



Department of
Environmental
Conservation

Division of Environmental Remediation

**Site Name: C&D Power Systems Tributary D-1-7
and Lagoon Remediation**

Site Number: 336001

Contract Number: D012095

**Location: Town of Deerpark, Orange County,
New York**

Contract Documents

AECOM USA, Inc.



May 2023

New York State Department of Environmental Conservation
The Honorable Kathy Hochul, *Governor* BASIL SEGGOS, *Commissioner*

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SECTION I

Advertisement and Notice to Bidders

New York State Department of Environmental Conservation Division of Environmental Remediation

Project Name: C&D Power Systems Tributary D-1-7 and Lagoon Remediation, Site No.
336001

Sealed bids for the C&D Power Systems Tributary D-1-7 and Lagoon Remediation project will be received by the New York State Department of Environmental Conservation (NYSDEC), Division of Management and Budget Services, Bureau of Expenditures [625 Broadway, 10th Floor, Albany, New York, 12233-5027], until the time of 01:00 PM, Eastern Standard Time, on the date of June 20, 2023. The bids will be opened and read aloud at the above time and date. Telegraphic or other electronically transferred bids will not be accepted.

The project involves the implementation of remedial activities at the C&D Power Systems site, located at Town of Deerpark, Orange County, New York. The remedial activities include but are not necessarily limited to; excavation, stabilization, and off-site disposal of PCB and lead impacted lagoon soils; in-situ solidification of subsurface lagoon soils; excavation and stabilization of shallow surface soils and tributary sediments; placement of treated soils and sediment within the lagoon; installation of a paved cover system; restoration of upland and tributary work areas. Site work will be regulated under USACE Federal and State Environmental Permits and a USEPA risk-based disposal approval.

The estimated range for this work is: \$10,000,000 - \$15,000,000

Contract Documents are available in electronic format at no charge. Electronic copies of non-biddable Contract Document drawings, specifications, proposal forms, addenda, and a separate Limited Site Data Document may be downloaded from the Department website <http://www.dec.ny.gov/chemical/59233.html>. Hard copies (fees apply) and/or FTP link to biddable Contract Documents are available upon request from the Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7017, Attn: Lisa Gorton at (518) 402-9574 or lisa.gorton@dec.ny.gov .

Proposals will be accepted only from bidders who attend the Pre-Bid Conference. All proposals must be made on the official proposal form(s) and enclosed in the envelope which will be provided by the Department at the Pre-Bid Conference. Each proposal must be accompanied by a deposit or a bid bond in the amount of five-percent (5%) of Proposers bid amount. All Bidders must attend the Pre-Bid Conference to receive special requirements and/or instruction for the Contract. The Pre-Bid Conference will be held on May 25, 2023 at the C&D Power Systems site, located at 403 US Route 209, Huguenot, starting at 11:00 AM, Eastern Standard Time.

Attendees are encouraged to review COVID-19 Center for Disease Control (CDC) guidelines prior to attendance; current guidelines can be accessed at <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>

ATTENDANCE IS MANDATORY AS A CONDITION OF BIDDING.

Minority-, Women-, and Service-Disabled Veteran-owned businesses are encouraged to submit bids in response to this solicitation. The New York State Department of Environmental Conservation is an Equal Opportunity/Affirmative Action Employer.

The Contractor shall adhere to the New York State Department of Environmental Conservation Guidelines Regarding Permissible Contacts During a Procurement and the Prohibition of Inappropriate Lobbying Influence. For the purpose of this Notice to Bidders, the Director of the Division of Environmental Remediation, Andrew Guglielmi, 12th Floor, 625 Broadway, Albany, New York, 12233-7011, shall be the Department's Designated Representative. Any questions, however, shall be directed to Lisa Gorton, the Department's Project Manager and Designated Contact, at (518) 402-9574 or lisa.gorton@dec.ny.gov .

Bidders may receive announcements of procurement opportunities by signing up for the NYSDEC – DER electronic mailing list (“listserv”) at – <https://public.govdelivery.com/accounts/NYSDEC/subscriber/new>

Basil Seggos,
Commissioner

SECTION II

Terms and Definitions

Wherever used in the Contract Documents, the following terms (or pronouns in place of terms) have the meanings indicated which are applicable to both the singular and plural forms thereof:

Addenda - Written or graphic instruments issued prior to the date for opening of Bids which interpret or modify the Contract Documents by way of changes, clarifications, corrections, or the provision of additional information.

Administrative Agreement - A written explanation of the Contract Documents, signed by Department, Engineer and Contractor on or after the Effective Date of the Agreement and dealing with procedural or administrative aspects of the Contract Documents which do not change the contract price.

Agreement - The written agreement between Department and Contractor covering the Work to be performed; other Contract Documents are attached to Section VI - Agreement and made a part thereof as provided therein.

Application for Payment – Billing invoice in the form required by Department on which Contractor must request progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

As-Built Documents - documents conforming to the requirements outlined in Section VIII - General Conditions, Article 5.19.

Bid - The written offer or proposal of the Bidder, submitted pursuant to Article 5 of Section III of the Bidding Documents on the form(s) provided.

Bidder - The person, partnership, corporation, joint venture or other authorized combination thereof, who has submitted a Bid. Bidder may also be referred to as “Offerer” or “Proposer” throughout the Bidding Documents and Contract Documents.

Bid Security - The security designated in the Bidding Documents to be furnished by the Bidder as guarantee that he/she will enter into a Contract with Department for the performance of the Work, if the Work involved in the Bid is awarded to that Bidder.

Bidding Documents - The Advertisement and Notice to Bidders, Bidding Information and Requirements, the Bid Forms and Attachments, and the proposed Contract Documents, including all Addenda issued prior to receipt of Bids.

Bonds - Instruments of security furnished by Contractor and its surety in accordance with the Contract Documents. This refers to the labor and material payment Bond,

performance Bond and those other instruments of security required by the Contract Documents.

Change Order - A document prepared and recommended by Engineer, which is reviewed by Department and has been signed by Contractor and Department and approved by Comptroller. It authorizes an addition, deletion or revision in the Work, or an adjustment in Contract Price or Contract Time, or any combination thereof, issued on or after the Effective Date of the Agreement.

Claim – Contractor's demand or assertion seeking as a matter of right, adjustment, interpretation, additional money, extension of time or other relief with respect to terms of the Contract.

Commissioner – The Commissioner of the New York State Department of Environmental Conservation.

Comptroller - The Comptroller of the Office of the New York State Comptroller.

Contract Documents - The Agreement, Addenda, Contractor's Bid, including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award, all bid forms and attachments required by Section V, the General Conditions, the Supplementary Conditions, the Standard Specifications, the Supplementary Specifications, Appendix A, Appendix B, Appendix C, Appendix D, Measurement for Payment, Advertisement, Terms and Definitions, Bidding Information and Requirements, Supplementary Bid Information and Requirements, and the Drawings, together with all amendments, modifications and supplements issued pursuant to paragraphs 2.4 and 2.5 of Article 2 of the General Conditions on or after the Effective Date of the Agreement.

Contract Price - The money payable by Department to Contractor under the Contract Documents.

Contract Time - The number of days permitted by the Agreement for completion of Work. This number may be stated, or, implied by a requirement that all work be completed by a certain date.

Contractor - The person, partnership, corporation, joint venture, or other allowable combination thereof, who has entered into the Contract with Department for the Work. The term "Contractor" means Contractor or its authorized representative.

Correction Period - The period of time within which the Contractor shall promptly, without cost to Department and in accordance with Department's written instructions, either correct Defective Work, or if it has been rejected by Department, remove it from the site and replace it with non-defective Work, pursuant to paragraph 12.12 of the General Conditions.

Cost and Pricing Data - Refers to all data available to and relied upon by Contractor in negotiating, pricing, or performing Work covered by a Change Order, or a Proposed Change Order, or involved in a claim. Sample Cost and Pricing Data include data and supporting documents pertaining to labor wages and material rates, crew mixes, labor productivity, payroll costs, price catalogs, quotations from and payments to Subcontractors, Suppliers or others, equipment production rates, equipment costs, sales and use taxes, cost of premiums for Bonds and Insurances, costs related to the determination of general and administrative overhead, site office overhead, profit, estimates and estimating guides, Contractor's computations and projections, and all of the relevant assumptions made by Contractor in pricing or figuring increases or decreases in Contract Price or Contract Time.

Cost of the Work Involved - The sum of all costs necessarily incurred and paid by Contractor in the proper performance of the Work involved.

Day - A calendar day consisting of 24 hours lasting from midnight to midnight on any two consecutive dates.

Defective Work - Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to Engineer's recommendation of final payment; unless responsibility for the protection thereof has been assumed by Department at Substantial Completion in accordance with paragraphs 13.8 or 13.10 of the General Conditions.

Delivery - Shall be effective on the date of receipt by the addressee.

Department - The New York State Department of Environmental Conservation.

Department Representative(s) - Employee(s) of Department engaged in Department activities relating to the work, but not responsible for day to day administration of the Project.

Design Engineer - The individual, partnership, corporation, joint venture, or any allowable combination thereof, who prepared and sealed the Contract Documents that were advertised for bid by Department.

Designated Contact(s) - Individuals to whom all contacts can properly be made during the Restricted Period in relation to the Permissible Contacts during a Procurement and Prohibition of Inappropriate Lobbying Influence clause of the Contract Documents. The Project Manager shall serve as the Department's Designated Contact for the Contract.

Designated Representative to Resolve Disputes - Department employee responsible for resolving all disputes between Contractor and Project Manager, as identified in the Supplementary Bidding Information and Requirements.

Dispute - A Claim that is not resolved pursuant to Article 8.10 of Section VIII - General Conditions, becomes a Dispute to be resolved under Article VIII – Dispute Resolution of Appendix B – Standard Clauses for All New York State Department of Environmental Conservation Contracts.

Drawings, Plans - The Drawings, Plans or reproductions thereof, which show location, character, dimensions, and details of the Work to be performed and which are referred to in the Contract Documents.

Effective Date of the Agreement - The date on which the Agreement is executed by Comptroller.

Employee - Any person working on the project mentioned in the Contract of which these specifications are a part, and who is under the direction or control, or receives compensation from Contractor or Subcontractor.

Engineer - The individual, partnership, corporation, joint venture, or any allowable combination thereof, any entity named as Engineer in the Agreement who will have the rights and authority assigned to Engineer in the Contract Documents. The term "Engineer" means the Engineer or its authorized representative.

Equipment - All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the Work.

Field Order - A written order issued by Engineer to Contractor which orders minor changes in the Work in accordance with Article 9.2 of the General Conditions not involving an adjustment in the Contract Price or the Contract Time.

Law(s) - Applicable laws, rules, regulations, ordinances, codes or orders of a Federal or New York State court.

Material - Any approved material acceptable to Department and conforming to the requirements of the specifications.

Notice of Intent to Award - The written notice by Department to a Bidder stating that upon compliance by that Bidder with the conditions enumerated therein, within the time specified, Department intends to process contract through the appropriate New York State contract reviews.

Notice to Proceed - The Department's written notice of Agreement execution by the Comptroller, stating pertinent information with which Contractor must comply and, where applicable, authorizing Contractor to proceed with the Work at the site.

Overhead - General and administrative costs (whether at the site or in Contractor's principal or branch offices) and all other miscellaneous costs not assigned to a specific payment item as identified in Articles 9, 10 and 11 of the General Conditions.

Partial Utilization - Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

Physical Completion - The Work and all parts thereof have been completed to the satisfaction of Department.

Progress Schedule - Drawings, data computer reports, and narratives disclosing Contractor's approach to the Work; the associated Early Schedule, Late Schedule and Float times, as supported by the Critical Path Method (CPM) or Bar Chart Diagram; the Schedule of Values; and the Schedule of Shop Drawing submissions.

Project - The term "Project" means work at the same Site carried out pursuant to one or more sets of Contract Documents.

Project Field Representative - Department employee assigned responsibility for the day to day administration of the Project.

Progress Payment - Payment made to the Contractor as the result of an Application for Payment which accurately reflects the Contract work completed to date.

Project Manager - Department employee identified in the Supplementary Bidding Information and Requirements, responsible for administration of work required by Contract Documents and supervision of the Project Field Representative(s).

Proposed Change Order - A document prepared on a form furnished by the Department which is to be used: 1) by Department when requiring that Contractor figure the potential effect on Contract Price or Contract Time of a proposed change, (the proposed change is ordered upon signing by Department), or 2) by Contractor to notify Department that in the opinion of Contractor a change is required to respond to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 3.7 of Article 3 of the General Conditions or to emergencies under paragraph 5.23 of Article 5 of the General Conditions, or has been ordered in a Field Order, or in Engineer's approval of a Shop Drawing or sample, or in Engineer's written interpretation or clarification of the requirements of the Contract Documents. When signed by Department, a Proposed Change Order may or may not fully adjust Contract Price or Contract Time but is evidence that the change directed or documented by the Proposed Change Order will be incorporated in a subsequently issued Change Order following negotiations as to its effect, if any, on Contract Price or Contract Time.

Resident Engineer - The authorized representative of Engineer who is assigned to the site or any part thereof.

Resident Project Representative(s) - Person acting as assistant to the Resident Engineer who is assigned to the site or any part thereof.

Resident Superintendent - The authorized representative of Contractor who is assigned to the site or any part thereof.

Restricted Period - The time period which runs from contract bid advertisement to contract execution by the Comptroller.

Retainage - A percentage of a Progress Payment withheld by the Department from a Contractor as guaranty that all contract requirements will be satisfactorily completed.

Request for Interpretation - A document prepared on a form furnished by the Department which is to be used by the Contractor to request interpretation or clarification of the Contract Requirements by the Engineer.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by Contractor to illustrate material or equipment for some portion of the Work.

Site – The horizontal and vertical area requiring Work by Contractor, as bounded by and represented in the Contract Documents.

Specifications - Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

Subcontractor - An individual, partnership, corporation, joint venture or other allowable combination thereof, having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the site.

Substantial Completion - The Work, or a specified part thereof, has progressed to the point where, in the opinion of Engineer as evidenced by Engineer's definitive Certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents (with the exception of the minor items identified during inspection described in paragraph 13.6 of the General Conditions), so that it can be utilized continuously for the purposes for which it is intended. Substantial Completion of the Work, or specified part thereof, may be achieved either upon completion of Pre-Operational Testing or Start-up Testing, depending upon the requirements of the Contract Documents. The terms "substantially complete" and "substantially completed" as applied to any Work refer to Substantial Completion thereof.

Supplier - A manufacturer, fabricator, supplier, distributor, vendor, or other entity providing materials or components for the Project.

Testing, Pre-Operational - All testing, associated trim-out activities and specified manufacturer or supplier training required prior to placing the facilities in service, including but not limited to manufacturer or supplier installation checks; leak, disinfection and pressure tests; removal or erection of temporary components; tie-ins; flushing and chemical/mechanical cleaning operations; specified performance tests; and other necessary non-operating adjustments, cold-alignment checks, corrections, housekeeping and spare parts stocking required of Contractor to demonstrate to Department and Engineer that individual components of the Work have been properly erected and do operate in accordance with the Contract Documents, and that they can be placed in service and utilized continuously for their intended purposes.

Testing, Start-Up - Follows Pre-Operational Testing. Start-up Testing commences by placing portions of the Work in service under interim conditions, continues through initial utilization of the facilities under design media, and culminates with predefined trial utilization tests during which Contractor is to operate the Work, or specified parts thereof, under actual and simulated operating conditions and performing as defined in the Contract Documents, for the purposes of: a) making such minor adjustments and changes as may be found necessary to comply with the requirements of the Contract Documents, and b) complying with the Start-up Test requirements outlined in the Contract Documents.

Total Float - Number of working days by which a part of the Work identified in the progress schedule may be delayed without necessarily extending the corresponding Contract Time(s).

