excavations where sloping/benching is not possible either because of space restrictions or stability. All shoring systems shall be designed by a professional engineer licensed to practice in the State of New York.
- F. Do not remove or disturb any materials outside the Limits of Work.
- G. Excavation shall be accomplished by methods which preserve the undisturbed state of subgrade soils. Do not plow, scrape, or dig with machines below the specified extents of excavation unless specifically directed.

- H. Upon completion of the excavation and post-excavation sampling, the CONTRACTOR shall provide resources to protect, secure and maintain the Site until disturbed areas can be restored.
- I. Stop work during periods of sustained strong winds (25 miles per hour or greater) and/or during periods of heavy rain (0.16 inches per hour or greater).

3.3 EXCAVATION

- A. Excavation shall be conducted in compliance with all New York State and OSHA requirements, and requirements of other authorities having jurisdiction.
- B. Maintain limits of excavation dry by dewatering to at least one foot below specified final elevation of work, during excavation, post-excavation sampling and analysis, inspection, surveying, backfilling, planting, and restoration.
- C. Grade perimeter of excavation to prevent surface water drainage into excavation.
- D. Provide and maintain shoring and bracing in excavations as needed and for duration needed until removal of the shoring and bracing and backfilling is approved by the ENGINEER. Carry down shoring and bracing as needed.
- E. Benching/cut back shall be performed at excavation sidewalls beyond limits specified where required to maintain excavation stability. Cut back shall be minimized and only performed where required for excavation sidewall stability. Limits of required cut back are not shown on Contract Drawings. All cut back material shall be removed and disposed off-Site as non-TSCA contaminated material with PCB concentrations of <50 mg/kg.
- F. Survey the layout of the excavation prior to beginning. Excavation areas shall be divided into maximum 30-foot by 30-foot grid boxes for post-excavation sampling. Refer to Supplementary Specification Section 01 43 36, Field Samples and Analysis and 01 71 23.01, Modifications to Field Engineering. Use grade stakes to measure the depth of excavation as the work proceeds.
- G. Notify the ENGINEER of unexpected subsurface conditions and discontinue affected work in area until notified to resume work.
- H. Bedrock is not expected to be encountered as part of this project. If bedrock is encountered, the top of bedrock shall be considered the bottom of excavation even if the Contract Drawings indicate excavation to greater depths is required. In this case, all soil shall be cleared to the top of bedrock for proper off-Site disposal.
- I. Excavate Asbestos Containing Soil and Debris first. Excavation of Asbestos Containing Soil and Debris shall be performed according to Section 02 82 00, Removal and Disposal of Asbestos Containing Soil and Debris. Care shall be taken by the CONTRACTOR to prevent release of asbestos containing soil and debris within the excavation area or on the Site. Asbestos Containing Soil and Debris shall be managed and disposed as asbestos containing waste, additionally contaminated with PCBs at concentrations of greater than 50 mg/kg, Perfluorooctanesulfonic acid (PFOS) at concentrations of approximately 6 ug/kg, total lead concentrations of approximately 3,900 mg/kg, and lead concentrations in leachate of approximately 31 mg/l when analyzed using the Toxicity Characteristic Leaching Procedure (TCLP).

1. After removal of Asbestos Containing Soil and Debris, layout maximum 30-foot by 30-foot survey sampling grid.
 2. Survey separately limits of Asbestos Containing Soil and Debris excavation.
 3. Provide all labor, equipment and materials required to facilitate ENGINEER's up-close inspection of excavation. The CONTRACTOR shall make no claims due to stoppage or delay of work as a result of ENGINEER's inspection of excavation areas.
 4. Any tracking of contaminated material to uncontaminated areas, or other means of cross-contamination, will require remediation to the satisfaction of the DEPARTMENT at the sole cost and expense of the CONTRACTOR.
 5. Decontaminate equipment after work in Asbestos Containing Soil and Debris excavation areas, and prior to movement of equipment to the PCB contaminated excavation areas.
- J. Begin excavation of PCB contaminated soil and debris only after the removal and surveying is completed in all Asbestos Containing Soil and Debris areas and approved by the ENGINEER.
- K. Excavation Areas A through E
1. PCB contaminated soil and debris (TSCA and Non-TSCA) shall be excavated in maximum 3-foot thick lifts extending from the ground surface to the bottom of excavation (up to 3 feet below the ground surface, as specified on the Contract Drawings). Each lift shall be excavated using the following procedures:
 - a. Construct access roads to excavation areas. Clear and grub access road routes entirely. Prior to clearing and construction of access roads, obtain ENGINEER'S approval of routes. Minimize tree removal.
 - b. Layout the limits of excavation for both the TSCA and Non-TSCA Contaminated Soil and Debris using the coordinates provided on the Drawings.
 - c. Following approval of the layout by ENGINEER, commence excavation of TSCA Contaminated Soil and Debris in each lift.
 - d. In each area TSCA Contaminated Soil and Debris shall be excavated in advance of excavation of Non-TSCA Contaminated Soil and Debris.
 - e. For Areas A through E excavations which do not contain TSCA Contaminated Soil and Debris, proceed directly to removal of Non-TSCA Contaminated Soil and Debris, refer to Article J.2 below.
 - f. Upon completion of TSCA Contaminated Soil and Debris excavation from each lift, layout survey sampling grid in the completed TSCA Contaminated Soil and Debris excavation as shown on the Contract Drawings. Complete post-excavation sampling in each excavation grid box at limits of specified excavation (collect sidewall and excavation bottom samples, in accordance with Section 01 43 36 – Field Samples and

Analysis) as soon as practicable in order to maintain the construction schedule.

- g. Expand areas of TSCA Contaminated Soil and Debris excavation, if necessary, based on the post-excavation sample results and direction from the ENGINEER and the DEPARTMENT. If directed, perform additional post-excavation sampling.
 - h. Survey separately post-excavation sample locations, and limits of TSCA Contaminated Soil and Debris excavation.
 - i. All known TSCA Contaminated Soil and Debris shall be removed from each lift prior to beginning Non-TSCA Contaminated Soil and Debris removal. The CONTRACTOR shall maintain the excavation in a dry condition, facilitating inspections by DEPARTMENT and ENGINEER. Provide all labor, equipment and materials required to facilitate ENGINEER's up-close inspection of excavations. The CONTRACTOR shall make no claims due to stoppage or delay of work as a result of ENGINEER's inspection of excavation areas.
 - j. Any tracking of contaminated material to uncontaminated areas, or other means of cross-contamination, will require remediation to the satisfaction of the DEPARTMENT at the sole cost and expense of the CONTRACTOR.
 - k. Decontaminate equipment after work in TSCA Contaminated Soil and Debris excavation area(s), and prior to movement of equipment to the Non-TSCA Contaminated Soil and Debris excavation areas. CONTRACTOR may alternately use dedicated equipment in each area to minimize decontamination efforts.
2. Excavate Non-TSCA Contaminated Soil and Debris from each area only after the removal and surveying of the limits of removal of TSCA Contaminated Soil and Debris has been completed, and approved by the ENGINEER.
3. Upon completion of excavations in each excavation lift, layout survey sampling grid as specified in the completed excavation area. Also, layout subsequent lift excavation limits (TSCA and Non-TSCA soil and debris).
- a. Each Area A, B, C, and E, regardless of size and dimensions, shall be sampled as specified for a 30-foot by 30-foot grid box (i.e., as if each area was a 30-foot by 30-foot grid box). Area D sampling grids shall be laid out in accordance with Contract Drawings.
 - b. Complete post-excavation sampling in accordance with Section 01 43 36 – Field Samples and Analysis (excavation bottom and sidewall samples) at the specified limits of excavations. Complete post-excavation sampling as soon as practicable in order to maintain the construction schedule.
 - c. Expand areas of excavation, if necessary, based on the post-excavation sample results and direction from the ENGINEER and the DEPARTMENT. If directed, perform additional post-excavation sampling.
 - d. If additional excavation is required, expand the excavation limits as directed.

- e. Any disturbance of the open excavation by CONTRACTOR's work, equipment movement, or excavation flooding prior to backfilling, will require sampling to be repeated in all affected areas at the sole cost and expense of the CONTRACTOR. Any tracking of contaminated material to uncontaminated areas, or other means of cross-contamination, will require remediation and sampling to the satisfaction of the DEPARTMENT at the sole cost and expense of the CONTRACTOR.
- L. Former Waste Accumulation Area: PCB contaminated soil and debris (TSCA and Non-TSCA) shall be excavated in 2-foot thick lifts extending from the ground surface to the bottom of excavation (approximate elevation 405.0 feet). Each lift shall be excavated using the following procedures:
 - 1. Layout the limits of excavation for both the TSCA and Non-TSCA Contaminated Soil and Debris using the coordinates provided on the Drawings. Layout limits of benching/cut back as required for excavation sidewall stability.
 - 2. No payment shall be made for excavation cut back for stabilizing excavation side slopes above the minimum volume required for slope stabilization in the opinion of the ENGINEER. Excavation cut back volume for side slope stabilization shall not exceed the volume required for side slopes of 2:1 (horizontal : vertical).
 - 3. Following approval of the layout by ENGINEER, commence excavation of TSCA Contaminated Soil and Debris.
 - 4. In each 2-foot thick lift TSCA Contaminated Soil and Debris shall be excavated in advance of excavation of Non-TSCA Contaminated Soil and Debris.
 - 5. For excavation lifts which do not contain TSCA Contaminated Soil and Debris, proceed directly to removal of Non-TSCA Contaminated Soil and Debris, refer to Article L below.
 - 6. Upon completion of TSCA Contaminated Soil and Debris excavation from each lift, survey limits of excavation to confirm removal to specified extents.
 - 7. All known TSCA Contaminated Soil and Debris shall be removed from each lift prior to beginning Non-TSCA Contaminated Soil and Debris removal. The CONTRACTOR shall maintain the excavation in a dry condition, facilitating inspections by DEPARTMENT and ENGINEER. Provide all labor, equipment and materials required to facilitate ENGINEER's up-close inspection of excavations. The CONTRACTOR shall make no claims due to stoppage or delay of work as a result of ENGINEER's inspection of excavation areas.
 - 8. Any disturbance of an open excavation by CONTRACTOR's work, equipment movement, or excavation flooding prior to backfilling, will require sampling in all affected areas at the sole cost and expense of the CONTRACTOR. Any tracking of contaminated material to uncontaminated areas, or other means of cross-contamination, will require remediation and sampling to the satisfaction of the DEPARTMENT at the sole cost and expense of the CONTRACTOR.
 - 9. Decontaminate equipment after work in TSCA Contaminated Soil and Debris excavation area(s), and prior to movement of equipment to the Non-TSCA Contaminated Soil and Debris excavation areas. CONTRACTOR may alternately use dedicated equipment in each area to minimize decontamination efforts.

- M. Former Waste Accumulation Area: Excavate Non-TSCA Contaminated Soil and Debris from each 2-foot thick lift only after the removal and surveying of the TSCA Contaminated Soil and Debris for the lift has completed, and approved by the ENGINEER.
1. Upon completion of excavations in each excavation lift, layout maximum 30-foot by 30-foot survey sampling grid in the completed excavation area. Also, layout subsequent lift excavation limits (for TSCA and Non-TSCA Contaminated Soil and Debris).
 2. Complete post-excavation sampling in accordance with Section 01 43 36 – Field Samples and Analysis (excavation bottom and sidewall samples) in areas at the specified limits of excavations. Complete post-excavation sampling as soon as practicable in order to maintain the construction schedule.
 3. Expand areas of excavation, if necessary, based on the post-excavation sample results and direction from the ENGINEER and the DEPARTMENT. If directed, perform additional post-excavation sampling.
 4. If additional excavation is required, expand the excavation lift limits as directed.
 5. Any disturbance of an open excavation by CONTRACTOR's work, equipment movement, or excavation flooding prior to backfilling, will require sampling in all affected areas at the sole cost and expense of the CONTRACTOR. Any tracking of contaminated material to uncontaminated areas, or other means of cross-contamination, will require remediation and sampling to the satisfaction of the DEPARTMENT at the sole cost and expense of the CONTRACTOR.
- N. CONTRACTOR shall not excavate vertically beyond the 2-foot lift being worked prior to completion of all tasks listed above and ENGINEER's approval.
- O. The CONTRACTOR shall maintain excavations in a dry condition, facilitating inspections by DEPARTMENT and ENGINEER for a period of 10 days after receipt of final post-excavation sampling results. Provide all labor, equipment and materials required to facilitate ENGINEER's up-close inspection of excavations. The CONTRACTOR shall make no claims due to stoppage or delay of work as a result of post-excavation sample results evaluation by the ENGINEER or ENGINEER's inspection of excavation areas.
- P. Begin backfilling of excavations only after receipt and acceptance by the ENGINEER of all final post-excavation sample results and final surveyed excavation drawings for all excavation lifts and areas. Results of post-excavation sampling shall be submitted to the ENGINEER within 72 hours of sample collection. DUSR reports and other laboratory data submittals shall be submitted within 45 days of sample collection.
- Q. Temporary stockpiles of excavated Non-TSCA Contaminated Soil and Debris adjacent to excavation areas is allowed, only in areas which have not yet been excavated and within the limits of specified excavation. At the end of each workday, all temporarily stockpiled material shall be stockpiled as shown on the Contract Drawings and as specified, in approved stockpiling locations. Grade temporary stockpiles to provide positive drainage. Inspect stockpiles daily for free liquids and remove and containerize immediately for treatment. Refer to other specification sections for additional requirements for stockpiles and water management. TSCA Contaminated Soil and Debris shall only be stockpiled in ENGINEER-approved stockpiling areas and as shown on the Contract Drawings.

- R. Manage excavation activities and excavated material consistent with the approved Work Plan.
- S. All excavated material shall be removed from the Site by the CONTRACTOR in accordance with the Contract Documents.
- T. The DEPARTMENT will not reimburse the CONTRACTOR for removal, handling, or disposal of any over excavated materials and for related backfilling, compaction and seeding (i.e., no payment for work associated with materials removed from beyond the specified or directed limits of excavation).

3.4 HANDLING

- A. Stage excavated soil and debris in stockpiles as specified and shown on the Drawings or in roll-off containers prior to loading and transporting off-Site for disposal.
- B. Dewater excavated material as specified in Supplementary Specification Section 31 32 13, Excavated Material Dewatering and Stabilization.
- C. Stabilize excavated soil and debris by addition of approved stabilizing agents, only if required for acceptance by the disposal facility, as described in Supplementary Specification Section 31 32 13, Excavated Material Dewatering and Stabilization.
- D. Storage and handling of contaminated soil and debris shall comply with all applicable NYSDEC solid waste regulations (6NYCRR Part 360), hazardous waste regulations (6 NYCRR Parts 370-376) and guidance and requirements of the Toxic Substances Control Act (40 CFR 761).
- E. The CONTRACTOR is responsible for ensuring prior to loading and shipping that all waste meets the approved disposal facility's acceptance criteria, including, but not limited to, the absence of free liquids.
- F. All water that has contacted contaminated soil and debris shall be properly handled, characterized, and treated and/or disposed of off-Site.

3.5 LOADING, HAULING, AND DISPOSAL

- A. Load soil and debris for transport to off-Site disposal facilities.
- B. Transport soil and debris for disposal to either the primary or backup approved disposal facilities, as described in the approved Work Plan. Prepare and provide all waste manifests.
- C. Do not mix TSCA regulated and non-TSCA regulated waste. Comply with facility waste acceptance criteria for management and disposal of Asbestos Containing Soil and Debris. Do not combine wastes that are regulated differently. All soil and debris regulated as PCB Remediation Waste shall be disposed in accordance with 40 CFR 761.61(b). Each stockpile, transport vehicle and container may only contain one waste type. CONTRACTOR shall comply with Supplementary Specification Section 02 51 00, Decontamination Procedures, after using vehicles and equipment for waste transport.
- D. Refer to Supplementary Specification Section 02 82 33 – Removal and Disposal of Asbestos Containing Soil and Debris, for additional requirement for asbestos containing wastes.

- E. Complete all waste characterization sampling and applications prior to transporting and in compliance with the Contract Documents and the requirements of the approved disposal facility.
- F. Benching/cut back material shall be disposed of as non-TSCA contaminated material with PCB concentrations of <50 mg/kg.
- G. Vehicles transporting waste must have a valid 6 NYCRR Part 364 Waste Transporter Permit and be approved to transport the specific waste to the intended disposal facility. Transport and deliver waste only with approved vehicles and only to disposal facilities approved by the ENGINEER.
- H. Directly transport all waste to approved disposal facilities.
- I. All vehicles transporting waste shall be inspected before every trip. Inspect each vehicle to ensure that all doors, covers, etc. are secure and that no material can spill or otherwise be released or leak. Each waste transport vehicle shall bare, at a minimum, the name and phone number of the operator, plainly visible. The ENGINEER may prohibit from use any vehicle which does not satisfy the requirements of the Contract Documents.
- J. Vehicles transporting soil and debris shall be covered prior to leaving the Site. Take all measures to prevent releases from loaded transport vehicles. ENGINEER may reject the use of trucks that are damaged or otherwise not able to transport material securely.
- K. Vehicles used to transport materials shall be designed, equipped, operated, and maintained to prevent leakage, spillage, and airborne emissions during transport. CONTRACTOR shall remedy any damage caused by leakage from trucks in transport.
- L. All vehicles shall be decontaminated prior to leaving the staging area, including truck tires and under carriages. The CONTRACTOR is responsible for supplying all labor, materials, equipment, and supplies for decontaminating vehicles. Decontamination waste shall be collected and managed as described elsewhere in the Contract Documents.
- M. The CONTRACTOR shall submit completed manifests and/or shipping papers for each container to document proper disposal. The following shall be provided for each load:
 - 1. Truck license plate number;
 - 2. Trailer license plate number;
 - 3. Container number;
 - 4. Transporter's name, address, contact person and phone number;
 - 5. Printed name and signature of the CONTRACTOR and date and time the load was shipped;
 - 6. Printed name and signature of the disposal facility representative and date and time that the load was received at the facility; and
 - 7. Disposal facility scale ticket including the following:
 - a. Disposal facility name, address, and telephone number,

- b. Scale ticket number,
- c. Manifest number,
- d. Truck license plate number,
- e. Trailer license plate number,
- f. Container number,
- g. Transporter's name, and
- h. Gross, net and tare weight of load.

END OF SECTION

SECTION 31 23 19
DEWATERING

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Minimum CONTRACTOR qualifications.
- B. Provision of portable, temporary, removable dams at the locations shown on the Contract Drawings and as specified herein.
- C. Dewatering water from excavation, inspection, survey, sampling, backfill, and planting areas in compliance with the Contract Documents and permits obtained for the Work.

1.2 DESCRIPTION

- A. Provide all labor, materials, equipment, power and incidentals for dewatering excavation, inspection, survey, sampling, backfill, and planting areas. Dewater specified areas in accordance with approved Dewatering Plan.
- B. The CONTRACTOR shall provide dewatering dams as shown on the Contract Drawings. Dewatering dams include all diking, sheeting, and dam structures and elements to complete dewatering to lower the water in the wetland area below the specified bottoms of the excavations and to maintain such a level so that the excavation of contaminated material, backfill, surveys, inspections, sampling and planting are completed under dry conditions.
- C. Dewatering of excavation areas is required prior to beginning excavation and until after completion of planting/seeding. Continue dewatering until approval to stop is issued by the ENGINEER.
- D. As part of dewatering remove all liquids encountered, including, but not limited to, contaminated water and separate phase liquids. Properly treat water for discharge on-site and dispose of separate phase liquids off-site in accordance with the requirements of the Contract Documents

1.3 REFERENCES

- A. OSHA Safety and Health Regulations for Construction, 29 CFR 1926.

1.4 CONTRACTOR QUALIFICATIONS

- A. The CONTRACTOR, or approved subcontractor, responsible for dewatering, must have successfully completed at least 3 similar dewatering projects, involving similar area (i.e., square feet), contamination (i.e., PCBs) and in support of environmental remediation.
- B. The Dewatering Plan must be prepared by an experienced professional that shall also be responsible for the implementation of the Plan. The responsible individual must have prepared a minimum of 3 similar plans, involving similar contamination (i.e., PCBs) and in support of soil excavation and off-Site disposal.

1.5 SUBMITTALS

- A. The CONTRACTOR shall submit a list of similar projects (List of Dewatering Projects) demonstrating compliance with the qualification requirements in Article 1.4 of this section. The list shall include for each project, the following:
1. Name and contact information for site owner.
 2. Name of contractor/subcontractor responsible for dewatering and name of individual(s) responsible for design and operation of the dewatering system.
 3. Description of the project remedial action and dewatering activities, including: i) purpose for the dewatering, ii) area in square feet dewatered, iii) feet of drawdown, iv) average gallons of water removed per day, v) length in days of the dewatering effort, vi) contaminants in extracted water, vii) equipment used for dewatering and water treatment, and viii) problems or issues encountered.
- B. The CONTRACTOR shall prepare and submit a Dewatering Plan as part of Supplementary Specification Section 01 15 00, Minimum Requirements for Work Plan. Approval of the Dewatering Plan by the ENGINEER shall be required prior to start of dewatering. The Dewatering Plan shall include the following elements at a minimum:
1. Means and methods proposed for isolating the excavation area from the nearby wetland surface water body. Include details of design of the dewatering dams and/or products proposed for use (e.g., Portadam®, AquaDam®, Aqua-Barrier™) in controlling water.
 2. Means and methods proposed for water pumping and transfer system including:
 - a. Dewatering sump design (shall be in accordance with New York State Standards and Specifications for Erosion and Sediment Control), or alternately, extraction well design;
 - b. Pumping system design, including pumps, suction hose and force main sizes and product and material types;
 - c. Methods to be used to prevent spills and leaks; and
 - d. Plans for monitoring including labor and responsibilities for monitoring during non-working hours.
 3. Design calculations demonstrating the adequacy of the proposed dewatering system, including elevation of static water at excavation limits under pumping conditions and projected flow rates of the dewatering system.
 4. Procedures for installation and for operation and maintenance of the dewatering system during each phase of the Work.
 5. Description of power supply for all dewatering equipment.
 6. Design of CONTRACTOR's proposed Water Treatment and Discharge System as specified in Supplementary Specification Section 44 01 40, Water Treatment.

7. Submit description of proposed continuous water level elevation monitoring equipment including type, manufacturer, quantity, location of installations, and frequency of monitoring, recording and reporting of water level elevations.
8. Dewatering Staffing Plan. Staffing Plan shall include at a minimum:
 - a. Name and Qualifications of Lead Dewatering Operator responsible for operation, monitoring, maintenance and performance of the system.
 - b. Schedule showing times Lead Operator will be on-Site.
 - c. Shift schedule showing periods (start time and stop time) of each shift for 24-hour per day 7-day per week operation of the Dewatering System.
 - d. Names of on-Site operators for each shift period for a typical 7-day week for each hour of each day, Sunday through Saturday.
 - e. Names of back-up operators for times when primary operators are not available.
- C. The Dewatering Plan shall include to-scale drawings signed and sealed by a New York State licensed Professional Engineer showing the water isolation system dewatering dams, dewatering system, and water treatment and discharge system. The drawings shall show materials of construction, material and equipment sizes and dimensions, product manufacturers and model numbers, layouts, arrangements, sections, and details of each component of each system.
- D. Dewatering system shall be designed and operated in accordance with NYSDEC's Standards and Specifications for Erosion and Sediment Control, dated November 2016 and the requirements of the Contract Documents.

1.6 QUALITY ASSURANCE

- A. Dewatering dam, dewatering system, and water treatment system described in the Contract Documents shall be comprehensive and designed to work together to achieve dry conditions for the Work. The CONTRACTOR is solely responsible for design, modifications, additional equipment, installation, startup, testing, operation, maintenance, and monitoring to ensure functionality of the systems required for dewatering, compliance with permits and regulations and satisfaction of the requirements of the Contract Documents.
- B. The design of the dewatering dams, dewatering/pumping system, and water treatment system shall be prepared by a Professional Engineer. The Professional Engineer shall be licensed in the State of New York and qualified to design all elements of the submittal. The Professional Engineer shall be the same as specified under Supplementary Specification Section 44 01 40, Water Treatment. Submittals shall be signed and sealed by the Professional Engineer.

PART 2. PRODUCTS

2.1 DEWATERING DAM

- A. The dewatering dam shall be portable, temporary, removable dam for control of water during the Work.

1. Dewatering dam material shall be compatible with placement in the anticipated environment. Dewatering dam shall be of rugged and durable construction and shall be compatible with low concentrations of PCBs.
 2. The dewatering dam shall be installed immediately outside of the excavation area. The CONTRACTOR is responsible for the restoration of the wetland area, including, after removal, beneath the dewatering dams.
 3. Dewatering dam shall be Portadam® as manufactured by Portadam, Inc., AquaDam® as manufactured by Aqua Dam, Inc., Aqua-Barrier™ as manufactured by HSI Services, Inc., or ENGINEER-approved equal. Or-equal products shall be products specifically manufactured for the intended purpose.
 4. Alternative dewatering dams shall be acceptable if shown to meet the requirements of the Contract Documents.
 5. Jetting equipment and vibratory equipment shall not be used for installation and/or removal of dewatering dam components.
- B. Design of the dewatering dam shall be by the CONTRACTOR for the Site specific conditions, including nature and types of soil, sediments and debris present, ground bearing capacity, water depths, and all other relevant conditions. Base design on 25-year flood conditions. Provide calculations, signed and sealed by a New York State licensed Professional Engineer, documenting that when installed at the site as planned the dewatering dam will remain stationary, secure and stable under storm conditions.
- C. Continuous monitoring of the performance of the dewatering dam is required. Provide continuous monitoring equipment to monitor water levels inside and outside of the dewatering dam. Equipment shall be instrumentation manufactured for the intended purpose such as electronic pressure transducers or approved equal.
- D. The Work includes installing additional dewatering dams not shown on the Drawings if necessary to effectively control water in the work areas.

2.2 DEWATERING SYSTEM EQUIPMENT

- A. Provide equipment compatible with Site conditions and the approved dewatering system design in the Work Plan.
- B. Utilize well points, temporary sumps, or other means approved by ENGINEER, to minimize sediment mobilization through pumping system, and reduce the amount of sediment requiring removal from the water prior to discharge.

PART 3. EXECUTION

3.1 DEWATERING DAM

- A. If the dewatering dams are filled with water, water shall be from a potable water source.
- B. The CONTRACTOR shall provide all equipment, appurtenances, labor, and materials necessary to install the dewatering dams in accordance with manufacturer's recommendations and the approved Work Plan.

- C. Install the dewatering dams to extend at least 10 feet beyond the specified limits of excavation adjacent to the wetland.
- D. Provide all shoring, bracing, and accessories necessary to secure the dewatering dams during excavation and as excavation progresses and to prevent movement of dewatering dams and potential for injury to personnel, property, and the Work.
- E. CONTRACTOR shall maintain and repair dewatering dams to control infiltration during the Work.

3.2 DEWATERING SYSTEM

- A. Install all equipment in accordance with CONTRACTOR's approved Dewatering Plan.
- B. If, in the opinion of the ENGINEER, the water levels are not lowered or maintained as required by the Contract Documents, install additional or alternate dewatering equipment at no additional cost to the DEPARTMENT.
- C. Provide an identical standby or backup pump for each pump in operation in the excavation area.
- D. Put standby equipment in immediate operation in the event that any part of the system becomes inadequate or fails.

3.3 WATER TREATMENT SYSTEM

- A. Refer to Supplementary Specification Section 44 01 40, Water Treatment. Water treatment system shall be operational prior to start of dewatering.

3.4 MAINTENANCE

- A. Maintain the dewatering dam, dewatering system, and water treatment system throughout the Work until they are no longer required as approved by the ENGINEER.
- B. Inspect and monitor the dewatering dam, dewatering system, and water treatment system daily for any loss of function, leaks, damage, or other conditions that result or have the potential to result in any component of the systems not operating as intended and specified. Notify ENGINEER immediately of any such condition. Correct such conditions immediately.
- C. Daily inspection and monitoring of the dewatering dam equipment shall include evaluation for settlement and other conditions that could result in failure.

3.5 GENERAL REQUIREMENTS FOR DEWATERING

- A. Do not commence pumping until installation of the dewatering system has been approved by the ENGINEER.
- B. The dewatering system shall be operable in advance of excavation. CONTRACTOR shall maintain excavation water levels below the bottom of the excavation during all stages of construction.
- C. Unless otherwise approved by the ENGINEER, the dewatering system shall be operated on a twenty-four hour per day basis, seven days per week, and standby pumping facilities

shall be maintained on Site to ensure uninterrupted operation. CONTRACTOR shall be required to provide twenty-four-hour oversight of the dewatering system. Remote telemetry may be used for this purpose if approved by the ENGINEER. Dewatering operations shall not be discontinued without the prior written approval of the ENGINEER.

- D. Dewatering may be accomplished by wells, open sumps, or other methods proposed and accepted in the Work Plan.
- E. Begin dewatering of the excavation areas as soon as start-up, including testing, of the water treatment system is complete and the dewatering dam is installed, and approval is issued by the ENGINEER. Install additional dams as necessary to block infiltration during dewatering.
- F. Maintain excavation areas in a dry condition until completion of excavation, post-excavation sampling, inspections by DEPARTMENT and ENGINEER, backfill, seeding, and surveying.
- G. Maintain adequate supervision and control to ensure the stability of excavated slopes and areas are not adversely affected by water, erosion is controlled, flooding is prevented, and damage to structures does not occur.
- H. Discontinue dewatering operations upon completion of the seeding and acceptance of the Work by the DEPARTMENT.
- I. Lowering of water to the injury or detriment of structures and improvements shall be part of the CONTRACTOR's risk and responsibility. Any structure or improvement damaged as a result of the lowering of the water shall be repaired or replaced to the satisfaction of the DEPARTMENT at the expense of the CONTRACTOR.

3.6 DEWATERING OF EXCAVATED SOIL AND DEBRIS

- A. Refer to Supplementary Specification Section 31 23 16, Excavation.
- B. Prior to loading and transporting soil and debris off-Site, sufficiently dewater saturated soil and debris to pass a paint filter test (SW-846 Test Method 9095B), as well as all disposal facility requirements.
- C. At the end of each workday, all excavated material shall be stockpiled and covered as shown on the Contract Drawings and as specified, in approved stockpiling locations. Refer to other Supplementary Specification Sections for additional requirements for stockpiles and water management.
- D. If the CONTRACTOR's dewatering methods require movement of soil and debris beyond the specified excavation limits, the CONTRACTOR shall prepare a lined stockpile area with sump for water collection. The CONTRACTOR shall, at no additional cost to the DEPARTMENT, move all such excavated soil and debris directly to the prepared lined stockpile area for management, and manage and dispose of the material in accordance with the requirements of the Contract Documents. Care shall be taken not to release any waste materials during transport between the excavation area and stockpile area. At its sole cost and expense, the CONTRACTOR shall immediately clean any spills outside of contained areas (e.g., the active excavation area or a lined stockpile area) and sample impact areas after cleanup.

- E. Manage water generated during dewatering in accordance with the Work Plan, permits, and the Contract Documents.

3.7 GENERAL WATER MANAGEMENT

- A. Containerize water generated during vehicle washing/decontamination and other Site uses that generate contaminated water.
- B. Treat containerized water with the water treatment system. Untreated water shall not be discharged at the Site or to adjacent surface water bodies.
- C. Do not allow potentially contaminated water to be released. Contain and capture all potentially contaminated water. At its sole cost and expense, CONTRACTOR shall remediate any soil and clean any materials that contact potentially contaminated water and sample impacted areas after cleanup.

3.8 REMOVAL OF WATER TREATMENT SYSTEM

- A. Refer to Supplementary Specification Section 44 01 40, Water Treatment. Water treatment system shall be removed only after all contaminated water has been properly treated and dewatering operations have ceased by the CONTRACTOR and the ENGINEER has agreed that dewatering and water treatment are complete.

3.9 REMOVAL AND DECONTAMINATION OF WATER PUMPING SYSTEM AND DEWATERING DAM(S)

- A. Remove all materials and components of the dewatering dams upon completion of the Work. Move all materials and components to a decontamination pad for cleaning and/or preparation for off-site disposal.
- B. Decontaminate nonporous surfaces if the material or equipment will be retained by the CONTRACTOR or returned to the manufacturer/supplier. Follow all requirements of the manufacturer/supplier and the Contract Documents for decontamination, including management of solids and liquids generated during decontamination.
- C. Characterize, load, haul, and dispose of porous materials and all materials that will not be decontaminated for reuse. Follow all requirements for waste management as described in the Contract Documents.
- D. Hoses used in the dewatering work shall be considered porous media and shall be characterized, transported and disposed off-site.

3.10 RESTORATION

- A. Restore areas occupied or disturbed by the dewatering dams after removal as specified below and in the Contract Documents.
 - 1. Areas that become inundated following removal of the dewatering dams shall not be addressed or further disturbed following removal of the dams.
 - 2. Areas that are not inundated following removal of the dewatering dams shall be restored in accordance with Supplementary Specification Section 32 92 00, Turf and Grasses, and additional requirements of the Contract Documents.

END OF SECTION

SECTION 31 23 23
FILL

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. The CONTRACTOR shall furnish all labor, materials, supplies, equipment, power, facilities and incidentals necessary to perform all backfilling, grading and compacting of all fills shown, specified, and required to complete the Work as shown on the Contract Drawings, as specified herein, and as directed by the DEPARTMENT.
- B. Included is earthwork necessary for replacement of topsoil within all areas disturbed by construction. Furnish and install all materials necessary for fill, topsoil, backfill, and Site restoration.
- C. All necessary preparation of subgrade is included.
- D. All imported materials shall be tested in accordance with this section and Supplementary Specification Section 01 43 36, Field Samples and Analysis. Approval from the ENGINEER is required before import to the site.

1.2 REFERENCES

- A. ASTM C136, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- B. ASTM D1556, Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
- C. ASTM D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft³ (2,700 kN-m/m³)).
- D. ASTM D2167, Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
- E. ASTM D2434, Standard Test Method for Permeability of Granular Soils (Constant Head).
- F. ASTM D2487, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- G. ASTM D6913, Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis.
- H. ASTM D6938, Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- I. NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation.

1.3 SUBMITTALS

- A. FILL PLAN

1. CONTRACTOR shall prepare a Fill Plan in accordance with this section and as part of the Work Plan specified under Supplementary Specification Section 01 15 00, Minimum Requirements for Work Plan. Import of material shall not begin until ENGINEER has approved CONTRACTOR's Fill Plan. CONTRACTOR's Fill Plan shall include at a minimum:
 - a. Sequence and schedule for fill and topsoil placement. Identify specifically sequence of fill and topsoil placement, identify in the sequence allowances for approvals and inspections by ENGINEER and DEPARTMENT, and collection and analysis of post-excavation samples throughout the excavation area and surveying.
 - b. Identification of the proposed source of each material to be imported to the site, including name, address (including block and lot numbers), contact information, licenses and certifications for the mining or processing operation. Include descriptions of the current and former uses and history of the location of each source of material.
 - c. Identification of all equipment proposed for use in the backfilling, grading, compaction, and preparation for planting and seeding tasks, including manufacturer's specifications.
 2. Submit material testing documentation, including field testing, and samples of Topsoil and Clean Fill as described herein and in Supplementary Specification Section 01 43 36, Field Samples and Analysis. A certified copy of the materials testing reports and test methods shall be submitted to the ENGINEER prior to acceptance of any fill materials at the site.
 3. Submit NYSDEC Request for Import/Reuse Fill or Soil Fill Form, completed and signed. Template form is inserted following this specification.
- B. At the time of delivery of each load of material to the site, the CONTRACTOR shall provide a certified load ticket indicating the source of supply (name and address), weight of load in tons, vehicle identification number, and date and time of departure from the source and arrival at the site. Invoice backup shall be provided to cross-reference each certified load tickets. No payments will be made for loads that are not represented by a certified load ticket provided at the time of delivery.

1.4 QUALITY ASSURANCE

A. Samples and Tests:

1. Materials used shall be subject to examination and tests before acceptance and during the duration of this Contract.
2. Any material may be tested and no materials for which laboratory tests are required shall be used by the CONTRACTOR until the CONTRACTOR has received notification of acceptance from the Engineer, and then only as long as its quality remains equal to that of the accepted sample.
3. Material rejected as the result of laboratory tests will not be resampled or retested unless otherwise directed by the DEPARTMENT.