Underground Facilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, chemicals, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Work - Any and all obligations, duties, responsibilities, labor, materials, equipment, temporary facilities, and incidentals, and the furnishing thereof necessary to complete the construction assigned to or undertaken by, Contractor pursuant to the Contract Documents. Also, the entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor, and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

SECTION III

Bidding Information and Requirements

ARTICLE 1 - Address for Notices

It is understood and agreed between the parties that Department's Representative(s) for the implementation of this Agreement, or for approval and direction called for therein, shall be the individual(s) named in Article 2 of Section IV, "Supplementary Bidding Information and Requirements."

Whenever it is provided in this Agreement that notice shall be given or other communications sent to Department, such notices or communications shall be delivered or sent to the Project Manager at the address set forth in Article 2 of Section IV, "Supplementary Bidding Information and Requirements." However, the Bid submittal should be addressed as stated in *Article 3 – Bid Instruction* below.

ARTICLE 2 - Interpretation of Bidding Documents

No interpretation of the meaning of the Bidding Documents will be made orally: all questions regarding the intent or meaning of the Bidding Documents shall be submitted in writing to the Project Manager at the address set forth in Article 2 of Section IV, "Supplementary Bidding Information and Requirements". The reply to the same, when deemed necessary, will be made available by Addendum. To be given consideration, all inquiries must be received in writing at the address set forth in Article 2 of Section IV, "Supplementary Bidding Information and Requirements", at least ten (10) days prior to the date fixed for the opening of Bids, or by the date indicated by Department. Any and all interpretations, and any supplemental instructions will be in the form of written Addendum(s) made available in electronic format. Failure of any Bidder to receive any such Addendum(s) shall not relieve said Bidder from any obligation under its Bid as submitted. All Addenda so issued shall become part of the Bidding Documents.

All pre-bid inquiries answered by means other than Addenda shall not be binding.

ARTICLE 3 - Bid Instructions

Department invites sealed Bids, on the forms attached hereto and submitted in the envelopes provided to: New York State Department of Environmental Conservation, Division of Management and Budget Services, Bureau of Expenditures, 625 Broadway, 10th Floor, Albany, New York, 12233-5027.

The outside of the envelope must bear the name and address of the Bidder, the Site Name, Site Number and Contract Number from the cover of the Contract Documents and specification book, and be clearly marked as "Bid."

Department may consider non-responsive any Bid not prepared and submitted in accordance with the provisions hereof, may waive any informalities or irregularities in any bid, or may reject any or all Bids. Bids that are illegible or that contain any omission, erasures, alterations, additions, conditions, or items not called for in the Bidding Documents, or that contain other irregularities of any kind, may be rejected as non-responsive. The failure or omission of any Bidder to obtain or examine any form, instrument, document or Bidding Documents, or any part thereof, shall in no way relieve any Bidder from any obligation in respect to its Bid. Complete sets of Bidding Documents shall be used in preparing Bids; neither Department nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

Department is responsible for providing Addenda only to those persons or firms listed as having attended the mandatory Pre-Bid Conference.

Department and Engineer make copies of Bidding Documents available only for the purpose of obtaining Bids on the Work and do not authorize any other use of the Bidding Documents.

Each Bid must be submitted on the official form which is furnished by Department. All blank spaces in the Bid must be filled in as noted, and no change shall be made in the phraseology of the Bid or in the items mentioned therein.

The Bidder shall sign, in the space provided in the Bid form, with his or her usual signature. An officer of a corporation or a member of a partnership signing for the Bidder, shall place his or her signature and title after the word "By" under the name of the Contractor. The same procedure shall apply to the Bid of a joint venture by two or more Bidders; however, if the signature is by an agent or attorney-in-fact for the parties of the joint venture, then the Bid shall be accompanied by evidence of his or her authority to act on behalf of all parties of the joint venture.

The Bidder shall complete that portion of the Bid form requesting a statement of the Addenda which have been received, by Addenda number and date. If no Addenda have been received, insert the word, "NONE." Failure to complete this portion of the Bid form may result in a bid being declared non-responsive at Department's option.

Each Bid shall specify in words and figures, the correct gross sum, in the manner hereafter described for which the Work shall be performed according to the Bidding Documents together with a unit price expressed in words and figures for each separate items for which such a price is required. The lowest Bid shall be determined by Department on the basis of the total sum for which the entire Work will be performed, arrived at by a correct computation of all items specified in the Bidding Documents at the prices stated in the Bid. Department reserves the right to reject any Bid in which the Bid prices appear to constitute an unbalanced Bid for the work.

In the event there is a discrepancy in any Bid between the unit prices and the extended totals, the unit prices shall govern. In the event there is a discrepancy in any Bid between the prices written in figures and the unit or lump sum prices written in words, the prices written in words shall govern. Department may reject as non-responsive bids which do not contain a price for every numbered item contained in the Bid form, or may insert a zero for every numbered item that doesn't contain a price.

Unless Department gives instructions to the contrary, the Bidder shall use no more than three decimal places in the cents column under unit Bid price items. If Bidder uses more than three decimal places without such instructions, Department may round off the Bid item to three decimal places.

The Bidder is responsible for examining supplemental information which is available for inspection, upon request, at the address for notices in Article 1 of this Section.

Department will not accept any Bid which has been transmitted electronically (e.g. via Facsimile, Telephone, Telegraph, email, text) or which has been received after the designated bid opening time except where there is evidence that the bid arrived on time, but was mishandled by the Department. A late Bid will be returned unopened with notification of the reason for non-acceptance.

Bids will only be accepted from persons or firms who have attended the mandatory Pre-Bid Conference.

Permissible Contacts During a Procurement and Prohibition of Inappropriate Lobbying Influence - Pursuant to State Finance Law §§139-j and §139-k, this contract includes and imposes certain restrictions on communications between a Governmental Entity and an Offerer/Bidder during the procurement process. An Offerer/bidder is restricted from making contacts from the earliest notice of intent to solicit bids through final award and approval of the Procurement Contract by the Department of Environmental Conservation (Department) and, if applicable, Office of the State Comptroller ("restricted period") to other than designated staff unless it is a contact that is included among certain statutory exceptions set forth in State Finance Law §139-j(3)(a). Designated staff, as of the date hereof, is identified on page I-1 of Section I, Advertisement and Notice to Bidders. Department employees are also required to obtain certain information when contacted during the restricted period and make a determination of the responsibility of the Offerer/bidder pursuant to these two statutes. Certain findings of non-responsibility can result in rejection for contract award and in the event of two findings within a four (4) year period, the Offerer / Bidder is debarred from obtaining governmental Procurement Contracts. Further information about these requirements, including a copy of the new lobbying law, can be found at <http://www.ogs.state.ny.us/aboutogs/regulations/defaultAdvisoryCouncil.html> .

ARTICLE 4 - Modification or Withdrawal of Bid

Permission will not be given to modify or explain by letter, telegram, telephone or otherwise, any Bid after it has been deposited with Department except that a Bid may be withdrawn, modified, and resubmitted prior to the date and time for opening the Bids. After such date and time, no Bid may be withdrawn by a Bidder except as provided by law, and provided further that: 1.) the Bidder files a duly signed written notice of a Bid mistake with Department within two (2) business days after the day of the Bid opening, and 2.) within three (3) business days thereafter demonstrates to the reasonable satisfaction of Department that there has been a material and substantial mistake in the preparation of the Bid. If these two conditions are not met, then the bid bond would be forfeited.

Prior to submittal of Bid, a Bidder may alter or correct a unit price, or a lump sum item, which has been entered on the Bid form by crossing out the entry, entering the new figure above or below the crossed-out entry, and initialing on the line of change. The crossing out of entries shall be with ink, or typed. All new entries and initials shall be legibly handwritten with ink, or typed. Any ambiguity arising from entries altered or corrected on the Bid Form may be cause for Department's rejection of the Bid as non-responsive.

If the Bid is made by an individual, the business address shall be given. If made by a corporation, the names and business addresses of the president, secretary and treasurer shall be given. If made by a partnership, the names and business addresses of the partners shall be given.

Department reserves the right to disqualify Bids, before or after opening, upon evidence of collusion with intent to defraud or other illegal practices upon the part of the Bidder.

All Bids submitted by an individual, a firm or partnership, a corporation or association, which submits more than one Bid for the same Work under the same or different name shall be rejected.

ARTICLE 5 - Required Bid Submittals

The following are to be submitted within the time periods indicated. At the option of Department, failure to make or amend a submittal will constitute proof that the Bidder has abandoned all rights and interests in the contract; that the Bid Security is forfeited to Department as liquidated damages; and that the Work may be awarded to another Bidder in a manner consistent with Law.

- a. The following items are to accompany Contractor's Bid submitted to Department as required in Article 3. The applicable forms and instructions can be found in Section V – Consolidated Bid Form Acknowledgments, Article 1:

- Form of Bid (completed and endorsed)

- Bid Bond or Certified Check
 - Offerer Disclosure of Prior Non-Responsibility Determinations (completed and endorsed)
 - Vendor Assurance of No Conflict of Interest or Detrimental Effect (endorsed)
 - In the case of a legally constituted joint venture, the bidders must submit a copy of the written joint venture agreement with their bid. Each member can only be part of one (1) joint venture. The agreement shall clearly define the relationship and services to be performed by each member, identify the authorized representative for each member, designate the lead principal participant, provide proof of insurance, identify percent equity share held by each member, and include any other relevant information.
 - The Bidder must also submit a statement signed by the Bidder's authorized representative acknowledging that such entities will be required to provide evidence of joint and several liability for the Bidder's obligations under the Contract. If the entity is an LLC, a statement signed by the bidder's authorized representative acknowledging that such entities will be required to provide guarantees of the Bidder's obligations under the Contract.
 - If the joint venture has not yet been legally formed, then the Bidder must submit a description of the proposed legal structure and draft copies of the underlying documents, including: a) all significant terms of the joint venture or partnership, including the rules relative to the administration of the joint venture, limited liability company or partnership, including dealing with deadlock situations; b) description of how the joint venture, limited liability company or partnership will operate administratively and technically; and
 - a teaming agreement or comparable document setting forth the equity member's agreement to form the organization.
 - Sexual Harassment Prevention Certificate (see Article 26 below)
 - Certificate Under Executive Order No. 16 - Prohibiting State Agencies and Authorities from Contracting with Businesses Conducting Business in Russia (see Article 27 below)
- b) The following items shall be submitted to the Project Manager within five (5) days of notification that the Bidder is the apparent low Bidder. The applicable forms and instructions can be found in Section V – Consolidated Bid Form Acknowledgements, Article 2:
- Off-site permitted facility to receive material along with a copy of the facilities permit

- Plan of Operations (Work Plan) and Progress Schedule, Health and Safety Plan, Sampling Plan, and QA/QC Plan
 - Statement of Surety's intent, complete and signed by a duly authorized surety company licensed to do business in the State of New York
 - A description of projects completed by Bidder documenting its experience in this type of work, including previous experience (including applicable experience in New York State and evaluations from other clients for whom the bidder has provided goods and/or services); the abilities and experience of the personnel to be assigned to the work and the ability to provide any needed advanced techniques such as modeling; and overall, information which demonstrates the bidder's skill, judgment and business integrity. This should include the Bidder's approach proposed in meeting the requirements of the scope of work and the need to purchase the goods from and/or subcontract performance of services to others, outlining any cost or schedule impacts to the Bidder's overall performance of the Work.
 - Completed NYS Vendor Responsibility Questionnaire (CCA-2) or an affidavit of no change (if appropriate). If the forms are filed using OSC's online VendRep System, a letter certifying that the forms have been so completed and submitted must be sent to the Project Manager. In the case of a joint venture, each member will be required to complete and submit a NYS Vendor Responsibility Questionnaire or an affidavit of no change (if appropriate). (Must be bound separately if submitting a paper copy of the Vendor Responsibility Questionnaire.)
 - The Contractor agrees to submit an MWBE Utilization Plan and Work Force Utilization Plan either prior to or at the time of the execution of the contract. The Contractor agrees to use such MWBE Utilization Plan for the performance of MWBE's on the Contract Pursuant to the prescribed MWBE goals.
 - An Authorizing Resolution stating that a certain individual has the authority to sign the Contract on behalf of the firm.
 - Endorsed Executive Order No. 177 Certification (Anti-Discriminatory Policies and Practices)
 - Any other information that demonstrates the Bidder's ability to perform the work described herein
 - Low bidders may be asked to submit additional information to demonstrate competency
- c) The following items shall be submitted to the Project Manager within 14 days from the date of the Notice of Intent to Award letter from Department. The applicable

forms and instructions can be found in Section V – Consolidated Bid Form Acknowledgements, Article 3:

- Executed Agreement (four (4) endorsed originals)
- Performance Bond with Power of Attorney & Surety Financial Statement (original and three copies)
- Labor & Materials Bond with Power of Attorney & Surety Financial Statement (original and three copies)
- Bid Breakdown of Items (original) (see Article 12 below)
- Certificates of Insurance (original)
- Consultant/Contractor Detailed M/WBE-EEO Utilization Plan (original). If the forms are filed using the Department's electronic M/WBE System, a letter certifying that the forms have been so completed and submitted must be sent to the Project Manager.
- Service-Disabled Veteran-Owned Business (SDVOB) Utilization Plan (original) as detailed in Appendix D

ARTICLE 6 - Bid Security and Bonds

Bid Security shall be made payable to Department in an amount not less than five (5) percent (5%) of the Bidder's gross sum Bid. The Bid Security shall be in the form of either a certified or bank check upon an incorporated bank or trust company, or a Bid Bond issued by a surety satisfactory to Department.

Department will accept only Bonds from a surety company licensed to write Bonds of such character and amount under the laws of New York State and which are listed on the U.S. Treasury Department Circular 570.

Attorneys-in-fact who sign Bonds shall file with such Bonds a certified copy of their Power of Attorney to sign Bonds and to conduct business in the State of New York.

The Bid Security of a Bidder awarded a Contract for the Work will be retained until such Bidder has executed the Agreement and furnished the required bonds and insurance, whereupon the Bid Security will be returned. If the Bidder fails to execute and deliver the Agreement, other required documents and furnish the required bonds and insurance within fourteen (14) days after the Notice of Intent to Award, Department may annul the Notice of Intent to Award, and the Bid Security of that Bidder will be forfeited to Department. The Bid Security of any Bidder whom Department believes to have a reasonable chance of receiving the award may be retained by Department until the earlier of the 45th day after the Bid opening or seven (7) days after the Effective Date of the

Agreement, whereupon Bid Security furnished by such Bidders will be returned. Bid Security of other Bidders will be returned after the Bid opening.

ARTICLE 7 - Approval of "or Equal" or Substitution Equipment, Systems or Items

There shall be no approval given by Department or Engineer during the bidding period or prior to Award of Contract for any "or equal" or substitution equipment, systems or items.

ARTICLE 8 - Other Contracts and Occupancy

Department may award other contracts in connection with this Work. Contractor shall not have exclusive occupancy of the real property within or adjacent to the limits of the Work.

In case of interference between the operations of utility owners and different contractors, Department will be the sole judge of the rights of each contractor and the sequence of work necessary to expedite the completion of the entire Project. In all such cases, Department's decision shall be accepted as final.

ARTICLE 9 - Taxes

Department is exempt from the payment of sales and compensating use taxes of the State of New York and of cities and counties on all materials, equipment and supplies sold to Department pursuant to this Contract. Also exempt from such taxes are purchases by Contractor and its Subcontractors of materials, equipment and supplies to be sold to Department pursuant to this Contract, including tangible personal property to be incorporated in any structure, building, or other real property forming part of the Project. These taxes are therefore not to be included in the Bid. The cost of all other taxes under the Contract shall be included in the Bid prices for the several items of the Contract.

ARTICLE 10 - Experience and Financial Statements

In accordance with New York State Executive Order No. 170, a Contract shall only be awarded to a responsible Bidder capable of performing and completing the Work in a satisfactory manner. The NYS Vendor Responsibility Questionnaire, instructions for which are included in Section V, "Bid Forms and Attachments" must be completed and submitted by the apparent low Bidder within five (5) days after the apparent low Bidder has been so notified.