4. Results of the test of any material may be compared with records of similar materials in actual service, and when such service record is unsatisfactory, use of the material will not be allowed even though the tests are satisfactory.
5. Prior to delivery of material to the site, deliver to the ENGINEER a 15-pound bag representative of each material proposed for use. ENGINEER's approval is required for all material prior to delivery to the site. If ENGINEER finds that characteristics of material delivered do not match characteristics of samples provided, ENGINEER may, at no cost to the DEPARTMENT, reject material delivered.
6. Testing of materials for approval shall include, but shall not be limited to, the following (all tests to be performed after screening or processing of the material).
 - a. Grain size distribution in accordance with ASTM D6913, including hydrometer analysis. Topsoil: Minimum of one sample per source and minimum of one sample per each 500 cubic yards of Topsoil proposed for import. Clean Fill: Minimum of one sample per source and minimum of one sample per each 500 cubic yards of Clean Fill proposed for import. Coarse Aggregate: Minimum of one sample per source and minimum of one sample per each 100 cubic yards of Coarse Aggregate proposed for import.
 - b. Characterization in accordance with ASTM D2487. Topsoil: Minimum of one sample per source and minimum of one sample per each 500 cubic yards of Topsoil proposed for import. Clean Fill: Minimum of one sample per source and minimum of one sample per each 500 cubic yards of Clean Fill proposed for import.
 - c. Chemical Analysis – Chemical analysis of Topsoil and Clean Fill shall be performed in accordance with NYSDEC Division of Environmental Remediation DER-10, Technical Guidance for Site Investigation and Remediation. Analysis shall include TCL VOCs; TCL SVOCs; TCL pesticides; TCL PCBs; TAL metals and cyanide; and pH, as specified in Supplementary Specification Section 01 43 36, Field Samples and Analysis. In addition to the target list in DER-10, samples must be analyzed for 1,4-dioxane and per-and polyfluoroalkyl substances (PFAS) in accordance with DEPARTMENT guidance.
 - (1) Sample collection and analysis shall be in accordance with the approved Sampling Plan.
 - (2) The sample frequency shall be in accordance with NYSDEC DER-10, Table 5.4(e)10 – “Recommended Number of Soil Samples for Soil Imported to or Exported From a Site”.
 - (3) The results of the chemical analysis shall meet the Unrestricted Use requirements of NYSDEC DER-10, Appendix 5 (Allowable Constituent Levels for Imported Fill or Soil) and 6 NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives.
7. The CONTRACTOR shall assist the ENGINEER, as requested, in providing access to the Work for the purpose of collecting duplicate samples, evaluating compaction efficiency during backfilling, and for other purposes as requested. No aspect of the CONTRACTOR's involvement in providing assistance to the

ENGINEER shall be construed as suitable grounds for claim of hardship, delay or additional compensation by CONTRACTOR.

8. The CONTRACTOR shall prequalify Topsoil and Clean Fill to be used for the project. The prequalification process requires that the CONTRACTOR identify suitable material for use for the project. The CONTRACTOR shall obtain prequalification samples from each source and each soil stockpile in accordance with NYSDEC DER-10 and the approved Sampling Plan. The pre-qualification samples shall be obtained from at least two different locations at the source or stockpile to provide a representative sample or as approved by the ENGINEER. If requested, the sampling shall be conducted in the presence of the ENGINEER. The CONTRACTOR shall have each sample tested by the approved soils testing or analytical laboratory as specified. The CONTRACTOR shall submit certified copies of the test results and test methods to the ENGINEER for review and approval. If the test results are acceptable, the CONTRACTOR may proceed with the use of the prequalified source and the prequalified stockpile material may be incorporated into the Work. If the test results are not acceptable, the CONTRACTOR shall propose an alternate source which satisfies the requirements of the Contract Documents and Specifications. CONTRACTOR shall repeat the prequalification process until acceptable test results are achieved. The CONTRACTOR shall not deliver to the site unacceptable material which is not prequalified.
9. If directed by the ENGINEER or DEPARTMENT, the CONTRACTOR shall conduct additional sampling of the prequalified material upon delivery to the Site to demonstrate conformance with the specifications. The CONTRACTOR will be compensated for costs associated with additional sampling required by the ENGINEER or DEPARTMENT if the results of the sampling indicate the prequalified material meets the requirements of the specifications. If the results indicate that the material does not meet the requirements of the specifications, the CONTRACTOR shall bear all costs associated with the sampling, as well as all costs associated with removing the defective material and replacing with new material and any sampling required by the ENGINEER to demonstrate that the new material meets the requirements of the specifications.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. All materials shall be stockpiled in areas as shown in the approved Work Plan and only within the limits designated on the Contract Drawings for use by the CONTRACTOR.
- B. All material shall be adequately protected to preserve the fitness and quality of the material. Do not allow fill materials to be saturated by precipitation, or contaminated by excavated soil and debris, or other potentially contaminated materials present at the Site.

PART 2. PRODUCTS

2.1 TOPSOIL

- A. The Topsoil shall conform to the requirements of New York State Department of Transportation (NYSDOT) Standard Specification 713-01(B)(3): Type B Topsoil – Special Planting Mix.
- B. The Topsoil shall consist of a fertile, friable, natural topsoil of loamy character, without admixtures of subsoil, uniform in quality and shall be free from refuse and non-naturally

occurring material of any nature, hard clods, stiff clay, sods, hard pan, pebbles larger than ¾-inch in diameter, coarse sand, noxious weeds, sticks, brush, or other rubbish.

- C. The pH value of all topsoil shall be no less than 5.5 and no more than 7.
- D. The organic content shall be between 10% and 15% dry weight basis.
- E. Gradation Analysis: The sieve analysis on an oven-dried sample shall be as follows:

<u>Sieve Size</u>	<u>% Passing by Weight</u>
2 inch	100
1 inch	85-100
1/4 inch	40-100
#200	5 to 10
2 Micron	5 to 35

- F. The results of the chemical analysis of Topsoil shall meet the Unrestricted Use requirements of NYSDEC DER-10, Appendix 5 (Allowable Constituent Levels for Imported Fill or Soil) and 6 NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives.
- G. Each truckload of topsoil delivered to the site shall be accompanied by a ticket prepared by the CONTRACTOR certifying the source of the material and the location from where the material was taken. The load ticket shall specifically identify the type of material, the quantity of material (weight), vehicle identification number and driver name, date, source (stockpile) identifier, time of departure from the source and time of arrival at the site. The load tickets shall be consecutively numbered, multipart forms and shall be clearly and legibly completed and signed in ink. An original copy of each load ticket shall be submitted to the ENGINEER prior to the material being off-loaded at the site.
- H. The topsoil shall be supplied from a source approved by ENGINEER and the CONTRACTOR shall pre-qualify the source of supply prior to delivery to the site.

2.2 CLEAN FILL

- A. Clean Fill shall consist of natural soils conforming to the gradation requirements of New York State Department of Transportation (NYSDOT) Standard Specification 733-15, Sand Backfill, and these Specifications. All material shall consist of hard, strong, durable particles which are free from a coating or any injurious material or other deleterious substances. Clean Fill shall be naturally occurring virgin, clean, inert, well graded material suitable for root development. The selected material shall be free of roots, stumps, chunks of earth or clay, shale or other soft, poor durability particles, construction and demolition debris, concrete, asphalt and other foreign material, and conform to the following gradation:

<u>Sieve Size</u>	<u>% Passing by Weight</u>
1/2 inch	100
1/4 inch	90-100
#200	0 – 5

- B. The results of the chemical analysis of Clean Fill shall meet the Unrestricted Use requirements of NYSDEC DER-10, Appendix 5 (Allowable Constituent Levels for Imported Fill or Soil) and 6 NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives.

- C. Each truckload of Clean Fill delivered to the site shall be accompanied by a ticket prepared by the CONTRACTOR certifying the source of the material and the location from where the material was taken. The load ticket shall specifically identify the type of material, the quantity of material (weight), vehicle identification number and driver name, date, source (stockpile) identifier, time of departure from the source and time of arrival at the site. The load tickets shall be consecutively numbered, multipart forms and shall be clearly and legibly completed and signed in ink. An original copy of each load ticket shall be submitted to the DEPARTMENT prior to the material being off-loaded at the site.
- D. The Clean Fill shall be from a source approved by ENGINEER and the CONTRACTOR shall pre-qualify the source of supply prior to delivery to the site.

2.3 DEMARCATION LAYER FABRIC

- A. Demarcation layer shall consist of woven or nonwoven polypropylene fabric.
- B. Furnish materials with a minimum average roll value (MARV) that meets or exceeds the criteria specified in the following table. Provide test results as part of the quality control submittal, as well as the manufacturer's certification that the material properties meet or exceed the specified values in the following table.

Property	Test Method	English
Tensile Strength	ASTM D4632	350 lbs
Elongation @ Break	ASTM D4632	15%
CBR Puncture	ASTM D6241	1000 lbs
Trapezoidal Tear	ASTM D4533	135 lbs
Apparent Opening Size ⁽¹⁾	ASTM D4751	40 US Sieve
Permittivity	ASTM D4491	0.08 Sec ⁻¹
Water Flow Rate	ASTM D4491	6 g/min/ft ²
UV Resistance @ 500 Hours	ASTM D4355	70%

⁽¹⁾ Minimum average roll value (MARV).

- C. MARV shall be based on manufacturer's data and shall be calculated as the mean value of the property of interest plus or minus two standard deviations, as appropriate. Where material properties vary among the machine and cross-machine directions, the MARV shall apply to the direction providing the lowest value when a minimum value is specified or the highest value when a maximum value is specified.
- D. Acceptable demarcation layer fabrics include US Fabrics, US 2700, or approved equal.
- E. Alternate Geotextile materials shall not be used unless submitted to ENGINEER and preapproved in writing by ENGINEER.

2.4 UNSUITABLE MATERIAL

- A. Material unsuitable for use at the site are clay, boulders, peat, contaminated material, construction debris, non-naturally occurring materials, organics and any other material so designated by the DEPARTMENT.
- B. Stockpiling of Unsuitable Material at the site shall not be permitted.

- C. Unsuitable Material shall be promptly removed from the site and disposed of by the CONTRACTOR, at their own expense, off the site of the work.

2.5 EXCESS MATERIAL

- A. Any excess material not required for use in the project shall become the property of the CONTRACTOR and shall be removed from the Site when deemed by ENGINEER to be no longer needed.

PART 3. EXECUTION

3.1 STOCKPILE AND PROTECTION

- A. Minimize the need for stockpiling imported material onsite. Deliver materials to the site when filling and backfilling tasks are actively underway. Only when needed, stockpile materials on-Site in the Work area or staging area consistent with the requirements of Supplementary Specification Section 01 55 29, Storage of Material.
- B. Protect imported materials from precipitation by covering in accordance with the Contract Documents. Saturated Topsoil and Clean Fill shall be dried prior to placement in the work.

3.2 PREPARATION AND RESTORATION

- A. Complete the Work in Supplementary Specification Sections 31 23 16, Excavation, 01 43 36, Field Samples and Analysis, and 01 45 00, Contractor Quality Control, and ensure that all required inspections, sampling and surveys are completed before placing fill.
- B. Backfill immediately following receipt of approval by the ENGINEER and the DEPARTMENT.
- C. CONTRACTOR shall continue to dewater throughout excavation, inspections, post-excavation sampling, backfilling, and restoration seeding and planting tasks. Clean Fill and Topsoil shall not be placed in areas of standing water.
- D. Take necessary precautions with backfill and construction operations to protect previously remediated areas from damage. Prevent contact of imported material with contaminated media. Do not begin backfilling until all excavation, inspections, sampling and surveying is complete, unless approved by ENGINEER.
- E. Backfill with care around structures, monitoring wells, trees, and manholes.
- F. Backfill to the final grade elevations shown on the Contract Drawings and meet surrounding grades at the edge of all fills with no visible change in elevation between existing and backfilled surface.

3.3 PLACEMENT AND COMPACTION OF CLEAN FILL

- A. Place and spread Clean Fill on dewatered dry subgrade in lift thicknesses not exceeding 6 inches.
- B. Compact each layer of Clean Fill material to the degree that no further appreciable consolidation or movement of the base is evidenced under action of the compaction equipment. Compaction equipment shall be capable of a minimum effective compaction

force of 200 pounds per inch of drum width, and a minimum effort of 6 passes at maximum speed of 4.5 feet per second shall be applied to each 6-inch thick lift.

- C. CONTRACTOR shall notify ENGINEER upon satisfactory compaction of each lift and allow ENGINEER to visually inspect the compaction effort. ENGINEER will verify that compaction has achieved a state of no further appreciable consolidation or movement of the base of the Clean Fill lift. CONTRACTOR shall not place additional Clean Fill lifts until ENGINEER approves of the completed lift.

3.4 FIELD QUALITY CONTROL OF CLEAN FILL

- A. Top of the Clean Fill shall be surveyed by CONTRACTOR to verify that the top surface of the Clean Fill is no higher than 1 foot below the specified final grade.

3.5 PLACEMENT OF DEMARCATION LAYER FABRIC

- A. Place demarcation layer fabric throughout the soil cover area, as specified and shown on Drawing C-113. Soil cover shall be constructed in accordance with "Typical Soil Cover Cross-Section" illustrated in Detail 8, Drawing C-501.
- B. Demarcation layer fabric shall be installed in accordance with manufacturer's instructions.

3.6 PLACEMENT OF TOPSOIL

- A. Place and spread Topsoil in loose lift thicknesses up to 6 inches. Each lift shall be compacted using the tracked equipment used for placement. Tracked equipment shall exert a ground pressure of between eight (8) and 10 lb/in². Compaction shall be performed to the degree that no further appreciable consolidation or movement of the base is evidenced under action of the tracked equipment. CONTRACTOR shall not use vibratory compaction equipment (no vibration) for topsoil placement.
- B. Uniformly grade all Topsoil final surfaces to match final grades and contours shown on the Contract Drawings, and meeting the elevation of surrounding soil at the edge of the fill area. Install one foot of topsoil in all soil and debris excavation areas and minimum of six (6) inches of topsoil in all other disturbed areas.
- C. Following removal of CONTRACTOR's Temporary Facilities and Material Staging and Handling areas, supply and place Topsoil in all locations where removal of the stone surface or other disturbance has resulted in a void or depression. Uniformly grade Topsoil to match grade of surrounding soil. If voids are greater than one foot deep, fill to one foot below specified or existing grade, as directed by the ENGINEER, with Clean Fill as specified above.
- D. Prepare the Topsoil surface for seed in accordance with Supplementary Specification Section 32 92 00, Turf and Grasses.

3.7 FIELD QUALITY CONTROL OF ELEVATIONS AND LIMITS OF WORK

- A. Following completion of Topsoil and Coarse Aggregate placement and seeding and planting, and prior to final acceptance, the CONTRACTOR shall perform a detailed physical features/topographical survey of the completed work, including all previously disturbed areas. The CONTRACTOR shall prepare and submit to ENGINEER, final survey drawing(s) depicting final topography, physical features and property boundaries. These drawings shall constitute the Record/As-Built Drawings for the project.

- B. Perform all surveys of this section in accordance with Standard Specification Section 01 71 23, Field Engineering, Supplementary Specification Section 01 71 23.01, Modifications to Field Engineering, and requirements of the Contract Documents.

END OF SECTION



**NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**



Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e) and 6NYCRR Part 360.13. Use of this form is not a substitute for reading the applicable regulations and Technical Guidance document.

SECTION 1 – SITE BACKGROUND

The allowable site use is:

Have Ecological Resources been identified?

Is this soil originating from the site?

How many cubic yards of soil will be imported/reused?

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone?

Does it contain less than 10%, by weight, material that passes a size 100 sieve?

Is this virgin material from a permitted mine or quarry?

Is this material recycled concrete or brick from a DEC registered processing facility?

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

Signature

Date

Print Name

Firm

SECTION 31 25 00
EROSION AND SEDIMENTATION CONTROLS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Providing and maintaining erosion and sediment controls.
- B. Work includes all labor, materials, power, supplies and incidentals necessary to control soil erosion and sedimentation resulting from construction operations, prevention of flow of sediment from areas of the Work, containment of construction materials (including, but not limited to, stockpiles of excavated and imported materials), and protect and stabilize restored areas. The work in this Section shall include, but not be limited to, the Work described in the SWPPP (refer to Supplementary Specification Section 01 15 00, Minimum Requirements for Work Plan) and as required by the Contract Documents, including the Contract Drawings.
- C. All Erosion and Sediment Controls shall be installed, monitored, inspected, and maintained in accordance with the SPDES General Permit, the SWPPP, New York State Standards and Specifications for Erosion and Sediment Control, November 2016 as amended, and local, state and federal approvals, permits, laws and regulations.

1.2 QUALITY ASSURANCE

- A. Comply with the accepted SWPPP, applicable permits and approvals, and requirements of the DEPARTMENT for erosion and sedimentation controls.
- B. SWPPP shall include control measures commonly used for compliance with the requirements established by the DEPARTMENT for Storm Water Pollution Prevention Plans.
- C. Inspections and monitoring of erosion and sediment controls shall be performed by appropriately trained and certified personnel.

1.3 REFERENCES

- A. New York State Standards and Specifications for Erosion and Sediment Control, November 2016 as amended.
- B. Standard Specification Sections 01 65 00, Product Delivery Requirements, and 01 66 00, Product Storage and Handling Requirements.

1.4 SUBMITTALS

- A. Submit manufacturer's name, model, description, sample, installation instructions, and all related information on proposed products to be used for erosion and sediment control.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery, storage, and handling shall be performed in accordance with Standard Specification Sections 01 65 00, Product Delivery Requirements, and 01 66 00, Product Storage and Handling Requirements.

- B. Comply with manufacturer's instructions if more stringent than the specifications.

PART 2. PRODUCTS

2.1 SILT LOGS

- A. Curlex Sediment Log by American Excelsior Company Earth Science Division.
- B. KoirWattle by Nedia Enterprises.
- C. Or approved equal manufactured cylindrical tube of fibrous material contained within a containment casing.

2.2 EROSION CONTROL BLANKET

- A. Short-term single net manufactured erosion control blanket with machine-produced mat of 100% agricultural straw with a functional longevity of up to 12 months. Weaving shall be 100% biodegradable, woven, natural, organic fiber net of approximately 0.5-inch by 1.0-inch voids on 1.5-inch centers.
- B. North American Green BioNet® S75BN™ or approved equal.
- C. Provide u-shaped, minimum of 12-inch long (each leg), 9-gauge or greater diameter heavy duty metal staples for securement by same manufacturer as erosion control blanket. Staples shall be compatible with proposed product, manufacturer's recommendations and site conditions.

2.3 ADDITIONAL PRODUCTS AND MATERIALS

- A. The CONTRACTOR shall submit information on additional products and materials to be used for erosion and sedimentation controls as needed.

PART 3. EXECUTION

3.1 INSTALLATION – GENERAL

- A. Silt Logs, Erosion Control Blankets, and other erosion and sediment control measures approved by the ENGINEER and the DEPARTMENT, and as specified and shown on the Contract Drawings, shall be used to protect vegetation, remediated areas, unvegetated ground surfaces, plantings, and to prevent sediment from either surface runoff or the dewatering operations from entering catch basins or surface water.
- B. Soil erosion and sediment control practices are to be installed prior to soil disturbance or import of soil/fill to the Site and shall be maintained until stabilization is complete. No soil erosion or sediment control devices shall be removed unless approved by the ENGINEER.
- C. Install all soil erosion and sediment control products per manufacturer's instructions and in accordance with the CONTRACTOR'S approved SWPPP, following whichever requirements are more stringent to ensure functionality of the product.

- D. All permanent storm water control features shall be protected by the CONTRACTOR prior to the start of construction. The CONTRACTOR shall be responsible for routine cleaning and repair of storm water control features due to failure of protection devices or other actions resulting in accumulation of solids in the storm water control features.
- E. Install erosion control blanket in all disturbed areas which are seeded in accordance with Supplementary Specification Section 32 92 00, Turf and Grasses. Furnish and place topsoil and seed in all disturbed areas.

3.2 INSTALLATION – SILT LOGS

- A. Construct approximate 2- to 4-inch-deep circular trench (of approximate 6-inch width) for installing silt logs. Use plate steel to cut the circular shape of the trench or alternate method approved by the ENGINEER. Use excavated material to create a small berm to buttress the silt logs downslope of the wattle. Trench bottom shall be free of rocks and debris. Silt logs installed on vegetated surfaces may be installed without entrenchment, if stable and secure.
- B. Place silt logs into trenches to ensure continuous ground contact.
- C. Connect and overlap silt logs together per manufacturer's instructions. Connections shall contain no gaps. Overlap silt logs to ensure no gaps.
- D. Stake silt logs per manufacturer's instructions, but no less than one hardwood stake (1-inch by 1-inch by 24-inch) every 3 feet on center. Stakes shall be driven through the middle of the silt log to a depth of at least 6 inches below existing grade.
- E. Terminate silt logs at the end of each proposed contour by terminating the ends at minimum 1 foot higher than the contour, such that storm water run-off does not short-circuit the end of the silt logs.
- F. Do not drive any equipment over silt logs.
- G. Remove and dispose of off-site all excavated material as Non-TSCA Contaminated Soil and Debris in accordance with the requirements of the Contract Documents.

3.3 INSTALLATION – EROSION CONTROL PRODUCTS

- A. Install other erosion control products per manufacturer's recommendations and best management practices in compliance with approved plans, project permits and the SWPPP.

3.4 INSPECTIONS

- A. All sediment and erosion control products and materials installed as part of the Work shall be inspected on a regular basis (at least weekly) and following all precipitation events, by a Qualified Inspector as defined in the SPDES General Permit.
- B. Inspections shall be conducted in accordance with the approved SWPPP, New York State Standards and Specifications for Erosion and Sediment Control, November 2016 as amended, the SPDES General Permit, and local permits, approvals, laws and regulations.

3.5 MAINTENANCE

- A. Inspect silt log and other erosion control products immediately after each rainfall (greater than 1 inch), daily during prolonged rainfall, and at least once per week during dry periods. Make required repairs immediately.
- B. Close attention shall be paid to the repair of damaged silt logs resulting from end runs and undercutting. If the silt log is not installed perpendicular to the flow of water, these conditions will occur and shall be corrected by installing silt log correctly promptly upon discovery.
- C. Should any part of the silt log decompose or become ineffective, the section of log shall be promptly replaced.
- D. Sediment deposits shall be removed, at a minimum, when deposits reach up to one-half the height of the silt log.
- E. At completion of the Work, remove and properly dispose off-Site sediment and erosion control devices and accumulated soil and debris as directed by the ENGINEER. Repair all disturbed areas.

END OF SECTION

SECTION 31 32 13
EXCAVATED MATERIAL DEWATERING AND STABILIZATION

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the requirements for preparation of an Excavated Material Dewatering and Stabilization Plan as part of CONTRACTOR's Work Plan.
- B. This Section also specifies the provision of all labor, materials, equipment, and incidentals as needed to perform certain soil and debris handling and stabilization as described herein and depicted in the Contract Drawings, including:
 - 1. Separately transporting to material staging area(s) and keeping excavated Asbestos Containing Soil and Debris, TSCA Contaminated Soil and Debris, and Non-TSCA Contaminated Soil and Debris separate from each other.
 - 2. Dewatering and managing excavated soil and debris within material staging areas.
 - 3. General handling and managing removed soil and debris for off-Site disposal.
 - 4. Mixing drying agent with excavated soil and debris, as needed, for proper transportation for off-site disposal and disposal facility acceptance.
 - 5. Providing soil and debris dewatering and stabilization materials and mixing tools, equipment, labor, decontamination, and free water handling.
- C. Use of stabilization additives shall be minimized to the greatest practical extent. Stabilization additives may be used if proposed by CONTRACTOR and approved by ENGINEER in the Excavated Material Dewatering and Stabilization Plan. Stabilization materials, means, and methods shall be described in detail in the Excavated Material Dewatering and Stabilization Plan.
- D. CONTRACTOR shall not be reimbursed for any costs related to disposal of stabilization materials used for soil and debris processing. The amount of stabilization materials (in tons) used to modify excavated soil and debris will, for payment purposes, be subtracted from the amount of material disposed.
- E. Contractor shall be responsible for all aspects of design, testing and implementation of soil and debris dewatering and stabilization program in accordance with the requirements of disposal facilities and the Contract Documents.

1.2 REFERENCES

- A. ASTM C150, Standard Specification for Portland Cement.
- B. ASTM D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft³ [600 kN-m/m³]).
- C. ASTM D1633, Standard Test Method for Compressive Strength of Molded Soil – Cement Cylinders.

- D. ASTM D6938, Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- E. USEPA SW-846 Method 9095, Paint Filter Liquids Test.

1.3 DESCRIPTION

1.4 SUBMITTALS

- A. Submit an Excavated Material Dewatering and Stabilization Plan as part of the Work Plan specified in Supplementary Specification Section 01 15 00, Minimum Requirements for Work Plan. The Excavated Material Dewatering and Stabilization Plan shall include proposed products, material management and drying/stabilization means and methods for review and approval by the ENGINEER. The Excavated Material Dewatering and Stabilization Plan shall include, at a minimum, the following:
 - 1. Sequencing of all work of this Section, coordinating with Excavation Plan, Fill Plan, and Transportation and Disposal Plan, and describing how soil and debris will be removed, stockpiled, and staged. CONTRACTOR shall include scaled drawings showing the anticipated footprint, height, and slopes of the stockpiles.
 - 2. Description and approach to maximize in-place dewatering of soil and debris.
 - 3. Description, number, and type of trucks or other vehicles to be used for on-Site material transport, including debris from point of removal to the material staging areas.
 - 4. Description of construction materials, methodology and locations for the material staging areas and access roads. The description will include methods to be employed to prevent tracking and cross-contamination of non-impacted areas and between asbestos containing soil and debris, TSCA Contaminated Soil and Debris, and Non-TSCA Contaminated Soil and Debris areas.
 - 5. Results of material stabilization testing performed showing successful performance, including (but not limited to) name, source, and safety data sheet for stabilization agent.
 - 6. If cementitious agents are proposed, CONTRACTOR shall determine through testing and identify in the Plan, the appropriate staging and standby time to allow cements to react completely.
 - 7. Identification of any and all stabilization agents planned for potential use in the work, including submittal of the following:
 - a. Stabilization material(s) source, origin, and manufacturer;
 - b. SDSs for all manufactured materials and all required chemical test results for other products/by-products including ashes and kiln dusts;
 - c. Other available material specifications including density, moisture content, grain size, etc.;
 - d. Estimated quantities to be used per cubic yard of excavated soil and debris;

- e. Description of packaging, delivery, and on-site storage methods;
 - f. Description of methods for metering the amount of material incorporated into the work;
 - g. Identification of example projects of where each stabilization material has been used with the mix design indicated;
 - h. Description of the appropriate safety measures to be undertaken by CONTRACTOR, dust control methods, dust control monitoring, and action levels.
- 8. Equipment, methods, layout, and location for processing and dewatering soil and debris prior to loading for off-Site disposal.
 - 9. Equipment, methods, layout, and stockpiling sequence for staging, dewatering/stabilization, and stockpiling materials.
 - 10. Storage location and method for dewatering and stabilization and odor controls.
 - 11. Description of containment systems for material staging.
 - 12. Description of all measures and materials for covering stockpiles and limiting exposure of material.
 - 13. Description of the stockpile cover installation sequence to ensure efficient covering of stockpiles. Include details of cover installation methods, erosion protection features for covers to shed water outside of material staging area, methodology for moving ponded water off the cover, ballasting plan to prevent uplift due to high winds, and material specifications of the proposed cover.
 - 14. Equipment for managing dewatered soil and debris and loading waste transport vehicles for transportation and disposal.
 - 15. Methods for collecting representative samples for waste characterization and disposal facility acceptance of soil and debris after stabilization.
- B. Submit Letter of Certification from disposal facilities demonstrating that acceptance of the waste with additives is permissible. Submit letters with Work Plan or as part of subsequent submittals if any alterations in the stabilization agents or quantities is determined to be needed.
 - C. Submit manufacturers' product data/information on the proposed additives including a sample bag of 15 pounds, delivered to the ENGINEER for examination.

PART 2. PRODUCTS

2.1 MATERIALS

- A. Stabilization/Drying Agent:

1. Provide stabilization/drying agents in sufficient quantities to control water content of excavated soil and debris for off-site disposal to ensure compliance with paint filter test and disposal facility requirements.
2. Stabilization/drying agent or alternate mix design may include kiln dust, non-biodegradable sorbent containing no more than 50 percent reactive (free) calcium oxide (CaO) and magnesium oxide (MgO) by weight, or other product accepted by the ENGINEER and DEPARTMENT prior to acquisition, shipment to site, and use.
3. Stabilization agents shall be free of objectionable odor.
4. CONTRACTOR shall test alternate materials to show conformance with required properties of the disposal facility. Such data shall be provided to the ENGINEER for review and approval prior to import or use of such materials at the site.

PART 3. EXECUTION

3.1 GENERAL

- A. Excavation: CONTRACTOR shall perform all required soil and debris excavation in accordance with CONTRACTOR's approved Excavation Plan, as specified in Supplementary Specification Section 31 23 16, Excavation and the requirements of the Contract Documents.
- B. Waste Characterization: CONTRACTOR shall perform all required waste characterization sampling and analysis, all required waste profiling, and secure all required disposal facility approvals, in accordance with the approved Transportation and Disposal Plan and as specified in Supplementary Specification Section 31 23 16, Excavation.
- C. Maximize water removal efforts in place, prior to excavation of soil and debris.
- D. The CONTRACTOR shall exhaust all other methods of dewatering the soil and debris prior to utilizing any of the approved additive(s). Methods of dewatering include gravity dewatering using temporary stockpiles within the excavation areas, gravity dewatering in lined stockpile areas or in roll-offs, and mechanical mixing of soil and debris (without additive) to facilitate air drying.
- E. The CONTRACTOR is responsible for the selection, mix rate and ratios, and development of the design of additive mixture, for stabilization. All proposed mixtures shall be acceptable to the receiving disposal facility as evidenced in the Letter of Certification.
- F. Separately stage and dewater/stabilize Asbestos Containing Soil and Debris.
- G. Separately stage and dewater/stabilize soil and debris containing PCBs at concentrations greater than or equal to 50 mg/kg (TSCA contaminated) from soil and debris below 50 mg/kg PCBs (non-TSCA contaminated).
- H. Following excavation/material handling of soil and debris containing PCBs at concentrations greater than or equal to 50 mg/kg and prior to handling soil and debris containing PCBs at concentrations less than 50 mg/kg, decontaminate all equipment that contacted soil and debris prior to handling other material. Following excavation/material

handling of soil and debris containing PCBs at concentrations less than 50 mg/kg, decontaminate all equipment that contacted soil and debris prior to handling other material.

- I. Provide required stabilization and drying agents in sufficient quantities as specified, without delay.
- J. Addition and mixing of stabilization materials shall not create any visible dust.
- K. Provide a means for accurate measurement and documentation for verifying that the appropriate quantities of stabilization and drying agents are maintained.
- L. Thoroughly mix the agents and soil and debris as required to achieve a homogeneous and uniform mixture.
- M. If cementitious agents are used, CONTRACTOR shall provide for adequate staging and standby time to allow cements to react completely. Standby and staging time shall be demonstrated by testing in advance of the use of such cements.
- N. The CONTRACTOR shall provide all delivery, storage, labor, and equipment necessary to complete stabilization to meet the acceptance requirements of the disposal facility. The CONTRACTOR shall be responsible for loads rejected at the disposal facility and returned to the Site due to improper stabilization.
- O. Transportation and Disposal: CONTRACTOR shall perform all required soil and debris characterization, profiling, applications for and securing approvals, loading, manifesting, load preparation, transportation, and disposal in accordance with CONTRACTOR's approved Transportation and Disposal Plan and as specified in Supplementary Specification Section 31 23 16, Excavation.

3.2 DECONTAMINATION

- A. All equipment (including excavator buckets and other equipment used for mixing and handling), staging areas, stabilization area surfaces, and any other components that may have come in contact with contaminated soil and debris shall be fully decontaminated in accordance with the Contract Documents.

END OF SECTION

SECTION 32 11 23
AGGREGATE BASE COURSE

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Constructing dense compacted Aggregate Base Course for access roads, staging areas and temporary facilities.

1.2 REFERENCES

- A. ASTM D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
- B. NYS Department of Transportation, Standard Specifications, Section 703-02 Coarse Aggregate.
- C. Standard Specification Sections 01 65 00, Product Delivery Requirements, and 01 66 00, Product Storage and Handling Requirements.

1.3 SUBMITTALS

- A. Submit test results under provisions of Standard Specification Section 01 33 00, Submittal Procedures, and Supplementary Specification Section 01 43 36, Field Samples and Analysis, indicating that the Aggregate Base Course meets the requirements of the Specifications.
- B. Aggregate Source and Gradation Submittals:
 - 1. Identification of the aggregate source name and location.
 - 2. Source permits and material certifications.
 - 3. Aggregate material gradation test results.
 - 4. Submit test results and obtain ENGINEER's approval of product prior to import of material.
- C. Geotextile Quality Control. Submit at least 5 days prior to placement of Geotextile.
 - 1. Quality control certificate (or copy) for each roll of Geotextile to be used. The quality control certificate shall include lot, batch, or roll numbers and identification, at a minimum.
 - 2. Results of the quality control tests, including sampling frequencies and test methods.
 - 3. ENGINEER may request additional testing (i.e., conformance testing) to verify that the Geotextile meets the Specifications.

4. Samples that do not meet the specified properties shall result in rejection of the applicable rolls.
- D. Geotextile Manufacturer's Certification. Submit at least five days prior to placement of material.
1. Certification statement from the manufacturer that the supplied Geotextile meets the requirements on the basis of the results of the test performed by either the manufacturer's laboratory or an outside laboratory.

PART 2. PRODUCTS

2.1 AGGREGATE BASE COURSE

- A. Material for gravel surfacing shall be pit run, locally available crushed stone (NYSDOT 703-0201) or crushed gravel (NYSDOT 703-0202) in compliance with the requirements of NYSDOT Coarse Aggregate Specification 703-02. Provide naturally occurring materials only.
- B. Unsuitable Material: Material unsuitable for use are clay, boulders, peat, contaminated material, construction debris, non-naturally occurring material, organics and any other material so designated by the DEPARTMENT. Unsuitable Material shall not be stockpiled and shall be promptly removed from the site and disposed of by CONTRACTOR, at CONTRACTOR's expense.
- C. Excess Material: Any excess material not required for use in the project shall become the property of the CONTRACTOR and shall be removed by CONTRACTOR from the site.

2.2 GEOTEXTILE

- A. Geotextile shall consist of woven or nonwoven polypropylene.
- B. Furnish material with a minimum average roll value (MARV) that meets or exceeds the criteria specified in the following table. Provide test results as part of the quality control submittal, as well as the manufacturer's certification that the material properties meet or exceed the specified values in the following table.

Property	Test Method	English
Tensile Strength	ASTM D4632	350 lbs
Elongation @ Break	ASTM D4632	15%
CBR Puncture	ASTM D6241	1000 lbs
Trapezoidal Tear	ASTM D4533	135 lbs
Apparent Opening Size ⁽¹⁾	ASTM D4751	40 US Sieve
Permittivity	ASTM D4491	0.08 Sec ⁻¹
Water Flow Rate	ASTM D4491	6 g/min/ft ²
UV Resistance @ 500 Hours	ASTM D4355	70%

⁽¹⁾ Minimum average roll value (MARV).

- C. MARV shall be based on manufacturer's data and shall be calculated as the mean value of the property of interest plus or minus two standard deviations, as appropriate. Where material properties vary among the machine and cross-machine directions, the MARV shall apply to the direction providing the lowest value when a minimum value is specified or the highest value when a maximum value is specified.
- D. Acceptable Geotextiles include US Fabrics, US 2700, or approved equal.
- E. Alternate Geotextile materials shall not be used unless submitted to ENGINEER and preapproved in writing by ENGINEER.

PART 3. EXECUTION

3.1 INSPECTION

- A. ENGINEER to observe and approve subgrade prior to Geotextile and Aggregate Base Course placement.
- B. Do not remove topsoil or vegetation roots from the Site prior to construction of the staging areas. Mow or trim vegetation for placement of Geotextile and Aggregate Base Course and as required to ensure vegetation does not cause maintenance issues during the Work. Vegetation shall not penetrate Aggregate Base Course surface.

3.2 INSTALLATION

- A. Geotextile Installation:
 - 1. Place Geotextile in all areas to be covered with Aggregate Base Course, including, but not limited to, all temporary access roads to be constructed to access locations of the Work, Stabilized Construction Entrance, Decontamination Pad, material staging and handling areas, and additional areas, including, but not limited to, temporary facilities areas, shown on the Contract Drawings.
 - 2. Overlap adjacent Geotextile panels a minimum of 12 inches.
 - 3. Install Geotextile in accordance with the guidelines of the manufacturer, including securing and anchoring the Geotextile.
 - 4. Wrinkles and folds in the geotextile (not associated with roadway curves) shall be removed by stretching and staking. Geotextile may be held in place prior to placement of cover by pins, staples, or piles of aggregate. On curves, the geotextile may be folded to conform to the curve. The fold or overlap shall be in the direction of construction and held in place as prescribed above.
 - 5. Take necessary precautions to prevent damage to underlying layers of materials during placement of the Geotextile. After placement, the Geotextile shall not be left exposed for a period more than 24 hours.
 - 6. Examine the surface after installation and ensure that no potentially harmful foreign objects are present. Remove any such objects and replace any damaged Geotextile.