Failure of the apparent low Bidder to timely submit the complete, properly executed questionnaire within five (5) days may result in disqualification.

Before Department will consent to any subcontracts at or over \$10,000, unless otherwise agreed to by the Department, the proposed subcontractor must submit the complete, properly executed "NYS Vendor Responsibility Questionnaire" through Contractor. Any delay in the progression of work caused by the failure of a subcontractor to comply with

these requirements will be attributable to Contractor and any additional costs will be Contractor's responsibility.

The low Bidder shall demonstrate its responsibility to perform and complete Work by submitting a statement of its experience and the experience of any Subcontractor which the low Bidder intends to use to perform the Work. Department may require the low Bidder to further demonstrate its responsibility to perform and complete Work by submitting an additional experience and financial statement or information seven (7) days after bid opening or within seven (7) days of Department request, which shall include at a minimum, information pertaining to the Bidder's financial resources. The submitted financial information shall be certified by a Certified Public Accountant, and shall be submitted in the form required by Department. This can also apply to Contractor's Subcontractors.

In the case of a joint venture, each member must meet the experience requirements as amended above. A bid cannot be submitted by a Bidder, including a joint venture, where the Bidder or one of the members of a joint venture has less than three (3) years satisfactory experience in construction of the work to be performed, unless the Bidder or member of a joint venture is a successor in interest to a pre-existing company which meets the required minimum of three (3) years satisfactory experience in construction of the work to be performed.

All on-site personnel are required to have 40-hour Occupational Safety and Health Administration (OSHA) training plus a current eight-hour refresher, baseline medical monitoring, plus a current yearly physical, and training and current fit testing for respirator use if applicable.

Additionally, the successful Contractor must be compliant with Section X – Standard Specifications, SPEC 01 35 29 – Contractor's Health and Safety Plan. Minimum Requirements for Health and Safety and the OSHA Standards and Regulations contained in Title 29, Code of Federal Regulations, Part 1910 and 1926 (20 CFR 1910 and 1926) and subsequent additions and/or modifications, the New York State Labor Law Section 876 (Right-to-Know Law), the Standard Operating Safety Guidelines by the United States Environmental Protection Agency (EPA), Office of Emergency and Remedial Response and the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH, OSHA, USCG, and EPA) provide the basis for the safety and health program. Additional specifications within this section are in addition to OSHA regulations and reflect the positions of both the EPA and the National Institute for Occupational Safety and Health (NIOSH) regarding procedures required to ensure safe operations at abandoned hazardous waste disposal sites.

ARTICLE 11 - Preliminary Progress Schedule

The Preliminary Progress Schedule shall consist of three (3) copies of a narrative description and a time-scaled critical path method diagram or bar chart diagram as specified in Section X – Standard Specifications, SPEC 01 32 16 – Progress Schedule. The narrative in the Preliminary Progress Schedule shall describe the order in which Bidder proposes to perform the Work pursuant to the specified Contract Time(s) and Work sequence conditions indicated in or required by the Bidding Documents. It shall also indicate proposed starting and completion dates for Work expressed in terms of days elapsed from the Notice to Proceed associated with each division of the Specifications within each major structure or geographical area of Work. Activities shall further identify significant submittals, approvals and associated deliveries, significant testing, major Department responsibilities, and responsibilities of affected utilities and third parties. The narrative shall include monthly percentages of completion for the Work in relation to the rate of progress anticipated in the Preliminary Progress Schedule.

ARTICLE 12 - Bid Breakdown

The Bid breakdown shall be submitted by the apparent low Bidder within fourteen (14) days after the date of the Notice of Intent to Award letter. Discrepancies, ambiguities or conflicts in the Bid breakdown shall be resolved in accordance with the terms and conditions set forth in Article 8.10 of Section VIII the General Conditions.

A Bidder submitting a Bid breakdown and awarded a Contract for the Work agrees and understands that those prices for separable parts of the Work disclosed on the Bid breakdown, where they are applicable and determined to be reasonable by Department may be used for the purposes of: a.) measurement and payment, b.) increase(s) or decrease(s) in the Contract Price due to adjustments in quantities to the separable parts of the Work, and c.) Change Orders or Proposed Change Orders which add or deduct like Work.

ARTICLE 13 - Subsurface and Technical Information

If boring logs and other subsurface information were made available for the inspection of Bidders, please note that such data were obtained with reasonable care and were recorded in good faith by Department, Engineer or the Design Engineer.

The soil and rock descriptions shown are as determined by a visual inspection of the samples from the various explorations unless otherwise noted. The observed water levels and/or water conditions indicated thereon are as recorded at the time of the exploration. These levels and/or conditions may vary considerably, according to the prevailing climate, rainfall and other factors, including the passage of time.

Similarly, data concerning leachate were obtained with reasonable care and recorded in good faith. The location and concentrations of leachate may vary considerably according to the prevailing climate, rainfall and other factors, including the passage of time. Bidders

may rely upon accuracy of the subsurface technical data as to where (location) and when (exact time) data was obtained; but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof.

When reports showing data obtained by investigations and tests at the site by Department, Engineer or the Design Engineer are included with the Bidding Documents, or made available to Bidders as set forth in the Bidding Documents, it is expressly understood and agreed that technical data, but not any non-technical data, interpretations or opinions contained in such reports, are incorporated by reference into the Contract Documents. Bidders may rely upon the accuracy of all such technical data contained in such reports as to where (location) and when (exact time) such technical data was obtained, unless the Bidding Documents limit any other basis upon which such technical data may be relied upon. It is further expressly understood and agreed that the use of any technical data contained in such reports is subject to all of the conditions and limitations set forth in the Bidding Documents.

Subsurface and technical information is made available to Bidders in good faith so that they may be aware of the information utilized for design and estimating purposes. Department makes no representations or warranties, express or implied, as to the completeness of this information or data, nor is such disclosure intended as a substitute for personal investigations, interpretations, and judgment of the Bidder.

ARTICLE 14 - Underground Facilities

The locations of Underground Facilities were ascertained with reasonable care and recorded in good faith from various sources, including the records of municipal and other public service corporations, and therefore such locations may only be approximate. Department does not assume responsibility for the accuracy or completeness of such locations.

ARTICLE 15 - Examination of Bidding Documents and Site

It is the responsibility of each Bidder, before submitting a Bid to: a.) examine the Bidding Documents thoroughly, b.) visit and visually inspect the site during the Pre-Bid Conference required pursuant to Article 3 of Section IV, "Supplementary Bidding Information and Requirements," c.) become familiar with local conditions that may affect cost, schedule, performance or furnishing of the Work, d.) become familiar with applicable Laws that may in any manner affect cost, schedule, performance or furnishing of the Work, e.) study and carefully correlate Bidder's observations with the Bidding Documents, and f.) notify the Project Manager identified in Article 1 of this Section promptly after discovering any conflicts, ambiguities, errors or inconsistencies in the Bidding Documents.

It is the responsibility of each Bidder to obtain any additional documents, information or data which pertain to the physical conditions (surface, subsurface and Underground

Facilities) at or contiguous to the site which may affect cost, schedule, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the Bidding Documents.

The submission of a Bid constitutes an incontrovertible representation by Bidder that Bidder has taken steps reasonably necessary to ascertain the nature and location of the Work, and that Bidder has investigated and accounted for in the preparation of the Bid:

a.) Governmental requirements and all reasonably foreseeable general and local conditions that may affect cost, schedule, performance or furnishing of the Work. Examples of such conditions include: 1.) conditions bearing upon the transportation, disposal, handling and storage of materials, 2.) the availability and suitability of labor, water, electric power, telephone, sanitary services, and roads, 3.) weather, river stages, tides or similar conditions at or contiguous to the site, 4.) physical conditions of the site, and 5.) the character of equipment and facilities needed preliminary to and during Work performance, b.) character, quality and quantity of surface, subsurface and Underground Facilities at or contiguous to the site, insofar as this information is reasonably ascertainable from the Drawings and Specifications included as part of the Bidding Documents, from the reports referenced in the Supplementary Bid Information. and from the documents, information and data regarding physical conditions at or contiguous to the site obtained by Bidder, and c.) Bidding Documents to be sufficient in scope and detail to indicate and convey understanding of all terms and conditions affecting cost, schedule, performance and furnishing of the Work.

Any Failure to take the actions described in this Article will not relieve that Bidder from responsibility for estimating properly the difficulty, cost of, and schedule for successfully performing the Work, or from performing the Work successfully without an increase in Contract Price or an extension in Contract Time.

Department, Engineer, or Design Engineer do not assume any responsibility for any conclusions or interpretations made by any Bidder based on the information made available by the Bidding Documents. Nor does Department, or Engineer assume any responsibility for any understanding reached or representation made concerning conditions which can affect the cost, schedule, progress, furnishing and performance of the Work prior to execution of the Contract, unless that understanding or representation is expressly stated in the Bidding Documents.

In an itemized contract, the estimate of quantities of work to be done and materials to be furnished is approximate and is given only as a basis of calculation upon which the award of the contract is to be made. Department does not assume any responsibility that the quantities estimated will be the actual quantities required; Contractor may not claim misunderstanding or deception because of such estimates of quantities or of the character of the work, location, or other condition pertaining thereto. Department may increase or diminish any or all of the quantities of work mentioned above or omit any of them, as deemed necessary or as being in the best interest of Department.

ARTICLE 16 - Subcontractors, Suppliers or Others

Unless otherwise agreed in writing by Department, Contractor shall subcontract no more than the percentage (%) of the total cost of the work under its contract as may be provided by the Contract Documents in Article 6 of Section IV, "Supplementary Bidding Information and Requirements". Procedures for approval of Subcontractors, Suppliers or other persons or organizations, after execution of the Agreement, are set forth in the General Conditions and the Supplementary Conditions.

ARTICLE 17 - Award of Contract

The Contract will be awarded to the lowest, responsive and responsible Bidder(s) that has prepared acceptable required submittals, in the opinion of Department, as stipulated in Article 5 of this Section.

To the extent permitted by applicable Law, Department reserves the right to reject any and all Bids, to waive any and all informalities or irregularities, to disregard all nonconforming, nonresponsive, or conditional Bids, or to re-advertise for Bids.

In order to be considered responsive, a Bid shall be completed, signed and be responsive in all respects to the Bidding Documents unless informalities are waived by Department.

In order to be considered responsible, a Bidder must establish to the complete satisfaction of Department and Engineer, as a minimum, that it has adequate and satisfactory experience and financial resources to meet the obligations under the Contract and award of the Contract would be in the best interest of the State. A Bidder's prior experience shall be considered satisfactory when among other factors, its performance of prior work was timely, of good quality, in compliance with any contract requirements including contracted costs and schedule, and in compliance with applicable Law. The Bidder must have a minimum of three (3) years satisfactory experience in construction of the work to be performed. This experience must include, but not be limited to, the excavation, transportations, and handling of hazardous waste and contaminated soil/sediment. Experience must also include the handling and treatment of contaminated water generated from hazardous waste operations. For work to be deemed satisfactory, the work must have been performed with required oversight from United States Environmental Protection Agency (USEPA), Department, or an equivalent state environmental regulatory agency (i.e., New Jersey DEP, Pennsylvania DER, etc). Brownfield cleanup work qualifies for the experience requirement. The bidder cannot meet the minimum experience requirements through the use of subcontractor(s).

Department may conduct such investigations as it deems necessary to assist in the evaluation of any Bid and to establish the responsibility in terms of satisfactory experience and financial ability of the Bidder, and of any proposed subcontractors. Department may reject the Bid of any Bidder which it deems not to be responsible and may reject performance of Work by any Subcontractor which it deems is not responsible.

It is the intention of Department that the work will be awarded within 45 calendar days after the opening of bids to the lowest responsive, responsible Bidder whose bid conforms to the requirements of the Contract Documents. Bids may not be withdrawn, altered or revoked during this 45-day period except as provided by law and specified within Article 4 of this Section. Even after the expiration of such 45-day period, Department may accept a Bid and award the work to any Bidder whose bid has not been unequivocally withdrawn or revoked prior to the mailing of written Notice of the Award to the successful Bidder. For purposes of the preceding sentence, withdrawal or revocation of a Bid shall not occur until Department receives an unequivocal written statement to that effect.

ARTICLE 18 - Time is of the Essence

Time is of the essence for the performance of Work required by the Contract Documents.

ARTICLE 19 - Applicability of Federal, State and Local Law

Any Bid and any Contract awarded pursuant to a Bid shall be subject to and governed by applicable Law.

It is the responsibility of each Bidder to be informed of and comply with federal, state and local Laws, affecting the cost, schedule, progress, performance or furnishing of the Work. This requirement includes, but is not limited to, applicable regulations concerning minimum wages, nondiscrimination in employment, affirmative action, protection of public and employee safety and health, environmental protection, fire protection and permits, and fees and licensing.

ARTICLE 20 - M/WBE and EEO Requirements

The M/WBE and EEO provisions of Appendix B are required provisions for this contract. The Bidder is required to comply with State regulations 9NYCRR Part 543 entitled, "Requirements and Procedures Regarding Business Participation Opportunities for Minorities and Women on State Contracts."

The selected Bidder shall be required to make good-faith efforts to subcontract at least the percentage stipulated in Section VII of Appendix B, of the contract price to NYS Certified Minority Business Enterprise(s) (MBE) and Women Business Enterprise(s) (WBE), respectively.

In accordance with Executive Law Article 15-A, Department is required to make available the NYS Directory of Certified Minority and Women Owned Business Enterprises. Empire State Development has put the Minority and Women's Business Development Directory on the Internet at www.ny.newnycontracts.com . Support will be available from 9:00 a.m. to 5:00 p.m., Monday through Friday, except for NYS holidays. If assistance is needed call (855) ESD-4MWBE or (855) 373-4692. For additional information and assistance regarding NYS Certified M/WBE's, please contact the Department's Minority and Women's Business Programs Unit at (518) 402-9240.

Pursuant to New York State Executive Law Article 15-A, and the attending rules and regulations, an approvable M/WBE Utilization Plan and Work Force Utilization Plan shall be required prior to or at the time of the execution of the Contract.

Contractor shall be required to provide equal opportunities to minorities and women with regard to all jobs necessary for the performance of work or contracts required by the project. In doing so, Contractor agrees to make good-faith efforts to employ minorities and women for at least the percentage stipulated in Section VII of Appendix B, of the work force hours required for the completion of the project. Different occupational category work force participation goals may be used to meet these overall goals for work force participation. Contractor shall not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability, or marital status, and shall undertake or continue existing programs of affirmative action to ensure that minority group persons and women are afforded equal opportunity without discrimination. Such programs shall include, but not be limited to, recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination, rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on-the-job training.

As required by Department, Contractor shall request of each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding and which is involved in the performance of the contract with the Agency to furnish a written statement that such employment agency, labor union, or representative shall not discriminate because of race, creed, color, national origin, sex, age, disability, or marital status, and that such union or representative will cooperate in the implementation of Contractor's obligations hereunder.

Contractor shall include the provisions of Section VII of Appendix B in every subcontract or purchase order in such a manner that the subcontractor shall be required to comply with such provisions with respect to its work in conjunction with the contract with Department.

ARTICLE 21 – Participation Requirements for New York State Certified Service-Disabled Veteran-Owned Businesses

Article 17-B of the New York State Executive Law provides for more meaningful participation in public procurement by certified Service-Disabled Veteran-Owned Businesses (SDVOBs), thereby further integrating such businesses into New York State's economy. The Department recognizes the need to promote the employment of service-disabled veterans and to ensure that certified service-disabled veteran-owned businesses have opportunities for maximum feasible participation in the performance of Department contracts.

In recognition of the service and sacrifices made by service-disabled veterans and in recognition of their economic activity in doing business in New York State, Bidders are

strongly encouraged and expected to consider SDVOBs in the fulfillment of the requirements of the Contract. Such participation may be as subcontractors or suppliers, as protégés, or in other partnering or supporting roles. To obtain more information regarding the utilization of SDVOBs including how to find and contact them, please use the contact information below or go to the Division of Service Disabled Veteran's Business Development (DSDVBD) website at: <https://ogs.ny.gov/Veterans/default.asp>.

The contractor must make good faith efforts to subcontract a goal of six (6) percent (%) of the contract amount to New York State Certified Service-Disabled Veteran-Owned Businesses (SDVOBs), for purposes of providing meaningful participation by SDVOBs. Appendix D further defines the SDVOB provisions required by Executive Law, Article 17B.

ARTICLE 22 - Permissible Contacts During a Procurement and Prohibition of Inappropriate Lobbying Influence

Chapter 1 of the Laws of 2005, as amended by Chapter 596 of the Laws of 2005 (collectively referred to as the "Lobbying Law"), makes major changes to the Legislative Law and State Finance Law relative to lobbying on government procurements. More specifically, the Lobbying Law creates two new sections in the State Finance Law: Section 139-j addresses restrictions on "contacts" during the procurement process; and Section 139-k addresses the disclosure of contacts and the responsibility of offerer(s)¹ during the procurement process. The Lobbying Law applies to all procurements initiated on or after January 1, 2006. In this regard, a procurement means a contract or agreement involving an annual expenditure in excess of \$15,000 for a commodity, service, technology, public work, or construction; purchase, sale or lease of real property; or revenue contract.

In conformity with the Lobbying Law, during a procurement's restricted period² the only New York State Department of Environmental Conservation (Department) officer(s) or employee(s) that the offerer may "contact" is/are the Department designated contact person(s) for that procurement. In this regard, "contact" means any oral, written, or electronic communication under circumstances where a reasonable person would infer that the communication was intended to influence a procurement. Exceptions to this rule include:

- submission of a written proposal in response to an RFP, IFB or any other solicitation method;
- submission of written questions as part of an RFP, IFB or other solicitation method where all written questions and written responses will be provided to all offerer(s);

¹ Individual or entity, or any employee, agent, consultant or person acting on behalf of such individual or entity, that contacts the Department about a procurement during the restricted period.

² The period of time commencing with the earliest public notice, advertisement or solicitation of a Request for Proposals (RFP), Invitation for Bids (IFB), solicitation of proposals or any other method for soliciting responses from offerers intending to result in a procurement contract by the Department, and ending with the final contract award and approval by the Department, and the Office of the State Comptroller (if required).

- participation in a pre-proposal or pre-bid conference scheduled as part of an RFP, IFB or other solicitation process;
- written complaints by an offerer that the Department designated contact for a procurement fails to respond to in a timely manner;
- negotiations with the Department following tentative award;
- contacts between designated Department staff and offerer to request the review of a contract award; and
- communications with the Department regarding an appeal, protest or other review of a procurement, participation in an administrative or judicial proceeding regarding a procurement, and complaints regarding a procurement made to the Attorney General, Inspector General, District Attorney, or State Comptroller.

An offerer shall not, under any circumstances, attempt to influence a Department procurement in a way that violates or attempts to violate: Public Officers Law Section 73(5), relating to gifts intended to influence; or Public Officers Law Section 74, relating to the code of ethics for employees of state agencies, public authorities and public benefit corporations, members of the New York State Legislature, and Legislative employees.

An offerer who contacts the Department designated contact person for a procurement during the restricted period must be prepared to provide the following information: name, address, telephone number, place of principal employment and occupation of the person or organization making the contact, and whether the person/organization making the contact is the offerer or is retained, employed or designated by or on behalf of the offerer to appear before or contact the Department about the procurement.

An offerer that submits a proposal, bid or other response to a Department RFP, IFB or other solicitation method must: certify that it understands and agrees to comply with these guidelines regarding permissible contacts during a procurement and the prohibition of inappropriate lobbying influence; and disclose whether any governmental entity has, within the prior four years, found the offerer non-responsible due to a violation of the Lobbying Law or the intentional provision of false or incomplete information. Further, all Department procurement contracts will contain: a certification by the offerer that all information provided to the Department with respect to the Lobbying Law is complete, true and accurate; and a provision authorizing the Department to terminate the contract in the event such information is found to be intentionally false or incomplete.

The Department will investigate all allegations of violations of the Department guidelines regarding permissible contacts during a procurement and the prohibition of inappropriate lobbying influence. A finding that an offerer has knowingly and willfully committed such a violation may result in a determination that the offerer and its subsidiaries are non-responsible and therefore ineligible for award of the procurement contract. A second determination of non-responsibility for such a violation within four (4) years of the first such determination may render the offerer and its subsidiaries ineligible to submit a bid or proposal or be awarded a procurement contract for four (4) years from the date of the second determination. The Department will notify the New York State Office of General

Services (OGS) of any determination of non-responsibility or debarments due to violations of the Lobbying Law.

If you require further guidance on the new Lobbying Law, you are encouraged to visit the Advisory Council on Procurement Lobbying website at the following address: <http://www.ogs.state.ny.us/aboutOgs/regulations/defaultAdvisoryCouncil.html>, where Frequently Asked Questions (FAQ's) and answers adopted by the council have been posted. A copy of the new Procurement Lobbying Law is also available on this website.

ARTICLE 23 – Diesel Emissions Reduction Act 2006

In 2007, New York State passed legislation establishing the Diesel Emissions Reduction Act 2006 (DERA). This Act amended the Environmental Conservation Law (ECL) by adding Section 19-0323 which requires the use of best available retrofit technology (BART) and ultra-low sulfur diesel fuel (ULSD) for heavy duty vehicles owned or operated by, including on behalf of, state agencies and state or regional public authorities. The Department has promulgated regulations (6 NYCRR Part 248) to provide guidance on provisions of the law. The regulations may be found on the Department's website at <http://www.dec.ny.gov/regs/2492.html>.

The Contractor must comply with the specifications and provisions of ECL Section 19-0323 and 6 NYCRR Part 248, which require the use of Best Available Retrofit Technology (BART) and Ultra Low Sulfur Diesel (ULSD), unless specifically waived by the Department. Qualifications for a waiver under this law will be the responsibility of the Contractor.

ARTICLE 24 – Environmental Protection Fund Acknowledgment

If applicable, in recognition of a portion of the Department funds utilized for any work completed under this Contract, the Contractor agrees to acknowledge in any communication to the public, that such funding was provided from the Environmental Protection Fund as administered by the New York State Department of Environmental Conservation.

Article 25 – Executive Order 177

Executive Order No. 177, Prohibiting State Contracts with Entities that Support Discrimination, orders that New York State's government will not do business with entities that promote or tolerate discrimination or infringement on the civil rights and liberties of New Yorkers. New York State is dedicated to ensuring that all individuals are treated equally, regardless of their age, race, creed, color, national origin, sexual orientation, gender identity, military status, sex, marital status, disability, or other protected basis. To that end, New York has enacted numerous laws, regulations, and policies, and will continue to aggressively enforce its strong protections against discrimination to the maximum extent allowable by law.

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

ARTICLE 26 - Sexual Harassment Prevention Certification

State Finance Law §139-I requires bidders on state procurements to certify that they have a written policy addressing sexual harassment prevention in the workplace and provide annual sexual harassment training (that meets the minimum requirements of section two hundred one-g of the NYS Labor Law and Department of Labor's model policy and training standards) to all its employees.

Where competitive bidding is required pursuant to statute, rule or regulation, every bid made to the state or any public department or agency of the state must contain the following statement:

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

Bids that do not contain the certification will not be considered for award; provided however, that if the bidder cannot make the certification, the bidder shall provide a signed statement with their bid detailing the reasons why the certification cannot be made. After review and consideration of such statement, the Department may reject the bid or may decide that there are sufficient reasons to accept the bid without such certification.

Bidders are required to sign and submit the Sexual Harassment Prevention Certification form included in Section V, Article 1(g). If the bidder cannot make the certification then a signed statement must be submitted with the bid detailing the reasons why the certification cannot be made.

Article 27 - Executive Order No. 16

Executive Order No. 16 provides that “all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia.” The complete text of Executive Order No. 16 can be found at <https://www.governor.ny.gov/executive-order/no-16-prohibiting-state-agencies-and-authorities-contracting-businesses-conducting>. The Executive Order remains in effect while sanctions against Russia imposed by the federal government are in effect. Accordingly, vendors who may be excluded from award because of current business operations in Russia are nevertheless encouraged to respond to solicitations to

preserve their contracting opportunities in case the sanctions are lifted during a solicitation or even after award in the case of some solicitations. As defined in Executive Order No. 16, an “entity conducting business operations in Russia” means an institution or company, wherever located, conducting any commercial activity in Russia or transacting business with the Russian Government or with commercial entities headquartered in Russia or with their principal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership. Vendors responding to this solicitation are required to complete and submit the form entitled “Certification Under Executive Order No. 16 Prohibiting State Agencies and Authorities from Contracting with Businesses Conducting Business in Russia”.

SECTION IV

Supplementary Bidding Information and Requirements

ARTICLE 1 - Location and Description of Project

The Site Number of this project is 336001. The Project is located at 403 US Route 209 in the Hamlet of Huguenot, Town of Deerpark, Orange County, New York. Access to the site is from US 209.

The project includes the implementation of remedial activities at the Former C&D Power Systems (C&D Batteries) Site. These activities include, but are not limited to: excavation and off-site disposal of lagoon soils containing PCB concentrations greater than 50 ppm, excavation of on-site soils containing lead concentrations greater than 1,000 ppm, excavation of off-site soils containing lead concentrations greater than 400 ppm. In-situ stabilization/solidification (ISS) of lagoon soils to elevation 429.5 and 439 ft NAVD88. Excavation of sediment from Tributary D-1-7 to depths of 12 to 18 inches. Stabilization of on and off-site excavated soils and excavated sediments in the lagoon. Excavation and stabilization within the lagoon of soils excavated from the vault and the 6-inch diameter, 6-inch deep hole within the warehouse building. Stabilization and off-site disposal of any soil or sediments that exceed the space limitations of the lagoon. Restoration of the site shall follow.

ARTICLE 2 - Department Representatives

Designated Representative to Resolve Disputes – Andrew Guglielmi, Designated Individual to Resolve Disputes, Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7012, Phone: (518) 402-9704 E-mail: andrew.guglielmi@dec.ny.gov

Section Chief – Benjamin Rung, Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7017, Phone: (518) 402-9813 E-mail: benjamin.rung@dec.ny.gov

Project Manager – Lisa A. Gorton, Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7017, Phone: (518) 402-9574 E-mail: lisa.gorton@dec.ny.gov

Project Field Representative – Kristopher Keenan, Sanitary Construction Inspection 2, Division of Environmental Remediation, 12th Floor, 625 Broadway, Albany, New York, 12233-7017, Phone: (518) 402-9813 E-mail: kristopher.keenan@dec.ny.gov

Engineer – AECOM USA, Inc., 125 Broad Street, New York, New York 10004 Attn: Amit Haryani. Phone: (212) 377-8701 E-mail: amit.haryani@aecom.com

ARTICLE 3 - Pre-Bid Conference

A pre-Bid conference will be held on May 25, 2023, at the project site located at 403 US Route 209 in the Hamlet of Huguenot, Town of Deerpark, Orange County, New York, at the time of 11:00 AM Eastern Standard Time to view the Project area. The Pre-Bid Conference is held to discuss the requirements of the Bidding Documents, the protocols for performing the work, the conditions existing at the work site, and to provide for visual inspection of the Site by Bidders. Bidders will be required to sign an attendance sheet to document their presence at the mandatory Pre-Bid Conference. **Department will accept Bids only from those bidders who attend the Pre-Bid Conference, attendance is mandatory as a condition of Bid.**

Attendees are encouraged to review COVID-19 Center for Disease Control (CDC) guidelines prior to attendance; current guidelines can be accessed at <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>

ARTICLE 4 - Additional Bid Submittals

Experience in performance of the Scope of Work (SOW) and in accordance with Section III, Article 17, Paragraph 4, shall be demonstrated in writing and presented to the Department within five (5) days of Department's Notice of Apparent Low Bid per Section III, Article 5, (b).

Section III – Article 17 outlines the requirements for contractor experience in performance of the Scope of Work (SOW). For this contract, that experience shall be modified as follows:

The Bidder of ISS/ESS Subcontractor must have completed a minimum of three (3) ISS/ESS remediation projects of similar size and scope, including sediment removal and in-situ solidification. The Bidder's or ISS/ESS Subcontractor's Project Manager/Superintendent must have a minimum of five (5) years of experience with ISS/ESS projects of similar scope, with a minimum of two (2) of those years in the role of Project Manager/Superintendent.

ARTICLE 5 - Other Available Documents

The following items are available in the Limited Site Data Document for contractor's review in preparing the Bid:

- A. Select Boring Logs
- B. Pre-Design Investigation Report (AECOM 2022)
- C. Phase 1B Archaeological Subsurface Testing Survey for the C&D Power Systems Site Sediment Removal Project (AECOM 2022)
- D. Record of Decision and Record of Decision Amendment (NYSDEC 2015)

ARTICLE 6 - Subcontracting

The maximum subcontracting allowed for this contract is forty percent (40%) unless a higher percentage is approved by Department in writing.

ARTICLE 7 - Type of Schedule

Contractor shall provide a Critical Path Method (CPM) type of schedule as described in Section X, Spec 01 32 16 - Progress Schedule.

ARTICLE 8 - Wage Rates

The Department requires, for the work under this contract, that the Contractor and its subcontractor pay at least the prevailing wage rate and pay or provide the prevailing supplements, including premium rates for overtime pay, as issued by the State Labor Department. The current wage rates are included within the contract documents, Section XIII – Wage Rates and Associated Contract Requirements.

The Contractor is responsible for any additional costs related to new determinations of the wage rates. The annual determination of the prevailing rates of wages and supplements are usually published on May 31st of each year and are in effect July 1st through June 30th. New determinations will supersede the original schedule or any prior issued annual determination. Any rate change from a previously issued determination becomes effective July 1st, regardless of whether the new determination has been received by the Contractor.

Every contractor and subcontractor shall submit to the Engineer within thirty days after issuance of its first payroll, and every thirty days thereafter, a transcript of the original payroll records, subscribed and affirmed as true under penalty of perjury, as provided by Article 8, Section 220, of the NYS Labor Law. The Engineer shall receive and maintain such payroll records. The original payrolls and transcripts must be preserved for three (3) years from the date of completion of the project. The current prevailing wage rate schedule must be posted in a prominent and accessible place on the site of the public work project.

ARTICLE 9 – Bid Protest Guidelines

The intent and purpose of these guidelines is to set forth the procedure to be utilized when an interested party challenges a contract bid award solicited by the Division of Environmental Remediation and routed to the Office of the State Comptroller (OSC) for approval pursuant to the provisions of Section 112 of the State Finance Law.

The protestor is responsible for complying with the restrictions on “contacts” under the Procurement Lobbying Law (State Finance Law, Section 139-j). All protests must be submitted to the Designated Department Contact listed in the Contract Documents.

1. The bid protest must be submitted within ten (10) Business days of the Department's Notification of Intent to Award letter being sent to the apparent low bidder.
2. The bid protest must be submitted in writing and must contain specific factual and/or legal allegations setting forth the basis on which the protesting party challenges the contract award. The notice of protest must be filed by the signatory of the bid or by an attorney representing the bidder. Any filing deadlines may be waived by the Department at its own discretion.
3. The Designated Department Contact will promptly submit the notice of protest, a bid protest summary and relevant bid documents to the Division of Management and Budget Services and the Office of General Counsel (OGC).
4. Once the formal notice of protest is filed, the Department, at its sole discretion, may continue or suspend the contract award process until the protest is resolved and a final Department determination is made.
5. As set forth in Section III, Article 17, of the Contract Documents, the Department reserves the right to reject any and all bids, to waive any and all informalities or irregularities, to disregard all nonconforming, nonresponsive, or conditional Bids, or to re-advertise for bids.

SECTION V

Bid Forms and Acknowledgements

ARTICLE 1(a) - Contract Bid Form and Acknowledgment for C&D Power Systems (C&D Batteries), Tributary D-1-7 Sediment and Lagoon Remediation.