B. Aggregate Base Course

1. Place Aggregate Base Course carefully on top of Geotextile. Ensure Geotextile and underlying layer is not damaged, that Geotextile does not move, and that excess stresses at wrinkles are not produced in the Geotextile.
2. Place and spread Aggregate Base Course in single uniform minimum 6-inch thick loose lifts. Compact Aggregate Base Course using smooth-drum vibratory roller to the degree that no further appreciable consolidation or movement of the base is evidenced under action of the compaction equipment. Compaction equipment shall be capable of a minimum effective compaction force of 200 pounds per inch of drum width, and a minimum effort of 6 passes at maximum speed of 4.5 feet per second shall be applied.
3. Trap all wrinkles that are generated during stone placement by “casting” stone onto the Geotextile rather than “pushing” the stone.
4. Place successive layers of loose aggregate and compact as specified to provide a full 6-inch compacted thickness of Aggregate Base Course.
5. Ensure that the surface elevation of the Aggregate Base Course for the completed Stabilized Construction Entrance meets the edge of County Route 26 pavement evenly, with no abrupt elevation changes.
6. Do not allow any stone material to be deposited on the pavement or public rights of way.

3.3 FIELD QUALITY CONTROL OF STAGING AREA

- A. Top and bottom of the Aggregate Base Course shall be surveyed by the CONTRACTOR to verify that the top surface of the Aggregate Base Course meets the specified thickness requirement. The CONTRACTOR shall also survey the extents of the Temporary Facilities and Materials Staging and Handling Area, Stone Drive, and Stabilized Construction Entrance as part of the Record/As-Built Drawings.
- B. CONTRACTOR shall be fully responsible for continuous inspection and maintenance of the Stabilized Construction Entrance, Decontamination Pad, and additional areas, including, but not limited to, material staging and handling areas and temporary facilities areas.
- C. Any settlement, pumping, or other indications, whether identified by CONTRACTOR, ENGINEER, or DEPARTMENT, that maintenance is needed shall be immediately corrected by CONTRACTOR.

END OF SECTION

SECTION 32 31 00
FENCES AND GATES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, materials, tools, equipment and incidentals as shown, specified, and required to furnish and install gate and fence.
2. CONTRACTOR shall remove and dispose of existing steel entrance gate.
3. Types of materials required under this Section include:
 - a. Aluminum-coated, steel chain link fabric.
 - b. Galvanized steel framework, including line posts, corner posts, and end post.
 - d. Aluminum, double-wide swing gate.
 - e. Concrete for gate post footings.
 - f. Sealant around gate posts.
 - g. Auxiliary system components, gates, accessories, fasteners, lock and fittings.
4. Substitutions: Structural shapes of satisfactory sections and equal strengths may be substituted upon ENGINEER's approval of CONTRACTOR's substitution request.

1.2 REFERENCES

A. Standards referenced in this Section are:

1. ASTM A53, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
2. ASTM A90/A90M, Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
3. ASTM A123, Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
4. ASTM A153/A153M, Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
5. A307, Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
6. A392, Standard Specification for Zinc-Coated Steel Chain Link Fence Fabric.
7. ASTM A428/A428M, Test Method for Weight [Mass] of Coating on Aluminum-Coated Iron or Steel Articles.

8. ASTM A491, Specification for Aluminum-Coated Steel Chain-Link Fence Fabric.
9. ASTM A653, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
10. ASTM A780, Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
11. ASTM A817, Specification for Metallic-Coated Steel Wire for Chain-Link Fence Fabric.
12. ASTM A1011/A1011M, Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
13. ASTM B6, Specification for Zinc.
14. ASTM F552, Terminology Relating to Chain Link Fencing.
15. ASTM F567, Practice for Installation of Chain-Link Fence.
16. ASTM F626, Specification for Fence Fittings.
17. ASTM F668, Specification for Polyvinyl Chloride (PVC) and Other Organic Polymer-Coated Steel Chain-Link Fence Fabric.
18. ASTM F900, Specification for Industrial and Commercial Swing Gates.
19. ASTM F1043, Specification for Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework.
20. ASTM F1083, Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
22. CLFMI CLF 2445, Product Manual.
23. CLFMI, Step-by-Step Installation Guide.

1.3 TERMINOLOGY

- A. The following words or terms are not defined but, when used in this Section, have the following meaning.
 1. “Knuckled” describes the type of selvage obtained by interlocking adjacent pairs of wire ends and then bending the wire ends back into a closed loop.
 2. “Fencing” describes an assembly of metal components, including wire chain-link fabric fastened to top, bottom and intermediate horizontal rails and to vertical line posts, corner posts and terminal posts (also referred to as “end posts”). This assembly includes all auxiliary components, gates, fittings, fasteners, and other accessories, all with specified protective coatings.
- B. Terminology used in this Section and not defined in this Article will be construed in accordance with the terminology used in CLF 2445 and ASTM F552.

1.4 QUALITY ASSURANCE

A. Qualifications:

1. Erector/Installer:

- a. Engage a single erector that is skilled and trained, and possesses successful and documented experience installing fencing.
- c. Submit name and qualifications of erector with the following information for a minimum of three successful projects:
 - 1) Names and telephone numbers of owner and architect or engineer responsible for project.
 - 2) Approximate fencing contract amount.
 - 3) Quantity of fencing installed.

B. Component Supply and Compatibility:

1. Provide fencing as complete system with all gates, posts, hardware, appurtenances and other components produced by a single manufacturer, including custom erection accessories, fittings, clamps, and fastenings as required for complete system.

D. Design Criteria

1. Comply with the standards of the Chain Link Fence Manufacturer's Institute "Product Manual" and Federal Specification RR-F-191/IA/1C, unless otherwise shown or specified.

1.5 SUBMITTALS

A. Action Submittals: Submit the following:

1. Shop Drawings:

- a. Drawings at scale of 1/4-inch equal to one foot of gate and fence assembly, identifying all materials, dimensions, sizes, weights, and finishes of rails, posts, braces, supports, footings and other components. Show gate and fence heights, and locations of gates and fence. Show gate swing, hardware, and accessories. Include plans, elevations, and sections, with required installation and operating clearances, and details of post anchorage, attachments, and bracing.

2. Product Data:

- a. Copies of manufacturer's technical product information, and specifications for all gate and fence components, including auxiliary system components.

B. Informational Submittals: Submit the following:

1. Certifications:

- a. Submit shipping list for materials used, endorsed with manufacturer's voucher, signed by authorized employee of manufacturer, certifying that material used in gate and fence complies with the Contract Documents and with the approved submittals.
 - 2. Design Data: Submit with the Shop Drawings:
 - a. All structural calculations verifying that all system components comply with requirements of authorities having jurisdiction at the Site.
 - 3. Manufacturer's Instructions:
 - a. Manufacturer's installation instructions.
 - C. Closeout Submittals: Submit the following:
 - 1. Warranty documentation.
- 1.6 DELIVERY, STORAGE, AND HANDLING
- A. Delivery and Storage of Materials:
 - 1. Deliver materials in manufacturer's original, unopened packaging with all factory-applied tags, labels and other identifying information intact, legible and accurately representing material on approved submittals.
 - 2. Deliver the fence and gate materials at the time of installation. Do not deliver materials in advance of installation.
- 1.7 PROJECT CONDITIONS
- A. Existing Utilities: Do not interrupt utilities unless allowed.
 - B. Obtain measurements at the Site to verify layout information and dimensions for fence and gate in relation to reference points provided by DEPARTMENT or indicated in the Contract Documents.
- 1.8 WARRANTY
- A. General Warranty: The special warranties specified in this Article shall not deprive DEPARTMENT of other rights or remedies DEPARTMENT may otherwise have under the Contract Documents and shall be in addition to and run concurrent with other warranties made by CONTRACTOR under the Contract Documents.

PART 2 – PRODUCTS

2.1 SYSTEM PERFORMANCE

A. Design Considerations:

1. Verify size of framing members shown or indicated in the Contract Documents. Where structural analysis indicates the need, provide additional members, or increased member size, thickness or weight.
2. Modifications may be made only as necessary to meet Site conditions to ensure proper fitting and support of the Work and only upon submittal of Shop Drawings and receipt of approval by ENGINEER.

2.2 MATERIALS

A. General:

1. Tube sizes specified are nominal outside dimension.
2. Roll-formed section sizes are nominal outside dimensions.
3. Wire gages shall conform to American Steel and Wire Company gage.
4. Heat-form arcs and chords before applying protective coatings to metal.
5. Sizes specified are given for uncoated metal. Protective coatings are in addition to specified metal dimensions, gages, and sizes.
6. Provide weights of zinc and aluminum coatings on wire and pipe fabrications in accordance with CLFMI CLF 2445.

B. Chain-Link Fence and Gate Fabric:

1. One-piece fabric widths, for fencing 12 feet and less in height, complying with CLFMI CLF 2445.
2. Wire mesh shall be woven throughout in form of approximately uniform square mesh with parallel sides and horizontal and vertical diagonals of approximately uniform dimensions, of size and gage specified and in compliance with ASTM A817, Type 1, cold-drawn carbon steel wire with minimum breaking strength of 2,170 pounds and coated with aluminized finish, as specified. Fabric shall be as recommended by CLFMI for heavy industrial usage.
3. Provide fence fabric imprinted with manufacturer's trade name, country of origin, core wire gage, and finished outside diameter gage.
4. Provide fabric knuckled to eliminate exposure of sharp edges.
5. Fabric Gage: No. 9-gage wires.
6. Mesh Size: Two-inch mesh.

2.3 FRAMEWORK

- A. General: The following table presents actual outside diameter (OD) and equivalent nominal pipe size (NPS) and trade size of round members:

Actual OD (inches)	NPS (inches)	Trade Size (inches)
1.315	1.0	1-3/8
1.660	1.25	1-5/8
1.900	1.5	2
2.375	2.0	2.5
2.875	2.5	3
3.500	3.0	3.5
4.000	3.5	4

- B. Pipe shall be commercial grade, plain-end steel pipe with standard-weight walls. Steel strip used for manufacture of pipe shall comply with ASTM F1083, Schedule 40 pipe with minimum yield strength of 25,000 psi and protected with zinc, as specified.
- C. Fittings: Comply with ASTM F626.
- D. End, Corner, Line, and Pull Posts: Provide end, corner, and pull posts of following minimum size:
1. Over eight feet fabric height: 3.50 in. OD pipe (7.58 pounds per linear foot).
- E. Top Rail: Provide top rails, unless otherwise shown or indicated, conforming to the following:
1. 1.900 inch OD pipe weighing 2.72 pounds per linear foot.
 2. Provide in manufacturer's longest lengths, with expansion-type coupling 0.051-inch thick rail sleeves, approximately seven inches long, for each joint.
 3. Provide means for attaching top rail securely to each gate, corner, pull, and end post.
- F. Roll-Formed Steel: Provide rolled steel shapes produced from structural-quality steel conforming to ASTM A1011, Grade 45, with minimum yield strength of 45,000 psi. Protective coating system shall conform to ASTM F1043, as specified.
- G. Post Brace Assembly: Provide bracing assemblies at end and gate posts, and at both sides of corner and pull posts, with horizontal brace located at mid-height of fabric.
1. Use 1.900-inch OD pipe weighing 2.72 pounds per linear foot for horizontal brace and 3/8-inch diameter rod with turnbuckle for diagonal truss.

2.4 AUXILIARY FENCING MATERIALS AND ACCESSORIES

- A. Wire Ties:
1. For tying fabric to line posts, use nine-gage, aluminum alloy 1100-H4, wire ties to match fence fabric, spaced 12 inches on centers.

- B. Tension Wire: Provide tension wire consisting of aluminized, seven-gage, coiled spring steel wire coated with 0.40-ounces of aluminum per square foot of wire surface, minimum, in compliance with ASTM F1664.
 - 1. Locate at bottom of fabric only.
- C. Post Caps: Pressed steel, wrought iron, or cast aluminum alloy, designed as weather-tight closure cap, for tubular posts. Provide one cap for each post unless equal protection is afforded by combination post-top cap.
 - 1. Provide cone-type caps for terminal posts and loop-type caps for line posts.
- D. Stretcher Bars: One-piece lengths equal to full height of fabric, with minimum cross-section of 3/16-inch by 3/4-inch. Provide one stretcher bar for each gate and end-post, and two for each corner- and pull-post.
- E. Stretcher Bar Bands: Pressed steel, galvanized, 0.078-inch to 0.108-inch thick depending on post diameter, spaced not greater than 15 inches on centers to secure stretcher bars to end, corner, pull, and gate posts.
- F. Truss Rods: Steel rods, 3/8-inch diameter, merchant quality with turnbuckle.
- G. Concrete: 3,000 psi concrete in accordance with Section 2.7, CONCRETE below.

2.5 GATES

- A. Manufacturer: The gate shall be the aluminum, double-wide swing gate type unless otherwise approved, and as manufactured by Master Halco, Inc., or approved equal.
- B. Frame: Gate frames shall be made of 2-inch square aluminum tubing alloy 6063-T6, weighing 0.94 pounds per lineal foot and shall be welded at all corners so as to form a rigid one-piece unit. Fabric shall be securely stretched and held on all four sides in the 2-inch square tubing by use of hook bolts and tension rods. Fabric filler shall match fence.
- C. Size/Type: per Detail 6, Drawing C-501.
- D. Bracing: per Detail 6, Drawing C-501.
- E. Gate Hardware: All gate hangers, latches, brackets, guide assemblies and stops shall be galvanized after fabrication with malleable iron or steel. A positive latch shall be provided with provisions for padlocking. Provide hold backs for gates. Holdbacks shall automatically engage the gate leaf and hold in open position until manually released.
- F. Lock: Provide combination padlock, Gen Security, Master Lock, hardened steel, brass, model no. 175.

2.6 FINISHING

- A. Chain-Link Fence and Gate Fabric:
 - 1. Aluminized finish with not less than 0.40 ounces aluminum per square foot, complying with ASTM A491, Class II.

- B. Framework and Appurtenances: Provide the following finishes for steel framework, auxiliary system components, and miscellaneous accessories:
1. Galvanizing: Zinc for galvanizing shall be of High Grade or Special High-Grade conforming to ASTM B6 with maximum aluminum content of 0.01 percent. Galvanize metal using hot-dip process in accordance with the following:
 - a. Structural Iron and Steel Shapes: ASTM A123
 - b. Rolled-Form Sheet Steel: ASTM A653
 - c. Hardware and Accessories: ASTM A153
 - d. Fittings: ASTM F626
 - e. Pipe: ASTM A53
 2. Provide minimum weights of zinc as follows:
 - a. Pipe: 1.8-ounces of zinc per square foot. Apply Type A coating both inside and outside according to ASTM F1043, as determined by ASTM A90.
 - b. Rolled-Form Sheet Steel: 4.0-ounces of zinc per square foot of surface area.
 - c. Hardware and Accessories: Zinc weights in compliance with Table 1 of ASTM A153.
- C. Welded Joints:
1. Repair zinc coatings at welded joints by applying zinc-rich paint.
 2. Repair polymer-coated steel by applying an epoxy primer, intermediate coat and urethane topcoat, per manufacturer's requirements.

2.7 CONCRETE

A. Fence Post Footing Concrete:

1. Embed all Gate, Corner, Line, and End Posts in concrete.
2. The concrete shall be 3,000 pounds per square inch "Low-Carbon" concrete.
3. The maximum water-cement ratio by weight of the concrete shall be 0.45.
4. Provide rough finish for concrete.

2.8 SOURCE QUALITY CONTROL

A. Fabrication Tolerances:

1. Fabric, posts, rails, and other supports shall be straight or uniformly curved to provide the profiles shown, to dimensional tolerance of 1/16-inch in 10 feet without warp or rack in the finished Work.

PART 3 – EXECUTION

3.1 INSPECTION AND SEQUENCE

- A. Examine conditions under which the Work will be erected and notify ENGINEER in writing of conditions detrimental to proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions are corrected. The work includes clearing and removal of vegetation and debris in the location of the new fence components and gate.
- B. Install new fence posts outside of existing gate and fence, and in advance of removal of existing gate. Allow footings for new gate posts sufficient time for concrete curing prior to installing new gate, per Article 3.2 D of this Section. Attach existing fence fabric and install gate on the same day that the existing gate and posts are removed. CONTRACTOR shall be fully responsible for Site security during the period of new gate installation and existing gate removal. New gate shall be installed within one week of CONTRACTOR mobilization to the site.
- C. At location of pole barn demolition, and as shown on the Drawings, install new corner post(s), new fence extension, and new end post, within 5 business days of removal of pole barn. Obtain ENGINEER's approval for corner post, fence extension, and end post locations, and method for attachment of existing fence fabric to new corner post.

3.2 ERECTION

- A. Comply with CLFMI Step-by-Step Installation Guide and ASTM F567. Do not begin installation and erection of fencing by pole barn until final grading is completed.
- B. Excavation: Drill holes of diameters specified, for post footings in firm, undisturbed or compacted soil.
 - 1. For posts set in cast-in-place concrete, provide hole diameters dug or drilled a minimum of four times the largest cross section of post.
 - 2. Remove excavated material and manage and dispose off-Site as Non-TSCA contaminated material with PCB concentrations <50 mg/kg.
- C. Setting Posts: Remove loose and foreign materials from sides and bottoms of holes and moisten soil prior to placing concrete.
 - 1. Center and align posts in holes 3-inches above bottom of excavation.
 - 2. Posts shall be set in concrete. Place concrete around posts in continuous pour and vibrate or tamp for consolidation. Check each post for vertical and top alignment and hold in position during placement and finishing operations.
 - 3. Extend concrete to two inches above ground surface. Crown to shed water away from posts.
 - 4. Extend footings for gate posts to underside of bottom hinge. Set keeps, stops, sleeves, and other accessories into concrete as required.

5. Keep exposed concrete surfaces moist for at least seven days after placement, or cure with membrane curing materials, or other acceptable curing method.
- D. Concrete Strength: Allow concrete to attain at least 75 percent of its minimum 28-day compressive strength, but in no case sooner than seven days after placement, before installing rails, tension wires, gates, or chain-link fabric.
- E. Posts and Rails:
1. Top Rails: Trim existing top rail for connection to new gate posts. Run rail continuously through post caps or extension arms, bending to radius for curved runs. Provide expansion couplings as recommended by fencing manufacturer to form continuous rail between terminal posts.
 2. Post depth, concrete footing depth and concrete footing diameter as shown on the Contract Drawings, but no less than: 42-inch post depth, 48-inch footing depth and 14-inch footing diameter. Refer to Detail 6, Drawing C-501.
- F. Chain-Link Fabric:
1. Trim existing fence fabric as needed to connect to new posts. Fasten to terminal posts and gate posts with tension bars threaded through mesh and secured with tension bands at maximum intervals of 14 inches.
 2. Tie to line-posts, gate frames and top and bottom rails with tie wires spaced at maximum 12 inches on posts and two feet on rails.
 3. Connect tension bars to posts and frames by means of adjustable bolts and bands spaced not more than 14 inches apart.
 4. Leave approximately two inches between finish ground surface and bottom selvage, except where bottom of fabric extends into concrete.
 5. Join roll of chain-link fabric by weaving a single picket into the ends of roll to form continuous mesh.
- G. Tension Wire:
1. Stretch tension wire taut and free of sag, from end to end of each stretch of fence and position at a height that will enable the wire to be fastened to chain-link fabric by securing within the top 12 inches of chain-link fabric.
 2. Fasten bottom tension wire within bottom six inches of chain-link fabric.
 3. Tie tension wire to each post with not less than six-gage galvanized wire.
- H. Stretcher Bars: Thread through or clamp to fabric four inches on centers, and secure to posts with metal bands spaced 15 inches on centers.
- I. Tie Wires: Use U-shaped wires conforming to diameter of pipe. Clasp pipe and fabric firmly with ends twisted at least two full turns. Bend ends of wire to minimize hazards.
- J. Fasteners: Install nuts for tension band and hardware bolts on side of fence opposite fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

- K. Gates: Install gates plumb, level, and secure for full opening without interference. Install ground-set items in concrete for anchorage, as recommended by the fence manufacturer. Adjust hardware for smooth operation and lubricate where necessary.

3.3 ADJUSTMENT AND CLEANING

- A. Repair coatings damaged in the shop or at the Site by recoating with manufacturer's recommended repair compound.
- B. Adjust all fencing and gates and leave in good working condition.
- C. Lubricate operating equipment and clean exposed surfaces.
- D. Protect gates and fence from construction traffic until final acceptance of the Work.
- E. Repair and replace broken or bent components.

END OF SECTION

SECTION 32 92 00
TURF AND GRASSES

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Description of requirements for purchase and placement of seed for Site restoration and related work.
- B. Bluebird nesting boxes furnish and installation.

1.2 REFERENCES

- A. NYS Department of Transportation CIM 610.

1.3 DEFINITIONS

- A. Weeds: Includes, but is not limited to, Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

1.4 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions. Include required subgrade preparation, list of seed mixture, and application rate.
- B. Submit manufacturer's letter of certification that the seed meets or exceeds the physical property, endurance, performance, and packaging requirements shown on their product.
- C. Source of potable water.
- D. Bluebird nesting box manufacturer's product data and installation instructions.

1.5 QUALITY ASSURANCE

- A. Provide seed mixture in containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver seed mixture in sealed, weather resistant, labeled containers. Seed in damaged packaging is not acceptable.
- B. Seed which is wet, moldy, or otherwise damaged is not acceptable.
- C. Store and handle to prevent damage of the seed by protecting from weather, excessive temperatures or moisture, and construction operations.

PART 2. PRODUCTS

2.1 SEED MIXTURE

- A. Seed Mixture – Seed mixture shall be Northeast Annual & Perennial Wildflower Mix, ERNMX-168, manufactured by Ernst Seeds, or approved equivalent.
- B. Seed shall be applied at a rate of 8 - 12 pounds per acre.
- C. Seed Mix shall be as follows:
 - 1. 14.0% *Echinacea purpurea* (Purple Coneflower)
 - 2. 12.3% *Cosmos bipinnatus* (Cosmos)
 - 3. 10.0% *Calendula officinalis* (Calendula)
 - 4. 10.0% *Centaurea cyanus* – Mixed (Bachelor's Button Tall Mixed/Cornflower)
 - 5. 6.0% *Coreopsis lanceolata* (Lanceleaf Coreopsis)
 - 6. 5.2% *Delphinium ajacis* (Rocket Larkspur)
 - 7. 4.5% *Lavatera trimestris* (Tree Mallow)
 - 8. 4.0% *Linum grandiflorum rubrum* (Scarlet Flax)
 - 9. 4.0% *Rudbeckia hirta* (Blackeyed Susan)
 - 10. 3.0% *Chrysanthemum maximum* (Shasta Daisy)
 - 11. 3.0% *Eschscholzia californica* (California Orange Poppy)
 - 12. 3.0% *Trifolium incarnatum*, Variety Not Stated (Crimson Clover, Variety Not Stated)
 - 13. 2.6% *Linum perenne* (Perennial Blue Flax)
 - 14. 2.0% *Cheiranthus allionii* (Wallflower)
 - 15. 2.0% *Heliopsis helianthoides*, PA Ecotype (Oxeye Sunflower, PA Ecotype)
 - 16. 2.0% *Rudbeckia triloba*, WV Ecotype (Browneyed Susan, WV Ecotype)
 - 17. 1.5% *Ratibida columnaris* (Red Prairie Coneflower (Mexican Red Hat))
 - 18. 1.2% *Agastache Foeniculum* (Anise (Lavender) Hyssop)
 - 19. 1.0% *Lobularia maritima* (Sweet Alyssum)
 - 20. 0.8% *Baptisia australis*, Southern WV Ecotype (Blue False Indigo, Southern WV Ecotype)
 - 21. 0.8% *Clarkia elegans* (Clarkia)

22. 0.8% *Liatris spicata* (Marsh Blazing Star)
23. 0.7% *Monarda fistulosa* (Wild Bergamot)
24. 0.6% *Penstemon digitalis* (Tall White Beardtongue)
25. 0.5% *Achillea millefolium*, PA Ecotype (Common Yarrow, PA Ecotype)
26. 0.5% *Aster laevis*, MN Ecotype (Smooth Blue Aster, MN Ecotype)
27. 0.5% *Aster oblongifolius*, PA Ecotype (Aromatic Aster, PA Ecotype)
28. 0.4% *Asclepias tuberosa*, PA Ecotype (Butterfly Milkweed, PA Ecotype)
29. 0.4% *Papaver rhoeas*, Red (Corn Poppy, Red)
30. 0.4% *Pycnanthemum incanum*, MD Ecotype (Hoary Mountainmint, MD Ecotype)
31. 0.4% *Zizia aurea* (Golden Alexanders)
32. 0.3% *Coreopsis tinctoria* (Plains Coreopsis)
33. 0.3% *Lespedeza virginica*, VA Ecotype (Slender Lespedeza, VA Ecotype)
34. 0.3% *Silene armeria* (Catchfly)
35. 0.3% *Solidago bicolor*, PA Ecotype (White Goldenrod, PA Ecotype)
36. 0.3% *Solidago nemoralis*, PA Ecotype (Gray Goldenrod, PA Ecotype)
37. 0.3% *Tradescantia ohiensis*, PA Ecotype (Ohio Spiderwort, PA Ecotype)
38. 0.1% *Penstemon hirsutus* (Hairy Beardtongue)

2.2 ACCESSORIES

- A. Erosion Control Blanket – Refer to Supplementary Specification Section 31 25 00, Erosion and Sedimentation Controls.
- B. Water: Potable, clean, fresh, and free of substances or matter which could inhibit vigorous growth of seed/plants.

2.3 BLUEBIRD NESTING BOXES

- A. Bluebird nesting boxes shall be supplied and installed in accordance with the instructions of the New York State Bluebird Society, www.nysbs.org.
- B. CONTRACTOR shall furnish and install a total of 5 bluebird nesting boxes. Locations for bluebird nesting boxes shall be as directed by ENGINEER.

PART 3. EXECUTION

3.1 INSPECTION

- A. Verify that prepared soil base is ready to be seeded.
- B. Prepare all disturbed areas of the Site to be seeded.

3.2 PREPARATION OF SURFACE SOIL/TOPSOIL

- A. As part of Site restoration, the temporary gravel staging and handling area as well as the equipment decontamination area, and any other ground surface coverings installed by the CONTRACTOR and not specified to remain, shall be removed and transported off-Site and properly disposed, unless directed otherwise by the ENGINEER. After removal, restore uncovered areas with topsoil and seeding as specified herein.
- B. Existing topsoil that may have become compacted due to the Work, shall be worked with a tiller, disk, harrow, dragged with a chain, mat or blade, machine-raked, or hand-worked to a depth of 4 inches.
- C. Fill up to 12 inches below final grade and Topsoil shall be added to fill depressions and voids.
- D. Grade Topsoil to finished grades and to ensure positive drainage. Furnish and Place Fill and Topsoil in accordance with Supplementary Specification Section 31 23 23, Fill.
- E. Remove stones or objects over 2 inches in diameter, foreign materials, weeds, and undesirable plants and their roots.
- F. Final seeding surface shall meet the specified grades, as approved by ENGINEER, prior to placing seed or other amendments. Where final grades are not specified, match surrounding existing grades.

3.3 SEEDING

- A. Seed all disturbed areas of the Site within 24 hours of preparation.
- B. Apply seed at 1.5 times the manufacturer's recommendation (but at a rate no less than 8 pound per acre), evenly in two intersecting directions. Rake in lightly.
- C. Planting shall be conducted in spring (April 1 to May 31) or fall (August 16 to October 15), if possible. If summer or late fall/winter seeding are anticipated, propose an approach for seeding, seed mixture, and verification of growth/stabilization as part of the Work Plan for review by the DEPARTMENT.
- D. Do not sow immediately following rain, or when ground is too dry, or during windy periods. Seeding dates shall be coordinated with the ENGINEER and DEPARTMENT to account for weather conditions.
- E. The CONTRACTOR shall follow manufacturer's recommendations for installation. The CONTRACTOR shall review method of installation with the ENGINEER prior to installation.

- F. Hydroseeding will only be acceptable if proposed and accepted as part of the Work Plan for review by the DEPARTMENT.

3.4 MULCHING

- A. Apply Erosion Control Blanket per manufacturer's instructions and Supplementary Specification Section 31 25 00.

3.5 WATERING

- A. Import water from a potable water source to the site. Obtain ENGINEER approval of water source prior to delivery to site.
- B. Apply water with a fine spray immediately after each area has been mulched. Saturate soil to a depth of 4 inches.
- C. Keep the surface layer of soil damp by frequent light watering with a fine spray during the germination period.

3.6 CARE AND GUARANTEE

- A. Protect and care for seeded areas until final acceptance of the work and repair any damage to seeded areas caused by pedestrian or vehicular traffic or other causes, at the CONTRACTOR's expense.
- B. Place a sign with the following or similar language in a visible location at the Site which is acceptable to the ENGINEER (minimum of three weatherproof signs): "Please Keep Off Seeded Areas - Do Not Disturb". The CONTRACTOR shall temporarily cordon off access with fencing, flagging, ribbon, etc.
- C. The CONTRACTOR shall deeply water root zone of all seeded restoration areas equivalent to the amount of 1" of water per week.
- D. The CONTRACTOR shall install a rain gauge in an inconspicuous area to monitor rainfall per week.
- E. Apply water to maintain moisture to promote growth. Use approved water wagons or tanks or other approved devices to apply water in the form of a spray or sprinkle without erosive force. Apply water prior to 10:00 AM and after 4:00 PM to minimize losses due to evaporation.
- F. Three to four weeks after germination, all seed beds shall be re-tested for pH and nutrients. The CONTRACTOR shall fertilize and adjust pH as per soils testing laboratory recommendations at no additional cost to the DEPARTMENT.
- G. The vegetative surface restoration shall be considered acceptable once the following criteria are met:
 - 1. At least 95% of the surface area shall be established with seeded species within two (2) growing seasons following restoration activities.
- H. CONTRACTOR shall re-seed all bare spots at no additional cost to the DEPARTMENT.

- I. CONTRACTOR shall be solely responsible for establishing and maintaining plant growth through two complete growing seasons, beginning after Substantial Completion.
- J. Growing seasons shall begin no sooner than April 15, and end no later than October 15.

3.7 BLUEBIRD NESTING BOX INSTALLATION

- A. Mount nesting boxes early in the spring or as otherwise directed by ENGINEER.
- B. A 6-1/2 foot length of 1 inch diameter galvanized steel pipe shall be used to mount each nesting box. An A-bolt shall be used to mount the box to the pole to facilitate height and direction modifications.
- C. The base of each nesting box shall be approximately 4 to 5 feet above the ground.
- D. The opening of the nesting box shall be faced away from the prevailing wind and towards a tree or shrub within 25 to 100 feet away.
- E. The diameter of the entrance hole shall be exactly 1 1/2 diameter
- F. The nesting box shall be constructed of cedar lumber, and shall not be painted or stained without ENGINEER approval.
- G. Do not add a perch to the nesting box.
- H. Construction and installation shall be in accordance with the New York State Bluebird Society instructions and recommendations provided on the website: www.nysbs.org.

END OF SECTION

SECTION 33 11 53
MONITORING WELL DECOMMISSIONING

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies the requirements for protection of existing monitoring wells to remain and removal/decommissioning of monitoring wells to be removed.

1.2 DESCRIPTION

- A. Decommission monitoring wells MW-3, MW-4, and MW-6 in advance of excavation work. Decommissioning shall be consistent with NYSDEC Policy CP-43.

1.3 PROTECTION OF EXISTING MONITORING WELLS

- A. Protect all monitoring wells not specified for decommissioning during the Work. The CONTRACTOR shall repair or replace damaged monitoring wells not specified for decommissioning to the satisfaction of the DEPARTMENT and at no cost to the DEPARTMENT.

1.4 REFERENCES

- A. NYSDEC Policy CP-43: Groundwater Monitoring Well Decommissioning Policy.
- B. Construction records for MW-3, MW-4, and MW-6 (provided in the RI Report, refer to Supplementary Specification Section 00 31 24 – Environmental Assessment Information).

1.5 QUALITY ASSURANCE

- A. Provide a copy of the New York well driller license for the qualified person that will perform the decommissioning work. Competent persons may work under direct supervision of the licensed well driller.
- B. Use only operational equipment in good working order.

1.6 SUBMITTALS

- A. As part of the Work Plan for the project, include information on planned decommissioning method for monitoring wells. Include the type of equipment and materials to be used.
- B. Submit manufacturer names and product information, including cement and bentonite, for review and approval by ENGINEER.
- C. Proposed waste transporter(s) and disposal facility(s) for drill cuttings, decontamination fluids, and all other wastes.
- D. Provide well decommissioning information including the following:

1. Total measured depth of well decommissioned, amount of sealant/fill used, and required forms (completed and signed).
2. Amounts of materials shall be in pounds or cubic feet.

PART 2. PRODUCTS

2.1 CEMENT/BENTONITE GROUT

- A. All cement/bentonite grout shall consist of the following mixture:
 1. 12 gallons of potable water.
 2. 4 pounds of high-grade sodium-based bentonite.
 3. One 94-pound bag of Portland cement (Type I or Type II).

PART 3. EXECUTION

3.1 GENERAL

- A. Containerize drill cuttings generated during decommissioning for off-Site disposal. Specify in the Work Plan the planned method of management of drill cuttings, including the proposed waste transporter and disposal facility. Complete waste characterization sampling, storage, labeling, handling, loading, and disposal of waste consistent with the requirements elsewhere in the Contract Documents.
- B. Decontamination of drilling/decommissioning equipment is required between locations. Wastewater generated during decontamination may be treated by the water treatment system.

3.2 DECOMMISSIONING

- A. Decommission MW-3, MW-4, and MW-6 in accordance with NYSDEC Policy CP-43.
- B. Any groundwater monitoring wells damaged or destroyed during the Work and not designated for abandonment or removal shall be decommissioned in accordance with NYSDEC Policy CP-43 and replaced as directed by the ENGINEER.
- C. Drill cuttings shall be containerized, labeled, sampled, and disposed of in accordance with the excavated material transport and disposal requirements of the Contract Documents.
- D. The CONTRACTOR shall employ only competent work persons for the execution of this work, and all work shall be performed under the direct supervision of an experienced New York licensed well driller. The CONTRACTOR shall use only operational equipment in good working order rated to do the work required.
- E. Cement/bentonite grout shall be installed using a tremie pipe.

- F. All waste, including, but not limited to, used plastic sheeting, personal protective equipment (PPE), and soil cuttings shall be managed, characterized, transported and disposed off-Site in accordance with the requirements of the Contract Documents.

3.3 EQUIPMENT DECONTAMINATION

- A. All equipment shall be provided to the work site free of contamination. The ENGINEER may prohibit from the Site any equipment that in its opinion has not been thoroughly decontaminated prior to arrival.
- B. The CONTRACTOR is prohibited from decontaminating equipment on the project Site that is not thoroughly decontaminated prior to arrival.
- C. Decontamination of drilling equipment is required between each location and prior to movement off-Site. Soil and wastewater generated during decontamination shall be collected and containerized and properly characterized and disposed.
- D. Comply with requirements of Supplementary Specification Section 02 51 00, Decontamination Procedures. The CONTRACTOR shall furnish labor, materials, tools and equipment for decontamination of all equipment and supplies that contact excavated material, groundwater and other contaminated materials. Decontamination shall be conducted at the Site Decontamination Pad, installed by CONTRACTOR.

END OF SECTION

SECTION 44 01 40
WATER TREATMENT

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Supply, installation, testing, operation, monitoring and maintenance, and decommissioning of a water treatment system to treat all water generated from the Work including liquids from dewatering of the excavation areas, decontamination water from vehicle and equipment decontamination, stormwater runoff from contaminated areas of the Site, and all other waters and liquids generated by the Work that require treatment. Treatment of liquids should produce water of a quality that can be directly discharged to adjacent surface water body in accordance with applicable permits, laws and regulations.
- B. Minimum Contractor qualifications.

1.2 DESCRIPTION

- A. The CONTRACTOR shall size the water treatment system; design, furnish, install operate, and maintain the water treatment system sufficient in size to allow for excavation, backfill, post-excavation sampling, survey, inspection and planting as specified and shown on the Contract Drawings under dry conditions; and discharge the treated water into the adjacent surface water as permissible by permits.
- B. The CONTRACTOR shall provide full secondary containment for all tanks and treatment equipment which store or process wastewater. Effluent holding tanks and other post-treatment equipment is not required to have secondary containment.
- C. The CONTRACTOR shall be responsible for management of all waters and liquids generated during the project in accordance with the Contract Documents.
- D. The CONTRACTOR may elect to dispose of construction liquids and water by any combination of the following means:
 - 1. On-site surface water discharge: Comply with the effluent limitations and monitoring program for Discharge to Surface Water of the State of New York. Refer to Supplementary Specification Section 01 43 36, Field Samples and Analysis, for further requirements, and Contract Section IX for the New York State SPDES Permit Equivalent.
 - 2. Off-Site transport and disposal at a properly permitted and ENGINEER approved Treatment, Storage, and/or Disposal Facility (TSDF).