The Bidder hereby declares that either personally or through authorized representative(s), Bidder has carefully examined all Bidding Documents and has personally or through authorized representative(s) inspected the actual location of the work, together with the local sources of supply; and understands all terms and conditions of Bidding Documents. Bidder further understands that in signing this Bid, the right to plead any misunderstanding regarding the same is waived.

Pursuant to and in compliance with the Bidding Documents, the Bidder hereby offers to furnish all labor, materials, supplies, equipment and other facilities and appurtenances, necessary or proper for, or incidental to, the construction and completion of this Contract, as required by and in strict compliance with the applicable provisions of all Contract Documents, for the following unit and/or lump sum prices.

The undersigned shall meet the required submittal time periods listed in Section III - Bidding Information and Requirements, Article 5 - Required Bid Submittals.

The undersigned hereby designates the following office as the office to which such Notice of Intent to Award and Notice of Award may be emailed, mailed, or delivered:

Attention:	
Company Name:	
Street Address:	
City, State, Zip (+4):	
Email Address:	
Phone Number:	

BID
(Page 1 of 2)

New York State Department of Environmental Conservation

**C&D POWER SYSTEMS (C&D BATTERIES)
TRIBUTARY D-1-7 SEDIMENT AND LAGOON REMEDIATION
Site Number: 336001
TOWN OF DEERPARK, ORANGE, COUNTY**

<i>Payment Item Number</i>	<i>Description</i>	<i>Unit</i>	<i>Estimated Quantity</i>	<i>Unit or Lump Sum Price</i>		<i>Total Amount (\$)</i>
				<i>Words</i>	<i>Figures</i>	
LS-1	Mobilization/ Demobilization	Lump Sum	1			
LS-2	Site Preparation/ Site Facilities	Lump Sum	1			
LS-3	Surveys	Lump Sum	1			
LS-4	Dewatering and Contact Water Treatment	Lump Sum	1			
LS-5	Temporary Stream Bypass System	Lump Sum	1			
LS-6	Swartwout Road Culvert Replacement	Lump Sum	1			
LS-7	Abandonment of Vault Structure	Lump Sum	1			
LS-8	Site Restoration	Lump Sum	1			
UP-1	Health and Safety	Day	250			
UP-2	Site Services	Day	340			
UP-3	Excavation and Management of Non- TSCA Soils	Cubic Yard	3,960			

BID
(Page 2 of 2)

New York State Department of Environmental Conservation

Payment Item Number	Description	Unit	Estimated Quantity	Unit or Lump Sum Price		Total Amount (\$)
				<i>Words</i>	<i>Figures</i>	
UP-4	Excavation and Management of TSCA Soils (greater than 50 ppm PCBs)	Cubic Yard	4,710			
UP-5	Excavation and Management of Sediment	Cubic Yard	2,280			
UP-6	In-Situ Solidification	Cubic Yard	6,915			
UP-7	Abandonment of Existing Pipes	Each	6			
UP-8	Off-Site Transport and Disposal of Non-Hazardous Waste	Ton	1,300			
UP-9	Off-Site Transport and Disposal of TSCA Waste (greater than 50 ppm PCBs)	Ton	8,810			
UP-10	Confirmation Sampling	Each	442			
UP-11	Crushed Stone Cover	SY	9,435			
UP-12	Pavement Cover	SY	4,625			
<p>GRAND TOTAL BID: \$ _____</p> <p align="center"><i>(Price in figures)</i></p>						

Contractor Authorized Representative

Contractor Name

Date

The undersigned acknowledges the receipt of the following Addenda and agrees to be bound by all Addenda issued by Department whether or not listed herein.

Addendum Number	Date of Addendum

Accompanying this proposal is bid security in the amount of \$_____, said security is in the form of certified check(s) totaling \$_____, and/or Bid Bond totaling \$_____ which shall become the property of the Department if this proposal shall be accepted by the Department, or, should the undersigned fail to execute and return the Contract in a timely manner, or fail to comply with the requirements of the Bidding Documents.

Corporate Seal

(If no seal, write "No Seal" and sign)

Legal Name of Person, Partnership, or Corporation

By _____
Print Name and Title

Signature Date

Please Complete Information Requested Below (as applicable):

The P.O. Box Address of the Bidder is: _____

Federal Identification Number is: _____

(ACKNOWLEDGMENT)

State of)
 s.s.:
County of)

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.

(Seal) _____
Notary Public

ARTICLE 1(b) Bidder's/Proposer's Certification

Non-Collusive Bidding and Nondiscrimination in Employment in Northern Ireland MacBride Fair Employment Principles and State Ethics Law Principles and Procurement Lobbying Law

BY SUBMISSION OF THIS BID/PROPOSAL, AND BY SIGNING HEREUNDER THE BIDDER/ PROPOSER, AND EACH PERSON SIGNING ON BEHALF OF SUCH PARTY CERTIFIES, AND IN THE CASE OF A JOINT BID/PROPOSAL, EACH PARTY THERETO CERTIFIES AS TO ITS OWN ORGANIZATION, UNDER PENALTY OF PERJURY, THAT TO THE BEST OF HIS/HER KNOWLEDGE AND BELIEF:

A. Non Collusion, State Finance Law §139-d

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

B. MacBride Fair Employment Principles, State Finance Law §165(5)

- 1) it or any individual or legal entity in which the Bidder/Proposer holds a ten-percent (10%) or greater ownership interest, or any individual or legal entity that holds a 10% or greater ownership in the Bidder/Proposer, either: (answer yes or no to one or both of the following, as applicable).

- 2) Has business operations in Northern Ireland:

Yes or No (check answer) If yes, complete #3

- 3) Shall take lawful steps in good faith to conduct any business operations that it has in Northern Ireland in accordance with the MacBride Fair Employment Principles relating to non-discrimination in employment and freedom of workplace opportunity, regarding such operations in Northern Ireland and shall permit independent monitoring of its compliance with such Principles.

Yes or No (check answer)

C. State Ethics Law Provision

By submittal of this bid, the undersigned hereby certifies, for and on behalf of the bidder, that he is familiar with the following provisions of the State Ethics Law provisions applicable to post employment restrictions affecting former state employees: POL §73(8)(a)(i) the two year ban, and §73(8)(a)(ii), the life time bar, and that submittal of this bid is not in violation of either provision, and that no violation will occur by entering into a contract or in performance of the contractual services, and further that the bidder recognizes that the Department may rely upon this certification.

Except as follows: (attach information if needed)

(Bidder/Proposer is to make full disclosure of any circumstances which could affect its ability to perform in complete compliance with the cited laws. Any questions as to the applicability of these provisions should be addressed to the New York State Joint Commission on Public Ethics, 540 Broadway, Albany, NY 12207 or by phone (518) 408-3976.

D. Procurement Lobbying Affirmation

The Undersigned affirms that it understands and agrees to comply with the procedures of the New York State Department of Environmental Conservation relative to permissible contacts as required by State Finance Law §139-j (3) and §139-j (6) (b).

Print Name, Title

Signature, Date

ARTICLE 1(c) – Bid Security (Page to Attach)

If Bid Security is a Bid Bond, use Bid Bond form and provide certified power of attorney.

ARTICLE 1(d) - Bid Bond

Know all persons by these presents, that we, the undersigned _____, as Principal, and _____, as Surety, are hereby held and firmly bound unto New York State Department of Environmental Conservation in the penal sum of _____ for the payment of which, will and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. Signed this ____ day of _____ 20____.

The condition of the above obligation is such that whereas the Principal has submitted to New York State Department of Environmental Conservation certain Bid, attached hereto and hereby made a part hereof to enter into a contract in writing, for the C&D Power Systems (C&D Batteries), Tributary D-1-7 Sediment and Lagoon Remediation, Contract No. D012095, Site No. 336001

Now, Therefore

- a) If said Bid shall be rejected, or in the alternate,
- b) If said Bid shall be accepted and the principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for the faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid.

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

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

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Corporate Seal(s) – Principal & Surety
(If no seal, write "No Seal" and sign)

By _____
Principal (Print Name and Title)

Principal (Signature and Date)

By _____
Surety (Print Name and Title)

Surety (Signature and Date)

ARTICLE 1(e) - Offerer Disclosure of Prior Non-Responsibility Determinations
(Page 1 of 2)

Name of Individual or Entity Seeking to Enter into the Procurement Contract:

Name: _____

Address: _____

Name and Title of Person Submitting this Form:

Name: _____

Title: _____

Contract Procurement Number: D012095

Date: _____

1. Has any Governmental Entity made a finding of non-responsibility regarding the individual or entity seeking to enter into the Procurement Contract in the previous four years?

Yes No (If yes, answer questions 2.– 4., if no, go to question 5.)

2. Was the basis for the finding of non-responsibility due to a violation of State Finance Law §139-j?

Yes No

3. Was the basis for the finding of non-responsibility due to the intentional provision of false or incomplete information to a Governmental Entity?

Yes No

4. If you answered yes to any of the above questions, please provide details regarding the finding of non-responsibility below.

Governmental Entity: _____

Date of Finding of Non-responsibility: _____

Basis of Finding of Non-Responsibility: Provide details under separate cover, endorse, date and provide marked as Supplement to Article 1(e).

**ARTICLE 1(e) - Offerer Disclosure of Prior Non-Responsibility Determinations
(Page 2 of 2)**

5. Has any Governmental Entity or other governmental agency terminated or withheld a Procurement Contract with the above-named individual or entity due to the intentional provision of false or incomplete information?

Yes No (If yes, provide details below.)

Governmental Entity: _____

Date of Termination or Withholding of Contract: _____

Basis of Termination or Withholding: Provide details under separate cover, endorse, date and provide marked as Supplement to Article 1(e).

Offerer Certification:

Offerer certifies that all information provided to the New York State Department of Environmental Conservation with respect to State Finance Law §139-k is complete, true and accurate.

Signature: _____

Date: _____

Name: _____

Title: _____

This form must be signed by an authorized executive or legal representative and returned with the bid/proposal.

**ARTICLE 1(f) – Vendor Assurance of No Conflict of Interest or Detrimental Effect
(Page 1 of 2)**

The Firm offering to provide services pursuant to this Procurement/Contract, as a contractor, joint venture contractor, subcontractor, or consultant, attests that its performance of the services outlined in this Procurement/Contract does not and will not create a conflict of interest with nor position the Firm to breach any other contract currently in force with the State of New York.

Furthermore, the Firm attests that it will not act in any manner that is detrimental to any State project on which the Firm is rendering services. Specifically, the Firm attests that:

1. The fulfillment of obligations by the Firm, as proposed in the response, does not violate any existing contracts or agreements between the Firm and the State;
2. The fulfillment of obligations by the Firm, as proposed in the response, does not and will not create any conflict of interest, or perception thereof, with any current role or responsibility that the Firm has with regard to any existing contracts or agreements between the Firm and the State;
3. The fulfillment of obligations by the Firm, as proposed in the response, does not and will not compromise the Firm's ability to carry out its obligations under any existing contracts between the Firm and the State;
4. The fulfillment of any other contractual obligations that the Firm has with the State will not affect or influence its ability to perform under any contract with the State resulting from this Procurement;
5. During the negotiation and execution of any contract resulting from this Procurement, the Firm will not knowingly take any action or make any decision which creates a potential for conflict of interest or might cause a detrimental impact to the State as a whole including, but not limited to, any action or decision to divert resources from one State project to another;
6. In fulfilling obligations under each of its State contracts, including any contract which results from this Procurement, the Firm will act in accordance with the terms of each of its State contracts and will not knowingly take any action or make any decision which might cause a detrimental impact to the State as a whole including, but not limited to, any action or decision to divert resources from one State project to another;
7. No former officer or employee of the State who is now employed by the Firm, nor any former officer or employee of the Firm who is now employed by the State, has played a role with regard to the administration of this contract procurement in a manner that may violate section 73(8)(a) of the State Ethics Law; and

**ARTICLE 1(f) – Vendor Assurance of No Conflict of Interest or Detrimental Effect
(Page 2 of 2)**

8. The Firm has not and shall not offer to any employee, member or director of the State any gift, whether in the form of money, service, loan, travel, entertainment, hospitality, thing or promise, or in any other form, under circumstances in which it could reasonably be inferred that the gift was intended to influence said employee, member or director, or could reasonably be expected to influence said employee, member or director, in the performance of the official duty of said employee, member or director or was intended as a reward for any official action on the part of said employee, member or director.

Firms responding to this Procurement/Contract should note that the State recognizes that conflicts may occur in the future because a Firm may have existing or new relationships.

The State will review the nature of any such new relationship and reserves the right to terminate the contract for cause if, in its judgment, a real or potential conflict of interest cannot be cured.

Signature: _____

Date: _____

Name: _____

Title: _____

This form must be signed by an authorized executive or legal representative and returned with the bid/proposal.

ARTICLE 1(g) - Sexual Harassment Prevention Certification Form

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

Company Name: _____

Signature: _____

Print Name and Title: _____

Date: _____

If the above certification cannot be made, the bidder must submit a signed statement below detailing the reasons why the certification cannot be made.

Company Name: _____

Signature: _____

Print Name and Title: _____

Date: _____

Article 1 (h) - Certification Under Executive Order No. 16 - Prohibiting State Agencies and Authorities from Contracting with Businesses Conducting Business in Russia

Executive Order No. 16 provides that “all Affected State Entities are directed to refrain from entering into any new contract or renewing any existing contract with an entity conducting business operations in Russia.” The complete text of Executive Order No. 16 can be found [here](#).

The Executive Order remains in effect while sanctions imposed by the federal government are in effect. Accordingly, vendors who may be excluded from award because of current business operations in Russia are nevertheless encouraged to respond to solicitations to preserve their contracting opportunities in case the sanctions are lifted during a solicitation or even after award in the case of some solicitations.

As defined in Executive Order No. 16, an “entity conducting business operations in Russia” means an institution or company, wherever located, conducting any commercial activity in Russia or transacting business with the Russian Government or with commercial entities headquartered in Russia or with their principal place of business in Russia in the form of contracting, sales, purchasing, investment, or any business partnership.

Is Vendor an entity conducting business operations in Russia, as defined above? Please answer by checking one of the following boxes:

- 1. No, Vendor does not conduct business operations in Russia within the meaning of Executive Order No. 16.
- 2.a. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but has taken steps to wind down business operations in Russia or is in the process of winding down business operations in Russia. (Please provide a detailed description of the wind down process and a schedule for completion.)
- 2.b. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16 but only to the extent necessary to provide vital health and safety services within Russia or to comply with federal law, regulations, executive orders, or directives. (Please provide a detailed description of the services being provided or the relevant laws, regulations, etc.)
- 3. Yes, Vendor conducts business operations in Russia within the meaning of Executive Order No. 16.

The undersigned certifies under penalties of perjury that they are knowledgeable about the Vendor’s business and operations and that the answer provided herein is true to the best of their knowledge and belief.

Vendor Name (legal entity): _____

By (signature): _____

Name (printed): _____

Title: _____

Date: _____

ARTICLE 2(a) - Statement of Surety's Intent

To: **New York State Department of Environmental Conservation**

We have reviewed the Bid of:

_____ (Contractor)

Having its place of business at:

_____ (Address)

For the Project:

Bids for which will be received on _____ (Bid Opening Date) and wish to advise that should this Bid of Contractor be accepted and the Contract awarded to Contractor, it is our present intention to become surety on the Performance Bond and Labor and Material Payment Bond required by the Contract.

Any arrangement for the Bonds required by the Contract is a matter between Contractor and ourselves and we assume no liability to Department or third parties if for any reason we do not execute the requisite bonds.

We, the undersigned, are duly licensed to do business in the State of New York.