1.3 REFERENCES

- A. American Water Work Association (AWWA) D103 Standard for Portable Water Storage Tanks
- B. AWWA B604 Standard for Granular Activated Carbon
- C. New York Administrative Code Title 24, Chapter 1: Environmental Protection and Utilities – Air Pollution Control

- D. National Electrical Code
- E. American Society for Testing and Materials (ASTM), relevant codes and guidance
 - 1. ASTM D1125-14 Standard Test Methods for Electrical Conductivity and Resistivity of Water
- F. American Society of Mechanical Engineers (ASME), relevant codes and guidance
 - 1. ASME Boiler and Pressure Vessel Code
- G. 40 Code of Federal Regulations 112.7 – General Requirements for Spill Prevention, Control, and Countermeasure Plan

1.4 CONTRACTOR QUALIFICATIONS

- A. The CONTRACTOR, or approved subcontractor, responsible for water treatment, must have successfully completed at least 3 similar water treatment projects, involving similar water quantity, contamination (i.e., PCBs and metals) and in support of similar remediation effort (i.e., soil excavation, saturated soil handling, excavation adjacent to wetlands and ponded areas).
- B. The Water Treatment Plan must be prepared by an experienced professional that shall also be responsible for the implementation of the Plan. The responsible individual must have prepared a minimum of 3 similar plans, involving similar contamination (i.e., PCBs) and in support of similar remediation.

1.5 QUALITY ASSURANCE

- A. Approval, signing and stamping of the Water Treatment Plan by the design engineer, a professional engineer licensed in the State of New York and qualified to design all elements of the submittal.
- B. The CONTRACTOR shall provide a qualified Lead Operator. The Lead Operator shall have experience operating dewatering and treatment systems, and shall demonstrate such experience for a minimum of 3 similar projects.

1.6 SUBMITTALS

- A. The CONTRACTOR shall submit a list of similar projects (List of Water Treatment Projects) demonstrating compliance with the qualification requirements in Article 1.4 of this section. The list shall include for each project, the following:
 - 1. Name and contact information for site owner.
 - 2. Name of contractor/subcontractor responsible for water treatment and name of individual responsible for design and operation of the treatment system.
 - 3. Description of the project remedial action and treatment activities, including: i) purpose for the treatment, ii) source of contaminants, iii) average gallons of water treated per day, iv) length in days of the treatment effort, v) contaminants in extracted water, vi) equipment used for treatment, viii) treated water discharge water body, and viii) problems or issues encountered.

- B. The CONTRACTOR shall prepare and submit a Water Treatment Plan as part of Supplementary Specification Section 01 15 00 – Minimum Requirements for Work Plan. The Water Treatment Plan shall be signed and sealed by a Professional Engineer licensed to practice in New York State. The Water Treatment Plan shall include descriptions of the water management sequence in relation to CONTRACTOR's Excavation Plan and Fill Plan, schedule, installation details, and means and methods of installation and operation of all water treatment components. The Water Treatment Plan shall include:
1. Treatment System manufacturer's data, capacities, maintenance and operational requirements, and design calculations for the following distribution and treatment components:
 - a. Influent holding tank, settling tank, oil water separator, intermediate/filter feed tanks, and effluent holding tanks.
 - b. Physical separation system for separation of floating material (i.e., separate phase PCB liquids, oils, foam, scum) and settleable solids.
 - c. Mechanical filtration system (i.e., bag filter, sand filter, etc.).
 - d. Water handling equipment (i.e., pumps, piping, valves, hoses, etc.).
 - e. Instrumentation including temperature indicators, pH indicators, flow rate indicators, flow totalizers, pressure indicators, level detection and high-level alarm equipment, leak detection and secondary containment equipment.
 2. Calculations used to generate treatment capacity, including projected water table drawdown and flow rates.
 3. Calculations demonstrating the water treatment system ability to meet the water discharge limits specified in the SPDES Permit.
 4. Calculations supporting the projected filter media (e.g., granular activated carbon) replacement frequency and schedule.
 5. Calculations supporting the selection and sizing of components, including flow paths, flow rates, pressures, and temperatures.
 6. Schematic drawings of the entire system, including size, type, grade/class for all tanks, separators, pumps, piping, valves, filters, and other equipment, layout and instrumentation diagrams, details of pipe support systems, and routing of influent water through the system to the discharge.
 7. Required maintenance of components, including backwash schedule.
 8. Frequency of inspection and maintenance of all system components, including, but not limited to, frequency of inspection of oil/water separator, bag filters, media (e.g., GAC), instrumentation, and all other system components. Specifically provide plan for establishing required frequency for removal of accumulated sediment and separate phase product from system.

9. Operations schedule, including contact information for responsible person for overnight/weekend operation.
 10. Electrical requirements of the system and method for providing continuous power to the system.
 11. Any other elements to provide a comprehensive liquids and water treatment system to meet the requirements of the Work.
- C. Water Treatment System Staffing Plan shall include at a minimum:
1. Name and Qualifications of Lead Water Treatment System Operator responsible for operation, monitoring, maintenance, and performance of the treatment system.
 2. Schedule showing times Lead Water Treatment System Operator will be on-Site.
 3. Shift schedule showing periods (start time and stop time) of each shift for 24 hours per day 7 days per week operation of the Treatment System.
 4. Names of on-Site operators for each shift period for a typical 7-day week for each hour of each day, Sunday through Saturday.
 5. Names of back-up operators for times when primary operators are not available.
- D. Startup Plan including plans for testing, sampling, analysis, temporary holding of effluent pending analysis, and schedule for testing.
- E. Submit results of sampling of treated liquids. ENGINEER's approval of sampling results shall be required prior to any discharge.
- F. Submit description of all start-up and on-going sampling planned for system in accordance with SPDES Permit requirements and requirements of Contract Documents, and description of data to be included in daily/weekly reports.
- G. Submit drafts of all reports required by the SPDES Permit for review and approval by ENGINEER prior to submission to the permitting agency. Allow a minimum of 7 days for ENGINEER's review prior to the due date for the report/submittal to the agency.
- H. Description of tank with secondary containment for storage of PCB liquids. Submit manufacturer's literature.
- I. Identification of transporters and disposal/recycling facilities for all wastes generated during startup, testing, operation, maintenance and decommissioning of the Water Treatment System.
- J. Documentation of licensing of electrician.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. The CONTRACTOR shall install and test the water treatment system prior to beginning any excavation activities. Provide for delivery of additional treatment system components for repair, regeneration, or otherwise to ensure uninterrupted progress of the Work.

- B. All treatment equipment and untreated water containers/tanks shall be installed within secondary containment.
- C. Inspect all parts of the system for defects, damage, or other issues that would cause the component to potentially fail.
- D. Store materials to permit access for inspection and identification before installation. Keep all materials off the ground, using pallets, platforms, or other supports. Protect steel members and materials from corrosion or deterioration. Ensure equipment and packaging are closed to prevent contamination or water infiltration prior to installation.

PART 2. PRODUCTS

2.1 EQUIPMENT PERFORMANCE

- A. The system shall be designed with sufficient redundancy to accommodate continuous operation during system maintenance. Two 100% capacity treatment trains are required, such that the system can operate continuously.
- B. The water treatment system shall be connected to utility-provided power supply. Temporary generator(s) shall not be used for primary power supply to the treatment system.
- C. The granulated activated carbon system shall be designed to facilitate sufficient advance notice of the need for treatment media replacement to prevent discharge of effluent in violation of applicable discharge criteria.
- D. If there is the possibility that ambient temperatures may fall below freezing, tanks, pumps, and the entirety of the treatment system shall be winterized to prevent freezing or leaking and to maintain operation. Provide heat tracing, insulation, covers, and other methods of winterization which are adequate for the system and in compliance with NEC and local codes and regulations, particularly for fire control.
- E. All equipment shall be powered by electricity from local electric utility company or alternatively by CONTRACTOR installed temporary ground-mounted solar-powered photovoltaic array. If temporary photovoltaic array is proposed, submit all details of proposed equipment, installation and operation for ENGINEER's approval. All electrical work shall be performed by a licensed electrician.

2.2 EQUIPMENT

- A. Process Instrumentation and Control System: Provide instrumentation and controls for the system to operate in at least manual and automatic modes. Provide all elements of the instruments and controls, including an interface panel, switches, electrical power, etc. Include appropriate alarms, such as automatic shutdown and high or high-high level switches and related alarms. Provide an effluent flow meter which continuously displays and records real-time flow rate in gallons per minute and total flow in gallons. Provide pressure indicators which continuously display pressure on both sides of each solids filter, both sides of each GAC vessel and each point of discharge.
- B. Secondary Containment: Provide secondary containment for all components of the system which will contain, treat or transfer untreated liquids and water to ensure that contaminated fluids are not released. Secondary containment shall be integral to all system components or shall be designed to contain a spill from the largest container/tank

plus 25% the volume of that container/tank. Fully enclosed double walled storage tanks shall be accepted with a 110% capacity of the primary tank.

1. Grade and slope the secondary containment area to a collection sump, where releases of water can be collected for treatment.
 2. Install a minimum 8-inch high berm around the area to be used for the system to provide containment. Provide stairs, ramps, rails, or other means for safe access to the area. Comply with all requirements of OSHA and local, state and federal laws and regulations.
 3. Line the containment area with 40-mil textured HDPE liner. Liner shall be installed continuously across the bottom of the containment area, sloped toward the sump, and overlapped/sealed/welded per manufacturer's recommendation.
 4. Install crushed stone, compatible with the liner, to cover and protect the liner from damage and provide a non-slip working surface. Provide crushed stone of 2-inch size. Stone layer shall be minimum 4 inches thick. Provide sufficient thickness of stone that liner is not exposed.
- C. Pumps: Provide transfer pumps with the capacity to handle solids (if present) to move water from dewatering areas, decontamination area, excavated materials staging area and other areas generating wastewater/liquids requiring treatment. Provide pumps for transfer of liquids between components of the treatment system and to provide enough pressure that water will flow through the treatment system. The CONTRACTOR is responsible for the sizing and selection of all pumps for the designated processes.
- D. Piping, Valves, and Appurtenances: Provide all pipes, valves, and appurtenances compatible with system components and intended operations. Provide all pipe supports. Use valves only where they are essential and, wherever possible, install valves such that they can be operated from the ground level.
- E. Tanks: Provide tanks appropriately sized for the treatment system. Tanks shall be certified clean, serviceable, and adequate upon arrival at the Site. Tanks shall be closed-top or equipped with removable covers, drain ports, and, as appropriate, vents. Components shall be suitably equipped with accessible valves, weirs, and other devices to permit flow control. Tanks shall be equipped with means to measure and indicate liquid levels and flow rates.
- F. Influent Tank and Oil/Water Separator: Provide an adequately sized influent tank with the means to remove settleable solids, oil, separate phase product and oil/water mixtures, or provide separate influent tanks/separators with these capabilities. Suitable access shall be provided to facilitate product removal and cleaning, including a separate clean-out for the oil/water separator.
- G. Mechanical Filtration/Bag Filters: Provide bag filtration for removal of small particulates. Each bag filter system shall be equipped with housings, support baskets, legs, interconnection piping, valves, taps, and pressure gauges. Configure to operate in parallel or isolation mode.
- H. Granulated Activated Carbon (GAC) Filters: Provide GAC tanks in circular configuration with GAC media (virgin or reactivated) which conforms to manufacturer's specifications and NSF requirements. The GAC treatment train shall include valves and appurtenances

for backwashing, flow and head loss measuring devices, valves for shutting off and diverting flow during backwashing, influent and effluent sample points, and drain ports.

- I. Backwash/Effluent Storage Tank: Provide a backwash/effluent holding tank at the end of the system of the same or larger capacity as influent tank.
- J. Spare Parts: Furnish spare parts to operate and maintain the treatment system without causing delay to the Work.
- K. The above specified equipment is minimum required. CONTRACTOR is responsible for identifying and furnishing all equipment needed to meet permit discharge limits and the Contract requirements.

PART 3. EXECUTION

3.1 GENERAL

- A. Install all components of the system per manufacturer's specifications, recommendations, and instructions.
- B. Conduct a leak detection test with potable water on portions and the entire system once it is constructed and operational.
- C. Calibrate all instruments after installation and in a manner consistent with manufacturer's instructions for calibration.
- D. Hydrate the GAC media in potable water.
- E. Operate and maintain the water treatment system in accordance with manufacturer's instructions and requirements, so as not to exceed the requirements of the discharge permit, and to comply with the requirements of the Contract Documents.
- F. Minimize generation of construction related water using engineering controls and best management practices, maintaining temporary bypass storm water controls, dewatering operations, and other related work.
- G. If the ENGINEER or DEPARTMENT believes that construction water is being mishandled or there is insufficient management of the construction water, the ENGINEER or DEPARTMENT may stop work until the CONTRACTOR corrects the problem.
- H. Disposal of construction fluids (which are not properly treated by the on-site treatment system) and sediment shall be to a properly permitted facility allowed to accept the fluids based on the characterization testing performed by the CONTRACTOR following Standard Specification Section 01 45 29.13, Testing Laboratory Services Furnished by Contractor, Supplementary Specification Section 01 43 36, Field Samples and Analysis, and in coordination with the designated approved disposal facility requirements.
- I. On-site discharge of treated water to locations approved by the ENGINEER/DEPARTMENT will be allowed following documentation of conformance with the requirements of applicable permits and approvals, this section and requirements in Standard Specification Section 01 45 29.13, Testing Laboratory Services Furnished by Contractor and Supplementary Specification Section 01 43 36, Field Samples and Analysis.

3.2 TESTING AND START-UP ACTIVITIES

- A. Upon completion of the installation of the system and testing of system components, perform tests at design load conditions, utilizing potable water supplied by the CONTRACTOR to ensure the system meets the design standards. Upon approval from ENGINEER and DEPARTMENT, CONTRACTOR shall begin to dewater excavations and test the dewatering and treatment systems as specified.
- B. Conduct required start-up sampling in compliance with the permit for operation.
- C. During start-up and testing, all treated water shall be stored in tanks or disposed off-site at an ENGINEER-approved facility and shall not be discharged to the environment until sampling results show compliance with discharge limits and approval to discharge is issued by the DEPARTMENT and ENGINEER.

3.3 COLLECTION OF LIQUIDS

- A. The system shall be designed to treat water and liquids (including separate phase PCB product) generated from dewatering operations, decontamination water from vehicle and equipment decontamination, liquids collected from materials handling and staging areas, precipitation run-on, infiltration through dewatering dam(s), well development water, and other waters/liquids generated by the Work. Pump or transport water/liquids to the influent of the treatment system.
- B. The treatment system shall also treat storm water from the Site that has come in contact with work surfaces, potentially contaminated materials (e.g., stockpiles), and the excavation areas. Refer to other specification sections for minimum storm water management requirements and requirements to minimize the amount of storm water that potentially contacts contaminated materials. Storm water that has not been in contact with potentially contaminated materials or spills can either be disposed separately or treated in the treatment system.
- C. Any spills within secondary containment shall be controlled in accordance with the CONTRACTOR's Spill Prevention, Control and Countermeasure (SPCC) Plan and properly treated or transported and disposed off-site.
- D. Maintain accurate records concerning the volumes and areas from which liquids are removed and transported to the treatment system.

3.4 HANDLING AND STORAGE OF LIQUIDS

- A. Label all storage containers of liquids to indicate the known or suspected contents, source area(s) and date(s) of generation.

3.5 OPERATION AND MAINTENANCE

- A. Upon successful start-up of the water treatment system and approval by the ENGINEER, begin dewatering of the excavation area as described in the CONTRACTOR's Work Plan. All treated water shall be stored and shall not be discharged to the environment until sampling results show compliance with discharge limits and approval to discharge is issued by the ENGINEER. Storage, prior to discharge, sampling, release and ENGINEER's approval, of the equivalent of at least one day (24 continuous hours) of liquids expected to be generated during peak dewatering operations shall be required. In no event shall such storage be less than 20,000 gallons. Samples of containerized

treated liquid collected for evaluation of compliance with discharge standards shall be representative of the entire volume of liquid stored.

- B. Conduct daily inspections of the pumps, piping, and tanks. Inspect for evidence of deterioration or leaks.
- C. Routinely monitor effluent from the lead GAC vessel for breakthrough. Sample, test and report in accordance with requirements of permits and approvals. GAC media shall be regenerated and/or replaced as recommended by manufacturer and as required to meet permit discharge limits.
- D. Maintain good housekeeping and neat conditions in the area of the water treatment system. Ensure there are no pooled liquids present or other hazards that could cause slips, trips, and falls. Use barricades, fencing, and warning signs consistent with other sections of the Contract Documents.
- E. At least daily remove and treat water which accumulates in secondary containment structures.
- F. At least weekly remove liquids which accumulate in oil/water separator and characterize, transport and dispose off-site at an approved facility in accordance with the requirements for management and disposal of waste in the Contract Documents. Submit documentation of volumes (in gallons) removed, transported and disposed off-site.
- G. At least weekly dispose of waste generated by the water treatment system, including, but not limited to, solids/sludge, oil/grease, and spent filter media.

3.6 SYSTEM MONITORING AND COMPLIANCE

- A. The water treatment system effluent, and other points as required, shall be monitored and sampled by the CONTRACTOR to ensure compliance with the SPDES Permit(s) for operation. Maximum turnaround time for laboratory analyses shall be 48 hours. Report all testing results to the ENGINEER within 72 hours of sample collection.
- B. If monitoring samples or test results are not in compliance with the permit for operation of the system, the CONTRACTOR shall immediately collect new samples which shall be analyzed on an expedited turn-around-time (24 hours) and store effluent water without discharge until the analytical results are received. Stored water shall be retreated to meet discharge criteria or properly transported and disposed off-site. Restart of discharge shall not begin until acceptable results are obtained and approval by ENGINEER to restart is issued.
- C. CONTRACTOR shall comply with Supplementary Specification Section 01 43 36, Field Samples and Analysis, for sample collection, data analysis, and data reporting.
- D. At least weekly submit report documenting system operation, including, at a minimum, the following:
 - 1. Total volume of liquid treated,
 - 2. Total volume of treated water discharged,
 - 3. Total hours of dewatering,

4. Total hours of treatment system operation,
5. Description of dewatering and water/liquid treatment performed during prior week,
6. Sampling results (waste characterization, discharge liquids, etc.),
7. Description and volumes/weights of liquid wastes and other wastes generated by the water treatment system removed from the site, and names of waste transporters and disposal facilities (provide documentation of proper disposal),
8. Maintenance, repairs and replacements performed during the prior week,
9. Materials and supplies consumed, volumes or weights consumed, and sources of materials and supplies, and
10. Description of system upsets, causes and corrective actions.

3.7 CORRECTIVE ACTIONS

- A. The CONTRACTOR shall take corrective actions to maintain specified treatment system performance in the event of an upset condition and/or operating conditions that result in non-compliant effluent water quality. Mobilize additional equipment for water storage and system improvements to ensure operation in compliance with permits and the Contract Documents. If the CONTRACTOR fails to correct the operation of the system to meet the needs of the Work and the requirements for discharge, the DEPARTMENT reserves the right to make partial or no payment for the Work and materials.

3.8 ON-SITE DISCHARGE

- A. On-Site discharge shall be in compliance with the conditions of the Contract Documents, permits, approvals, laws and regulations.
- B. Collect treated water for temporary on-site storage in approved storage containers prior to discharge.
- C. Before discharge, test and confirm that treated water meets the SPDES Permit Equivalent requirements and all New York State Discharge to Surface Water requirements to discharge to the ground surface. Coordinate reporting of analytical results to regulating authorities with the ENGINEER. Follow the requirements of this section, Standard Specification Section 01 45 29.13, Testing Laboratory Services Furnished by Contractor and Supplementary Specification Section 01 43 36, Field Samples and Analysis.
- D. Treat water on-site to meet permit and applicable regulatory requirements.
- E. Record quantities of water discharged to the nearest gallon using an in-line flow meter. Furnish and install separate flow indicators for the following: i) to measure instantaneous flow rate and cumulative influent volume separately to each treatment train, and ii) to measure instantaneous flow rate and cumulative effluent volume discharged individually from each treatment train.
 1. If water is containerized due to system non-compliance, CONTRACTOR shall separately meter the containerized water whether it is discharge to the environment or re-treated through the system.

- F. Provide back-up on-site storage or alternate disposal options as a contingency in case of:
 - 1. Significant storm events generate above average water quantities.
 - 2. Discharge restrictions at receiving body during wet weather or other emergency conditions.
 - 3. Treatment system fails or has downtime for maintenance.
 - 4. Treatment system does not meet discharge requirements.
- G. Provide storage tank with secondary containment for storage of minimum of 1,000 gallons of separate phase PCB product recovered as part of dewatering operations or from other on-site sources. Storage tank shall be a manufactured product, designed and manufactured specifically for the intended purpose.

3.9 OFF-SITE DISPOSAL

- A. Refer to Supplementary Specification Section 01 74 19, Construction Waste Management and Disposal. Construction water may be disposed off-site at an approved TSDF, if requested by CONTRACTOR and approved by ENGINEER or DEPARTMENT. No additional payment will be made to the CONTRACTOR for transportation or off-Site disposal fees or related work.
- B. Characterize, transport off-Site and dispose of all liquids and wastewater in accordance with the approved TSDF requirements and requirements of the Contract Documents.
- C. Characterize, transport off-Site and dispose of treatment system wastes, including spent media, such as activated carbon and removed sediment in accordance with approved TSDF requirements and requirements of the Contract Documents.
- D. Furnish documentation of disposal of all wastes.

END OF SECTION

SECTION XII

Measurement for Payment

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SECTION XII

MEASUREMENT FOR PAYMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section covers the methods and procedures that the DEPARTMENT will use to measure the CONTRACTOR's Work and provide payment. This description of the measurement and payment features will not, in any way, limit the responsibility of the CONTRACTOR for making a thorough investigation of the Contract Documents and Site conditions to determine the scope of the work included in each bid item.
- B. Items listed starting in Part 3 of this Section refer to and are the same pay items listed in the Bid Form and constitute all pay items for completing the Work. No direct or separate payment will be made for providing miscellaneous temporary or accessory works, plant services, CONTRACTOR's or ENGINEER's field offices, layout surveys, Project signs, sanitary requirements, testing, safety provisions and safety devices, submittals and record drawings, water supplies, power and fuel, traffic maintenance, removal of waste, security, coordination with OWNER's operations, information technology (including hardware, software, and services) required during construction, bonds, insurance, or other requirements of the General Conditions, Supplementary Conditions, General Requirements, and other requirements of the Contract Documents. Payment will constitute complete compensation for all Work required by the Contract Documents, including all costs of accepting the general risks, liabilities and obligations, expressed or implied. Compensation for providing, as required, all supervision, labor, equipment, power, overhead, profit, material, tests, required services, applicable taxes, and for performing all other related Work items, shall be included in prices stipulated for lump sum and unit price pay items listed in this Section and included in the Contract.
- C. Payment will be made to the CONTRACTOR in accordance with the specified methods of measurement and the unit or lump sum prices stipulated in the acceptance of the bid. Payment will constitute complete compensation for all work required by the Contract Documents including all costs of accepting the general risks, liabilities and obligations, expressed or implied. Payment under all tasks will include, but not necessarily be limited to, compensation for furnishing all supervision, labor, equipment, power, overhead, profit, material, services, applicable taxes, and for performing all other related work required. No other payment will be made.
- D. Each lump sum and unit price bid shall include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.
- E. For unit price items, the CONTRACTOR shall be paid for the actual amount of work accepted and for the actual amount of materials in place during the period of construction. After the work is completed and before final payment is made, the ENGINEER or CONTRACTOR as specified in the pay items will make final measurements to determine the quantities of the various items of work accepted as the basis for final payment. The CONTRACTOR shall accept compensation as herein provided, in full payment for furnishing all materials, labor, power, tools, equipment, and

incidentals necessary to complete the work and for performing all work contemplated and embraced by the Contract.

- F. For lump sum items, the CONTRACTOR will be paid on the basis of actual work accepted until the work is completed. Upon completion of the item, 100 percent of the lump sum price may be paid, subject to the terms of the Agreement. The pay items listed below describe the measurement of and payment for the Work to be done under respective items listed in the Bid as outlined in the approved schedule of values.
- G. No payment will be made for work performed by the CONTRACTOR to replace defective work, work which is not required by the Contract Documents, work outside the limits of the Contract, and additional work necessary due to actions of the CONTRACTOR.
- H. All units of measurement shall be standard United States convention, as applied to the specific items of work by tradition and as interpreted by the ENGINEER. Each unit or lump sum price stated in the Bid shall constitute full compensation, as herein specified, for each item of Work completed.

1.2 ENGINEER'S ESTIMATE OF QUANTITIES

- A. The estimated quantities for Unit Price Items, as listed in the Bid Schedule, are approximate only and are included solely for purpose of the comparison of Bids. The ENGINEER does not expressly, or by implication, agree that nature of materials encountered or required shall correspond therewith and reserves the right to increase or decrease any such quantities or to eliminate quantities as the ENGINEER may deem necessary.

1.3 RELATED PROVISIONS

- A. Payments to CONTRACTOR: Refer to General Conditions, Supplementary Conditions, and Agreement Section VI.
- B. Changes in Contract Price: Refer to General Conditions, Supplementary Conditions and Agreement Section VI.
- C. Schedule of Values: Refer to General Conditions, Supplementary Conditions, and Section X – Standard Specifications Section 01 29 73 - Schedule of Values.

1.4 SUBMITTALS

- A. Bid Breakdowns/Schedule of Values: Submit in accordance with Section VIII, Articles 1.4, 1.6 and Article 13.

1.5 INCIDENTAL ITEMS

- A. Except for the items designated hereunder for Measurement and Payment, the costs of items necessary to complete the work as specified are considered incidental to the items specified for Measurement and Payment. The costs of incidental items shall be included in the prices of items specified for Measurement and Payment.

PART 2 - MEASUREMENT

- A. Under this Contract, the CONTRACTOR shall provide all labor, equipment, power and materials and shall complete all Work as shown and described in the Contract Documents and as directed by the ENGINEER, in accordance with the expressed intent of the Contract to secure a complete construction of a functionally complete Project. The bid items described in this Section shall together include all work set forth in the Contract Documents and required to properly complete the Work. Any necessary Work that is not explicitly described shall be considered included in the item to which it properly belongs. Where used in the Contract Documents, the word “including” (“includes”, “include”) shall mean “including (includes, include) but not limited to”. Each item includes:
1. All tools, labor, material, equipment, power, plant services, bonds and insurance, tests, adjustments, warranties, overhead, supervision and other expenses required to perform the Work.
 2. All accessories, manuals, and services pertinent to the proper installation of materials and equipment.
 3. All accessories, manuals, and services pertinent to the proper start-up, operation, and maintenance of materials and equipment.
- B. Lump Sum Items: Measurement of all Lump Sum Items will be on a total job basis.
1. The quantities of Work performed under lump sum items will not be measured except for the purpose of determining reasonable interim payments. Interim payments will be made in accordance with the estimated value of Work performed and found acceptable as determined by the ENGINEER, or as specified in this Section.
 2. For each lump sum bid item, the CONTRACTOR shall provide a schedule of values per Part 3 of this Section. The schedule of values shall include a breakdown of major cost items included within the lump sum in sufficient detail to document the specific costs of all items included in the lump sum bid item. The schedule of values shall be provided prior to initiation of the Work.
 3. Measurement for Progress Payments of all lump sum items will be on a percent complete basis as established in the Contract Documents.
- C. Unit Price Items: For each unit price bid item, the CONTRACTOR shall provide a schedule of values per Part 3 of this Section. The schedule of values shall include a breakdown of major cost items included within the unit price in sufficient detail to document the specific costs of all items included in the unit price bid item. The schedule of values shall be provided prior to initiation of the Work. Where items are specified to be measured on a unit basis, measurement will be of each particular unit as specified.
1. Volumetric Basis - Where solid or semi-solid items (e.g., soil material) are specified to be measured on a volumetric basis, the volume will be determined on an in-place basis (prior to excavation for excavation or after placement and compaction for imported clean fill and topsoil) between the existing and final ground surfaces as measured by land surveys. If no tolerance is specified, the tolerance shall be interpreted to be 0.00 foot. Where liquid items

are specified to be measured on a volumetric basis, the volume will be determined by direct readings obtained from a graduated container containing the liquid or from a calibrated meter designed to measure the quantity of liquid passing an established point or boundary (e.g., flow meter).

2. Area Basis - Where items are specified to be measured on an areal basis, the area will be measured as the actual surface area within the specified limits. If a specified width of an item is indicated, the area will be determined by the actual length along the centerline multiplied by the specified width. No adjustments will be made for the overlap of materials.
 3. Length Basis - Where items are specified to be measured on a length basis, the length will be measured as the actual length along the centerline within specified limits. No adjustments will be made for the overlap of materials.
 4. Weight Basis - Where items are specified to be measured on a weight basis, the weight will be measured based on certified weigh scale tickets obtained from a weigh scale certified by the County Office of Weights and Measures and approved by the ENGINEER. Certified weigh scale tickets obtained from a disposal facility, considering the weight of the inbound truck minus the weight of the outbound truck (net weight for disposal), shall also be acceptable. Upon request from the DEPARTMENT, the weights shall be measured in the presence of a DEPARTMENT representative. When the weight is per ton, trucks shall be weighed prior to loading and after loading, or prior to dumping and after dumping (for waste disposal). The measured tonnage will be the difference between the prior- and post-loading or prior- and post-disposal measured truck weights.
 5. Daily Basis – Where items are specified to be measured on a daily basis, the following terms shall apply to the measurement of the item(s):
 - a. Calendar Day – shall be measured for each day of the 7-day week, including weekends and holidays, from and including the specified start day, up to and including the specified end day.
- D. Measurement and payment will be made only for Work that has been acceptably performed within the limits shown on the Contract Documents and in conformance with the Contract Documents, as specified, or ordered by the ENGINEER.

PART 3 – BID ITEMS

A. Bid Item LS-1 – Mobilization and Demobilization

1. Measurement and Payment: The bid lump sum price for Bid Item LS-1 - Mobilization and Demobilization shall be the amount paid to the CONTRACTOR to mobilize and demobilize to and from the Site in accordance with the requirements of the Contract Documents. The CONTRACTOR may invoice for up to 70% of this item after all mobilization items listed below are in place, required plans submitted and approved by ENGINEER, and tasks otherwise completed satisfactorily. The CONTRACTOR may invoice for the remaining 30% following Final Completion. However, in no event shall any payment be made until the following are completed to the satisfaction of the

DEPARTMENT: demolition and removal of the pole barn and construction of the specified new fencing and gate.

Payment for Item LS-1 – Mobilization and Demobilization will be made upon the completion of:

- a. Mobilization of personnel, equipment and complete installation, testing and placing into functional service, as determined by the DEPARTMENT and the ENGINEER, project support facilities, and:
 1. Attendance and participation in all project meetings required by the Contract Documents.
 2. Construction entrance(s) and decontamination pad(s) and construction of temporary roads required to access all areas of work and as further required in the Contract Documents.
 3. Identifying and obtaining approval for the source and supplying clean, potable water.
 4. Pre-Construction, Construction Progress and Post-Construction photographic documentation as further required by Section 01 32 33, Aerial and Ground Photographic and Video Documentation.
 5. Location and Protection of Site Utilities for existing utilities on-site and within occupied public ROWs, and photographic documentation of existing aboveground utilities before and after work in accordance with Section 01 32 33, Aerial and Ground Photographic and Video Documentation.
 6. Project plans and schedules including, but not limited to: the Site Specific Health and Safety Plan, Community Air Monitoring Plan, Odor Control Plan, Work Plan (covering excavation, material management, planting, and seeding, and additional work), Asbestos Removal and Disposal Plan, progress schedules, and other plans (including regulatory compliance plans such as Spill Prevention, Control and Countermeasures Plan and Storm Water Pollution Prevention Plan), and schedules and look-ahead submittals required by the Contract Documents and as further required in Standard Specification Section 01 33 00, Submittal Procedures.
 7. All facilities necessary to conduct Health and Safety and Community Air Monitoring Programs as further required in Standard Specification Section 01 35 29, Contractor's Health and Safety Plan.
 8. Environmental control measures as further required in Standard Specification Section 01 35 29, Contractor's Health and Safety Plan.
 9. Handling and proper disposal of all CONTRACTOR generated waste, unless specifically paid under a separate Bid Item, and other control measures as further required in Standard Specification Section 01 35 43.13, Environmental Procedures for Hazardous Materials.
 10. Temporary utilities as required in Standard Specification Section 01 51 05, Temporary Utilities and Controls.
 11. Collection and analysis of pre-mobilization and post-construction surface soil samples, including reporting to ENGINEER and DEPARTMENT.
 12. Stockpile, staging, and parking areas as further required in Standard Specification Section 01 51 05, Temporary Utilities and Controls.
 13. Sanitary facilities as further required in Standard Specification Section 01

- 51 05, Temporary Utilities and Controls.
14. Field offices and support areas as further required in Standard Specification Sections 01 52 11, Engineer's Field Office and Section 01 52 13, Contractor's Field Offices and Sheds.
15. On-site and off-site traffic controls as further required in Standard Specification Section 01 55 13, Access Roads and Parking Areas, and Supplementary Specification Section 01 55 26, Traffic Control.
16. Project Signs as required in Standard Specification Section 01 58 00, Project Identification and Signs.
17. Establishment of all sediment and erosion controls as further required in Supplementary Specification Section 31 25 00, Erosion and Sediment Controls, including eventual removal of all erosion and sediment controls following establishment of vegetation and approval by the ENGINEER.
18. Application for and securing all required permits, variances, and approvals including, but not limited to, Asbestos Abatement Notifications, Washington County Department of Code Enforcement Demolition Permit and Certificate of Compliance, county and municipal permits and approvals, including full compliance with these and all other project required permits and approvals which is not part of other payment items. State Pollutant Discharge Elimination System (SPDES) Permit for dewatering and treated water discharge shall be applied for and secured by the DEPARTMENT.
19. Initial, layout, and as-builts and other surveys/surveying specified and required and not included in other payment items.
20. Progress Schedules, Shop Drawings, and Record Drawings as further required in the Contract Documents.
21. Bonds and Insurances as required in the Contract Documents.
22. Clearing and grubbing as required for access to the areas of work and as required for the Work, including off-site disposal of waste and debris generated and as further required in the Contract Documents.
23. Demolition of the existing pole barn structure, including removal and disposal of debris in and around pole barn, fifty (50) empty 55-gallon drums (drums are damaged, partially rusted, and several contain used absorbent pads), two (2) 55-gallon drums filled or partially filled with investigation-phase decontamination water (drums are damaged and repackaging or overpacking is required), and thirty-five (35) empty steel propane tanks of varying sizes (25- to 200-pound containers, all damaged and partially rusted), and removal and disposal of all above ground and below ground building components required under Supplementary Specification Section 02 41 00 – Pole Barn Demolition.
24. Removal and disposal of existing tarps covering asbestos-containing materials, including removal and disposal of temporary fencing and fence posts, concrete blocks (anchoring the tarps), and other related appurtenances.
25. Supply and installation of a new entrance gate including removal and disposal of the existing gate and a portion of the existing fence, installation of new end posts, fence fabric, and construction of the new gate and all appurtenances required under Supplementary Specification Section 32 31 00 – Fences and Gates, and shown on the Drawings for continuous fencing and gate.

26. Supply and installation of new, permanent 10-foot high chain link fence after demolition of the pole barn, including installation of new corner posts, end post, line posts, fence fabric, and all appurtenances and accessories, and connection of the existing fence fabric to the new corner post at the pole barn, as required under Supplementary Specification Section 32 31 00 – Fences and Gates, and shown on the Drawings.
27. Installation and, when directed, removal, of temporary fence, as shown and specified.
28. Removal entirely of a fallen tree on the existing chain link fence and repair of the associated damage to the existing fence, including furnishing and installing new line posts, fence fabric, privacy slats and appurtenances to match existing undamaged chain link fence.
29. Complete waste characterization, removal and off-Site disposal of all aboveground debris and debris piles, including partially buried debris, within and around the limits of excavation, and within and around all areas accessed for other parts of the Work.
30. Applying for and obtaining disposal facility approvals to accept all wastes which will be generated.
31. All other work not specifically included in other bid items including, but not limited to: compliance with applicable regulatory requirements; preconstruction and construction period planning; scheduling; reporting; submittals; administration and documentation; quality control; testing; environmental protection; and spill control.

b. Demobilization of personnel, equipment and facilities and removal and disposal of all excess materials and project-related waste not included under other bid items, and removal of all temporary facilities and utilities installed during the work, and submission of all records and documentation as directed by the DEPARTMENT and the ENGINEER.

c. This bid item includes partial demobilization at the start of the winter shutdown period and remobilization at the end of the winter shutdown period. Equipment, facilities, material and supplies which will remain on-site during the winter shutdown period shall be winterized and properly stored to prevent damage during the winter shutdown period. All ground surfaces shall be stabilized, and all waste shall be removed from the site before the start of the winter shutdown period. No waste shall be left on site during the winter shutdown period. At the end of the winter shutdown period, all equipment and facilities required to complete the work shall be returned to fully operational status. Monitoring and maintenance of the Site during the winter shutdown period shall be included under unit price payment item UP-8.