Attest, and Attach Power of Attorney:

Corporate Seal

(If no seal, write "No Seal" and sign)

_____ **Surety Name, Title**

_____ **Surety's Authorized Signature(s), Date**

_____ **Telephone Number and email address for Bonding Company**

_____ **Telephone Number and email address for Bonding Broker**

Article 2(b) - M/WBE-EEO Utilization Plan and Work Force Utilization

Contractor must submit M/WBE-EEO Utilization Plan after being issued Notice of Intent to Award in accordance with Article 5c. of Section III. Quarterly reporting is required throughout the term of the contract and Contractors will receive quarterly reminders from the M/WBE-EEO compliance unit.

Contractors are invited to file the required forms online or may choose to complete and submit paper forms. Instructions are available at: <http://www.dec.ny.gov/about/48854.html>

If submitting paper forms, The M/WBE-EEO Utilization Plan and/or quarterly reports shall be sent directly to:

NYS Department of Environmental Conservation
Division of Management and Budget Services
Minority and Women's Business Programs Unit
625 Broadway, 10th Floor
Albany, New York 12233-5028

Contractors opting to file electronic forms can obtain the appropriate forms from the website. The Contractor will be able to amend the forms either online, through the quarterly report process, or by contacting the M/WBE-EEO compliance specialist.

M/WBE Directory on the Internet

Empire State Development has put the Minority and Women-Owned Business Directory on the Internet. The Internet address is <https://ny.newnycontracts.com/> . Support will be available from 9:00 a.m. to 5:00 p.m., Monday through Friday, except for NYS holidays. If assistance is needed, call (855)-ESD-4MWBE or (855)-373-4692.

Article 2 (c) - Instructions for Completing the New York State Vendor Responsibility Questionnaire CCA-2

- Please Read Before Completing Questionnaire -

Contractors must submit a Vendor Responsibility Questionnaire CCA-2 form after being announced the low bidder for any competitively bid contract of \$10,000 or more, or when proposed for subcontract work valued at \$10,000 or more. The Department may require additional information deemed necessary for its review.

Contractors are invited to file the required Vendor Responsibility Questionnaire online via the New York State VendRep System or may choose to complete and submit a paper questionnaire. To enroll in and use the New York State VendRep System, see the VendRep System Instructions available at: <http://www.osc.state.ny.us/vendrep/systeminit.htm> or go directly to the VendRep System online at <https://portal.osc.state.ny.us>. For direct VendRep System user assistance, the Office of the State Comptroller's Help Desk may be reached at 866-370-4672 or 518-408-4672 or by email at helpdesk@osc.state.ny.us. Contractors opting to file a paper questionnaire can obtain the appropriate questionnaire from the VendRep website www.osc.state.ny.us/vendrep or contact the Office of the State Comptroller's Help Desk.

The enrollment process in the VendRep System can take several days. Contractors are encouraged to enroll prior to submitting bids to ensure meeting the timeframes for certification.

Contractors electing to file the Vendor Responsibility Questionnaire online shall certify to the Department, via a letter, within the timeframe designated in the Instructions to Bidders, that the questionnaire has been updated. The Contractor will be able to supply any additional information requested by the Department, by updating the online questionnaire and notifying the Department via letter, that it has been recertified.

Throughout the contract term, the Contractor is required to notify the Department in writing of any changes in Contractor's vendor responsibility disclosure related to the Contractor commencing bankruptcy proceedings; filings against the Contractor for relief under bankruptcy; Contractor making general assessment for benefit of creditors; a Court appointing a party to take charge of the Contractor's property; Contractor's inability to pay debts; or the Contractor being found in violation of laws and regulations of any public body having jurisdiction.

If the Contractor elects to file a paper copy directly with the Department, a completed original CCA-2 Form must be submitted within the timeframe designated in the Instructions to Bidders. Submit completed questionnaires marked "**CONFIDENTIAL**" to:

NYS Department of Environmental Conservation
Division of Environmental Remediation
Lisa Gorton, Project Manager
625 Broadway, 12th Floor
Albany, New York 12233-7017

Article 2 (d) – Authorizing Resolution

The Contractor is required to submit an Authorizing Resolution stating that a certain individual has the authority to sign the Contract on behalf of the firm.

ARTICLE 2(e) – Executive Order No. 177 Certification

The New York State Human Rights Law, Article 15 of the Executive Law, prohibits discrimination and harassment based on age, race, creed, color, national origin, sex, pregnancy or pregnancy-related conditions, sexual orientation, gender identity, disability, marital status, familial status, domestic violence victim status, prior arrest or conviction record, military status or predisposing genetic characteristics.

The Human Rights Law may also require reasonable accommodation for persons with disabilities and pregnancy-related conditions. A reasonable accommodation is an adjustment to a job or work environment that enables a person with a disability to perform the essential functions of a job in a reasonable manner. The Human Rights Law may also require reasonable accommodation in employment on the basis of Sabbath observance or religious practices.

Generally, the Human Rights Law applies to:

- all employers of four or more people, employment agencies, labor organizations and apprenticeship training programs in all instances of discrimination or harassment;
- employers with fewer than four employees in all cases involving sexual harassment; and,
- any employer of domestic workers in cases involving sexual harassment or harassment based on gender, race, religion or national origin.

In accordance with Executive Order No. 177, the Bidder hereby certifies that it does not have institutional policies or practices that fail to address the harassment and discrimination of individuals on the basis of their age, race, creed, color, national origin, sex, sexual orientation, gender identity, disability, marital status, military status, or other protected status under the Human Rights Law. Executive Order No. 177 and this certification do not affect institutional policies or practices that are protected by existing law, including but not limited to the First Amendment of the United States Constitution, Article 1, Section 3 of the New York State Constitution, and Section 296(11) of the New York State Human Rights Law.

Contractor: _____

Signature: _____

Name: _____

Title: _____

Date: _____

ARTICLE 3(a) - Instructions for Insurance

Please refer to Contract Documents Section VIII, Article 4, and any Addenda if applicable, for the types and amounts of insurance required for this contract, as well as the necessary forms and endorsement requirements.

Bidders should:

1. Request that your insurance provider note the Department's specific contract number D012095 in the Description of Operations box on the ACORD form.
2. List the following address on the Workers' Compensation and Disability Benefits Certificates as Entity Requesting Proof of Coverage and on the ACORD forms and endorsements as the Certificate Holder:

State of New York and the NYS Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau E
Lisa Gorton, Project Manager
625 Broadway, 12th Floor
Albany, NY 12233-7017

3. Submit all required insurance certificates and applicable endorsements to the following address:

New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau E
Lisa Gorton, Project Manager
625 Broadway, 12th Floor
Albany, NY 12233-7017

ARTICLE 3(b) - Instruction for Performance Bond and Labor and Material Payment Bond

- 1) The performance bond and the labor and material payment bond are to be only submitted by the bidder who receives the Notice of Intent to Award letter from Department.
- 2) Use the forms that are included in the Contract Documents. **DO NOT RETYPE THE FORMS.**
- 3) Attach a **SEPARATE** certified power of attorney and surety financial statement to **EACH** bond (i.e., one set attached to performance bond and one set attached to labor and material payment bond)
- 4) Performance Bond and Labor and Materials Payment Bond must be secured by the surety and notarized within three (3) days of the date the Contractor signs the agreement.

ARTICLE 3(c) - Performance Bond (page 1 of 3)

Date Bond Executed: _____

NYSDEC-DER Site Number: 336001

Date Contract Executed by Principal: _____

Principal: (Name and Address)

Surety (Name and Address - Indicate State of incorporation and location of principal office)

Full and Just Sum of Bond

(Express in Words)

(Express in Numbers)

Know all persons by these presents, that we, the **Principal** and **Surety**, above named, are held and firmly bound unto the New York State Department of Environmental Conservation for and on behalf of the People of the State of New York, hereinafter called the Department, in full and just sum of the amount stated above, good and lawful money of the United States of America, to the payment of which said sum, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the **Principal** has entered into a certain written contract with the Department, covering the project and specification above;

Now, Therefore, the condition of this obligation is such, that if the **Principal** shall well, truly and faithfully comply with and perform all of the terms, covenants and conditions of said contract on their (his, its) part to be kept and performed, according to the true intent and meaning of said contract, and shall protect the Department and the People of the State of New York against, and pay any and all amounts, damages, costs and judgments which may or shall be recovered against the Department or the State of New York may be called upon to pay to any person or corporation by reason of any damages arising or growing out of the doing of said work, or the repair or maintenance thereof, or the manner of doing the same, or the neglect of the **Principal**, or their (its) agents or servants, or the improper performance of the work by the **Principal**, or their (its) agents or servants, or the infringement of any patent or patent rights by reason of the use of materials furnished or work done as aforesaid or otherwise, then this obligation shall be null and void, otherwise to remain in full force and virtue.

ARTICLE 3(c) - Performance Bond (page 2 of 3)

And the **Surety**, for value received, hereby stipulates and agrees, if requested to do so by the department to fully perform and complete the work mentioned and described in the contract and specifications, pursuant to the terms, conditions and covenants thereof, if for any cause, the **Principal** fails or neglects to so fully perform and complete the work; and the **Surety** further agrees to commence the work of completion within twenty days after notice thereof from the Department, and to complete the work with all due diligence.

And the **Surety**, for value received hereby stipulates and agrees that no change, extension, alteration or addition to the terms of this contract or specifications, accompanying the same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

In Testimony Whereof, the **Principal**, and the authorized officers of the **Surety** have caused this instrument to be signed and sealed on the date shown above.

Signed, sealed and delivered in the presence of:

Corporate Seal of Principal (if a Corporation)

Principal Organization

By _____
Print Name, Title

Signature, Date

Surety

Business Address

By _____
Print Name, Title

Corporate Seal of Surety Company

Signature, Date

Attest _____
Print Name, Title

Signature, Date

ARTICLE 3(c) - Performance Bond (page 3 of 3)

- ACKNOWLEDGMENT BY SURETY COMPANY -

State of _____)
 s.s.:
 County of _____)

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

(Seal)

Notary Public

- ACKNOWLEDGMENT BY PRINCIPAL -

State of _____)
 s.s.:
 County of _____)

On the _____ day of _____, 20____, before me, the undersigned notary public, personally appeared _____, known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose names(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.

(Seal)

Notary Public

ARTICLE 3(d) - Labor and Material Payment Bond (page 1 of 3)

Date Bond Executed: _____

NYSDEC-DER Site Number: 336001

Date Contract Executed By Principal: _____

Principal: (Name and Address)

Surety (Name and Address - Indicate State of incorporation and location of principal office)

Full and Just Sum of Bond

(Express in Words)

(Express in Numbers)

Know all persons by these presents, That We, the **Principal** and the **Surety** above named, are held and firmly bound unto the Department of Environmental Conservation for and on behalf of the People of the State of New York, in full and just sum of the amount stated above, good and lawful money of the United States of America, to the payment of which said sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the **Principal** has entered into a certain written contract with the Department of Environmental Conservation, covering the project and specification indicated above.

Now, Therefore, the condition of this obligation is such, that if the **Principal** shall promptly pay all moneys due to all persons furnishing labor and materials to him or his subcontractors in the prosecution of the work provided for in the contract, then this obligation shall be void, otherwise to remain in full force and effect;

Provided, however, that the Comptroller of the State of New York having required the **Principal** to furnish this bond in order to comply with the provisions of Section 137 of the State Finance Law, all rights and remedies on this bond shall inure solely to such persons and shall be determined in accordance with the provisions, conditions and limitations of said Section to the same extent as if they were copied at length herein; and

ARTICLE 3(d) - Labor and Material Payment Bond (page 2 of 3)

Further, provided, that the place of trial of any action on this bond shall be in the county in which the contract was to be performed, or if the contract was to be performed in more than one county, then in any such county, and not elsewhere.

In Testimony Whereof, the **Principal** and the authorized officers of the **Surety** have caused this instrument to be signed and sealed on the date shown above.

Signed, sealed and delivered in the presence
of:

Corporate Seal of Principal (if a Corporation)

Principal Organization

By _____
Print Name, Title

Signature, Date

Surety

Business Address

By _____
Print Name, Title

Corporate Seal of Surety Company

Signature, Date

Attest _____
Print Name, Title

Signature, Date

ARTICLE 3(d) - Labor and Material Payment Bond (page 3 of 3)

- ACKNOWLEDGMENT BY SURETY COMPANY -

State of _____)

s.s.:

County of _____)

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

(Seal)

Notary Public

- ACKNOWLEDGMENT BY PRINCIPAL -

State of _____)

s.s.:

County of _____)

On the _____ day of _____, 20____, before me, the undersigned notary public, personally appeared _____, known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose names(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.

(Seal)

Notary Public

ARTICLE 3(e) – SDVOB Utilization Plan

Contractor must submit a Service-Disabled Veteran-Owned Business (SDVOB) Utilization Plan after being issued a Notice of Intent to Award in accordance with Section III, Article 5(c). Quarterly reporting is required throughout the term of the contract.

For additional information regarding the SDVOB Utilization Plan and quarterly reporting including information on how to obtain the forms, the contractor should contact the Department's SDVOB lead at:

SDVOB Program Lead
Bureau of Contract and Grant Development
New York State Department of Environmental Conservation
625 Broadway, 10th Floor
Albany, NY 12233-1080

Phone: 518-402-9240

Email: sdvob@dec.ny.gov

SECTION VI

Agreement

This **Agreement**, by and between the **New York State Department of Environmental Conservation** (hereinafter referred to as Department) having offices at 625 Broadway, Albany, New York 12233 and, _____ (Bidder name)

- o a corporation organized and existing under the laws of the _____,
- o State of a partnership, consisting of _____,
- o an individual conducting business as _____,

hereinafter called "Contractor", the location of whose principal office is,

_____.

WITNESSETH

Whereas, Department is empowered by law to obtain services; the performance of these services is essential to Department; and Department, after fully examining all of its internal capabilities and thoroughly investigating all possible alternative approaches, has determined that certain tasks can best be accomplished through a contract;

Whereas, Contractor hereby represents that it is capable of providing the services which are the subject matter of this Contract;

Now Therefore, Department **and** Contractor, in consideration of the mutual covenants hereinafter set forth agree as follows:

ARTICLE 1 - Defined Terms

Terms used in the Agreement which are defined in the Contract Documents have the intent and meanings assigned to them in the Contract Documents.

ARTICLE 2 - Work

As indicated or specified in the Contract Documents, Contractor shall complete in a timely and workmanlike manner, any and all obligations, duties and responsibilities, and provide any and all labor, materials, equipment, temporary facilities, and incidentals necessary to complete the construction generally identified and shown on the plans and Contract Documents entitled:

New York State Department of Environmental Conservation
Division of Environmental Remediation
Site Name: Former C&D Power Systems (C&D Batteries)
Contract No. D012095
Date: TBD

ARTICLE 3 - Engineer

AECOM, USA, Inc. shall assume all duties and responsibilities of and have the rights and authority assigned to Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - Contract Documents

The Documents which comprise the entire Contract between Department and Contractor concerning the Work consist of the following:

- 4.1 Appendices A, B, C & D
- 4.2 Engineer's written clarifications and interpretations
- 4.3 Change Orders
- 4.4 Administrative Agreements
- 4.5 Field Orders
- 4.6 Proposed Change Orders signed by Department
- 4.7 Approved Shop Drawings
- 4.8 Addenda
- 4.9 Agreement (including all Appendices)
- 4.10 Measurement for Payment
- 4.11 Bid Forms and Attachments Exclusive of Bonds and Insurance Certificates
- 4.12 Drawings, Plans
- 4.13 Supplementary Specifications
- 4.14 Supplementary Conditions
- 4.15 Standard Specifications
- 4.16 General Conditions
- 4.17 Supplementary Bidding Information and Requirements
- 4.18 Bidding Information and Requirements
- 4.19 Terms and Definitions
- 4.20 Advertisement
- 4.21 Bonds and Insurance Certificates

In the event of a conflict between the documents set forth above, they shall be entitled to priority according to the order in which they are listed.

ARTICLE 5 - Contractor's Representations

In order to induce Department to enter into this Agreement, Contractor makes the following representations:

- 5.1 Contractor has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and applicable Laws that in any manner may affect cost, schedule, progress, performance or furnishing of the Work.
- 5.2 Contractor has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in Information to Bidders, as provided in the General Conditions, and accepts the determination set forth in said Section to the extent of the technical data contained in such reports and drawings upon which Contractor is entitled to reply.

- 5.3 Contractor has obtained and carefully studied all such examinations, investigations, explorations, tests, reports and studies which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, schedule, progress, performance or furnishing of the Work as Contractor considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Article 3 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.
- 5.4 Contractor has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by Contractor in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Article 3 of the General Conditions.
- 5.5 Contractor has correlated (or assumes responsibility for correlating) the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- 5.6 Contractor has given Engineer written notice of all conflicts, errors or discrepancies that he (she) has discovered in the Contract Documents and any written resolution thereof is acceptable to Contractor.
- 5.7 General Responsibility: The Contractor shall at all times during the Contract term remain responsible. The Contractor agrees, if requested by the Commissioner or his or her designee, to present evidence of its continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity. Additional responsibilities required of the Contractor in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, are specified within the provisions of Article 5 of the General Conditions.

ARTICLE 6 - Contract Term

The number of days within which, or alternatively, the dates by which, the Work, or any specified part thereof, is to be completed (the Contract Times) are set forth as follows:

- 6.1 The Work will be Substantially Completed within **THREE HUNDRED AND TEN (310) calendar days** from the Effective Date of the Agreement, plus twenty (20) calendar days.
- 6.2 Separable parts of the Work, if specified in an Attachment A to this Agreement, will be Substantially Completed within the number of days stated in Attachment A from the Effective Date of the Agreement, plus twenty (20) calendar days.
- 6.3 The Work will be completed and ready for final payment in accordance with the General Conditions within **THREE HUNDRED AND THIRTY EIGHT (338) calendar days** from the Effective Date of the Agreement, plus twenty (20) calendar days

- 6.4 Department and Contractor recognize that the Contract Time(s) specified in paragraphs 6.1, 6.2 and 6.3 above are of the essence of this Agreement, and that Department may suffer financial loss if the Work is not completed within the Contract Time(s) specified above, plus any extensions thereof allowed in accordance with the General Conditions, as amended or supplemented in the Supplementary Conditions.
- 6.5 Accordingly, Contractor agrees to forfeit and pay Department as liquidated damages, and not as a penalty, the amount of **FOUR THOUSAND FIVE HUNDRED AND NINETY FIVE dollars (\$4,595.00)** for each day that expires after the Contract Time specified in paragraph 6.1 above for Substantial Completion until the Work is Substantially Complete. Contractor further agrees to pay Department as liquidated damages, and not as a penalty, each of the amounts set forth in Attachment A if applicable to this agreement for each day that expires after each of the contract times specified in paragraph 6.2 above for substantial completion until the each of the separable parts of the work is substantially complete. After substantial completion of the work, if Contractor shall neglect, refuse or fail to complete the remaining work within the contract time or any proper extension thereof granted by Department, Contractor shall pay Department as liquidated damages, and not as a penalty, the amount of **FOUR THOUSAND TWO HUNDRED AND FOURTY FOUR dollars (\$4,244.00)** for each day that expires after the Contract Time specified in paragraph 6.3 above for completion and readiness for final payment. These liquidated damages are additive and represent a reasonable estimate, in lieu of any such proof, of Department's extra expenses for Inspection, engineering services, administrative costs, and Interim excess operating costs for each day that expires after the associated Contract Time.
- 6.6 In addition to the liquidated damage amounts set forth in paragraph 6.5 above, Contractor agrees to pay Department's additional actual damages arising out of the types of expenses itemized below for each day that expires after each of the Contract Times specified in paragraph 6.2 above for Completion of each of the designated parts of the Work until each of the designated parts of the Work achieves the specified completion. These actual damages are additive and shall equal Department's expenditures for costs other than those itemized in paragraph 6.5, including, but not limited to, delay damage settlements or awards related to other separate contracts, delay penalties or fines imposed by regulatory agencies, contract damage and loss of use, excess financing costs, and professional fees and related expenses incurred thereto.

ARTICLE 7 - Alterations and Omissions

Department reserves the right, at any time during the progress of the work, to alter the plans or omit any portion of the work as it may deem reasonably necessary for the public interest; making allowances for additions and deductions with compensation made in accordance with the Contract Documents.

ARTICLE 8 - Determinations as to Variances

In case of any ambiguity in the Contract Documents, the matter must be immediately submitted to the Representative of Department designated in the Contract Documents, who shall adjust the same, and his (her) decision in relation thereto shall be final and conclusive upon the parties.

ARTICLE 9 - Payment Procedures

Contractor shall submit Applications for Payment on standard form in accordance with the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions, as amended or supplemented in the Supplementary Conditions and in accordance with Section 139-f of the State Finance Law.

- 9.1 **Progress Payments.** Contractor shall submit Applications for Payments to Engineer for review no more frequently than monthly in accordance with paragraph 13.2 of the General Conditions from the date when the Contract Time commences to run. Department shall make progress payments against the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer as provided below. All progress payments will be calculated on the basis of the progress of the Work measured by the Schedule of Values established pursuant to paragraph 1.4.3 of the General Conditions. Progress payments will also be made for materials pertinent to the Contract in accordance with the General Conditions. Contractor shall provide complete and accurate billing invoices to the Department in order to receive payment. Billing invoices submitted to the Department must contain all information and supporting documentation required by the Contract, the Department, and the State Comptroller.

Payments for expenditures incurred under this contract will be rendered electronically to the **Recipient/Contractor/Vendor** unless payment by paper check is expressly authorized by the Commissioner of the Department (Commissioner), in the Commissioner's sole discretion, due to extenuating circumstances. Such electronic payment shall be made in accordance with ordinary State procedures and practices. The **Recipient/Contractor/Vendor** shall comply with the **Office of the State Comptroller's (OSC's)** procedures to authorize electronic payments. Authorization forms are available at the **OSC's** website at www.osc.state.ny.us/epay/index.htm, by e-mail at epunit@osc.state.ny.us or by telephone at (518) 474-4032. The **Recipient/Contractor/Vendor** acknowledges that it will not receive payment under this **Contract** if it does not comply with the **OSC's** electronic payment procedures, except where the Commissioner has expressly authorized payment by paper check as set forth above.

- 9.1.1 Prior to Substantial Completion of the Work, progress payments will be made less five percent (5%) the aggregate of payments (i.e. retainage) previously made and less an amount necessary to satisfy any claims, liens, or judgments against Contractor which have not been suitably discharged.
- 9.2 **Payment upon substantial completion.** When the work, or major portions thereof, as contemplated in the Contract Documents, is substantially completed, Contractor shall submit to Department, an Application for Payment in accordance with the General Conditions for the remaining amount of the contract balance or amount due for that major portion completed. Department will pay the remaining Contract balance, or amount due for that major portion completed, less two times the value of any remaining items to be completed and an amount necessary to satisfy any claims, liens, judgments against Contractor which have not been suitably discharged. Payment for remaining items will be made upon their completion.

- 9.3 **Final Payment.** Upon final completion of the physical Work and acceptance of the Work in accordance with the General Conditions, Department shall pay the remainder of the Contract Price as recommended by Engineer.

ARTICLE 10 - No Estimate on Contractor's Noncompliance

It is further agreed that so long as Contractor has not complied with any lawful or proper direction concerning the work or material given by Department, Contractor shall not be entitled to have any estimate made for the purpose of payment, nor shall any estimate be rendered on account of work done or material furnished until Contractor has fully and satisfactorily complied with such direction.

ARTICLE 11 - Delays, Inefficiencies, and Interference

Contractor agrees to make no claim for any consequential damages attributable to any delays, or act in the performance of this contract which are not directly occasioned by any act or omission to act by the State or any of its representatives. In the event Contractor completes the work prior to the contract completion date set forth in the proposal, Contractor hereby agrees to make no claim for extra costs due to delays, interferences or inefficiencies in the performance of the work.

- 1) Contractor further agrees that it has included in its bid prices for the various items of the Contract any additional costs for delays, inefficiencies, or interferences affecting the performance or scheduling of Contract work caused by, or attributable to, the following instances:
 - a. The work or the presence on the Site of any third party, including but not limited to that of other contractors or personnel employed by the State, or by other public bodies, by railroad, transportation or utility companies or corporations, or by private enterprises, or any delay in progressing such work by any third party.
 - b. The existence of any facility or appurtenance owned, operated, or maintained by any third party.
 - c. The act, or failure to act, of any other public or governmental body, including, but not limited to, approvals, permits, restrictions, regulations or ordinances.
 - d. Restraining orders, injunctions, or judgments issued by a court.
 - e. Any labor boycott, strike, picketing or similar situation.
 - f. Any shortages of supplies or materials required by the contract work.
 - g. Any situation which was, or should have been, within the contemplation of the parties at the time of entering into the contract.

ARTICLE 12 - Postponement, Suspension or Termination

- 12.1 Department shall have the right to postpone, suspend or terminate this Contract in whole or in part for the convenience of Department. If, after termination for cause of Contractor it is determined that no cause existed for termination of Contractor, such termination shall be deemed to have been made for the convenience of Department.

- 12.2 If this Contract is terminated by Department for convenience or cause, Department shall make payment on an equitable basis for all work performed in accordance with the Contract Documents prior to termination in accordance with paragraphs 12.3 and 12.4 below.
- 12.3 If this contract is terminated for cause, no payment shall be made for anticipated profit on unperformed work or services. Additionally, Department may adjust any payment due to Contractor at the time of termination to account for any additional costs to Department because of Contractor's default.
- 12.4 If this contract is terminated for convenience, payment shall be made for any services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by Contractor which had become firm prior to the termination.
- 12.5 Upon termination of this Contract under this Agreement, Department may take over the work or may award or negotiate a contract with another party to complete work required by these Contract Documents.
- 12.6 Termination for Non-Responsibility: Upon written notice to the Contractor, and a reasonable opportunity to be heard with appropriate Department officials or staff, the Contract may be terminated by the Commissioner, or his or her designee, at the Contractor's expense where the Contractor is determined by the Commissioner, or his or her designee, to be non-responsible. In such event, the Commissioner, or his or her designee, may complete the contractual requirements in any manner he or she may deem advisable and pursue available legal or equitable remedies for breach.
- 12.7 Suspension of Work (for Non-Responsibility): The Commissioner, or his or her designee, in his or her sole discretion, reserves the right to suspend any or all activities under this Contract, at any time, when he or she discovers information that calls into question the responsibility of the Contractor. In the event of such suspension, the Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, the Contractor must comply with the terms of the suspension order. Contract activity may resume at such time as the Commissioner, or his or her designee, issues a written notice authorizing a resumption of performance under the Contract.

ARTICLE 13 – Completion of Physical Work and Final Acceptance

The time within which Department may bring an action on the Contract against Contractor shall be computed from the date of completion of the physical Work. In accordance with Section 138(a) of the State Finance Law, Contractor shall notify Department in writing that the physical Work has been completed. The date of completion must be no more than thirty days prior to the date of the notice. This notice must be delivered personally, or, by either registered or certified mail, return receipt requested, to the exact address given below.

**New York State Department of Environmental Conservation
Division of Environmental Remediation
Andrew Guglielmi, Director - Remedial Bureau E
625 Broadway, 12th Floor
Albany, New York 12233-7017**

If Department disagrees with the date set forth in the notice, it will so advise Contractor in writing within 30 days of receipt of the notice. This notice will be delivered by either registered or certified mail, return receipt requested, to Contractor's address as shown in this Agreement.

If Department accepts Contractor's date of completion of physical Work, Department's final acceptance of work shall be as of that date.

When, in the opinion of Department, Contractor has fully performed the physical Work under the Contract, Department shall notify Contractor in writing of final acceptance.

ARTICLE 14 - Final Payment

After the final acceptance of the work, Engineer shall prepare a final agreement of the work performed and the materials placed and shall compute the value of such work and materials under and according to the terms of the contract. This agreement shall be certified, as to its correctness, by Engineer and submitted for final approval to Department. The Representative of Department designated in the Contract Documents shall have the right to reject the whole or any portion of the final agreement, should the said certificate of Engineer be found or known to be inconsistent with the terms of the agreement or otherwise improperly given and upon failure of Contractor to provide requested documentation including but not limited to that regarding payment of wages, suppliers or subcontractors. All certificates upon which partial payments may have been made being merely estimates, shall be subject to correction in the final certificate or final agreement.

ARTICLE 15 - Disposition of Documents and Data

Upon final acceptance of work under this Contract or termination of this Contract pursuant to this Agreement, or upon written demand of Department, Contractor shall promptly deliver or otherwise make available to Department all data, drawings, reports, estimates, and such other information and materials as may have been accumulated by Contractor in performing this Contract.

All documents and data are to be submitted in electronic format to the Engineer and Department. The Engineer/Department will not approve a final report unless, and until, all documents and data generated in support of that report have been submitted in accordance with the electronic submission protocols. Information on the format of data submissions can be found at:

<http://www.dec.ny.gov/chemical/62440.html>. Information on document submissions can be found at: <http://www.dec.ny.gov/regulations/2586.html>.

ARTICLE 16 – Applicable Law; Jurisdiction; Service of Legal Process

Contractor agrees:

- 16.1 That this Agreement is subject to and governed by all applicable federal and New York State law.
- 16.2 To procure all necessary licenses and permits.
- 16.3 To voluntarily and irrevocably submit to the jurisdiction of a New York State Court of competent jurisdiction, to resolve any dispute or controversy arising out of this Contract.

- 16.4 That the venue of any action at law or in equity commenced against Department arising out of a Project in one of Department's regions, shall be in the county in that Region where Department regional headquarters is located.
- 16.5 That the service of legal process or any notices in connection with a dispute or controversy arising out of this Contract, by United States registered mail, postage prepaid, addressed to the Designated representative of Department at the address stated in the Contract. Documents shall constitute good and valid service of process upon Engineer.
- 16.6 To waive any defense based on or alleging lack of jurisdiction, improper venue, or invalid service, if there is compliance with paragraphs 16.3 and 16.4 in this Article.
- 16.7 This Contract may be presented in court as conclusive evidence of the foregoing agreement.

ARTICLE 17 - Sales and Use Tax Exemption

Contractor represents that this project has been bid in such a manner that Department has full advantage of available exemptions from sales and compensating use taxes. Accordingly, Contractor agrees to make all payment requests in a manner which affords Department full advantage of such exemptions. Further, Contractor agrees to complete and to require all subcontractors and material men to complete a Contractor Exempt Purchase Certificate in the name of the New York State Department of Environmental Conservation, which shall be furnished to all persons, firms or corporations from whom they purchase materials, equipment or supplies which are tax exempt by reason of the fact that they will be sold to Department, or will be used as an integral component in the construction, rehabilitation, or improvement of any structure of building required by the Contract Documents.

Contractor agrees to maintain and keep, and to contractually require all subcontractors and material men to maintain and keep, records relating to the tax exemption of material, equipment and Supplies for a period of six years. The six- (6) year period shall commence to run as of the date of final payment.

ARTICLE 18 - Effective Date

This Contract and all Contract Documents shall take effect as of the date it is approved and filed by the state Comptroller.

ARTICLE 19 – Vendor Responsibility

The Department recommends that vendors file a required Vendor Responsibility Questionnaire online via the New York State VendRep System. To enroll in and use the New York State VendRep System, see the VendRep System Instructions available at: http://www.osc.state.ny.us/vendrep/vendor_index.htm or go directly to the VendRep System online at <https://portal.osc.state.ny.us> .

Vendors must provide their New York State Identification Number when enrolling. To request assignment of a Vendor ID or for VendRep System assistance, contact the Office of the State Comptroller's Help Desk at 866-370-4672 or 518-408-4672 or by email at: ciohelpdesk@osc.state.ny.us. Vendors opting to complete and submit a paper questionnaire can obtain the appropriate questionnaire from the VendRep website www.osc.state.ny.us/vendrep or may

contact the Department of the Office of the State Comptroller's Help Desk for a copy of the paper form.