B. Bid Item LS-2 – Removal and Disposal of Asbestos Containing Soil and Debris

1. Measurement and Payment: The lump sum price bid for Bid Item LS-2 – Removal and Disposal of Asbestos Containing Soil and Debris shall be the amount paid to the CONTRACTOR to handle, stage, remove, transport and dispose off-site asbestos containing soil and debris as directed and specified herein. The asbestos, soil, material and debris to be removed under this payment item also contains PCBs at concentrations of 50 mg/kg or greater, perfluorooctanesulfonic acid (PFOS) at concentrations of up to 10 ug/kg

and other PFAS, total lead concentrations of up to 5,000 mg/kg, and exhibits the RCRA characteristic of toxicity for lead.

Provide all materials, equipment, incidentals, power and labor to completely and properly remove and manage asbestos containing soil and debris, and perform all applicable work, and requirements as described in Supplementary Specification Sections 02 82 33, Removal and Disposal of Asbestos-Containing Material and 31 23 16, Excavation, and as shown on the Contract Drawings. Perform all required and specified air monitoring and air sampling including collection and analysis of work zone and personnel air samples, required reporting, and work zone and personnel air monitoring, in full compliance with 29 CFR 1926.1101. This bid item includes waste characterization sampling and analysis of the asbestos-containing soil and debris and surveying to mark out excavation limits and surveying for confirmation of removal to the limits shown on the Drawings.

The means and methods for excavating and removing the asbestos containing soil and debris is the CONTRACTOR's responsibility. The CONTRACTOR shall remove all designated asbestos containing soil and debris in advance of the TSCA and non-TSCA contaminated soil and debris excavation under Bid Item UP-3. No payment shall be made for excavation beyond the limits shown on the Drawings unless directed by the ENGINEER. All work activities to remove asbestos containing soil and debris to the limits shown, handle, reduce debris to sizes acceptable to the disposal facility, stage, and transport and dispose of the asbestos containing soil and debris, and properly manage the material staging area, including, but not limited to, labor, equipment, incidentals, power, and materials, shall be incorporated into the lump sum price bid for Bid Item LS-2.

The lump sum price bid for Bid Item LS-2 – Removal and Disposal of Asbestos Contaminated Soil and Debris will be paid after receipt of CONTRACTOR's survey (showing pre-excavation and post-excavation limits and volume excavated), receipt of proper documentation of disposal, and the DEPARTMENT's and ENGINEER's approval thereof. The surveys shall be performed, signed, and sealed by a land surveyor licensed to practice in New York State and shall show the calculated in-place volume of asbestos containing soil and debris removed.

C. Bid Item LS-3 – Dewatering and Water Treatment

1. Measurement and Payment: The lump sum price bid for Bid Item LS-3 – Dewatering and Water Treatment shall be the amount paid to the CONTRACTOR for design, furnishing, mobilization, installation, initial startup, compliance testing, operation, maintenance and monitoring of the dewatering and treatment systems, and decontamination and demobilization of the equipment and treatment systems in accordance with the requirements of the Contract Documents.

Dewatering and water treatment equipment rental costs are also included in this payment item. The equipment furnished shall maintain the areas of work in a dry condition for soil and debris removal, DEPARTMENT and ENGINEER inspections, post-excavation sampling, backfilling, surveying and planting. Provide all labor, materials, power, equipment and incidentals necessary to complete the work, including but not limited to: electrical connection and equipment, construction of proper dewatering sumps, supply and installation of dewatering pumps, transfer pumps, and transfer hoses, water treatment equipment, storage tanks, filtration and treatment vessels, piping, appurtenances, meters,

valves, instrumentation, electrical, controls, and discharge systems, as specified in the Contract Documents.

This item also includes start-up and initial sampling of the treatment system discharge and related sample collection and laboratory analysis, reporting and record keeping, temporarily holding treated water pending analysis and discharge approvals by DEPARTMENT, final cleaning, break-down, decontamination, and demobilization of the dewatering equipment, treatment systems and appurtenances. This item additionally includes designing, furnishing, installing, and maintaining dewatering dams, as shown and specified, and removal of dewatering dams when directed by the ENGINEER.

This item also includes operation and maintenance of the dewatering and water treatment systems, 24 hours per day, 7 days per week, for removal and treatment of water during excavation, excavation inspection, post-excavation sampling, surveying, backfilling and planting. Operation and maintenance of the dewatering and water treatment systems shall include provision of all materials, equipment, incidentals, power, and labor necessary to operate the dewatering and water treatment systems following completion and ENGINEER's approval of start-up testing of the system. Staff and operate the water treatment system to continuously maintain water levels in the areas of excavation such that excavation, inspection, sampling, surveying, and backfilling can be completed in the dry. Include all filtration, treatment, maintenance, carbon change/regeneration, full compliance with the SPDES permit equivalent requirements including monitoring, testing, reporting of test results, pumping, routine discharge monitoring, sampling and reporting (as required by permit), all maintenance and monitoring of the treatment system operation to ensure proper water removal, treatment and discharge (including all filter and media changes and filter and media characterization, labeling, transport and disposal and replacement), and all activities associated with dewatering and treatment of water and contaminated liquids and related record keeping and reporting. Compliance monitoring includes all analyses required by the permit and regulations. For compliance monitoring, the CONTRACTOR shall ensure calibrated and operational flow meters are provided and operating at all times on the water treatment system to measure influent and discharge flow rates and volumes. CONTRACTOR shall include daily flow rate and volume measurements as part of their daily reports and ENGINEER will review quantities based on daily reports.

This bid item includes routine removal and characterization, off-site transportation, and disposal of sediment which accumulates in the dewatering and water treatment systems equipment, and removal of free-phase liquids which may accumulate in the dewatering and treatment systems equipment. This bid item also includes all filter and media changes and filter and media characterization, labeling, transport and disposal and replacement.

Payments will be made based on the percent completed as agreed to by ENGINEER and DEPARTMENT, and the amount of Bid Item LS-3 – Dewatering and Water Treatment Systems.

D. Bid Item LS-4 – Monitoring Well Decommissioning

1. Measurement and Payment: The lump sum price bid for Bid Item LS-4 – Monitoring Well Decommissioning shall be the amount paid to the CONTRACTOR for completely and properly, in accordance with the Contract Documents and according to DEPARTMENT

requirements and guidelines, decommissioning existing monitoring wells.

Provide all materials, equipment, incidentals, power and labor necessary to completely and properly fill and seal (and remove partially or entirely, as specified) monitoring wells and perform all applicable work and requirements as described in Supplementary Specification Section 33 11 53, Monitoring Well Decommissioning, and as shown on the Contract Drawings.

All costs associated with characterization and off-site transportation and disposal of resulting waste is included in Bid Item LS-1 and all costs for disposal of fluids generated during monitoring well work are included in Bid Item LS-3 if the fluids are treated by the water treatment system, otherwise costs for disposal of fluids are included in Bid Item LS-1. This item shall also include all required reporting and related work.

E. Bid Item LS-5 – Site Restoration

1. Measurement and Payment: The lump sum price bid for Bid Item LS-5 – Site Restoration shall be the amount paid to the CONTRACTOR to restore the Site, including removal of imported fill/gravel from the Decontamination Areas, Temporary Facilities and Office Areas, and other areas where provided, unless specified to remain, and final restoration in all disturbed areas of the Site as directed and specified in the Contract Documents. Excluded is work included in other payment items.

Provide all materials, equipment, incidentals, power and labor to completely and properly restore the Site, including removal and off-site disposal of all ground surface coverings not specified to remain; furnishing and placement of clean fill and topsoil (not included in other payment items); furnishing of seed, seeding, watering, monitoring and maintenance of the seed and seed growth; providing the site in final conditions in accordance with the Contract Documents, including but not limited to, furnishing and installing aggregate base course as shown and specified, and all applicable work and requirements as described in Supplementary Section 32 92 00 – Turf and Grasses and as shown on the Contract Drawings.

Payments will be made based on the percent completed as agreed to by ENGINEER and the amount of Bid Item LS-5 – Site Restoration.

F. Bid Item UP-1 – Site Services

1. Payment: The unit price bid for Payment Item UP-1 – Site Services shall be the amount paid each day for the CONTRACTOR to provide and maintain and, as necessary, repair, temporary facilities and services at the Site in accordance with the requirements of the Contract Documents. Site services include, but are not limited to:
 - a. Maintaining and performing site security including maintaining and repairing fencing and gates;
 - b. Maintaining construction entrances, temporary facilities and utilities, project and traffic signs, sanitary facilities, lighting, on-Site and off-Site traffic controls, and access roads;
 - c. Maintaining and operating field offices and support areas;
 - d. Inspecting, maintaining and repairing sediment and erosion controls;
 - e. Disposal of project-related waste not included in other payment items;

- f. Maintaining compliance with permit and permit-equivalency requirements (not part of other payment items);
 - g. Providing and maintaining continuous electrical supply and internet services;
 - h. Maintaining project records and provision of daily reports;
 - i. Full-time Site superintendence;
 - j. Parking, staging and stockpile area maintenance;
 - k. Implementing the Project Plans (not part of other payment items);
 - l. Maintaining and updating the construction schedule;
 - m. Implementing the Spill Prevention, Control and Countermeasures Plan, as required and the SWPPP;
 - n. Maintenance and operation of the decontamination pad and facilities;
 - o. Providing other services not specifically listed but required by the Contract Documents and for completion of the Work.
2. Measurement for payment: The unit price bid for Bid Item UP-1 – Site Services will be paid for each day (i.e., calendar day) that all temporary services are provided by the CONTRACTOR beginning after the completion of mobilization, as defined in the description of Bid Item LS-1 and ending at completion of site restoration, at the end of the Contract Time specified in Section VI, Article 6.1, or when directed by the ENGINEER, whichever is sooner. This item does not include operation and maintenance of the dewatering and water treatment systems; refer to Bid Item LS-3 for payment for these services. There shall be a 50% reduction in the payment of this item for days when site services are incomplete or inadequate in the opinion of the ENGINEER. A 100% reduction in the payment for this item shall occur for each day the CONTRACTOR fails to provide site services in the opinion of the ENGINEER.

There shall be no payment of Site Services during the planting guarantee period and there shall be no payment for Site Services during the winter shutdown period.

G. Bid Item UP-2 – Health and Safety Services

1. Payment: The unit price bid for Bid Item UP-2 – Health and Safety Services will be the amount paid each day the CONTRACTOR fully implements the Site Specific Health and Safety Plan (SSHASP), and all associated plans (e.g., CAMP), at the Site in accordance with the requirements of the Contract Documents. Required scope of work for this bid item includes, but is not limited to: implementation, maintenance and updating the SSHASP and associated plans; providing a full-time Health and Safety Officer at the site; air monitoring, sampling, analysis, and reporting; and furnishing personal protective equipment (PPE), as well as characterizing, transportation, and disposal of used PPE and decontamination wastes not specifically included in other bid items. Provide all material, equipment, incidentals, power and labor necessary to perform all applicable work and requirements as described in Standard Specification Section 01 35 29, Contractor's Health and Safety Plan, Supplementary Specification Section 01 35 29.01, Modifications to Contractor's Health and Safety Plan, and as shown on the Contract Drawings.
2. Measurement for payment: The unit price bid for Bid Item UP-2 – Health and Safety Services will be paid for each day that work is occurring in the exclusion zone, and:
- a. All of the elements of the CONTRACTOR's SSHASP and associated plans are in place, and

- b. The CONTRACTOR conducts the activities necessary to fully implement the SSHASP and associated plans.

The period of potential payment for Bid Item UP-2 - Health and Safety Services shall begin after the satisfactory establishment and start of work within the required exclusion zone(s) and shall be considered complete when there is no longer work in an exclusion zone on the Site, at Substantial Completion, as specified in Section VI, Article 6.1, or when directed by the ENGINEER, whichever is sooner. A 100% reduction in the payment for this item will occur for every day the CONTRACTOR fails to adhere (in the opinion of the DEPARTMENT or the ENGINEER) to the SSHASP and for every day where no Work occurs in the exclusion zone. For the purposes of this item, operation and monitoring of the dewatering and water treatment systems is not considered "work in the exclusion zone(s)". No payment will be made for Saturdays, Sundays and holidays specified in Section XIII if no work occurs in the exclusion zone(s). There shall be no payment of Health and Safety Services during the planting guarantee period and there shall be no payment for Health and Safety Services during the winter shutdown period.

H. Bid Item UP-3 – Excavation and Management of Soil and Debris

- 1. Payment: The unit price for Bid Item UP-3 – Excavation and Management of Soil and Debris shall be the amount paid per cubic yard for the CONTRACTOR to excavate, handle and stage soil and debris and all other material within the specified limits and as directed.

Provide all materials, equipment, incidentals, power and labor necessary to completely and properly excavate and handle contaminated soil and debris, including removal of below grade portions of the former Incinerator Building and stack foundation, stabilize saturated soil as required by the disposal facilities, reduce debris to sizes acceptable to disposal facilities, and perform all applicable work, and requirements as described in Supplementary Specification Section 31 23 16, Excavation and as shown on the Contract Drawings. This bid item includes surveying to mark out excavation limits and surveying for measurement of cut volumes.

The means and methods for excavating the contaminated soil and debris are the CONTRACTOR's responsibility. Removal of contaminated soil and debris shall be performed after removal of asbestos contaminated soil and debris (Bid Item LS-2). Additional excavation directed by the ENGINEER and required due to post-excavation sampling analytical results exceeding the target criteria shall also be measured and paid for under this item. No payment shall be made for excavation beyond the limits specified and shown on the Drawings unless directed by the ENGINEER. All work activities to accomplish excavation of contaminated material, including, but not limited to, labor, equipment, power, incidentals and materials, to the limits specified and shown, handle the material, dewater and stabilize the excavated material for transport and disposal, stage the material, properly manage the material staging areas and complete specified surveying shall be incorporated into the unit price bid for Bid Item UP-3.

No payment will be made for excavation cut back for stabilizing excavation side slopes above the minimum volume required for side slopes of 2:1 (horizontal : vertical). The volume of cut back for stabilizing excavation side slopes and the slope of excavation side walls (horizontal : vertical) shall be shown separately on survey drawings submitted for payment. The volume of any excavation above the specified minimum amount required

shall also be shown separately on the survey drawings.

Payment for removal of above ground debris, including partially buried debris, and debris piles is included in Bid Item LS-1.

2. Measurement for payment: The unit price bid for Bid Item UP-3 – Excavation and Management of Soil and Debris will be paid for each cubic yard removed as measured in-place based on the CONTRACTOR's survey (showing pre-excavation and post-excavation limits and volume) and the DEPARTMENT's and ENGINEER's approval thereof. The surveys shall be performed, signed, and sealed by a land surveyor licensed to practice in New York State and shall show the calculated in-place volume of excavated soil and debris, the calculated in-place volume of material excavated for side slope stabilization, and the slope of excavation side walls.

I. Bid Item UP-4 – Loading, Transportation, and Off-Site Disposal of TSCA Soil and Debris (Non-Hazardous for Metals)

1. Payment: The unit price bid for Bid Item UP-4 – Loading, Transportation, and Off-Site Disposal of TSCA Soil and Debris (Non-Hazardous for Metals) shall be the amount paid per ton for the CONTRACTOR to characterize for disposal, load, transport, and dispose off-site soil and debris defined as PCB-impacted at TSCA concentrations (equal to or greater than 50 mg/kg of PCBs), classified as non-hazardous waste under RCRA (below the TCLP regulatory limit), and containing PFAS at concentrations of up to 15 ug/kg, as directed and specified herein.

Provide all materials, equipment, incidentals, power and labor necessary to completely and properly characterize, load, transport, and dispose contaminated soil and debris off-site, and perform all applicable work and requirements as described in Supplementary Specification Section 31 23 16, Excavation.

Costs for excavation, removal, handling, staging, and storing of soil and debris prior to loading for disposal are included in Bid Item UP-3.

CONTRACTOR shall be responsible for proper off-site transportation and disposal of all excavated soil and debris. However, no payment will be made for transportation and disposal of soil and debris cut back above the minimum amount required for excavation side slopes of 2:1 (horizontal : vertical). An in-place density factor of 120 pounds per cubic foot will be used to estimate the weight of cut back volumes above the minimum required.

2. Measurement for payment: The unit price bid for Bid Item UP-4 – Loading, Transportation, and Off-Site Disposal of TSCA Soil and Debris (Non-Hazardous for Metals) will be paid for each ton disposed of off-site, as measured by the CONTRACTOR's disposal facility certified weigh scale tickets, provided to and approved by the ENGINEER.

J. Bid Item UP-5 – Loading, Transportation, and Off-Site Disposal of TSCA Soil and Debris (Hazardous for Metals)

1. Payment: The unit price bid for Bid Item UP-5 – Loading, Transportation, and Off-Site Disposal of TSCA Soil and Debris (Hazardous for Metals) shall be the amount paid per ton

for the CONTRACTOR to characterize for disposal, load, transport, and dispose off-site soil and debris defined as PCB-impacted at TSCA concentrations (equal to or greater than 50 mg/kg of PCBs), classified as hazardous waste under RCRA (at or exceeding the TCLP regulatory limit), and containing PFAS at concentrations of up to 15 ug/kg, as directed and specified herein.

Provide all materials, equipment, incidentals, power and labor necessary to completely and properly characterize, load, transport, and dispose contaminated soil and debris off-site, and perform all applicable work and requirements as described in Supplementary Specification Section 31 23 16, Excavation.

Costs for excavation, removal, handling, staging, and storing of soil and debris prior to loading for disposal are included in Bid Item UP-3.

CONTRACTOR shall be responsible for proper off-site transportation and disposal of all excavated soil and debris. However, no payment will be made for transportation and disposal of soil and debris cut back above the minimum amount required for excavation side slopes of 2:1 (horizontal : vertical). An in-place density factor of 120 pounds per cubic foot will be used to estimate the weight of cut back volumes above the minimum required.

2. Measurement for payment: The unit price bid for Bid Item UP-5 – Loading, Transportation, and Off-Site Disposal of TSCA Soil and Debris (Hazardous for Metals) will be paid for each ton disposed of off-site, as measured by the CONTRACTOR's disposal facility certified weigh scale tickets, provided to and approved by the ENGINEER.

K. Bid Item UP-6 – Loading, Transportation, and Off-Site Disposal of Non-TSCA Soil and Debris (Non-Hazardous for Metals)

1. Payment: The unit price bid for Bid Item UP-6 – Loading, Transportation, and Off-Site Disposal of Non-TSCA Soil and Debris (Non-Hazardous for Metals) shall be the amount paid per ton for the CONTRACTOR to characterize for disposal, load, transport, and dispose off-site soil and debris defined as PCB-impacted with concentrations of PCBs below 50 mg/kg, classified as non-hazardous waste under RCRA (below the TCLP regulatory limit), and containing PFAS at concentrations of up to 15 ug/kg, as directed and specified herein.

Provide all materials, equipment, incidentals, power and labor necessary to completely and properly characterize, load, transport, and dispose contaminated soil and debris off-site, and perform all applicable work and requirements as described in Supplementary Specification Section 31 23 16, Excavation.

Costs for excavation, removal, handling, staging, and storing of soil and debris prior to loading for disposal are included in Bid Item UP-3.

CONTRACTOR shall be responsible for proper off-site transportation and disposal of all excavated soil and debris. However, no payment will be made for transportation and disposal of soil and debris cut back above the minimum amount required for excavation side slopes of 2:1 (horizontal : vertical). An in-place density factor of 120 pounds per cubic

foot will be used to estimate the weight of cut back volumes above the minimum required.

2. Measurement for payment: The unit price bid for Bid Item UP-6 – Loading, Transportation, and Off-Site Disposal of Non-TSCA Soil and Debris (Non-Hazardous for Metals) will be paid for each ton disposed of off-site, as measured by the CONTRACTOR's disposal facility certified weigh scale tickets, provided to and approved by the ENGINEER.

L. Bid Item UP-7 – Loading, Transportation, and Off-Site Disposal of Non-TSCA Soil and Debris (Hazardous for Metals)

1. Payment: The unit price bid for Bid Item UP-7 – Loading, Transportation, and Off-Site Disposal of Non-TSCA Soil and Debris (Hazardous for Metals) shall be the amount paid per ton for the CONTRACTOR to characterize for disposal, load, transport, and dispose off-site soil and debris defined as PCB-impacted with concentrations of PCBs below 50 mg/kg, classified as hazardous waste under RCRA (at or exceeding the TCLP regulatory limit), and containing PFAS at concentrations of up to 15 ug/kg, as directed and specified herein.

Provide all materials, equipment, incidentals, power and labor necessary to completely and properly characterize, load, transport, and dispose contaminated soil and debris off-site, and perform all applicable work and requirements as described in Supplementary Specification Section 31 23 16, Excavation.

Costs for excavation, removal, handling, staging, and storing of soil and debris prior to loading for disposal are included in Bid Item UP-3.

CONTRACTOR shall be responsible for proper off-site transportation and disposal of all excavated soil and debris. However, no payment will be made for transportation and disposal of soil and debris cut back above the minimum amount required for excavation side slopes of 2:1 (horizontal : vertical). An in-place density factor of 120 pounds per cubic foot will be used to estimate the weight of cut back volumes above the minimum required.

2. Measurement for payment: The unit price bid for Bid Item UP-7 – Loading, Transportation, and Off-Site Disposal of non-TSCA Soil and Debris (Hazardous for Metals) will be paid for each ton disposed of off-site, as measured by the CONTRACTOR's disposal facility certified weigh scale tickets, provided to and approved by the ENGINEER.

M. Bid Item UP-8 – Winter Shutdown

1. Payment: The unit price bid for Payment Item UP-8 – Winter Shutdown shall be the amount paid each day for the CONTRACTOR to provide and maintain, in accordance with the requirements of the Contract Documents, as necessary, temporary facilities at the Site which are not demobilized for winter shutdown. Winter Shutdown work shall include, but is not necessarily limited to:
 - a. Maintaining and performing site security including maintaining and repairing fencing and gates;
 - b. Maintaining construction entrances, temporary facilities and utilities, project and traffic signs, on-Site and off-Site traffic controls, and access roads;

- c. Maintaining field offices and support areas;
- d. Inspecting, maintaining and repairing sediment and erosion controls;
- e. Disposal of project-related waste not included in other payment items;
- f. Providing and maintaining continuous electrical supply and internet services;
- h. Maintaining project records and provision of daily reports;
- i. Maintaining and updating the construction schedule;
- m. Implementing the Spill Prevention, Control and Countermeasures Plan, as required and the SWPPP.

2. Measurement for payment: The unit price bid for Bid Item UP-8 – Winter Shutdown will be paid for each day that the above-listed services are provided by the CONTRACTOR beginning after the demobilization for winter shutdown, as defined in the description of Bid Item LS-1, and ending at the start of remobilization.

There shall be no payment for Bid Item UP-1 - Site Services and there shall be no payment for Bid Item UP-2 - Health and Safety Services during the winter shutdown period. Completed work lost during winter shutdown (such as soil loss from erosion, etc.) shall be replaced at no cost to the DEPARTMENT.

N. Bid Item UP-9 – Post-Excavation Sampling and Analysis

1. Payment: The unit price bid for Bid Item UP-9 – Post-Excavation Sampling and Analysis shall be the amount paid per sample collected and analyzed for PCBs as specified and directed by the ENGINEER.

Provide all materials, equipment, incidentals, power and labor necessary to completely and properly conduct post-excavation sample collection and analysis, and perform all applicable work and requirements as described in Supplementary Specification Section 01 43 36, Field Samples, Section 01 45 00, Quality Control, and Section 31 23 16, Excavation, and as shown on the Contract Drawings. This includes, but is not limited to: collection of samples; preparation of samples; preservation, labeling, handling, shipping, and 48-hour turn-around-time analysis of each post-excavation, and QA/QC sample; staking and surveying the location and elevation of each sample; and result analysis, review and reporting, including data validation and Data Usability Summary Report (DUSR) preparation and submittal. Costs for surveying the elevation and location of each sample and sample aliquot collected (four sample aliquot locations per composite sample) shall also be incorporated into the unit price bid. Confirmation samples shall be analyzed for PCBs, as directed, with reporting limits below the specified evaluation/threshold criteria. Additional sampling and surveying work required due to expansion of excavation area(s) shall also be measured and paid for under this item at the unit price.

2. Measurement for payment: The unit price bid for Bid Item UP-9 – Post-Excavation Sampling and Analysis shall be paid based on the actual quantity of post-excavation samples collected and analyzed for PCBs. Payment shall be made at the unit price bid for each sample collected and analyzed as shown in the CONTRACTOR's final laboratory analytical results reports and in DUSR reports. For results that are not received within the required 48-hour turn-around-time, a unit price reduction of 50% will be applied. Subsequent unit price reductions of 10% (of the initial unit price) will be applied for each day (24-hour period) beyond the initial 48-hour turn-around deadline. QA/QC samples are not considered post-excavation samples for payment purposes and all costs for collection

and analysis of QA/QC samples shall be incorporated into the unit price bid. A survey map signed and sealed by a land surveyor licensed to practice in New York State, showing sample elevations and locations and the elevation and location of each collected sample aliquot, must be submitted and approved by the ENGINEER for payment.

O. Bid Item UP-10 – Furnish and Place Clean Fill and Topsoil

1. Payment: The unit price bid for Bid Item UP-10 – Furnish and Place Clean Fill and Topsoil shall be the amount paid per cubic yard for the CONTRACTOR to furnish and place clean fill and topsoil including furnishing, placement, compaction, testing, surveying, and grading.

Provide all materials, equipment, incidentals, power and labor necessary for completely and properly furnishing, placing, testing, compacting, and surveying of clean fill and topsoil to specified final grades, furnishing and placing geotextile (demarcation layer), and including all applicable work and requirements specified in Supplementary Specification Sections 31 23 23, Clean Fill, and as shown on the Contract Drawings. Bid unit price includes analytical testing of source material, reporting of test results, and import/furnish and installation of suitable clean fill, topsoil material, and demarcation layer fabric. Sampling frequency, analytical testing, and allowable constituent levels for imported clean fill and topsoil shall be in accordance with DER-10 guidance. Allowable constituent levels shall meet DER-10, Appendix 5 for Unrestricted Use. In addition, a minimum of one (1) sample per source material shall be analyzed for PFAS and 1,4-Dioxane in accordance with NYSDEC guidance.

No payment will be made for furnishing and placing clean fill and topsoil in areas of cut back above the minimum required for stabilizing excavation side slopes.

2. Measurement for payment: The unit price bid for Bid Item UP-10 – Furnish and Place Clean Fill and Topsoil shall be paid for each cubic yard as measured in-place based on the CONTRACTOR's survey and the DEPARTMENT's and ENGINEER's approval thereof. The survey shall be performed, signed, and sealed by a land surveyor licensed to practice in New York State and shall show ground surface elevations before and after placement of clean fill and topsoil (individually) and the calculated in-place volume of clean fill and topsoil (individually) furnished and installed. The survey shall also show the limits and elevation of the demarcation layer. CONTRACTOR's records of clean fill and topsoil purchased (e.g., load tickets) and all test results shall also be provided to ENGINEER for review of quantities indicated on the survey. No payment will be paid under this item for clean fill and topsoil provided to repair and restore areas disturbed by the CONTRACTOR beyond the limits of excavation and seeding shown on the Drawings including the minimum limits of cut back required for stabilizing excavation side slopes.

++ END OF SECTION ++

SECTION XIII

Wage Rates and Associated Contract Requirements

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Kathy Hochul, Governor

Roberta Reardon, Commissioner

NYSDEC

Kevin Sullivan
1090 Union Road
Suite 280
West Seneca NY 14224

Schedule Year 2024 through 2025
Date Requested 04/24/2024
PRC# 2024004801

Location Katzman Recycling Site
Project ID#
Project Type Environmental remediation of former scrap metal recycling facility.

PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

Attached is the current schedule(s) of the prevailing wage rates and prevailing hourly supplements for the project referenced above. A unique Prevailing Rate Case Number (PRC#) has been assigned to the schedule(s) for your project.

The schedule is effective from July 2024 through June 2025. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website www.labor.ny.gov. Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

It is the responsibility of the contracting agency or its agent to annex and make part, the attached schedule, to the specifications for this project, when it is advertised for bids and /or to forward said schedules to the successful bidder(s), immediately upon receipt, in order to insure the proper payment of wages.

Please refer to the "General Provisions of Laws Covering Workers on Public Work Contracts" provided with this schedule, for the specific details relating to other responsibilities of the Department of Jurisdiction.

Upon completion or cancellation of this project, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: _____ Date Cancelled: _____

Name & Title of Representative: _____

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12240

General Provisions of Laws Covering Workers on Article 8 Public Work Contracts

Introduction

The Labor Law requires public work contractors and subcontractors to pay laborers, workers, or mechanics employed in the performance of a public work contract not less than the prevailing rate of wage and supplements (fringe benefits) in the locality where the work is performed.

Responsibilities of the Department of Jurisdiction

A Department of Jurisdiction (Contracting Agency) includes a state department, agency, board or commission; a county, city, town or village; a school district, board of education or board of cooperative educational services; a sewer, water, fire, improvement and other district corporation; a public benefit corporation; and a public authority awarding a public work contract.

The Department of Jurisdiction (Contracting Agency) awarding a public work contract MUST obtain a Prevailing Rate Schedule listing the hourly rates of wages and supplements due the workers to be employed on a public work project. This schedule may be obtained by completing and forwarding a "Request for wage and Supplement Information" form (PW 39) to the Bureau of Public Work. The Prevailing Rate Schedule MUST be included in the specifications for the contract to be awarded and is deemed part of the public work contract.

Upon the awarding of the contract, the law requires that the Department of Jurisdiction (Contracting Agency) furnish the following information to the Bureau: the name and address of the contractor, the date the contract was let and the approximate dollar value of the contract. To facilitate compliance with this provision of the Labor Law, a copy of the Department's "Notice of Contract Award" form (PW 16) is provided with the original Prevailing Rate Schedule.

The Department of Jurisdiction (Contracting Agency) is required to notify the Bureau of the completion or cancellation of any public work project. The Department's PW 200 form is provided for that purpose.

Both the PW 16 and PW 200 forms are available for completion [online](#).

Hours

No laborer, worker, or mechanic in the employ of a contractor or subcontractor engaged in the performance of any public work project shall be permitted to work more than eight hours in any day or more than five days in any week, except in cases of extraordinary emergency. The contractor and the Department of Jurisdiction (Contracting Agency) may apply to the Bureau of Public Work for a dispensation permitting workers to work additional hours or days per week on a particular public work project.

Wages and Supplements

The wages and supplements to be paid and/or provided to laborers, workers, and mechanics employed on a public work project shall be not less than those listed in the current Prevailing Rate Schedule for the locality where the work is performed. If a prime contractor on a public work project has not been provided with a Prevailing Rate Schedule, the contractor must notify the Department of Jurisdiction (Contracting Agency) who in turn must request an original Prevailing Rate Schedule from the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12226; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website www.labor.ny.gov.

Upon receiving the original schedule, the Department of Jurisdiction (Contracting Agency) is REQUIRED to provide complete copies to all prime contractors who in turn MUST, by law, provide copies of all applicable county schedules to each subcontractor and obtain from each subcontractor, an affidavit certifying such schedules were received. If the original schedule expired, the contractor may obtain a copy of the new annual determination from the NYSDOL website www.labor.ny.gov.

The Commissioner of Labor makes an annual determination of the prevailing rates. This determination is in effect from July 1st through June 30th of the following year. The annual determination is available on the NYSDOL website www.labor.ny.gov.

Payrolls and Payroll Records

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. As per Article 6 of the Labor law, contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records. At a minimum, payrolls must show the following information for each person employed on a public work project: Name, Address, Last 4 Digits of Social Security Number, Classification(s) in which the worker was employed, Hourly wage rate(s) paid, Supplements paid or provided, and Daily and weekly number of hours worked in each classification.

The filing of payrolls to the Department of Jurisdiction is a condition of payment. Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury. The Department of Jurisdiction (Contracting Agency) shall collect, review for facial validity, and maintain such payrolls.

In addition, the Commissioner of Labor may require contractors to furnish, with ten (10) days of a request, payroll records sworn to as their validity and accuracy for public work and private work. Payroll records include, but are not limited to time cards, work description sheets, proof that supplements were provided, cancelled payroll checks and payrolls. Failure to provide the requested information within the allotted ten (10) days will result in the withholding of up to 25% of the contract, not to exceed \$100,000.00. If the contractor or subcontractor does not maintain a place of business in New York State and the amount of the contract exceeds \$25,000.00, payroll records and certifications must be kept on the project worksite.

The prime contractor is responsible for any underpayments of prevailing wages or supplements by any subcontractor.

All contractors or their subcontractors shall provide to their subcontractors a copy of the Prevailing Rate Schedule specified in the public work contract as well as any subsequently issued schedules. A failure to provide these schedules by a contractor or subcontractor is a violation of Article 8, Section 220-a of the Labor Law.

All subcontractors engaged by a public work project contractor or its subcontractor, upon receipt of the original schedule and any subsequently issued schedules, shall provide to such contractor a verified statement attesting that the subcontractor has received the Prevailing Rate Schedule and will pay or provide the applicable rates of wages and supplements specified therein. (See NYS Labor Laws, Article 8 . Section 220-a).

Determination of Prevailing Wage and Supplement Rate Updates Applicable to All Counties

The wages and supplements contained in the annual determination become effective July 1st whether or not the new determination has been received by a given contractor. Care should be taken to review the rates for obvious errors. Any corrections should be brought to the Department's attention immediately. It is the responsibility of the public work contractor to use the proper rates. If there is a question on the proper classification to be used, please call the district office located nearest the project. Any errors in the annual determination will be corrected and posted to the NYSDOL website on the first business day of each month. Contractors are responsible for paying these updated rates as well, retroactive to July 1st.

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. To the extent possible, the Department posts rates in its possession that cover periods of time beyond the July 1st to June 30th time frame covered by a particular annual determination. Rates that extend beyond that instant time period are informational ONLY and may be updated in future annual determinations that actually cover the then appropriate July 1st to June 30th time period.

Withholding of Payments

When a complaint is filed with the Commissioner of Labor alleging the failure of a contractor or subcontractor to pay or provide the prevailing wages or supplements, or when the Commissioner of Labor believes that unpaid wages or supplements may be due, payments on the public work contract shall be withheld from the prime contractor in a sufficient amount to satisfy the alleged unpaid wages and supplements, including interest and civil penalty, pending a final determination.

When the Bureau of Public Work finds that a contractor or subcontractor on a public work project failed to pay or provide the requisite prevailing wages or supplements, the Bureau is authorized by Sections 220-b and 235.2 of the Labor Law to so notify the financial officer of the Department of Jurisdiction (Contracting Agency) that awarded the public work contract. Such officer MUST then withhold or cause to be withheld from any payment due the prime contractor on account of such contract the amount indicated by the Bureau as sufficient to satisfy the unpaid wages and supplements, including interest and any civil penalty that may be assessed by the Commissioner of Labor. The withholding continues until there is a final determination of the underpayment by the Commissioner of Labor or by the court in the event a legal proceeding is instituted for review of the determination of the Commissioner of Labor.

The Department of Jurisdiction (Contracting Agency) shall comply with this order of the Commissioner of Labor or of the court with respect to the release of the funds so withheld.

Summary of Notice Posting Requirements

The current Prevailing Rate Schedule must be posted in a prominent and accessible place on the site of the public work project. The prevailing wage schedule must be encased in, or constructed of, materials capable of withstanding adverse weather conditions and be titled "PREVAILING RATE OF WAGES" in letters no smaller than two (2) inches by two (2) inches.

The ["Public Work Project"](#) notice must be posted at the beginning of the performance of every public work contract, on each job site.

Every employer providing workers. compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers. Compensation Board in a conspicuous place on the jobsite.

Every employer subject to the NYS Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers, notices furnished by the State Division of Human Rights.

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the NYS Department of Labor.

Apprentices

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to journeyworkers in any craft classification can be no greater than the statewide building trade ratios promulgated by the Department of Labor and included with the Prevailing Rate Schedule. An employee listed on a payroll as an apprentice who is not registered as above or is performing work outside the classification of work for which the apprentice is indentured, must be paid the prevailing journeyworker's wage rate for the classification of work the employee is actually performing.

NYSDOL Labor Law, Article 8, Section 220-3, require that only apprentices individually registered with the NYS Department of Labor may be paid apprenticeship rates on a public work project. No other Federal or State Agency of office registers apprentices in New York State.

Persons wishing to verify the apprentice registration of any person must do so in writing by mail, to the NYSDOL Office of Employability Development / Apprenticeship Training, State Office Bldg. Campus, Bldg. 12, Albany, NY 12226 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

The only conclusive proof of individual apprentice registration is written verification from the NYSDOL Apprenticeship Training Albany Central office. Neither Federal nor State Apprenticeship Training offices outside of Albany can provide conclusive registration information.

It should be noted that the existence of a registered apprenticeship program is not conclusive proof that any person is registered in that program. Furthermore, the existence or possession of wallet cards, identification cards, or copies of state forms is not conclusive proof of the registration of any person as an apprentice.

Interest and Penalties

In the event that an underpayment of wages and/or supplements is found:

- Interest shall be assessed at the rate then in effect as prescribed by the Superintendent of Banks pursuant to section 14-a of the Banking Law, per annum from the date of underpayment to the date restitution is made.
- A Civil Penalty may also be assessed, not to exceed 25% of the total of wages, supplements, and interest due.

Debarment

Any contractor or subcontractor and/or its successor shall be ineligible to submit a bid on or be awarded any public work contract or subcontract with any state, municipal corporation or public body for a period of five (5) years when:

- Two (2) willful determinations have been rendered against that contractor or subcontractor and/or its successor within any consecutive six (6) year period.
- There is any willful determination that involves the falsification of payroll records or the kickback of wages or supplements.

Criminal Sanctions

Willful violations of the Prevailing Wage Law (Article 8 of the Labor Law) may be a felony punishable by fine or imprisonment of up to 15 years, or both.

Discrimination

No employee or applicant for employment may be discriminated against on account of age, race, creed, color, national origin, sex, disability or marital status.

No contractor, subcontractor nor any person acting on its behalf, shall by reason of race, creed, color, disability, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates (NYS Labor Law, Article 8, Section 220-e(a)).

No contractor, subcontractor, nor any person acting on its behalf, shall in any manner, discriminate against or intimidate any employee on account of race, creed, color, disability, sex, or national origin (NYS Labor Law, Article 8, Section 220-e(b)).

The Human Rights Law also prohibits discrimination in employment because of age, marital status, or religion.

There may be deducted from the amount payable to the contractor under the contract a penalty of \$50.00 for each calendar day during which such person was discriminated against or intimidated in violation of the provision of the contract (NYS Labor Law, Article 8, Section 220-e(c)).

The contract may be cancelled or terminated by the State or municipality. All monies due or to become due thereunder may be forfeited for a second or any subsequent violation of the terms or conditions of the anti-discrimination sections of the contract (NYS Labor Law, Article 8, Section 220-e(d)).

Every employer subject to the New York State Human Rights Law must conspicuously post at its offices, places of employment, or employment training centers notices furnished by the State Division of Human Rights.

Workers' Compensation

In accordance with Section 142 of the State Finance Law, the contractor shall maintain coverage during the life of the contract for the benefit of such employees as required by the provisions of the New York State Workers' Compensation Law.

A contractor who is awarded a public work contract must provide proof of workers' compensation coverage prior to being allowed to begin work.

The insurance policy must be issued by a company authorized to provide workers' compensation coverage in New York State. Proof of coverage must be on form C-105.2 (Certificate of Workers' Compensation Insurance) and must name this agency as a certificate holder.

If New York State coverage is added to an existing out-of-state policy, it can only be added to a policy from a company authorized to write workers' compensation coverage in this state. The coverage must be listed under item 3A of the information page.

The contractor must maintain proof that subcontractors doing work covered under this contract secured and maintained a workers' compensation policy for all employees working in New York State.

Every employer providing worker's compensation insurance and disability benefits must post notices of such coverage in the format prescribed by the Workers' Compensation Board in a conspicuous place on the jobsite.

Unemployment Insurance

Employers liable for contributions under the Unemployment Insurance Law must conspicuously post on the jobsite notices furnished by the New York State Department of Labor.



Kathy Hochul, Governor

Roberta Reardon, Commissioner

NYSDEC

Kevin Sullivan
1090 Union Road
Suite 280
West Seneca NY 14224

Schedule Year 2024 through 2025
Date Requested 04/24/2024
PRC# 2024004801

Location Katzman Recycling Site
Project ID#
Project Type Environmental remediation of former scrap metal recycling facility.

Notice of Contract Award

New York State Labor Law, Article 8, Section 220.3a requires that certain information regarding the awarding of public work contracts, be furnished to the Commissioner of Labor. One "Notice of Contract Award" (PW 16, which may be photocopied), **MUST** be completed for **EACH** prime contractor on the above referenced project.

Upon notifying the successful bidder(s) of this contract, enter the required information and mail **OR** fax this form to the office shown at the bottom of this notice, **OR** fill out the electronic version via the NYSDOL website.

Contractor Information

All information must be supplied

Federal Employer Identification Number: _____		
Name: _____		
Address: _____ _____		
City: _____	State: _____	Zip: _____
Amount of Contract: \$ _____	Contract Type:	
Approximate Starting Date: ____/____/____	<input type="checkbox"/> (01) General Construction	
Approximate Completion Date: ____/____/____	<input type="checkbox"/> (02) Heating/Ventilation	
	<input type="checkbox"/> (03) Electrical	
	<input type="checkbox"/> (04) Plumbing	
	<input type="checkbox"/> (05) Other : _____	

Phone: (518) 457-5589 Fax: (518) 485-1870
W. Averell Harriman State Office Campus, Bldg. 12, Room 130, Albany, NY 12226

Social Security Numbers on Certified Payrolls:

The Department of Labor is cognizant of the concerns of the potential for misuse or inadvertent disclosure of social security numbers. Identity theft is a growing problem and we are sympathetic to contractors' concern regarding inclusion of this information on payrolls if another identifier will suffice.

For these reasons, the substitution of the use of the last four digits of the social security number on certified payrolls submitted to contracting agencies on public work projects is now acceptable to the Department of Labor. This change does not affect the Department's ability to request and receive the entire social security number from employers during its public work/ prevailing wage investigations.

Construction Industry Fair Play Act: Required Posting for Labor Law Article 25-B § 861-d

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site. Failure to post the notice can result in penalties of up to \$1,500 for a first offense and up to \$5,000 for a second offense. The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, <https://dol.ny.gov/public-work-and-prevailing-wage>

If you have any questions concerning the Fair Play Act, please call the State Labor Department toll-free at 1-866-435-1499 or email us at: dol.misclassified@labor.ny.gov .

Worker Notification: (Labor Law §220, paragraph a of subdivision 3-a)

Effective June 23, 2020

This provision is an addition to the existing wage rate law, Labor Law §220, paragraph a of subdivision 3-a. It requires contractors and subcontractors to provide written notice to all laborers, workers or mechanics of the *prevailing wage and supplement rate* for their particular job classification *on each pay stub**. It also requires contractors and subcontractors to *post a notice* at the beginning of the performance of every public work contract *on each job site* that includes the telephone number and address for the Department of Labor and a statement informing laborers, workers or mechanics of their right to contact the Department of Labor if he/she is not receiving the proper prevailing rate of wages and/or supplements for his/her job classification. The required notification will be provided with each wage schedule, may be downloaded from our website www.labor.ny.gov or be made available upon request by contacting the Bureau of Public Work at 518-457-5589. *In the event the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.

**To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND**

Budget Policy & Reporting Manual

B-610

Public Work Enforcement Fund

effective date December 7, 2005

1. Purpose and Scope:

This Item describes the Public Work Enforcement Fund (the Fund, PWEF) and its relevance to State agencies and public benefit corporations engaged in construction or reconstruction contracts, maintenance and repair, and announces the recently-enacted increase to the percentage of the dollar value of such contracts that must be deposited into the Fund. This item also describes the roles of the following entities with respect to the Fund:

- New York State Department of Labor (DOL),
- The Office of the State of Comptroller (OSC), and
- State agencies and public benefit corporations.

2. Background and Statutory References:

DOL uses the Fund to enforce the State's Labor Law as it relates to contracts for construction or reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law. State agencies and public benefit corporations participating in such contracts are required to make payments to the Fund.

Chapter 511 of the Laws of 1995 (as amended by Chapter 513 of the Laws of 1997, Chapter 655 of the Laws of 1999, Chapter 376 of the Laws of 2003 and Chapter 407 of the Laws of 2005) established the Fund.

3. Procedures and Agency Responsibilities:

The Fund is supported by transfers and deposits based on the value of contracts for construction and reconstruction, maintenance and repair, as defined in subdivision two of Section 220 of the Labor Law, into which all State agencies and public benefit corporations enter.

Chapter 407 of the Laws of 2005 increased the amount required to be provided to this fund to .10 of one-percent of the total cost of each such contract, to be calculated at the time agencies or public benefit corporations enter into a new contract or if a contract is amended. The provisions of this bill became effective August 2, 2005.

To all State Departments, Agency Heads and Public Benefit Corporations
IMPORTANT NOTICE REGARDING PUBLIC WORK ENFORCEMENT FUND

OSC will report to DOL on all construction-related ("D") contracts approved during the month, including contract amendments, and then DOL will bill agencies the appropriate assessment monthly. An agency may then make a determination if any of the billed contracts are exempt and so note on the bill submitted back to DOL. For any instance where an agency is unsure if a contract is or is not exempt, they can call the Bureau of Public Work at the number noted below for a determination. Payment by check or journal voucher is due to DOL within thirty days from the date of the billing. DOL will verify the amounts and forward them to OSC for processing.

For those contracts which are not approved or administered by the Comptroller, monthly reports and payments for deposit into the Public Work Enforcement Fund must be provided to the Administrative Finance Bureau at the DOL within 30 days of the end of each month or on a payment schedule mutually agreed upon with DOL.

Reports should contain the following information:

- Name and billing address of State agency or public benefit corporation;
- State agency or public benefit corporation contact and phone number;
- Name and address of contractor receiving the award;
- Contract number and effective dates;
- Contract amount and PWEF assessment charge (if contract amount has been amended, reflect increase or decrease to original contract and the adjustment in the PWEF charge); and
- Brief description of the work to be performed under each contract.

Checks and Journal Vouchers, payable to the "New York State Department of Labor" should be sent to:

Department of Labor
Administrative Finance Bureau-PWEF Unit
Building 12, Room 464
State Office Campus
Albany, NY 12226

Any questions regarding billing should be directed to NYSDOL's Administrative Finance Bureau-PWEF Unit at (518) 457-3624 and any questions regarding Public Work Contracts should be directed to the Bureau of Public Work at (518) 457-5589.



Required Notice under Article 25-B of the Labor Law

**Attention All Employees, Contractors and Subcontractors:
You are Covered by the Construction Industry Fair Play Act**

The law says that you are an employee unless:

- You are free from direction and control in performing your job, **and**
- You perform work that is not part of the usual work done by the business that hired you, **and**
- You have an independently established business.

Your employer cannot consider you to be an independent contractor unless all three of these facts apply to your work.

It is against the law for an employer to misclassify employees as independent contractors or pay employees off the books.

Employee Rights: If you are an employee, you are entitled to state and federal worker protections. These include:

- Unemployment Insurance benefits, if you are unemployed through no fault of your own, able to work, and otherwise qualified,
- Workers' compensation benefits for on-the-job injuries,
- Payment for wages earned, minimum wage, and overtime (under certain conditions),
- Prevailing wages on public work projects,
- The provisions of the National Labor Relations Act, and
- A safe work environment.

It is a violation of this law for employers to retaliate against anyone who asserts their rights under the law. Retaliation subjects an employer to civil penalties, a private lawsuit or both.

Independent Contractors: If you are an independent contractor, **you must pay all taxes and Unemployment Insurance contributions required by New York State and Federal Law.**

Penalties for paying workers off the books or improperly treating employees as independent contractors:

- **Civil Penalty**
 - First offense: Up to \$2,500 per employee
 - Subsequent offense(s): Up to \$5,000 per employee
- **Criminal Penalty**
 - First offense: Misdemeanor - up to 30 days in jail, up to a \$25,000 fine and debarment from performing public work for up to one year.
 - Subsequent offense(s): Misdemeanor - up to 60 days in jail or up to a \$50,000 fine and debarment from performing public work for up to 5 years.

If you have questions about your employment status or believe that your employer may have violated your rights and you want to file a complaint, call the Department of Labor at (866) 435-1499 or send an email to dol.misclassified@labor.ny.gov. All complaints of fraud and violations are taken seriously. You can remain anonymous.

Employer Name:

IA 999 (09/16)



Attention Employees

THIS IS A: **PUBLIC WORK PROJECT**

If you are employed on this project as a **worker, laborer, or mechanic** you are entitled to receive the **prevailing wage and supplements rate** for the classification at which you are working.

Your pay stub and wage notice received upon hire must clearly state your wage rate and supplement rate.

Chapter 629 of
the Labor Laws
of 2007:

These wages are set by law and must be posted at the work site. They can also be found at:
<https://dol.ny.gov/bureau-public-work>



If you feel that you have not received proper wages or benefits, please call our nearest office.*

Albany	(518) 457-2744	Patchogue	(631) 687-4882
Binghamton	(607) 721-8005	Rochester	(585) 258-4505
Buffalo	(716) 847-7159	Syracuse	(315) 428-4056
Garden City	(516) 228-3915	Utica	(315) 793-2314
New York City	(212) 932-2419	White Plains	(914) 997-9507
Newburgh	(845) 568-5287		

* For New York City government agency construction projects, please contact the Office of the NYC Comptroller at (212) 669-4443, or www.comptroller.nyc.gov – click on Bureau of Labor Law.

Contractor Name: _____

Project Location: _____

Requirements for OSHA 10 Compliance

Article 8 §220-h requires that when the advertised specifications, for every contract for public work, is \$250,000.00 or more the contract must contain a provision requiring that every worker employed in the performance of a public work contract shall be certified as having completed an OSHA 10 safety training course. The clear intent of this provision is to require that all employees of public work contractors, required to be paid prevailing rates, receive such training "prior to the performing any work on the project."

The Bureau will enforce the statute as follows:

All contractors and sub contractors must attach a copy of proof of completion of the OSHA 10 course to the first certified payroll submitted to the contracting agency and on each succeeding payroll where any new or additional employee is first listed.

Proof of completion may include but is not limited to:

- Copies of bona fide course completion card (*Note: Completion cards do not have an expiration date.*)
- Training roster, attendance record or other documentation from the certified trainer pending the issuance of the card.
- Other valid proof

**A certification by the employer attesting that all employees have completed such a course is not sufficient proof that the course has been completed.

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-457-5589.

WICKS

Public work projects are subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work, when the total project's threshold is \$3 million in Bronx, Kings, New York, Queens and, Richmond counties; \$1.5 million in Nassau, Suffolk and Westchester counties; and \$500,000 in all other counties.

For projects below the monetary threshold, bidders must submit a sealed list naming each subcontractor for the plumbing, HVAC and electrical and the amount to be paid to each. The list may not be changed unless the public owner finds a legitimate construction need, including a change in specifications or costs or the use of a Project Labor Agreement (PLA), and must be open to public inspection.

Allows the state and local agencies and authorities to waive the Wicks Law and use a PLA if it will provide the best work at the lowest possible price. If a PLA is used, all contractors shall participate in apprentice training programs in the trades of work it employs that have been approved by the Department of Labor (DOL) for not less than three years. They shall also have at least one graduate in the last three years and use affirmative efforts to retain minority apprentices. PLA's would be exempt from Wicks, but deemed to be public work subject to prevailing wage enforcement.

The Commissioner of Labor shall have the power to enforce separate specification requirements on projects, and may issue stop-bid orders against public owners for non-compliance.

Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.

Contractors must pay subcontractors within a 7 days period.

(07.19)

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Payrolls and Payroll Records

Contractors and subcontractors are required to establish, maintain, and preserve for not less than six (6) years, contemporaneous, true, and accurate payroll records.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is straight time for all hours worked, some classifications require the payment or provision of supplements, or a portion of the supplements, to be paid or provided at a premium rate for premium hours worked. Supplements may also be required to be paid or provided on paid holidays, regardless of whether the day is worked. The Overtime Codes and Notes listed on the particular wage classification will indicate these conditions as required.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.ny.gov) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1, 1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3
Electrical (Outside) Lineman	1:1,1:2
Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

New York State Department of Labor
Bureau of Public Work
State Office Campus, Bldg. 12
Albany, NY 12226

District Office Locations:	Telephone #	FAX #
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Washington County General Construction

Boilermaker

02/01/2025

JOB DESCRIPTION Boilermaker

DISTRICT 1

ENTIRE COUNTIES
Albany, Broome, Chenango, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

WAGES
Per hour
07/01/2024

Boilermaker \$ 40.84

SUPPLEMENTAL BENEFITS
Per hour

Journeyworker \$26.51
+ 1.49*

(*) This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

OVERTIME PAY
See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 25) on HOLIDAY PAGE
Note: When a holiday falls on Sunday, the day observed by the State or Nation shall be observed, and when Christmas Day and New Year's fall on Saturday, Friday will be observed as the holiday.

REGISTERED APPRENTICES
Wages per hour
(1/2) year terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
65%	65%	70%	75%	80%	85%	90%	95%

Supplemental Benefits per hour

1st	2nd	3rd	4th	5th	6th	7th	8th
19.71	19.71	20.69	21.64	22.62	23.60	24.57	25.53
+1.49**	+1.49**	+1.49**	+1.49**	+1.49**	+1.49**	+1.49**	+1.49**

(**) This portion of the benefit is NOT subject to the SAME PREMIUM as shown for overtime.

1-197

Carpenter - Building

02/01/2025

JOB DESCRIPTION Carpenter - Building

DISTRICT 2

ENTIRE COUNTIES
Clinton, Essex, Franklin, Hamilton, Washington

WAGES	07/01/2024	07/01/2025
Per hour:		Additional
Carpenter	\$ 30.68	\$ 1.00*
Floor Coverer	30.68	1.00*
Carpet Layer	30.68	1.00*
Dry-Wall	30.68	1.00*
Diver-Wet Day	61.25	0.00
Diver-Dry Day	31.68	1.00*
Diver Tender	31.68	1.00*

*To be allocated at a later date

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):
- Pile Drivers/Dock Builders shall receive \$0.25 per hour over the journeyworker's rate of pay when performing piledriving/dock building work.

- Certified welders shall receive \$1.00 per hour over the journeyworker's rate of pay when the employee is required to be certified and performs DOT or ABS specified welding work
- When an employee performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require employees to be furnished and use or wear required forms of personal protection, then the employee shall receive his regular hourly rate plus \$1.50 per hour.
- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):
 - 0' to 80' no additional fee
 - 81' to 100' additional \$.50 per foot
 - 101' to 150' additional \$0.75 per foot
 - 151' and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):
 - 0' to 50' no additional fee
 - 51' to 100' additional \$.75 per foot
 - 101' and deeper additional \$1.00 per foot
- Diver rates applies to all hours worked on dive day.

SHIFT WORK

On Agency/Owner mandated shift work, the following rates will be applicable:

- 1st Shift - Regular Rate
- 2nd Shift - Premium of 7% of base wage per hour
- 3rd Shift - Premium of 14% of base wage per hour

Shift work shall be defined as implementing at least two (2) shifts in a twenty-four (24) consecutive hour period. Shift work must be for a minimum of three (3) consecutive days.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 23.34

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

REGISTERED APPRENTICES

Wages per hour (1300 hour terms at the following percentage of Journeyworker's base wage):

1st	2nd	3rd	4th
65%	70%	75%	80%

Supplemental Benefits per hour:

\$ 12.15 \$ 12.15 \$ 14.75 \$ 14.75

NOTE ADDITIONAL AMOUNTS PAID TO APPRENTICES FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):

- Pile Driving/Dock Builder apprentices shall receive an additional \$0.25 per hour worked when performing piledriving/dock building work.
- Certified Welders shall receive \$1.00 per hour over the apprentices rate of pay when the apprentice is required to be certified and performs DOT or ABS specified welding work.
- When an apprentice performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require the apprentice to be furnished and use or wear required forms of personal protection, then the apprentice shall receive his regular hourly rate plus \$1.50 per hour.

2-291B-Cli

Carpenter - Building / Heavy&Highway

02/01/2025

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

DISTRICT 2

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

PARTIAL COUNTIES

Orange: The area lying on Northern side of Orange County demarcated by a line drawn from the Bear Mountain Bridge continuing west to the Bear Mountain Circle, continue North on 9W to the town of Cornwall where County Road 107 (also known as Quaker Rd) crosses under 9W, then east on County Road 107 to Route 32, then north on Route 32 to Orrs Mills Rd, then west on Orrs Mills Rd to Route 94, continue west and south on Route 94 to the Town of Chester, to the intersection of Kings Highway, continue south on Kings Highway to Bellvale Rd, west on Bellvale Rd to Bellvale Lakes Rd, then south on Bellvale Lakes Rd to Kain Rd, southeast on Kain Rd to Route 17A, then north and southeast along Route 17A to Route 210, then follow Route 210 to NJ Border.

WAGES

Wages per hour: 07/01/2024

Carpenter - ONLY for
Artificial Turf/Synthetic
Sport Surface \$ 36.48

Note - Does not include the operation of equipment. Please see Operating Engineers rates.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 26.55

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE

HOLIDAY

Paid: See (5) on HOLIDAY PAGE

Overtime: See (5, 6, 16) on HOLIDAY PAGE

Notes:

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. When a holiday falls upon a Sunday, it shall be observed on the following Monday.

An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

REGISTERED APPRENTICES

Wages per hour (1300 hour terms at the following percentage of Journeyworker's wage):

1st	2nd	3rd	4th
65%	70%	75%	80%

Supplemental Benefits per hour:

\$18.58	\$19.14	\$21.24	\$21.79
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2-42AtSS

Carpenter - Heavy&Highway

02/01/2025

JOB DESCRIPTION Carpenter - Heavy&Highway

DISTRICT 2

ENTIRE COUNTIES

Albany, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour 07/01/2024

Carpenter	\$ 44.28
Piledriver	44.28
Diver-Wet Day	69.28
Diver-Dry Day	45.28
Diver-Tender	45.28

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (per hour worked):

- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.50 per hour.
- Certified welders when required to perform welding work will receive an additional \$2.50 per hour.

ADDITIONAL NOTES PERTAINING TO DIVERS/TENDERS:

- Divers and Tenders shall receive one and one half (1 1/2) times their regular diver and tender rate of pay for Effluent and Slurry diving.
- Divers and tenders being paid at the specified rate for Effluent and Slurry diving shall have all overtime rates based on the specified rate plus the appropriate overtime rates (one and one half or two times the specified rate for Slurry and Effluent divers and tenders).
- The pilot of an ADS or submersible will receive one and one-half (1 1/2) times the Diver-Wet Day Rate for time submerged.
- All crew members aboard a submersible shall receive the Diver-Wet Day rate.
- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):
 - 0' to 50' no additional fee
 - 51'to 100' additional \$.50 per foot
 - 101'to 150' additional \$.075 per foot
 - 151'and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):
 - 0' to 50' no additional fee
 - 51' to 100' additional \$.75 per foot
 - 101' and deeper additional \$1.00 per foot
- Diver rates applies to all hours worked on dive day.

SHIFT WORK

When project owner mandates a single irregular work shift, the Journeyworkers and Apprentices will receive an additional \$3.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 24.79

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

- In the event a Holiday falls on a Saturday, the Friday before will be observed as a Holiday. If a Holiday falls on a Sunday, then Monday will be observed as a Holiday.

- The employee must work their scheduled workday before and their scheduled workday after the holiday to receive holiday pay.

REGISTERED APPRENTICES

CAPRENTER APPRENTICES

Wages per hour (1040 hour terms at the following percentage of journeyworker's base wage):

1st	2nd	3rd	4th	5th
65%	70%	75%	80%	85%
Supplemental Benefits per hour:				
\$ 18.27	\$ 18.84	\$ 20.90	\$ 21.46	\$ 22.02

PILEDRIIVER/DOCKBUILDER APPRENTICES

Wages per hour (1300 hour terms at the following percentage of journeyworker's base wage):

1st	2nd	3rd	4th
65%	70%	75%	80%
Supplemental Benefits per hour:			
\$ 18.27	\$ 18.84	\$ 20.90	\$ 21.46

NOTE ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:

- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.50 per hour.

- Certified welders when required to perform welding work will receive an additional \$2.50 per hour.

2-291HH-Alb

Electrician

02/01/2025

JOB DESCRIPTION Electrician

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Greene: Portion of the County North of a line following the South limits of the City of Catskill in a westerly direction from the Hudson River to State Highway 23A. Then continuing on 23A to the road following the Little West Kill and continuing along this road to Delaware County.

Otsego: Only the Towns of Decatur and Worcester

WAGES

Per hour

	07/01/2024
Electrician	\$ 48.00
Audio/Sound	48.00
Video	48.00
Tele-Data	48.00
Solar/ Photovoltaic	48.00

Notes: An additional 5% above rate for work over 30' above floor and requires use of a safety harness when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smokestacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

An additional 5% above rate when Journeymen are required to work as Lead (Pb) cable splicers.

An additional 10% above rate when Journeymen Welders are required to have ASME verification.

SHIFT WORK

For Projects Bid on or Prior to 05/31/2019

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS OF AT LEAST A FIVE (5) DAY DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1st Shift	8:00 AM to 4:30 PM	REGULAR RATE
2nd Shift	4:30 PM to 1:00 AM	REGULAR RATE PLUS 10%
3rd Shift	12:30 AM to 9:00 AM	REGULAR RATE PLUS 15%

For Projects Bid on or After 06/01/2019

1st Shift	8:00 AM to 4:30 PM	REGULAR RATE
2nd Shift	4:30 PM to 1:00 AM	REGULAR RATE PLUS 17.3%
3rd Shift	12:30 AM to 9:00 AM	REGULAR RATE PLUS 31.4%

For Projects Bid on or After 09/01/2019

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SINGLE IRREGULAR SHIFTS OF AT LEAST A FIVE (5) DAY DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1st Shift	8:00 AM to 4:30 PM	REGULAR RATE
2nd Shift	4:30 PM to 1:00 AM	REGULAR RATE PLUS 17.3%
3rd Shift	12:30 AM to 9:00 AM	REGULAR RATE PLUS 31.4%

SUPPLEMENTAL BENEFITS

Per hour

Journeyworker	\$ 30.65 +3% of wage
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OVERTIME PAY

See (B, *E, Q) on OVERTIME PAGE

* DOUBLE TIME AFTER 10 HOURS ON SATURDAY

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Saturday, it shall be celebrated on Friday. If the holiday falls on Sunday, it shall be celebrated on Monday.

REGISTERED APPRENTICES

Wages per hour

Terms at the following percentage of Journeyworker's wage.

0-6mo	6-12mo	2nd yr	3rd yr	4th yr	5th yr
40%	45%	50%	60%	70%	80%

Notes: An additional 5% above rate for work over 30' above floor and requires use of a safety harness when working on tooth picks, structural steel, temporary platforms, swing scaffolds & boatswain chairs. All OSHA approved lifts are excluded.

An additional 10% above rate on towers & smoke stacks over 100' high.

An additional 20% above rate in shafts over 25' deep or tunnels over 50' long that are under construction.

Supplemental Benefits per hour worked

0-12 month term	\$ 15.32**
2nd year term	24.93**
3rd year term	26.07**
4th year term	27.22**
5th year term	28.36**

(**) Plus additional 3% of wage

1-236

Elevator Constructor

02/01/2025

JOB DESCRIPTION Elevator Constructor

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Essex, Fulton, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Madison: Madison Only the towns of: Brookfield, Hamilton, Lincoln, Madison, Smithfield, Stockbridge and the City of Oneida
Oneida: Entire county except the towns of: Camden, Florence, and Vienna.

WAGES

Per hour

	07/01/2024	01/01/2025
Mechanic	\$ 55.32	\$ 57.73
Helper	70% of Mechanic Wage Rate	70% of Mechanic Wage Rate

SUPPLEMENTAL BENEFITS

Per hour

	07/01/2024	01/01/2025
Journeyworker/Helper	\$ 37.885*	\$ 38.435*

(*)Plus 6% of hourly rate, if less than 5 years of service. Plus 8% of hourly rate, if more than 5 years of service.

OVERTIME PAY
See (D, O) on OVERTIME PAGE

HOLIDAY
Paid: See (5, 6, 15, 16) on HOLIDAY PAGE
Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE
Note: When a paid holiday falls on Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES
Wages per hour:
0-6 mo* 6-12 mo 2nd yr 3rd yr 4th yr
50% 55 % 65 % 70 % 80 %

(*)Plus 6% of the hourly rate, no additional supplemental benefits.

Supplemental Benefits - per hour worked:

Same as Journeyperson/Helper 1-35

Glazier

02/01/2025

JOB DESCRIPTION Glazier **DISTRICT 1**

ENTIRE COUNTIES
Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES Per hour	07/01/2024	01/01/2025	05/01/2025 Additional + 1.80	07/01/2025 Additional
Glazier Base Wage	\$ 33.01	\$ 33.01		
Plus additional \$4.10 per hour for all hours worked, not subject to overtime/premium				
	07/01/2024	01/01/2025 Additional		
High Work Base Wage***	\$ 35.35	\$ 2.00		+ 4.00

Plus additional \$4.10 per hour for all hours worked, not subject to overtime/premium

(***)When working on Swing Stage or Lift 100 feet or more in height, measured from the ground level up.

SHIFT WORK
THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFT WORK OR SINGLE IRREGULAR SHIFTS STARTING BETWEEN THE HOURS LISTED BELOW:

4:00pm to 6:30am: ADDITIONAL 12.5% TO APPLICABLE WAGE RATE
AND SUPPLEMENTAL BENEFIT

SUPPLEMENTAL BENEFITS
Per hour

Journeyworker	\$ 23.55
Journeyworker High Work	\$ 29.57

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE
Premium is applied to the respective base wage only.

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
Note: If any of the holidays are designated by federal law to be celebrated on a day other than that on which they regularly fall, then the holiday shall be celebrated on the day set by said federal law as if the day on which the holiday is celebrated was actually the holiday date.

REGISTERED APPRENTICES
Wages per hour

Apprentice Glazier 1500 hr. terms at the following percentage of Journeyworkers base wage.

1st	2nd	3rd	4th
50%	65%	75%	90%
+ additional \$4.10 per hour for all hours worked for all terms			

Apprentice Glazier Hi-Work 1500 hr. terms at the following percentage of Journeyworkers Hi-Work base wage.

1st	2nd	3rd	4th
50%	65%	75%	90%
+ additional \$4.10 per hour for all hours worked for all terms			

Supplemental Benefits per hour worked

Apprentice	
1st term	\$ 19.88
2nd-4th term	23.55
Apprentice High Work	
1st term	23.72
2nd-4th term	29.57

1-201

Insulator - Heat & Frost

02/01/2025

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington

WAGES

Wages per hour 07/01/2024

Asbestos Worker*	\$ 40.46
Insulator*	40.46
Firestopping Worker*	34.40

(*) On Mechanical Systems only.

SHIFT WORK

On government mandated shift work additional 12% of wage for all shifts starting after 3:30 P.M.

SUPPLEMENTAL BENEFITS

Per hour

Journeyworker \$ 26.86

OVERTIME PAY

See (*B1, **Q) on OVERTIME PAGE

*B1=Double time begins after 10 hours on Saturday

**Q=Triple time on Labor Day if worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When a holiday falls on Sunday the following Monday shall be observed as the holiday.

REGISTERED APPRENTICES

Wages per hour

one year terms at the following percentage of Journeyperson's wage.

1st	2nd	3rd	4th
60 %	70 %	80 %	90 %

Supplemental Benefits per hour worked:

Apprentices	\$ 26.86
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1-40

Ironworker

02/01/2025

JOB DESCRIPTION Ironworker

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Delaware, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Fulton: Only the Townships of Broadalbin, Mayfield, Northampton, Bleecker and Johnstown.

Hamilton: Only the Townships of Hope, Benson and Wells.

Montgomery: Only the Townships of Florida, Amsterdam, Charleston, Glen, Mohawk and Root.

Otsego: Only the Towns of Unadilla, Butternuts, Morris, Otego, Oneonta, Laurens, Millford, Maryland and Worcester.

WAGES

Wages	07/01/2024	01/01/2025
Per hour		
Ornamental	\$ 38.50	\$ 39.50
Reinforcing	38.50	39.50
Rodman	38.50	39.50
Structural & Precast	38.50	39.50
Mover/Rigger	38.50	39.50
Fence Erector	38.50	39.50
Stone Derrickman	38.50	39.50
Sheeter	38.75	39.75
Curtain Wall Installer	38.50	39.50
Metal Window Installer	38.50	39.50

SHIFT WORK

THE FOLLOWING RATE WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SINGLE IRREGULAR SHIFTS:

Shift Starting 4:30 PM to 12:00 AM

REGULAR RATE PLUS 10%

THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTWORK:

1st Shift	6:00 AM to 4:30 PM	REGULAR RATE
2nd Shift	2:00 PM to 7:00 PM	REGULAR RATE PLUS 10%
3rd Shift	7:00 PM to 12:00 AM	REGULAR RATE PLUS 15%

SUPPLEMENTAL BENEFITS

Per hour

JOURNEYWORKER	\$ 30.64	\$ 31.64
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday. Any holiday which occurs on Saturday shall be observed on the preceding Friday.

REGISTERED APPRENTICES

Wages per hour

ONE YEAR TERMS AT THE FOLLOWING WAGE RATES:

	07/01/2024
1st year	\$ 23.50
2nd year	25.50
3rd year	27.50
4th year	29.50
Supplemental Benefits per hour worked	
1st year	\$ 10.78
2nd year	22.87
3rd year	24.58
4th year	24.88

1-12

Laborer - Building

02/01/2025

JOB DESCRIPTION Laborer - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Rensselaer, Washington

PARTIAL COUNTIES
Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham and Austerlitz.
Greene: Entire county except the Township of Catskill
Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, Waterford, and the City of Mechanicville.

WAGES
Per hour
07/01/2024

Group #1:
All Classifications
except as noted in
Groups 2 & 3
\$ 36.16

Group #2:
Blaster, Drilling Equipment
Only Where a Separate Air
Compressor Unit Supplies
Power, Metal Formsetter
sidewalk),Well Pointing
& Laser Operator
\$ 36.66

Group #3:
Handling of Asbestos
or Toxic Materials
\$ 37.51

SUPPLEMENTAL BENEFITS
Per hour
Journeyworker
\$ 26.42

OVERTIME PAY
See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY
Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES
Wages per hour
1000 Hour terms at the following percentage of Journeyman's basic hourly wage.

1st	2nd	3rd	4th
65 %	70 %	80 %	80 %

Supplemental Benefits per hour worked

Apprentices
\$ 26.42

1-190

Laborer - Heavy&Highway

02/01/2025

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES
Albany, Rensselaer, Washington

PARTIAL COUNTIES
Columbia: Only the Townships of Stuyvesant, Stockport, Kinderhook, New Lebanon, Canaan, Ghent, Chatham, and Austerlitz
Greene: Entire county except the Township of Catskill.
Saratoga: Only the Townships of Halfmoon, Saratoga, Stillwater, Waterford, and the City of Mechanicville.

WAGES
GROUP # A:
Basic, Drill Helper, Flagman, Outboard and Hand Boats

GROUP # B:
Chain Saw, Concrete Aggregate Bin, Concrete Bootmen, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of Steelmesh, Small Generators for Laborers' Tools, Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Tail or Screw Operator on Asphalt Paver, Water Pump Operators(1-1/2" and Single Diaphragm) Nozzle (Asphalt, Gunit, Seeding and Sand Blasting), Laborers on Chain Link Fence. Rock Splitter and Power Unit, Pusher Type Concrete Saw and all other Gas, Electric, Oil and Air Tool Operators, Wrecking Laborer.

GROUP # C:

Drilling Equipment Only Where a Separate Air Compressor Unit Supplies Power, Acetylene Torch Operators, Asphalt Raker and Powderman.

GROUP # D:

Blasters, Metal Form Setters(sidewalk), Stone or Granite Curb Setters.

GROUP # E:

Employees performing hazardous waste removal, lead abatement and removal, or asbestos abatement and removal on a State and/or Federally designated waste site & where relevant State or Federal regulations require employees to use or wear forms of personal protection.

WAGES per hour

07/01/2024

Group # A	\$ 41.69
Group # B	41.89
Group # C	42.09
Group # D	42.29
Group # E	44.19

SHIFT WORK

All employees who work a single irregular workday that starts from 5:00 pm to 1:00 am on a governmental mandated night shift shall be paid an additional \$5.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour

Journeyworker	\$ 27.65
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday. If the Monday Holiday is worked it will be paid at double time plus the Holiday pay. If the Holiday falls on a Saturday employer can choose to celebrate Saturday or give Friday off with pay. If the Saturday Holiday is worked it will be paid at double time plus the Holiday pay

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th
65%	70%	80%	80%

Supplemental Benefits per hour worked

Apprentices	\$ 27.65
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1-190 h/h

Laborer - Tunnel

02/01/2025

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 1

ENTIRE COUNTIES

Albany, Fulton, Hamilton, Herkimer, Madison, Montgomery, Oneida, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

WAGES

Class 1: All support laborers/sandhogs working above the shaft or tunnel

Class 2: All laborers/sandhogs working in the shaft or tunnel

Class 4: Safety Miners

Class 5: Site work related to Shaft/Tunnel

Per Hour

07/01/2024

Class 1	\$ 47.20
Class 2	49.20

Class 4	51.45
Class 5	43.45

Toxic and hazardous waste, lead abatement and asbestos abatement work will be paid an additional \$ 3.00 an hour.

SUPPLEMENTAL BENEFITS

Per hour

Journeyworker \$ 29.15

OVERTIME PAY

See (B, E, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 15, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

Note: When a holiday falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double time rate. When a holiday falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double time rate.

REGISTERED APPRENTICES

FOR APPRENTICE RATES, refer to the appropriate Laborer Heavy & Highway wage rate contained in the wage schedule for the County and Location where the work is to be performed.

1-190/157T

Lineman Electrician

02/01/2025

JOB DESCRIPTION Lineman Electrician

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

A Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors, assembly of all electrical materials, conduit, pipe, or raceway; placing of fish wire; pulling of cables, wires or fiber optic cable through such raceways; splicing of conductors; dismantling of such structures, lines or equipment.

Crane Operators: Operation of any type of crane on line projects.

Crawler Backhoe: Operation of tracked excavator/crawler backhoe with 1/2 yard bucket or larger on line projects.

Digging Machine Operator: All other digging equipment and augering on line projects.

A Groundman/Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chainsaws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator/equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/truck driver may assist in installing conduit, pipe, cables and equipment.

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines. Also includes digging of holes for poles, anchors, footer, and foundations for electrical equipment.

Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. Includes access matting for line work.

Per hour: 07/01/2024

Group A:

Lineman, Technician	\$ 58.90
Crane, Crawler Backhoe	58.90
Welder, Cable Splicer	58.90

Group B:

Digging Mach. Operator	53.01
Tractor Trailer Driver	50.07
Groundman, Truck Driver	47.12
Equipment Mechanic	47.12
Flagman	35.34

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work." Includes access matting for line work.

Group A:	
Lineman, Technician	\$ 58.90
Crane, Crawler Backhoe	58.90
Cable Splicer	64.79
Certified Welder, Pipe Type Cable	61.85

Group B:	
Digging Mach. Operator	53.01
Tractor Trailer Driver	50.07
Groundman, Truck Driver	47.12
Equipment Mechanic	47.12
Flagman	35.34

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. Includes access matting for line work.

Group A:	
Lineman, Tech, Welder	\$ 60.22
Crane, Crawler Backhoe	60.22
Cable Splicer	66.24
Certified Welder, Pipe Type Cable	63.23

Group B:	
Digging Mach. Operator	54.20
Tractor Trailer Driver	51.19
Groundman, Truck Driver	48.18
Equipment Mechanic	48.18
Flagman	36.13

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. Includes access matting for line work.

Group A:	
Lineman, Tech, Welder	\$ 61.41
Crane, Crawler Backhoe	61.41

Group B:	
Digging Mach. Operator	55.27
Tractor Trailer Driver	52.20
Groundman, Truck Driver	49.13
Equipment Mechanic	49.13
Flagman	36.85

Additional \$1.00 per hour for entire crew when a helicopter is used.

SHIFT WORK

THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM to 4:30 PM REGULAR RATE
2ND SHIFT	4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 %
3RD SHIFT	12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 %

SUPPLEMENTAL BENEFITS

Per hour:

07/01/2024

Group A \$ 30.90
 *plus 7% of
 the hourly
 wage paid

Group B \$ 26.90
 *plus 7% of
 the hourly
 wage paid

*The 7% is based on the hourly wage paid, straight time or premium time.

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE. NOTE: Double time for all emergency work designated by the Dept. of Jurisdiction.

WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

Overtime See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the applicable Journeyworker's Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour:

07/01/2024

\$ 26.90
*plus 7% of
the hourly
wage paid

*The 7% is based on the hourly wage paid, straight time or premium time.

6-1249a

Lineman Electrician - Teledata

02/01/2025

JOB DESCRIPTION Lineman Electrician - Teledata

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour:

For outside work, stopping at first point of attachment (demarcation).

07/01/2024

01/01/2025

Cable Splicer	\$ 39.24	\$ 40.81
Installer, Repairman	\$ 37.24	\$ 38.73
Teledata Lineman	\$ 37.24	\$ 38.73
Tech., Equip. Operator	\$ 37.24	\$ 38.73
Groundman	\$ 19.74	\$ 20.53

NOTE: EXCLUDES Teledata work within ten (10) feet of High Voltage (600 volts and over) transmission lines. For this work please see LINEMAN.

SHIFT WORK

THE FOLLOWING RATES APPLY WHEN THE CONTRACTING AGENCY MANDATES MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION ARE WORKED. WHEN TWO (2) OR THREE (3) SHIFTS ARE WORKED THE FOLLOWING RATES APPLY:

1ST SHIFT	REGULAR RATE
2ND SHIFT	REGULAR RATE PLUS 10%

3RD SHIFT	REGULAR RATE PLUS 15%	
SUPPLEMENTAL BENEFITS		
Per hour:	07/01/2024	01/01/2025
Journeyworker	\$ 5.70	\$ 5.70
	*plus 3% of the hour wage paid	*plus 3% of the hour wage paid

*The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

Lineman Electrician - Traffic Signal, Lighting

02/01/2025

JOB DESCRIPTION Lineman Electrician - Traffic Signal, Lighting

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors which includes, but is not limited to road loop wires; conduit and plastic or other type pipes that carry conductors, flex cables and connectors, and to oversee the encasement or burial of such conduits or pipes.

Crane Operators: Operation of any type of crane on Traffic Signal/Lighting projects.

Crawler Backhoe: Operation of tracked excavator/crawler backhoe with 1/2 yard bucket or larger on Traffic Signal/Lighting projects.

Digging Machine Operator: All other digging equipment and augering on Traffic Signal/Lighting projects.

A Groundman/Truck Driver shall: Build and set concrete forms, handle steel mesh, set footer cages, transport concrete in a wheelbarrow, hand or machine concrete vibrator, finish concrete footers, mix mortar, grout pole bases, cover and maintain footers while curing in cold weather, operate jack hammer, operate hand pavement breaker, tamper, concrete and other motorized saws, as a drill helper, operate and maintain generators, water pumps, chainsaws, sand blasting, operate mulching and seeding machine, air tools, electric tools, gas tools, load and unload materials, hand shovel and/or broom, prepare and pour mastic and other fillers, assist digger operator/equipment operator in ground excavation and restoration, landscape work and painting. Only when assisting a lineman technician, a groundman/truck driver may assist in installing conduit, pipe, cables and equipment.

A flagger's duties shall consist of traffic control only.

Per hour: 07/01/2024

Group A:

Lineman, Technician	\$ 50.54
Crane, Crawler Backhoe	50.54
Certified Welder	53.07

Group B:

Digging Machine	45.49
Tractor Trailer Driver	42.96
Groundman, Truck Driver	40.43
Equipment Mechanic	40.43
Flagman	30.32

Above rates are applicable for installation, testing, operation, maintenance and repair on all Traffic Control (Signal) and Illumination (Lighting) projects, Traffic Monitoring Systems, and Road Weather Information Systems. Includes digging of holes for poles, anchors, footer foundations for electrical equipment; assembly of all electrical materials or raceway; placing of fish wire; pulling of cables, wires or fiber optic cable through such raceways; splicing of conductors; dismantling of such structures, lines or equipment.

SHIFT WORK

THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM TO 4:30 PM	REGULAR RATE
2ND SHIFT	4:30 PM TO 1:00 AM	REGULAR RATE PLUS 17.3%
3RD SHIFT	12:30 AM TO 9:00 AM	REGULAR RATE PLUS 31.4%

SUPPLEMENTAL BENEFITS

Per hour worked:

07/01/2024

Group A \$ 30.90
 *plus 7% of
 the hourly
 wage paid

Group B \$ 26.90
 *plus 7% of
 the hourly
 wage paid

*The 7% is based on the hourly wage paid, straight time or premium time.

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE. NOTE: Double time for all emergency work designated by the Dept. of Jurisdiction.

WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

Overtime: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the applicable Journeyworker's Lineman wage.

1st	2nd	3rd	4th	5th	6th	7th
60%	65%	70%	75%	80%	85%	90%

SUPPLEMENTAL BENEFITS per hour:

07/01/2024

\$ 26.90
*plus 7% of
the hourly
wage paid

*The 7% is based on the hourly wage paid, straight time or premium time.

6-1249a-LT

Lineman Electrician - Tree Trimmer

02/01/2025

JOB DESCRIPTION Lineman Electrician - Tree Trimmer

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also includes stump removal near underground energized electrical lines including telephone and CATV lines.

Per hour: 07/01/2024

Tree Trimmer \$ 31.44
Equipment Operator 27.80

Equipment Mechanic	27.80
Truck Driver	23.15
Groundman	19.07
Flag person	15.00*

*NOTE-Rate effective on 01/01/2025 - \$15.50 due to minimum wage increase.

SUPPLEMENTAL BENEFITS

Per hour:

07/01/2024

Journeyworker	\$ 10.48
	*plus 4.5% of the hourly wage paid

* The 4.5% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q, X) on OVERTIME PAGE

WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (5, 6, 8, 15) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

NOTE: All paid holidays falling on a Saturday shall be observed on the preceding Friday. All paid holidays falling on a Sunday shall be observed on the following Monday.

6-1249TT

Mason - Building

02/01/2025

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour 07/01/2024

Tile/Marble/Terrazzo

Setter	\$ 37.71
Finisher	29.38

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setter	\$ 21.83
Journeyman Finisher	18.87

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

Hour Terms at the following percentage of Journeyman's wage

Setter:	
1st term 0-500 hrs	60%
2nd term 501-1500 hrs	70%
3rd term 1501-2500 hrs	80%
4th term 2501-3500 hrs	85%
5th term 3501-4500 hrs	90%
6th term 4501-6000 hrs	95%

Finisher:

1st term 0-500 hrs	70%
2nd term 501-1500 hrs	80%
3rd term 1501-2500 hrs	90%
4th term 2501-3700 hrs	95%

Supplemental Benefits per hour worked

07/01/2024

Setter:

1st term 0-500 hrs	\$ 12.98
2nd term 501-1500 hrs	12.98
3rd term 1501-2500 hrs	17.40
4th term 2501-3500 hrs	17.40
5th term 3501-4500 hrs	19.61
6th term 4501-6000 hrs	21.83

Finisher:

1st term 0-500 hrs	\$ 12.22
2nd term 501-1500 hrs	12.22
3rd term 1501-2500 hrs	15.54
4th term 2501-3700 hrs	15.54

12-2TS.1

Mason - Building

02/01/2025

JOB DESCRIPTION Mason - Building

DISTRICT 12

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Warren: Only the Townships of Bolton, Lake George, Lake Luzerne,Queensbury, Stony Creek, Thurman & Warrensburg.

WAGES

Per hour 07/01/2024

Bricklayer	\$ 41.04
Cement Mason(Bldg)	41.04
Plasterer/Fireproofing*	41.04
Pointer/Caulker/Cleaner	41.04
Stone Mason	41.04
Acid Brick	41.04

(*)Fireproofing of Structural only.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 23.58

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour

750 hour terms at the following percentage of Journey's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
60%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

All Terms \$ 23.58

12-2b.1

Mason - Heavy&Highway

02/01/2025

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 12

ENTIRE COUNTIES

Albany, Cayuga, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Madison, Montgomery, Oneida, Oswego, Rensselaer, Saratoga, Schenectady, Schoharie, St. Lawrence, Warren, Washington

PARTIAL COUNTIES

Onondaga: For Heavy & Highway Cement Mason or Plaster Work in Onondaga County, refer to Mason-Heavy&Highway tag 12-2h/h on.

WAGES

Per hour	07/01/2024
Mason & Bricklayer	\$ 42.26

Additional \$1.00 per hour for work on any swing scaffold or staging suspended by means of ropes or cables.

SUPPLEMENTAL BENEFITS

Per hour worked	
Journeyman	\$ 22.43

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid:	See (1) on HOLIDAY PAGE
Overtime:	See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour	
750 HR TERMS at the following percent of Journeyman's wage	

1st	2nd	3rd	4th	5th	6th	7th	8th
60%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

0 to 500 Hours	\$ 13.68	
All Other	22.43	12-2hh.1

Millwright	02/01/2025
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JOB DESCRIPTION	Millwright	DISTRICT 6
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ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

THE FOLLOWING RATE APPLIES TO ANY GAS/STEAM TURBINE AND OR RELATED COMPONENT WORK, INCLUDING NEW INSTALLATIONS OR MAINTENANCE AND ANY/ALL WORK PERFORMED WITHIN THE PROPERTY LIMITS OF A NUCLEAR FACILITY.

Per hour:	07/01/2024	07/01/2025
Millwright - Power Generation	\$ 45.00	Additional \$2.50*
* To be allocated at a later date.		

NOTE: ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums):

- Certified Welders shall receive an additional \$1.75 per hour provided they are directed to perform Certified Welding.
- If a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) is required, then that employee shall receive an additional \$1.50 per hour.
- An employee performing the work of a machinist shall receive an additional \$2.00 per hour. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.
- When performing work underground at 500 feet and below, the employee shall receive an additional \$1.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour paid:	
Journeyworker	\$ 27.95*

*NOTE: Subject to OT premium

OVERTIME PAY

See (B, E, E2, Q, V) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES

WAGES per hour: One year terms at the following percentage of Journeyworker's wage:

Appr. 1st year	65 %*
Appr. 2nd year	75 %*
Appr. 3rd year	80 %*
Appr. 4th year	90 %*

*NOTE: Additional premium for the following work listed below:

Certified Welder	\$ 1.75
Hazardous Waste Work	1.50
Machinist	2.00
Underground	1.00
(500' and below)	

SUPPLEMENTAL BENEFITS per hour:

Appr. 1st year	\$ 11.89
Appr. 2nd year	23.14
Appr. 3rd year	24.74
Appr. 4th year	26.35

6-1163Power

Millwright

02/01/2025

JOB DESCRIPTION Millwright

DISTRICT 2

ENTIRE COUNTIES

Clinton, Essex, Franklin, Hamilton, Jefferson, Lewis, Oneida, Onondaga, Oswego, St. Lawrence, Warren, Washington

WAGES

Per hour:	07/01/2024	07/01/2025 Additional
Building	\$ 36.32	\$ 3.00*
Heavy & Highway	39.82	3.00*

*To be allocated at a later date

NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums):

- Certified Welders shall receive \$1.75 per hour in addition to the current Millwrights rate provided he/she is directed to perform certified welding.
- For Building work if a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) are required, then that employee shall receive a \$1.50 premium per hour for Building work.
- For Heavy & Highway work if the work is performed at a State or Federally designated hazardous waste site where employees are required to wear protective gear, the employees performing the work shall receive an additional \$2.00 per hour over the millwright heavy and highway wage rate for all hours worked on the day protective gear was worn.
- An employee performing the work of a machinist shall receive \$2.00 per hour in addition to the current Millwrights rate. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.
- When performing work underground at 500 feet and below, the employee shall receive an additional \$1.00.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker	\$ 26.59
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OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES

Wages per hour:

(1)year terms at the following percentage of Journeyworker's rate.

1st	2nd	3rd	4th
65%	75%	80%	90%

Supplemental Benefits per hour:

Apprentices:

1st term	\$ 11.89
2nd term	22.19
3rd term	23.65
4th term	25.13

2-1163.2

Operating Engineer - Building

02/01/2025

JOB DESCRIPTION Operating Engineer - Building

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedell Road then east along Bedell Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

NOTE:

-- In the event that equipment listed below is operated by robotic control, the classification covering the operation will be the same as if manually operated.

-- If a second employee is required by the employer for operation of any covered machine, they shall be an Engineer Class C

CLASS A1*: All cranes that require A NYS crane license, tower cranes**(including self erecting), hydraulic cranes, locomotive crane, piledriver, cableway, derricks, whirlies, dragline, boom trucks, cherry pickers, overhead cranes (gantry or saddle type), truck cranes

CLASS A:

Shovel, Excavators 18,001 lbs. and above(including rubber tire full swing), Gradalls, power road grader, all CMI equipment, front-end rubber tire loader, tractor-mounted drill (quarry master), mucking machine, concrete central mix plant, concrete pump, belcrete system, automated asphalt concrete plant, and tractor road paver, boom trucks 5 tons and under, maintenance engineer, self-contained crawler drill-hydraulic rock drill, Profiler/Milling machine.

CLASS B:

Excavators 18,000 lbs. and under, Backhoes (rubber tired backhoe/loader combination), bulldozer, pushcat, tractor, traxcavator, scraper, LeTourneau grader, form fine grader, self-propelled soil compactor (fill roller), asphalt roller, blacktop spreader, power brooms, sweepers, trenching machine, Barber Green loader, side booms, hydro hammer, concrete spreader, concrete finishing machine, one drum hoist, power hoisting (single drum), hoist two drum or more, three drum engine, power hoisting (two drum and over), two drum and swinging engine, three drum swinging engine, hod hoist, A-L frame winches, core and well drillers (one drum), post hole digger, model CHB Vibro-Tamp or similar machine, batch bin and plant operator, dinky locomotive, skid steer loader, track excavator 5/8 cubic yard or smaller, front end rubber tired loader under four cubic yards, vacuum machine (mounted or towed).

CLASS C:

Fork lift, high lift, all terrain fork lift: or similar, oiler, fireman and heavy-duty greaser, boilers and steam generators, pump, vibrator, motor mixer, air compressor, dust collector, welding machine, well point, mechanical heater, generators, temporary light plants, electric submersible pumps 4" and over, murphy type diesel generator, conveyor, elevators, concrete mixer, beltcrete power pack (belcrete system), seeding, and mulching machines, pumps, rotating telehandler (that does not require NYS crane license).

WAGES per hour

	07/01/2024	07/01/2025
Class A1*	\$ 53.11	\$ 55.42
Class A	52.62	54.93
Class B	51.60	53.91
Class C	48.70	51.01

(*) TONNAGE RATING PREMIUMS:

Note: Additional value subject to same premiums as shown for OT

All cranes 1000 tons and over, A1 rate plus \$7.00
All cranes 800-999 tons, A1 rate plus \$6.00
All cranes 600-799 tons, A1 rate plus \$5.00
All cranes 400-599 tons, A1 rate plus \$4.00
All cranes 200-399 tons, A1 rate plus \$3.00
All cranes 111-199 tons, A1 rate plus \$2.25
All cranes 110 tons and under, A1 rate only

(**)Additional \$0.50 per hr on A1 rate for Tower Cranes (no tonnage premiums apply)
Additional \$2.50 per hr over B rate for Nuclear Leader work.
Additional \$2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

SUPPLEMENTAL BENEFITS

Per hour

	07/01/2024	07/01/2025
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Journeyworker	\$ 32.40	\$ 33.50
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OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: All hours worked on designated holidays shall be paid a double the hourly rate of pay plus 8 hours of straight time.

NOTE: If a holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on Saturday, it will be celebrated on Friday.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyworker's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2024	07/01/2025
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All terms	\$ 27.70	\$ 28.80
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1-158 Alb

Operating Engineer - Heavy&Highway

02/01/2025

JOB DESCRIPTION Operating Engineer - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Broome, Chenango, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

PARTIAL COUNTIES

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedell Road then east along Bedell Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 44 east to Route 343 then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to Connecticut.

WAGES

NOTE:

--- In the event that equipment listed below is operated by robotic control, the classification covering the operation will be the same as if manually operated.

--- If a second employee is required by the employer for operation of any covered machine, they shall be an Engineer Class C

CLASSIFICATION A1*: All Cranes that require a NYS Crane License; tower cranes(including self erecting)**, hydraulic cranes, locomotive crane, piledriver, cableway, derricks, whirlies, dragline, boom trucks, cherry pickers, overhead cranes (gantry or saddle type), truck cranes

CLASSIFICATION A:

Asphalt Curb Machine (Self Propelled, Slipform), Asphalt Paver, Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Blacktop Roller, Boom truck, GPS operated Bull Dozer, Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine (Self Propelled, Slipform), Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All Purpose Hydraulically Operated) (Gradall or Similar), Front End Loader (4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole, PB-4 and similar type, Power Grader, Profiler/Milling Machine (over 105 H.P.), Quad 9, Quarry Master (or equivalent), Rotating Telehandler, Scraper (Including Challenger Type), Shovel, Side Boom, Slip Form Paver (If a second man is needed, he shall be an Oiler), Tractor Drawn BeltType Loader, Truck or Trailer Mounted Log Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

CLASSIFICATION B:

Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (Non-Automated), Blast or Rotary Drill (Truck or Tractor Mounted), Brokk, Boring Machine, Cage Hoist, Central Mix Plant [(Non-Automated) and All Concrete Batching Plants], Concrete Paver (Over 16S), Crawler Drill (Self-contained), Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, Hi Pressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders (If Employer requires another man to clean the screen or to maintain the equipment, he shall be an Oiler), L.C.M. Work Boat Operator, Locomotive, Material handling knuckle boom, Mini Excavator (under 18,000 lbs.), Mixer (for stabilized base self-propelled), Monorail Machine, Plant Engineer, Prentice Loader, Profiler/Milling Machine (105 H.P. and under), Pug Mill, Pump Crete, Ready Mix Concrete Plant, Refrigeration Equipment (for soil stabilization), Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Ride-on Rock Drill(Excluding Air-Track Type Drill), Skidder, Tractor with Dozer and/or Pusher, Trencher, Tugger Hoist, Vacuum machine (mounted or towed), Vermeer saw (ride on, any size or type), Welder, Winch, Winch Cat

CLASSIFICATION C:

A Frame Winch Hoist on Truck, Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving Machine (ride on), Ballast Regulator(Ride-on), Boiler (used in conjunction with production), Bituminous Heater (self-propelled), Boat (powered), Cement and Bin Operator, Concrete Pavement Spreader and Finisher Concrete Paver or Mixer (16' and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill (Core and Well), Farm Tractor with accessories, Fine Grade Machine, Fireman, Fork Lift, Form Tamper, Grout Pump, Gunit Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker (ride-on), Hydraulic Pump (jacking system), Hydro-Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinus Widener, Roller (Grade and Fill), Scarifier (ride-on), Shell Winder, Skid steer loader (Bobcat or similar; including all attachments), Span-Saw (ride-on), Steam Cleaner, Tamper (ride-on), Tie Extractor (ride-on), Tie Handler (ride-on), Tie Insertter (ride-on), Tie Spacer (ride-on), Tire Repair, Track Liner (ride-on), Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point, and the following hands-off equipment: Compressors, Dust Collectors, Generators, Pumps, Welding Machines, Light Plants and Heaters

WAGES per hour

	07/01/2024	07/01/2025
Class A1*	\$ 57.90	\$ 60.30
Class A	54.90	57.30
Class B	53.99	56.39
Class C	51.42	53.82

(*) TONNAGE RATING PREMIUMS:

Cranes over 1000 tons, A1 rate plus \$7.00
Cranes from 800-999 tons, A1 rate plus \$6.00
Cranes from 600-799 tons, A1 rate plus \$5.00
Cranes from 400-599 tons, A1 rate plus \$4.00
Cranes from 200-399 tons, A1 rate plus \$3.00
Cranes from 111-199 tons, A1 rate plus \$2.00
Cranes from 65-110 tons, A1 rate plus \$1.50
Cranes from 0-64 Tons, A1 rate only

NOTE: Additional value subject to same premiums as shown for OT

() Tower Cranes, A1 rate plus \$3.00 (no tonnage premiums apply)**

-- Cranes in Luffer Configuration, A1 rate plus \$5.00
-- Cranes with external ballast (tray or wagon), A1 rate plus \$5.00
NOTE: Additional value subject to same premiums as shown for OT

Additional \$2.50 per hr. for hazardous waste removal work on State and/or Federally designated waste site which require employees to wear Level C or above forms of personal protection.

SHIFT WORK

Additional \$2.50 per hour for All Employees who work a single irregular work shift, of at least 5 consecutive days, starting from 5:00 PM to 1:00 AM that is mandated by the Contracting Agency.

SUPPLEMENTAL BENEFITS

Per hour

	07/01/2024	07/01/2025
Journeyworker	\$ 32.60	\$ 33.70

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be observed on Monday. If the observed Monday Holiday is worked, pay shall be double time plus Holiday pay for time worked. If the Holiday falls on a Saturday and is worked pay shall be double time plus Holiday pay for time worked. If the Holiday falls on a Saturday employer can choose to observe the paid holiday Saturday or give Friday off with holiday pay.

REGISTERED APPRENTICES

Wages per hour

1000 hours terms at the following percentage of Journeyworker's wage Class B

1st	2nd	3rd	4th
60%	70%	80%	90%

Supplemental Benefits per hour worked

	07/01/2024	07/01/2025
All Terms	\$ 27.45	\$ 28.30

1-158H/H Alb

Operating Engineer - Marine Dredging

02/01/2025

JOB DESCRIPTION Operating Engineer - Marine Dredging

DISTRICT 4

ENTIRE COUNTIES

Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

WAGES

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour: 07/01/2024

CLASS A1 \$ 45.26

Deck Captain, Leverman,
Mechanical Dredge Operator,
Licensed Tug Operator 1000HP or more.

CLASS A2 40.33

Crane Operator (360 swing)

CLASS B To conform to Operating Engineer
Dozer, Front Loader Prevailing Wage in locality where work
Operator on Land is being performed including benefits.

CLASS B1 39.14

Derrick Operator (180 swing)
Spider/Spill Barge Operator
Operator II, Fill Placer, Engineer
Chief Mate, Electrician, Chief Welder,
Maintenance Engineer, Licensed Boat, Crew Boat Operator

CLASS B2 36.84

Certified Welder

CLASS C1 35.83

Drag Barge Operator,
Steward, Mate,
Assistant Fill Placer

CLASS C2 34.68

Boat Operator

CLASS D 28.81
Shoreman, Deckhand, Oiler,
Rodman, Scowman, Cook,
Messman, Porter/Janitor

SUPPLEMENTAL BENEFITS

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B \$ 12.00 plus 7%
of straight time
wage, Overtime hours
add \$ 0.63

All Class C & D \$ 11.75 plus 7%
of straight time
wage, Overtime hours
add \$ 0.50

OVERTIME PAY

See (B2, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

Operating Engineer - Survey Crew

02/01/2025

JOB DESCRIPTION Operating Engineer - Survey Crew

DISTRICT 12

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

These rates apply to Building, Tunnel and Heavy Highway.

Per hour:

SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.

Instrument Person - One who operates the surveying instruments.

Rod Person - One who holds the rods and assists the Instrument Person.

07/01/2024

Party Chief \$ 50.65
Instrument Person 46.54
Rod Person 34.55

Additional \$3.00/hr. for Tunnel Work

Additional \$2.50/hr. for Hazardous Work Site

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$ 29.75

OVERTIME PAY

See (B, E, P, *X) on OVERTIME PAGE

*Note: \$25.10/Hr. Only for "ALL" premium hours paid when worked.

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES: 1000 hour terms based on the Percentage of Rod Persons Wage:

07/01/2024

0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 21.53 / PHP \$18.45
1001-2000	24.55 / " 20.45
2001-3000	27.58/ " 22.93

NOTE: PHP is premium hours paid when worked.

12-158-545 D.H.H.

Operating Engineer - Survey Crew - Consulting Engineer

02/01/2025

JOB DESCRIPTION Operating Engineer - Survey Crew - Consulting Engineer

DISTRICT 12

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: The northern portion of the county from the northern boundary line of the City of Poughkeepsie, north.

Genesee: Only the portion of the county that lies east of a line down the center of Route 98 to include all area that lies within the City of Batavia.

WAGES

These rates apply to feasibility and preliminary design surveying, line and grade surveying for inspection or supervision of construction when performed under a Consulting Engineer Agreement.

Per hour:

SURVEY CLASSIFICATIONS:

Party Chief - One who directs a survey party.

Instrument Person - One who operates the surveying instruments.

Rod Person - One who holds the rods and assists the Instrument Person.

07/01/2024

Party Chief	\$ 50.65
Instrument Person	46.54
Rod Person	34.55

Additional \$3.00/hr. for Tunnel Work.

Additional \$2.50/hr. for EPA or DEC certified toxic or hazardous waste work.

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman	\$ 29.75
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OVERTIME PAY

See (B, E, Q, *X) on OVERTIME PAGE

*Note: \$25.10/Hr. Only for "ALL" premium hours paid when worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

WAGES: 1000 hour terms based on percentage of Rod Persons Wage:

07/01/2024

0-1000	60%
1001-2000	70%
2001-3000	80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 21.53 / PHP \$18.45
1001-2000	\$ 24.55 / " 20.45
2001-3000	\$ 26.98 / " 22.93

NOTE: PHP is premium hours paid when worked.

12-158-545 DCE

Operating Engineer - Tunnel

02/01/2025

JOB DESCRIPTION Operating Engineer - Tunnel

DISTRICT 7

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: Northern part of Dutchess, to the northern boundary line of the City of Poughkeepie, then due east to Route 115 to Bedell Road, then east along Bedell Road to VanWagner Road, then north along VanWagner Road to Bower Road, then east along Bower Road to Rte. 44 east to Rte. 343, then along Rte. 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains, to the borderline of the State of Connecticut.

Genesee: Only that portion of the county that lies east of a line drawn down the center of Route 98 and the entirety of the City of Batavia.

WAGES

CLASS A: Automatic Concrete Spreader (CMI Type); Automatic Fine Grader; Backhoe (except tractor mounted, rubber tired); Belt Placer (CMI Type); Blacktop Plant (automated); Cableway; Caisson Auger; Central Mix Concrete Plant (automated); Concrete Curb Machine (self-propelled slipform); Concrete Pump (8" or over); Dredge; Dual Drum Paver; Excavator; Front End Loader (4 cu. yd & over); Gradall; Head Tower (Sauerman or Equal); Hoist (shaft); Hoist (two or three Drum); Log Chipper/Loader (self-feeder); Maintenance Engineer (shaft and tunnel); any Mechanical Shaft Drill; Mine Hoist; Mining Machine(Mole and similar types); Mucking Machine or Mole; Overhead Crane (Gantry or Straddle Type); Pile Driver; Power Grader; Remote Controlled Mole or Tunnel Machine; Scraper; Shovel; Side Boom; Slip Form Paver (If a second man is needed, they shall be an Oiler); Tripper/Maintenance Engineer (shaft & tunnel); Tractor Drawn Belt-Type Loader; Tug Operator (manned rented equipment excluded); Tunnel Shovel.

CLASS B: Automated Central Mix Concrete Plant; Backhoe (topside); Backhoe (track mounted, rubber tired); Backhoe (topside); Bituminous Spreader and Mixer, Blacktop Plant (non-automated); Blast or Rotary Drill (truck or tractor mounted); Boring Machine; Cage Hoist; Central Mix Plant(non-automated); all Concrete Batching Plants; Compressors (4 or less exceeding 2,000 c.f.m. combined capacity); Concrete Pump; Crusher; Diesel Power Unit; Drill Rigs (tractor mounted); Front End Loader (under 4 cu. yd.); Grayco Epoxy Machine; Hoist (One Drum); Hoist (2 or 3 drum topside); Knuckle Boom material handler; Kolman Plant Loader & similar type Loaders (if employer requires another person to clean the screen or to maintain the equipment, they shall be an Oiler); L.C.M. Work Boat Operator; Locomotive; Maintenance Engineer (topside); Maintenance Grease Man; Mixer (for stabilized base-self-propelled); Monorail Machine; Plant Engineer; Personnel Hoist; Pump Crete; Ready Mix Concrete Plant; Refrigeration Equipment (for soil stabilization); Road Widener; Roller (all above sub-grade); Sea Mule; Shotcrete Machine; Shovel (topside); Tractor with Dozer and/or Pusher; Trencher; Tugger Hoist; Tunnel Locomotive; Vacuum Machine (mounted or towed); Welder; Winch; Winch Cat.

CLASS C: A Frame Truck; All Terrain Telescoping Material Handler; Ballast Regulator (ride-on); Compressors (4 not to exceed 2,000 c.f.m. combined capacity; or 3 or less with more than 1200 c.f.m. but not to exceed 2,000 c.f.m.); Compressors ((any size, but subject to other provisions for compressors), Dust Collectors, Generators, Pumps, Welding Machines, Light Plants (4 or any type combination)); Concrete Pavement Spreaders and Finishers; Conveyor; Drill (core); Drill (well); Electric Pump used in conjunction with Well Point System; Farm Tractor with Accessories; Fine Grade Machine; Fork Lift; Grout Pump (over 5 cu. ft.); Gunite Machine; Hammers (hydraulic-self-propelled); Hydra-Spiker (ride-on); Hydra-Blaster (water); Hydro-Blaster; Motorized Form Carrier; Post Hole Digger and Post Driver; Power Sweeper; Roller grade & fill); Scarifer (ride-on); Span-Saw (ride-on); Submersible Electric Pump (when used in lieu of well points); Tamper (ride-on); Tie-Extractor (ride-on), Tie Handler (ride-on), Tie Insertor (ride-on), Tie Spacer (ride-on); Track Liner (ride-on); Tractor with towed accessories; Vibratory Compactor; Vibro Tamp, Well Point.

CLASS D: Aggregate Plant; Cement & Bin Operator; Compressors (3 or less not to exceed 1,200 c.f.m. combined capacity); Compressors ((any size, but subject to other provisions for compressors), Dust Collectors, Generators, Pumps, Welding Machines, Light Plants (3 or less or any type or combination)); Concrete Saw (self-propelled); Form Tamper; Greaseman; Hydraulic Pump (jacking system); Junior Engineer; Light Plants; Mulching Machine; Oiler; Parapet Concrete or Pavement Grinder; Power Broom (towed); Power Heaterman (when used for production); Revinius Widener; Shell Winder; Steam Cleaner; Tractor.

Per hour:	07/01/2024	07/01/2025
CLASS A	\$ 55.91	\$ 58.44
CLASS B	54.69	57.22
CLASS C	51.90	54.43
CLASS D	48.89	51.42

Additional \$5.00 per hour for Hazardous Waste Work on a state or federally designated hazardous waste site where the Operating Engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin and eye protection.

CRANES:

Crane 1: All cranes, including self-erecting.

Crane 2: All Lattice Boom Cranes and all cranes with a manufacturer's rating of fifty (50) ton and over.

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton and below, including boom trucks.

Crane 1	\$ 59.91	\$ 62.44
Crane 2	58.91	61.44
Crane 3	57.91	60.44

SUPPLEMENTAL BENEFITS

Per hour:

\$ 25.05	\$ 25.90
+ 9.85*	+ 10.10*

* This portion of benefits subject to same premium rate as shown for overtime wages.

OVERTIME PAY

See (B, B2, E, Q, X) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: If a holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

WAGES:(1000) hours terms at the following percentage of Journeyworker's Class B wage.

1st term	60%
2nd term	65%
3rd term	70%
4th term	75%

SUPPLEMENTAL BENEFITS per hour: Same as Journeyworker

7-158-832TL.

Painter

02/01/2025

JOB DESCRIPTION Painter

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Essex, Franklin, Fulton, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

07/01/2024

Painter\Wallcovers	\$ 32.03**
Drywall Finishers	32.03**
Spray Rate	32.03**
Structural Steel*	33.03**
Lead Abatement	33.03**
Lead Abatement on	
Structural Steel	34.03**

(*)Employees working on objects with the use of swing stage, boatswain chair, pick and cables only will be paid at Structural Steel rate.

(**) Plus Additional \$1.25 per hour not subject to Overtime/Premiums

Bridge Painter

See Bridge Painter rates for the following work:

All Bridges and Tanks

SHIFT WORK

THE FOLLOWING ADDITIONAL HOURLY RATE WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFT(S) OR SINGULAR IRREGULAR SHIFT WHEN THE SHIFT STARTS BETWEEN THE HOURS LISTED BELOW:

2:30 PM to 6:00 AM	PLUS \$1.00 to the applicable rate, and this is not subject to overtime
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SUPPLEMENTAL BENEFITS

Per hour

Journeyworker	\$ 20.51
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OVERTIME PAY

See (B, E2, H) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE
Note: If the holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

Wages per hour

1000 hour terms at the following percentage of Journeyworker's base wage

Apprentice rate is calculated on the rate before the \$1.25 is added, then add the \$1.25

1st	2nd	3rd	4th	5th	6th
\$15	50%	60%	70%	80%	90%

Supplemental Benefits per hour

All Terms \$ 20.51

1-201-P

Painter - Bridge & Structural Steel

02/01/2025

JOB DESCRIPTION Painter - Bridge & Structural Steel

DISTRICT 8

ENTIRE COUNTIES

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per Hour:

STEEL:

Bridge Painting: 07/01/2024
\$ 56.00
+ 10.35*

ADDITIONAL \$7.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker: \$ 12.43
+ 31.55*

* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (50 hour cap).

OVERTIME PAY

See (B, F, R) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4, 6) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wage - Per hour:

Apprentices: (1) year terms.

1st year	\$ 22.40 + 4.14
2nd year	\$ 33.60 + 6.21
3rd year	\$ 44.80 + 8.28
Supplemental Benefits - Per hour:	
1st year	\$ 1.16 + 12.62
2nd year	\$ 7.46 + 18.93
3rd year	\$ 9.94 + 25.24

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

Painter - Line Striping

02/01/2025

JOB DESCRIPTION Painter - Line Striping

DISTRICT 8

ENTIRE COUNTIES

Albany, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Nassau, Orange, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

WAGES

Per hour:

Painter (Striping-Highway):	07/01/2024	04/01/2025	04/01/2026
Striping-Machine Operator*	\$ 34.12	\$ 35.49	\$ 36.93
Linerman Thermoplastic	41.12	42.74	44.44

Note: * Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety.

SHIFT WORK

When directly specified in public agency or authority contract documents there shall be a 30% night shift premium pay differential for all work performed after 9:00pm and before 5:00am.

SUPPLEMENTAL BENEFITS

Per hour paid:

Journeyworker:

Striping Machine Operator:	\$23.65	\$ 24.30	\$ 24.95
Linerman Thermoplastic:	23.65	24.30	24.95

OVERTIME PAY

See (B, B2, E2, F, S) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 20) on HOLIDAY PAGE
Overtime: See (5, 20) on HOLIDAY PAGE

REGISTERED APPRENTICES

One (1) year terms at the following wage rates:

	07/01/2024	01/01/2025	04/01/2025	04/01/2026
1st Term:	\$ 16.00	\$ 16.50	\$ 16.50	\$ 16.50
2nd Term:	20.47	20.47	21.29	22.16
3rd Term:	27.30	27.30	28.39	29.54

Supplemental Benefits per hour:

All terms:	\$ 23.65	\$ 23.65	\$ 24.30	\$ 24.95
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Painter - Metal Polisher

02/01/2025

JOB DESCRIPTION Painter - Metal Polisher

DISTRICT 8

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

	07/01/2024
Metal Polisher	\$ 39.33
Metal Polisher*	40.43
Metal Polisher**	43.33

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2024

Journeyworker:

All classification \$ 12.79

OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2024
1st year	\$ 19.67
2nd year	21.63
3rd year	23.60
1st year*	\$ 22.06
2nd year*	22.07
3rd year*	24.14
1st year**	\$ 22.17
2nd year**	24.13
3rd year**	26.10

*Note: Applies on New Construction & complete renovation

** Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:

Per hour:

1st year	\$ 8.69
2nd year	8.69
3rd year	8.69

8-8A/28A-MP

Plumber

02/01/2025

JOB DESCRIPTION Plumber

DISTRICT 1

ENTIRE COUNTIES

Clinton, Warren, Washington

PARTIAL COUNTIES

Saratoga: Entire county except the Townships of Stillwater, Halfmoon, Galway, Milton, Charlton, Clifton Park and City of Mechanicville.

WAGES

Per hour

07/01/2024

Plumber &
Steamfitter

\$ 43.28

SUPPLEMENTAL BENEFITS

Per hour

Journeyworker

\$ 22.20
+11.20*

* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime and applicable to paid Holidays

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (22) on HOLIDAY PAGE

Overtime: See (5, 6, 23) on HOLIDAY PAGE

Note: For the paid Christmas Holiday the employee must have worked 20 regular working days in the calendar year with contractor to qualify

Note: Whenever a Holiday falls on a Saturday, the preceding day, Friday, shall be observed as the Holiday. If a Holiday falls on a Sunday, the following day, Monday shall be observed as the Holiday.

REGISTERED APPRENTICES

Wages per hour

One year terms at the following percentage of Journeyman's wage

1st yr	50%
2nd yr	60%
3rd yr	70%
4th yr	80%
5th yr	90%

Supplemental Benefits per hour worked

1st yr	\$ 19.03 + 5.60*
2nd yr	19.66 + 6.72*
3rd yr	20.30 + 7.84*
4th yr	20.93 + 8.96*
5th yr	21.57 + 10.08*

* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.

* This portion per hour paid.

1-773-SF

Roofer

02/01/2025

JOB DESCRIPTION Roofer

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Warren, Washington

WAGES

Per hour

07/01/2024

07/01/2025

Additional

Roofer/Waterproofer	\$ 37.05	\$ 1.75*
Asphalt Cold Process	37.55	
Fluid Applied Roof	37.55	
Pitch & Asbestos	39.05	

(*) To be allocated at a later date

SHIFT WORK

Shift Work:

On government mandated shift work starting after 12:00pm and before 4:00am workers shall be paid \$4.00 additional per hour

SUPPLEMENTAL BENEFITS

Per hour

Journeyworker \$ 23.52

OVERTIME PAY

See (B, E, J) on OVERTIME PAGE.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: When any Holiday falls on Saturday, the Friday before such Holiday shall be recognized as the legal Holiday. When a Holiday falls on Sunday, it shall be observed the following Monday.

REGISTERED APPRENTICES

Wages per hour

Apprentice terms at the following per cent of the Roofer/Waterproofer rate. For Pitch & Asbestos work, an additional \$2.00 must be paid in wages. For Asphalt Cold Process work and Fluid Applied Roof coating, an additional \$0.50 must be paid in the wages.

1st Term 58% + \$ 3.00
1500 hrs.

2nd Term 74% + \$ 3.00
1 yr. and 1500 hrs. as 1st term.

3rd Term 90%
1 yr. and 1500 hrs. as 2nd term.

3rd Term complete at 1 yr and 1050 hrs. as 3rd term

Supplemental Benefits per hour worked

1st Term \$ 18.94
2nd Term 19.37
3rd Term 22.85

1-241

Sheetmetal Worker

02/01/2025

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 1

ENTIRE COUNTIES

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

WAGES

Per hour

07/01/2024

Sheetmetal Worker \$ 40.52

All work requiring HAZWOPER Training additional \$1.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour

Journeyworker \$ 37.27

OVERTIME PAY

See (B,E,E5,Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When any holiday falls on Saturday, the Friday before such holiday shall be recognized as the legal holiday. Any holiday falling on Sunday, the following Monday shall be recognized as the legal holiday.

REGISTERED APPRENTICES

Wages per hour

6 Month Terms at the following rate:

1st term \$ 22.71
2nd term 24.57
3rd term 25.49
4th term 26.42

5th term	25.12
6th term	26.34
7th term	28.36
8th term	30.39
9th term	32.42
10th term	34.44
Supplemental Benefits per hour	
1st term	\$ 23.21
2nd term	23.82
3rd term	24.13
4th term	24.58
5th term	31.59
6th term	32.04
7th term	32.79
8th term	33.56
9th term	34.32
10th term	35.07

1-83

Sprinkler Fitter

02/01/2025

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 20.03	\$ 22.26	\$ 24.24	\$ 26.46	\$ 28.69	\$ 30.91	\$ 33.14	\$ 35.37	\$ 37.59	\$ 39.82
Supplemental Benefits per hour									
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 9.18	\$ 9.18	\$ 20.90	\$ 20.90	\$ 21.15	\$ 21.15	\$ 21.15	\$ 21.15	\$ 21.15	\$ 21.15

1-669

Teamster - Building

02/01/2025

JOB DESCRIPTION Teamster - Building	DISTRICT 1
ENTIRE COUNTIES	
Albany, Columbia, Fulton, Greene, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Washington	
PARTIAL COUNTIES	

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Lake George, Lake Luzerne and Queensbury.

WAGES

GROUP # A:

Straight trucks, winch, transit mix on the site, road oilers, dump trucks, pick-ups, panel, water trucks, fuel trucks on the site (including nozzle).

GROUP # B:

Low boy or Low boy trailer, Euclids or similar equipment.

WAGES per hour

	07/01/2024	07/01/2025
Group A	\$ 32.13	\$ 33.65
Group B	32.43	33.95

SUPPLEMENTAL BENEFITS

Per hour	07/01/2024	07/01/2025
Journeyworker	\$ 29.58	\$ 30.56

OVERTIME PAY

See (B, E, E2, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

1-294

Teamster - Heavy&Highway

02/01/2025

JOB DESCRIPTION Teamster - Heavy&Highway

DISTRICT 1

ENTIRE COUNTIES

Albany, Columbia, Fulton, Greene, Hamilton, Herkimer, Montgomery, Oneida, Rensselaer, Saratoga, Schenectady, Schoharie, Washington

PARTIAL COUNTIES

Chenango: Entire county except the Townships of Afton, Bainbridge, Coventry, Greene, Guilford, Oxford and Smithville.

Lewis: Only the Township of Grieg, Lewis, Leyden, Lowville, Lyonsdale, Martinsburg, Turin, West Turin and Watson.

Madison: Only the Townships of Brookfield, Eaton, Hamilton, Lebanon, Lincoln, Madison, Smithfield, Stockbridge and the City of Oneida

Otsego: Entire county EXCEPT Townships of Butternuts, Laurens, Maryland, Milford, Morris, Oneonta, Otsego, Unidilla and Worchester.

Warren: Only the Townships of Bolton, Warrensburg, Thurman, Stony Creek, Luzerne, Caldwell (Lake George), and Queensbury.

WAGES

GROUP #1:

Warehousemen, Yardmen, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks(straight jobs), Single Axel Dump Trucks, Dumpsters, Material Checkers and Receivers, Greasers, Truck Tiremen, Mechanics Helpers and Parts Chasers.

GROUP #2:

Tandems and Batch Trucks, Mechanics, Dispatcher.

GROUP #3:

Semi-Trailers, Low-boy Trucks, Asphalt Distributor Trucks, and Agitator, Mixer Trucks and dumpcrete type vehicles, Truck Mechanic, Fuel Trucks.

GROUP #4:

Specialized Earth Moving Equipment, Euclid type, or similar off-highway, where not self-loading, Straddle (Ross) Carrier, and self-contained concrete mobile truck.

GROUP #5:

Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

WAGES per hour 07/01/2024

Group #1	\$ 39.75
Group #2	39.81
Group #3	39.90
Group #4	40.03
Group #5	40.19

Hazardous waste projects that require a Level C or greater protection shall be paid an additional \$ 1.00 per hour.

SHIFT WORK

All employees who work a single irregular work shift starting between 5pm and 1 am on governmental mandated night shifts shall be paid an additional \$1.50 per hour.

SUPPLEMENTAL BENEFITS

Per hour:

\$ 28.97
+\$1.00 per*
hour worked

(*) not applicable to paid holidays

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE
Overtime: See (5, 6) on HOLIDAY PAGE

1-294h/h

Welder

02/01/2025

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES
Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2024

Welder: To be paid the same rate of the mechanic performing the work.*

*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

OVERTIME PAY

HOLIDAY

1-As Per Trade

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- (AA) Time and one half of the hourly rate after 7 and one half hours per day
- (A) Time and one half of the hourly rate after 7 hours per day
- (B) Time and one half of the hourly rate after 8 hours per day
- (B1) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.
Double the hourly rate for all additional hours
- (B2) Time and one half of the hourly rate after 40 hours per week
- (B3) Time and one half of the hourly rate after 40 straight hours per week
- (C) Double the hourly rate after 7 hours per day
- (C1) Double the hourly rate after 7 and one half hours per day
- (D) Double the hourly rate after 8 hours per day
- (D1) Double the hourly rate after 9 hours per day
- (E) Time and one half of the hourly rate on Saturday
- (E1) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- (E2) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E3) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- (E4) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- (E5) Double time after 8 hours on Saturdays
- (F) Time and one half of the hourly rate on Saturday and Sunday
- (G) Time and one half of the hourly rate on Saturday and Holidays
- (H) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- (I) Time and one half of the hourly rate on Sunday
- (J) Time and one half of the hourly rate on Sunday and Holidays
- (K) Time and one half of the hourly rate on Holidays
- (L) Double the hourly rate on Saturday
- (M) Double the hourly rate on Saturday and Sunday
- (N) Double the hourly rate on Saturday and Holidays
- (O) Double the hourly rate on Saturday, Sunday, and Holidays
- (P) Double the hourly rate on Sunday
- (Q) Double the hourly rate on Sunday and Holidays
- (R) Double the hourly rate on Holidays

- (S) Two and one half times the hourly rate for Holidays
- (S1) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
- (T) Triple the hourly rate for Holidays
- (U) Four times the hourly rate for Holidays
- (V) Including benefits at SAME PREMIUM as shown for overtime
- (W) Time and one half for benefits on all overtime hours.
- (X) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)

Holiday Codes

PAID Holidays:

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- | | |
|--------|---|
| (1) | None |
| (2) | Labor Day |
| (3) | Memorial Day and Labor Day |
| (4) | Memorial Day and July 4th |
| (5) | Memorial Day, July 4th, and Labor Day |
| (6) | New Year's, Thanksgiving, and Christmas |
| (7) | Lincoln's Birthday, Washington's Birthday, and Veterans Day |
| (8) | Good Friday |
| (9) | Lincoln's Birthday |
| (10) | Washington's Birthday |
| (11) | Columbus Day |
| (12) | Election Day |
| (13) | Presidential Election Day |
| (14) | 1/2 Day on Presidential Election Day |
| (15) | Veterans Day |
| (16) | Day after Thanksgiving |
| (17) | July 4th |
| (18) | 1/2 Day before Christmas |
| (19) | 1/2 Day before New Years |
| (20) | Thanksgiving |
| (21) | New Year's Day |
| (22) | Christmas |
| (23) | Day before Christmas |
| (24) | Day before New Year's |
| (25) | Presidents' Day |
| (26) | Martin Luther King, Jr. Day |
| (27) | Memorial Day |
| (28) | Easter Sunday |

(29) Juneteenth

New York State Department of Labor - Bureau of Public Work
State Office Building Campus
Building 12 - Room 130
Albany, New York 12226

REQUEST FOR WAGE AND SUPPLEMENT INFORMATION

As Required by Articles 8 and 9 of the NYS Labor Law

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

This Form Must Be Typed

Submitted By:

(Check Only One) ☐ Contracting Agency ☐ Architect or Engineering Firm ☐ Public Work District Office Date:

A. Public Work Contract to be let by: (Enter Data Pertaining to Contracting/Public Agency)

1. Name and complete address ☐ (Check if new or change)

Telephone

Fax

E-Mail:

2. NY State Units (see Item 5).

☐ 01 DOT

☐ 02 OGS

☐ 03 Dormitory Authority

☐ 04 State University
Construction Fund

☐ 05 Mental Hygiene
Facilities Corp.

☐ 06 OTHER N.Y. STATE UNIT

☐ 07 City

☐ 08 Local School District

☐ 09 Special Local District, i.e.,
Fire, Sewer, Water District

☐ 10 Village

☐ 11 Town

☐ 12 County

☐ 13 Other Non-N.Y. State
(Describe)

3. SEND REPLY TO ☐ (check if new or change)
Name and complete address:

Telephone

Fax

E-Mail:

4. SERVICE REQUIRED. Check appropriate box and provide project information.

☐ New Schedule of Wages and Supplements.

APPROXIMATE BID DATE :

☐ Additional Occupation and/or Redetermination

PRC NUMBER ISSUED PREVIOUSLY FOR
THIS PROJECT :

OFFICE USE ONLY

B. PROJECT PARTICULARS

5. Project Title _____

Description of Work _____

Contract Identification Number _____

Note: For NYS units, the OSC Contract No. _____

6. Location of Project:

Location on Site _____

Route No/Street Address _____

Village or City _____

Town _____

County _____

7. Nature of Project - Check One:

- ☐ 1. New Building
☐ 2. Addition to Existing Structure
☐ 3. Heavy and Highway Construction (New and Repair)
☐ 4. New Sewer or Waterline
☐ 5. Other New Construction (Explain)
☐ 6. Other Reconstruction, Maintenance, Repair or Alteration
☐ 7. Demolition
☐ 8. Building Service Contract

8. OCCUPATION FOR PROJECT :

- ☐ Construction (Building, Heavy
Highway/Sewer/Water)
☐ Tunnel
☐ Residential
☐ Landscape Maintenance
☐ Elevator maintenance
☐ Exterminators, Fumigators
☐ Fire Safety Director, NYC Only

- ☐ Fuel Delivery
☐ Guards, Watchmen
☐ Janitors, Porters, Cleaners,
Elevator Operators
☐ Moving furniture and
equipment
☐ Trash and refuse removal
☐ Window cleaners
☐ Other (Describe)

9. Does this project comply with the Wicks Law involving separate bidding? YES ☐ NO ☐

10. Name and Title of Requester

Signature



NEW YORK STATE DEPARTMENT OF LABOR
Bureau of Public Work - Debarment List

**LIST OF EMPLOYERS INELIGIBLE TO BID ON OR BE
AWARDED ANY PUBLIC WORK CONTRACT**

Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements;
- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements.

The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = New York State Department of Labor; NYC = New York City Comptroller's Office; AG = New York State Attorney General's Office; DA = County District Attorney's Office.

Debarment Database: To search for contractors, sub-contractors and/or their successors debarred from bidding or being awarded any public work contract or subcontract under NYS Labor Law Articles 8 and 9, or under NYS Workers' Compensation Law Section 141-b, access the database at this link: <https://apps.labor.ny.gov/EDList/searchPage.do>

For inquiries please call 518-457-5589.

NYSDOL Bureau of Public Work Debarment List 01/31/2025

Article 8

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	DOL	*****5754	0369 CONTRACTORS, LLC		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL	*****5784	A.J.M. TRUCKING, INC.		PO BOX 2064 MONROE NY 10950	02/12/2024	02/12/2029
DOL	DOL		AKHLAQ OULAKH		4307 28TH AVE ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	NYC		ALL COUNTY SEWER & DRAIN, INC.		7 GREENFIELD DR WARWICK NY 10990	03/25/2022	03/25/2027
DOL	DOL	*****8387	AMERICAN PAVING & MASONRY, CORP.		8 FOREST AVE GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	DOL	*****8654	AMERICAN PAVING, INC.		8 FORREST AVE. GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	NYC		AMJED PARVEZ		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		ANGELO GARCIA		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL		ANGELO STANCO		8 FOREST AVE. GLEN COVE NY 11542	05/24/2024	05/24/2029
DOL	DOL		ANGELO TONDO		449 WEST MOMBSHA ROAD MONROE NY 10950	06/06/2022	06/06/2027
DOL	DOL	*****4231	ANKER'S ELECTRIC SERVICE, INC.		10 SOUTH 5TH ST LOCUST VALLEY NY 11560	09/26/2022	09/26/2027
DOL	DOL		ANTHONY MONGELLI		PO BOX 2064 MONROE NY 10950	02/12/2024	02/12/2029
DOL	NYC		ARADCO CONSTRUCTION CORP		115-46 132RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	DOL		ARNOLD A. PAOLINI		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	NYC		AVM CONSTRUCTION CORP		117-72 123RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	NYC		AZIDABEGUM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****8421	B & B DRYWALL, INC		206 WARREN AVE APT 1WHITE PLAINS NY 10603	12/14/2021	12/14/2026
DOL	DOL		B&L RENOVATION CO.		618 OCEAN PARKWAY APT A6BROOKLYN NY 11230	09/17/2020	09/17/2025
DOL	NYC	*****2113	BHW CONTRACTING, INC.		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL	*****5078	BLACK RIVER TREE REMOVAL, LLC		29807 ANDREWS ROAD BLACK RIVER NY 13032	10/17/2023	10/17/2028
DOL	DOL		BRADLEY J SCHUKA		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****4083	C.P.D. ENTERPRISES, INC		P.O BOX 281 WALDEN NY 12586	03/03/2020	03/03/2025
DOL	DOL	*****5161	CALADRI DEVELOPMENT CORP.		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	*****3391	CALI ENTERPRISES, INC.		1223 PARK STREET PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	*****4155	CASA BUILDERS, INC.	FRIEDLANDER CONSTRUCTI ON	64 N PUTT CONNERS ROAD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	AG	*****7247	CENTURY CONCRETE CORP		2375 RAYNOR ST RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****0026	CHANTICLEER CONSTRUCTION LLC		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	NYC	*****2117	CHARAN ELECTRICAL ENTERPRISES		9-11 40TH AVENUE LONG ISLAND CITY NY 11101	09/26/2023	09/26/2028
DOL	NYC		CHARLES ZAHRAKKA		863 WASHINGTON STREET FRANKLIN SQUARE NY 11010	03/10/2020	03/10/2025
DOL	DOL		CHRISTOPHER GRECO		26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL	*****2281	CORRAO TRUCKING, INC.		PO BOX 393 NANUET NY 10954	09/17/2024	09/17/2029
DOL	DOL		CRAIG JOHANSEN		10 SOUTH 5TH ST LOCUST VALLEY NY 11560	09/26/2022	09/26/2027

NYSDOL Bureau of Public Work Debarment List 01/31/2025

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DOL	DOL	*****3228	CROSS-COUNTY LANDSCAPING AND TREE SERVICE, INC.	ROCKLAND TREE SERVICE	26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL	*****7619	DANCO CONSTRUCTION UNLIMITED INC.		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL		DANIEL ROBERT MCNALLY		7 GREENFIELD DRIVE WARWICK NY 10990	03/25/2022	03/25/2027
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		DARWIN PEGUESE		6400 BALTIMORE NATIONAL SUITE 602CANTONSVILLE NY 21228	10/24/2024	10/24/2029
DOL	DOL		DAVID FRIEDLANDER		64 NORTH PUTT CORNERS RD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	DOL		DINA TAYLOR		64 N PUTT CONNERS RD NEW PALTZ NY 12561	05/10/2023	05/10/2028
DOL	DOL	*****5175	EAGLE MECHANICAL AND GENERAL CONSTRUCTION LLC		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	AG		EDWIN HUTZLER		23 NORTH HOWELLS RD BELLPORT NY 11713	08/04/2021	08/04/2026
DOL	DA		EDWIN HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	DOL		EMIL KISZKO		84 DIAMOND ST BROOKLYN NY 11222	07/18/2024	07/18/2029
DOL	DOL	*****3298	EMJACK CONSTRUCTION CORP.		84 DIAMOND ST BROOKLYN NY 11222	07/18/2024	07/18/2029
DOL	DOL	*****3298	EMJACK CONSTRUCTION LLC		4192 SIR ANDREW CIRCLE DOYLESTOWN PA 18902	07/18/2024	07/18/2029
DOL	DOL		EUGENIUSZ "GINO" KUCHAR		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	DA		FREDERICK HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	*****2998	G.E.M. AMERICAN CONSTRUCTION CORP.		195 KINGSLAND AVE BROOKLYN NY 11222	12/22/2023	12/22/2028
DOL	NYC		GAYATRI MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	DA		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DA		GIOVANNA TRAVALJA		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DA		GIOVANNI NAPOLITANO		2501 BAYVIEW AVENUE WANTAGH NY 11793	02/21/2024	02/21/2029
DOL	DA	*****0213	GORILLA CONTRACTING GROUP, LLC		505 MANHATTAN AVE WEST BABYLON NY 11704	10/05/2023	10/05/2028
DOL	DA	*****4760	GTX CONSTRUCTION ASSOCIATES, CORP		2501 BAYVIEW AVE WANTAGH NY 11793	02/21/2024	02/21/2029
DOL	DOL		HANS RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL		HERBERT CLEMEN		42 FOWLER AVENUE CORTLAND MANOR NY 10567	01/24/2023	01/24/2028
DOL	DOL		HERBERT CLEMEN		42 FOWLER AVENUE CORTLAND MANOR NY 10567	10/25/2022	10/25/2027
DOL	DOL	*****2397	ISLAND BREEZE MARINE, INC.		6400 BALTIMORE NATIONAL CANTONSVILLE MD 21228	10/24/2024	10/24/2029
DOL	DOL	*****9211	J. WASE CONSTRUCTION CORP.		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		J.M.J CONSTRUCTION		151 OSTRANDER AVENUE SYRACUSE NY 13205	11/21/2022	11/21/2027
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		J.R. NELSON CONSTRUCTION		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R. NELSON, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	12/12/2022	12/12/2027

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DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		J.R.N COMPANIES, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL	*****1147	J.R.N. CONSTRUCTION, LLC		531 THIRD ST ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		JAMES J. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL		JASON P. RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL	*****7993	JBS DIRT, INC.		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL	*****2435	JEFFEL D. JOHNSON	JMJ7 AND SON	5553 CAIRNSTRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JEFFEL JOHNSON ELITE CARPENTER REMODEL AND CONSTRUCTION		C2 EVERGREEN CIRCLE LIVERPOOL NY 13090	11/21/2022	11/21/2027
DOL	DOL	*****2435	JEFFREY M. JOHNSON	JMJ7 AND SON	5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JIM PLAUGHER		17613 SANTE FE LINE ROAD WAYNEFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL		JMJ7 & SON CONSTRUCTION, LLC		5553 CAIRNS TRAIL LIVERPOOL NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 AND SONS CONTRACTORS		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS		7014 13TH AVENUE BROOKLYN NY 11228	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS AND SONS		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JMJ7 CONTRACTORS, LLC		5553 CAIRNS TRAIL CLAY NY 13041	11/21/2022	11/21/2027
DOL	DOL		JOHN MARKOVIC		47 MANDON TERRACE HAWTHORN NJ 07506	03/29/2021	03/29/2026
DOL	DOL		JOHN WASE		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		JORGE RAMOS		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	DOL		JOSEPH K. SALERNO		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL		JOSEPH K. SALERNO II		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL	*****5116	JP RACE PAINTING, INC. T/A RACE PAINTING		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		JRN CONSTRUCTION CO, LLC		1024 BROADWAY ALBANY NY 12204	11/07/2023	11/07/2028
DOL	DOL	*****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL	*****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL	*****1147	JRN CONSTRUCTION, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		JRN PAVING, LLC		531 THIRD STREET ALBANY NY 12206	11/07/2023	11/07/2028

NYSDOL Bureau of Public Work Debarment List 01/31/2025

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DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL		KARIN MANGIN		796 PHELPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	DOL		KATE E. CONNOR		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KEAN INDUSTRIES, LLC		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL	*****2959	KELC DEVELOPMENT, INC		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KIMBERLY F. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL		KMA GROUP II, INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL	*****1833	KMA GROUP INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL		KMA INSULATION, INC.		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028
DOL	DOL		KRIN HEINEMANN		2345 ROUTE 52, SUITE 2N HOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	NYC		KULWANT S. DEOL		9-11 40TH AVENUE LONG ISLAND CITY NY 11101	09/26/2023	09/26/2028
DOL	DA	*****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	10/25/2022	10/25/2027
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	12/22/2022	12/22/2027
DOL	DOL		LEROY E. NELSON JR		531 THIRD ST ALBANY NY 12206	11/07/2023	11/07/2028
DOL	AG	*****3291	LINTECH ELECTRIC, INC.		3006 TILDEN AVE BROOKLYN NY 11226	02/16/2022	02/16/2027
DOL	DOL		LOUIS A. CALICCHIA		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	*****2196	MAINSTREAM SPECIALTIES, INC.		11 OLD TOWN RD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DA		MANUEL P TOBIO		150 KINGS STREET BROOKLYN NY 14444	08/19/1998	08/19/2998
DOL	DA		MANUEL TOBIO		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		MAQSOOD AHMAD		618 OCEAN PKWY BROOKLYN NY 11230	09/17/2020	09/17/2025
DOL	NYC		MARIA NUBILE		84-22 GRAND AVENUE ELMHURST NY 11373	03/10/2020	03/10/2025
DOL	DOL	*****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	10/25/2022	10/25/2027
DOL	DOL	*****1320	MJC MASON CONTRACTING, INC.		42 FOWLER AVENUE CORTLAND MANOR NY 10567	01/24/2023	01/24/2028
DOL	NYC		MUHAMMED A. HASHEM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	NYC		NAMOW, INC.		84-22 GRAND AVENUE ELMHURST NY 11373	03/10/2020	03/10/2025
DOL	DOL	*****7790	NATIONAL BUILDING & RESTORATION CORP		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	DOL	*****1797	NATIONAL CONSTRUCTION SERVICES, INC		1010 TILDEN AVE UTICA NY 13501	07/24/2023	07/24/2028
DOL	NYC		NAVIT SINGH		402 JERICO TURNPIKE NEW HYDE PARK NY 11040	08/10/2022	08/10/2027
DOL	DOL		NELCO CONTRACTING, LLC		1024 BROADWAY ALBANY NY 12204	11/07/2023	11/07/2028
DOL	DA		NICHOLAS T. ANALITIS		505 MANHATTAN AVE WEST BABYLON NY 11704	10/05/2023	10/05/2028
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	03/01/2022	03/01/2027
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	11/15/2022	11/15/2027
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	09/29/2021	09/29/2026
DOL	DOL		NICHOLE E. FRASER A/K/A NICHOLE RACE		3469 STATE RT. 69 PERISH NY 13131	02/09/2022	02/09/2027

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DOL	DOL	*****7429	NICOLAE I. BARBIR	BESTUCCO CONSTRUCTION, INC.	444 SCHANTZ ROAD ALLENTOWN PA 18104	09/17/2020	09/17/2025
DOL	NYC	*****5643	NYC LINE CONTRACTORS, INC.		402 JERICHO TURNPIKE NEW HYDE PARK NY 11040	08/10/2022	08/10/2027
DOL	DOL		PATRICK PENNACCHIO		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL		PATRICK PENNACCHIO		2345 RT. 52 SUITE 2NHOPEWELL JUNCTION NY 12533	12/18/2023	12/18/2028
DOL	DOL		PAULINE CHAHALES		935 S LAKE BLVD MAHOPAC NY 10541	03/02/2021	03/02/2026
DOL	DOL		PETER STEVENS		11 OLD TOWN ROAD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DOL		PETER STEVENS		8269 21ST ST BELLEROSSE NY 11426	12/22/2022	12/22/2027
DOL	DOL	*****4168	PHANTOM CONSTRUCTION CORP.		95-27 116TH STREET QUEENS NY 11419	07/12/2024	07/12/2029
DOL	DOL	*****4168	PHANTOM CONSTRUCTION CORP.		95-27 116TH STREET QUEENS NY 11419	05/28/2024	05/28/2029
DOL	DOL	*****0466	PRECISION BUILT FENCES, INC.		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	NYC		RASHEL CONSTRUCTION CORP		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****1068	RATH MECHANICAL CONTRACTORS, INC.		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL	*****2633	RAW POWER ELECTRIC CORP.		3 PARK CIRCLE MIDDLETOWN NY 10940	07/11/2022	07/11/2027
DOL	DA	*****7559	REGAL CONTRACTING INC.		24 WOODBINE AVE NORTHPORT NY 11768	10/01/2020	10/01/2025
DOL	DOL		RICHARD REGGIO		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	DOL		ROBBYE BISSEAR		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL		ROMEO WARREN		161 ROBYN RD MONROE NY 10950	07/11/2022	07/11/2027
DOL	DOL	*****7172	RZ & AL INC.		198 RIDGE AVENUE VALLEY STREAM NY 11581	06/06/2022	06/06/2027
DOL	DOL		SAL FRESINA MASONRY CONTRACTORS, INC.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL		SAL MASONRY CONTRACTORS, INC.		(SEE COMMENTS) SYRACUSE NY 13202	07/16/2021	07/16/2026
DOL	DOL	*****9874	SALFREE ENTERPRISES INC		P.O BOX 14 2821 GARDNER RD POMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		SALVATORE A FRESINA A/K/A SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026
DOL	DOL		SAM FRESINA		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13218	07/16/2021	07/16/2026
DOL	DA	*****0476	SAMCO ELECTRIC CORP.		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	NYC	*****1130	SCANA CONSTRUCTION CORP.		863 WASHINGTON STREET FRANKLIN SQUARE NY 11010	03/10/2020	03/10/2025
DOL	DOL	*****2045	SCOTT DUFFIE	DUFFIE'S ELECTRIC, INC.	P.O BOX 111 CORNWALL NY 12518	03/03/2020	03/03/2025
DOL	DOL		SCOTT DUFFIE		P.O BOX 111 CORNWALL NY 12518	03/03/2020	03/03/2025
DOL	DA		SILVANO TRAVALJA		3735 9TH ST LONG ISLAND CITY NY 11101	01/05/2023	01/05/2028
DOL	DOL	*****0440	SOLAR GUYS INC.		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	NYC		SOMATIE RAMSUNAHAI		115-46 132ND ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	DOL	*****2221	SOUTH BUFFALO ELECTRIC, INC.		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	NYC	*****3661	SPANIER BUILDING MAINTENANCE CORP		200 OAK DRIVE SYOSSET NY 11791	03/14/2022	03/14/2027
DOL	DOL		STANADOS KALOGELAS		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL	*****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003

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DOL	DOL	****9528	STEEL-IT, LLC.		17613 SANTE FE LINE ROAD WAYNESFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL	****3800	SUBURBAN RESTORATION CO. INC.		5-10 BANTA PLACE FAIR LAWN PLACE NJ 07410	03/29/2021	03/29/2026
DOL	DOL	****9150	SURGE INC.		8269 21ST STREET BELLEROSE NY 11426	12/22/2022	12/22/2027
DOL	DOL		SYED MUHAMMAD S. JAFRI A/K/A SHARRUKH JAFRI		4307 28TH AVE ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		SYED RAZA		198 RIDGE AVENUE NY 11581	06/06/2022	06/06/2027
DOL	DOL		TARLOK SINGH		95-27 116TH STREET QUEENS NY 11419	05/28/2024	05/28/2029
DOL	DOL		TARLOK SINGH		95-27 116TH STREET QUEENS NY 11419	07/12/2024	07/12/2029
DOL	DOL		TERRY THOMPSON		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	DOL	****9733	TERSAL CONSTRUCTION SERVICES INC		107 FACTORY AVE P.O BOX 11070SYRACUSE NY 13208	07/16/2021	07/16/2026
DOL	DOL		TERSAL CONTRACTORS, INC.		221 GARDNER RD P.O BOX 14POMPEI NY 13138	07/16/2021	07/16/2026
DOL	DOL		TERSAL DEVELOPMENT CORP.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL	****5766	THE COKER CORPORATION	COKER CORPORATIO N	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	****2426	THE MATRUKH GROUP, INC.		4307 28TH AVE PO BOX 9082ASTORIA NY 11103	10/11/2024	10/11/2029
DOL	DOL		TIMOTHY PERCY		29807 ANDREWS ROAD BLACK RIVER NY 13612	10/17/2023	10/17/2028
DOL	DA	****1050	TRI STATE CONSTRUCTION OF NY CORP.		50-39 175TH PLACE FRESH MEADOWS NY 11365	03/28/2022	03/28/2027
DOL	DA	****4106	TRIPLE H CONCRETE CORP		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	****8210	UPSTATE CONCRETE & MASONRY CONTRACTING CO INC		449 WEST MOMBSHA ROAD MONROE NY 10950	06/06/2022	06/06/2027
DOL	DOL	****6418	VALHALLA CONSTRUCTION, LLC.		796 PHLEPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	NYC	****2426	VICKRAM MANGRU	VICK CONSTRUCTI ON	21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	NYC		VICKRAM MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	DOL		VIKTORIA RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL		VINCENT CORRAO		PO BOX 393 NANUET NY 10954	09/17/2024	09/17/2029
DOL	DOL	****8266	WILLIAM CHRIS MCCLENDON	MCCLENDON ASPHALT PAVING	1646 FALLS STREET NIAGARA FALLS NY 14303	05/01/2023	05/01/2028
DOL	DOL		WILLIAM CHRIS MCCLENDON		1646 FALLS STREET NIAGARA FALLS NY 14303	05/01/2023	05/01/2028
DOL	DOL		WILLIAM G. PROERFRIEDT		85 SPRUCEWOOD ROAD WEST BABYLON NY 11704	01/19/2021	01/19/2026
DOL	DOL	****5924	WILLIAM G. PROPHY, LLC	WGP CONTRACTIN G, INC.	54 PENTAQUIT AVE BAYSHORE NY 11706	01/19/2021	01/19/2026
DOL	DOL		WILLIAM SCRIVENS		4192 SIR ANDREW CIRCLE DOYELSTOWN PA 18902	07/18/2024	07/18/2029
DOL	DOL		XENOFON EFTHIMIADIS		29-10 38TH AVENUE LONG ISLAND CITY NY 11101	10/11/2023	10/11/2028