ARTICLE 20 - Contract Price

The maximum payment which Department shall pay to Contractor, and which Contractor agrees to accept as full payment for its work under this Agreement, is the total of:

Bid

\$ _____ (Express Sum in Words)

\$ _____ (Express Sum in Numbers)

Plus/Minus executed change order(s)

SIGNATURE PAGE

IN WITNESS WHEREOF, this Contract 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 Contract, I also certify that original copies of this signature page will be attached to all other exact copies of this Contract."

CONTRACTOR SIGNATURE
By:
Print Name:
Title:
Dated:

DEPARTMENT SIGNATURE
By:
Print Name:
Title:
Dated:

<p>Contractor Acknowledgement State of _____)) ss.: County of _____)</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>
--

ATTORNEY GENERAL SIGNATURE
Approved as to Form:
Dated:

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

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SECTION VII

Appendices A, B, C & D

APPENDIX A

STANDARD CLAUSES FOR NEW YORK STATE CONTRACTS

PLEASE RETAIN THIS DOCUMENT
FOR FUTURE REFERENCE.

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STANDARD CLAUSES FOR NYS CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licenser, licensee, lessor, lessee or any other party):

1. EXECUTORY CLAUSE. In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

3. COMPTROLLER'S APPROVAL. In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds \$50,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$25,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed \$85,000 (State Finance Law § 163.6-a). However, such pre-approval shall not be required for any contract established as a centralized contract through the Office of General Services or for a purchase order or other transaction issued under such centralized contract.

4. WORKERS' COMPENSATION BENEFITS. In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the

Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment, nor subject any individual to harassment, because of age, race, creed, color, national origin, sexual orientation, gender identity or expression, military status, sex, disability, predisposing genetic characteristics, familial status, marital status, or domestic violence victim status or because the individual has opposed any practices forbidden under the Human Rights Law or has filed a complaint, testified, or assisted in any proceeding under the Human Rights Law. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-

a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of any State approved sums due and owing for work done upon the project.

7. NON-COLLUSIVE BIDDING CERTIFICATION. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

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

9. SET-OFF RIGHTS. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, the "Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the

agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION. (a) Identification Number(s). Every invoice or New York State Claim for Payment submitted to a New York State agency by a payee, for payment for the sale of goods or services or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number is any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Failure to include such number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or Claim for Payment, must give the reason or reasons why the payee does not have such number or numbers.

(b) Privacy Notification. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in the Statewide Financial System by the Vendor Management Unit within the Bureau of State Expenditures, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN. In accordance with Section 312 of the Executive Law and 5 NYCRR Part 143, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of

\$25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this agreement the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) at the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and

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

Contractor will include the provisions of "a," "b," and "c" above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this clause. The

contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

13. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

14. GOVERNING LAW. This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. LATE PAYMENT. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

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

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by

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

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

20. OMNIBUS PROCUREMENT ACT OF 1992. It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
Albany, New York 12245
Telephone: 518-292-5100
Fax: 518-292-5884
email: opa@esd.ny.gov

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

NYS Department of Economic Development
Division of Minority and Women's Business Development
633 Third Avenue
New York, NY 10017
212-803-2414
email: mwbecertification@esd.ny.gov
<https://ny.newnycontracts.com/FrontEnd/VendorSearchPublic.asp>

The Omnibus Procurement Act of 1992 (Chapter 844 of the Laws of 1992, codified in State Finance Law § 139-i and Public Authorities Law § 2879(3)(n)-(p)) requires that by signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than \$1 million:

(a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority- and

women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;

(b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

(c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and

(d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

21. RECIPROCITY AND SANCTIONS PROVISIONS. Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively, codified in State Finance Law § 165(6) and Public Authorities Law § 2879(5)) require that they be denied contracts which they would otherwise obtain. NOTE: As of October 2019, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii.

22. COMPLIANCE WITH BREACH NOTIFICATION AND DATA SECURITY LAWS. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law § 899-aa and State Technology Law § 208) and commencing March 21, 2020 shall also comply with General Business Law § 899-bb.

23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW. If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4)(g) of the State Finance Law (as amended by Chapter 10 of the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller.

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

25. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.

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

26. IRAN DIVESTMENT ACT. By entering into this Agreement, Contractor certifies in accordance with State Finance Law § 165-a that it is not on the "Entities Determined to be Non-Responsive Bidders/Offerers pursuant to the New York State Iran Divestment Act of 2012" ("Prohibited Entities List") posted at: <https://ogs.ny.gov/list-entities-determined-be-non-responsive-biddersofferers-pursuant-nys-iran-divestment-act-2012>

Contractor further certifies that it will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. Contractor agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. Contractor also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law § 165-a) is in violation of the above-referenced certifications, the state agency will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the Act within 90 days after the determination of such violation, then the state agency shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

The state agency reserves the right to reject any bid, request for assignment, renewal or extension for an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Prohibited Entities list after contract award.

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

APPENDIX B

Standard Clauses for All New York State Department of Environmental Conservation Contracts

The parties to the attached contract, license, lease, grant, amendment or other agreement of any kind (hereinafter "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract. The word "Contractor" herein refers to any party to the contract, other than the New York State Department of Environmental Conservation (hereinafter "Department").

I. **Postponement, suspension, abandonment or termination by the Department:**

The Department shall have the right to postpone, suspend, abandon or terminate this contract, and such actions shall in no event be deemed a breach of contract. In the event of any termination, postponement, delay, suspension or abandonment, the Contractor shall immediately stop work, take steps to incur no additional obligations, and to limit further expenditures. Within 15 days of receipt of notice, the Contractor shall deliver to the Department all data, reports, plans, or other documentation related to the performance of this contract, including but not limited to source codes and specifications, guarantees, warranties, as-built plans and shop drawings. In any of these events, the Department shall make settlement with the Contractor upon an equitable basis as determined by the Department which shall fix the value of the work which was performed by the Contractor prior to the postponement, suspension, abandonment or termination of this contract. This clause shall not apply to this contract if the contract contains other provisions applicable to postponement, suspension or termination of the contract.

II. **Indemnification and Hold harmless** The Contractor agrees that it will indemnify and save harmless the Department and the State of New York from and against all losses from claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against it by reason of any omission or tortious act of the Contractor, its agents, employees, suppliers or subcontractors in the performance of this contract. The Department and the State of New York may retain such monies from the amount due Contractor as may be necessary to satisfy any claim for damages, costs and the like, which is asserted against the Department and/or the State of New York.

III. **Conflict of Interest**

(a) Organizational Conflict of Interest. To the best of the Contractor's knowledge and belief, the Contractor warrants that there are no relevant facts or circumstances which could give rise to an organizational conflict of interest, as herein defined, or that the Contractor has disclosed all such relevant information to the Department.

(1) An organizational conflict of interest exists when the nature of the work to be performed under this contract may,

without some restriction on future activities, impair or appear to impair the Contractor's objectivity in performing the work for the Department.

(2) The Contractor agrees that if an actual, or potential organizational conflict of interest is discovered at any time after award, whether before or during performance, the Contractor will immediately make a full disclosure in writing to the Department. This disclosure shall include a description of actions which the Contractor has taken or proposes to take, after consultation with the Department, to avoid, mitigate, or minimize the actual or potential conflict.

(3) To the extent that the work under this contract requires access to personal, proprietary or confidential business or financial data of persons or other companies, and as long as such data remains proprietary or confidential, the Contractor shall protect such data from unauthorized use and disclosure and agrees not to use it to compete with such companies.

(b) Personal Conflict of Interest: The following provisions with regard to management or professional level employee personnel performing under this contract shall apply until the earlier of the termination date of the affected employee(s) or the duration of the contract.

(1) A personal conflict of interest is defined as a relationship of an employee, subcontractor employee, or consultant with an entity that may impair or appear to impair the objectivity of the employee, subcontractor employee, or consultant in performing the contract work. The Contractor agrees to notify the Department immediately of any actual or potential personal conflict of interest with regard to any such person working on or having access to information regarding this contract, as soon as Contractor becomes aware of such conflict. The Department will notify the Contractor of the appropriate action to be taken.

(2) The Contractor agrees to advise all management or professional level employees involved in the work of this contract, that they must report any personal conflicts of interest to the Contractor. The Contractor must then advise the Department which will advise the Contractor of the appropriate action to be taken.

(3) Unless waived by the Department, the Contractor shall certify annually that, to the best of the Contractor's knowledge and belief, all actual, apparent or potential conflicts of interest, both personal and organizational, as defined herein, have been reported to the Department. Such certification must be signed by a senior executive of the Contractor and submitted in accordance with instructions provided by the Department. Along with the annual certification, the Contractor shall also submit an update of any changes in any conflict of interest plan submitted with its proposal for this contract. The initial certification shall cover the one-year period from the date of contract award, and all subsequent certifications shall cover successive annual periods thereafter. The certification is to be submitted no later than 45 days after the close of the previous certification period covered.

(4) In performing this contract, the Contractor recognizes that its employees may have access to data, either provided by the Department or first generated during contract performance, of a sensitive nature which should not be released without Department approval. If this situation occurs, the Contractor agrees to obtain confidentiality agreements from all affected employees working on requirements under this contract including subcontractors and consultants. Such agreements shall contain provisions which stipulate that each employee agrees not to disclose, either in whole or in part, to any entity external to the Department, Department of Health or the New York State Department of Law, any information or data provided by the Department or first generated by the Contractor under this contract, any site-specific cost information, or any enforcement strategy without first obtaining the written permission of the Department. If a Contractor, through an employee or otherwise, is subpoenaed to testify or produce documents, which could result in such disclosure, the Contractor must provide immediate advance notification to the Department so that the Department can authorize such disclosure or have the opportunity to take action to prevent such disclosure. Such agreements shall be effective for the life of the contract and for a period of five (5) years after completion of the contract.

(c) Remedies - The Department may terminate this contract in whole or in part, if it deems such termination necessary to avoid an organizational or personal conflict of interest, or an unauthorized disclosure of information. If the Contractor fails to make required disclosures or misrepresents relevant information to the Department, the Department may terminate the contract, or pursue such other remedies as may be permitted by the terms of Clause I of this Appendix or other applicable provisions of this contract regarding termination.

(d) The Contractor will be ineligible to make a proposal or bid on a contract for which the Contractor has

developed the statement of work or the solicitation package

(e) The Contractor agrees to insert in each subcontract or consultant agreement placed hereunder (except for subcontracts or consultant agreements for well drilling, fence erecting, plumbing, utility hookups, security guard services, or electrical services) provisions which shall conform substantially to the language of this clause, including this paragraph (e), unless otherwise authorized by the Department.

If this is a contract for work related to action at an inactive hazardous waste site, the following paragraph shall apply to those Contractors whose work requires the application of professional judgment: It does not apply to construction contracts.

(f) Due to the scope and nature of this contract, the Contractor shall observe the following restrictions on future hazardous waste site contracting for the duration of the contract.

(1) The Contractor, during the life of the work assignment and for a period of three (3) years after the completion of the work assignment, agrees not to enter into a contract with or to represent any party with respect to any work relating to remedial activities or work pertaining to a site where the Contractor previously performed work for the Department under this contract without the prior written approval of the Department.

(2) The Contractor agrees in advance that if any bids/proposals are submitted for any work for a third party that would require written approval of the Department prior to entering into a contract because of the restrictions of this clause, then the bids/proposals are submitted at the Contractor's own risk, and no claim shall be made against the Department to recover bid/proposal costs as a direct cost whether the request for authorization to enter into the contract is denied or approved.

IV. **Requests for Payment** All requests for payment by the Contractor must be submitted on forms supplied and approved by the Department. Each payment request must contain such items of information and supporting documentation as are required by the Department, and shall be all-inclusive for the period of time covered by the payment request.

V. **Compliance with Federal requirements** To the extent that federal funds are provided to the Contractor or used in paying the Contractor under this contract, the Contractor agrees that it will comply with all applicable federal laws and regulations, including but not limited to those laws and regulations under which the Federal funds were authorized. The Contractor further agrees to insert in any subcontract hereunder, provisions which shall conform substantially to the language of this clause.

VI. **Independent Contractor** The Contractor shall have the status of an independent contractor. Accordingly, the Contractor agrees that it will conduct itself in a manner consistent with such status, and that it will neither hold itself out as, nor claim to be, an officer or employee of the Department by reason of this contract. It further agrees that it will not make any claim, demand or application to the Department for any right or privilege applicable to an officer or employee of the Department, including but not limited to worker's compensation coverage, unemployment insurance benefits, social security coverage, or retirement membership or credit.

VII. **Compliance with applicable laws**

(a) Prior to the commencement of any work under this contract, the Contractor is required to meet all legal requirements necessary in the performance of the contract. This includes but is not limited to compliance with all applicable federal, state and local laws and regulations promulgated thereunder. It is the Contractor's responsibility to obtain any necessary permits, or other authorizations. By signing this contract, the Contractor affirmatively represents that it has complied with said laws, unless it advises the Department otherwise, in writing. The Department signs this contract in reliance upon this representation.

(b) During the term of this contract, and any extensions thereof, the Contractor must remain in compliance with said laws. A failure to notify the Department of noncompliance of which the Contractor was or should have been aware, may be considered a material breach of this contract.

VIII. **Dispute Resolution** The parties agree to the following steps, or as many as are necessary to resolve disputes between the Department and the Contractor.

(a) The Contractor specifically agrees to submit, in the first instance, any dispute relating to this contract to the designated individual, who shall render a written decision and furnish a copy thereof to the Contractor.

(1) The Contractor must request such decision in writing no more than fifteen days after it knew or should have known of the facts which are the basis of the dispute.

(2) The decision of the designated individual shall be the final DEC determination, unless the Contractor files a written appeal of that decision with the designated appeal individual ("DAI") within twenty days of receipt of that decision.

(b) Upon receipt of the written appeal, the DAI, will review the record and decision. Following divisional procedures in effect at that time, the DAI will take one of the following actions, with written notice to the Contractor.

- (1) Remand the matter to the program staff for further negotiation or information if it is determined that the matter is not ripe for review; or
- (2) Determine that there is no need for further action, and that the determination of the designated individual is confirmed; or
- (3) Make a determination on the record as it exists.

(c) The decision of the DAI shall be the final DEC decision unless the Contractor files a written appeal of that decision with the Chair of the Contract Review Committee ("CRC") within twenty days of receipt of that decision.

The designated individual to hear disputes is:

Michael Cruden, Director, Bureau E
(Name and Title)
NYS Dept of Env. Conservation - Env. Remediation
625 Broadway, 12th Floor, Albany, NY 12233-7012
(Address)
(518) 402-9764
(Telephone)

The designated appeal individual to review decisions is:

Janette Brown, Asst. Division Director
(Name and Title)
NYS Dept of Env. Conservation - Env. Remediation
625 Broadway, 12th Floor, Albany, NY 12233-7012
(Address)
(518) 402-9706
(Telephone)

The Chair of the Contract Review Committee is:

Department of Environmental Conservation
Nancy W. Lussier Chair
Contract Review Committee
625 Broadway, 10th Floor
Albany, NY 12233-5010
Telephone: (518) 402-9228

(d) Upon receipt of the written appeal, the Chair of the CRC, in consultation with the members of the CRC and the Office of General Counsel, will take one of the following actions, or a combination thereof, with written notice to the Contractor.

(1) Remand the matter to program staff for additional fact finding, negotiation, or other appropriate action; or

(2) Adopt the decision of the DAI; or

(3) Consider the matter for review by the CRC in accordance with its procedures.

(e) Following a decision to proceed pursuant to (d) 3, above, the Chair of the CRC shall convene a proceeding in accordance with the CRC's established contract dispute resolution guidelines. The proceeding will provide the Contractor with an opportunity to be heard.

(f) Following a decision pursuant to (d) 2 or (d) 3, the CRC shall make a written recommendation to the Assistant Commissioner for Administration who shall render the final DEC determination.

(g) At any time during the dispute resolution process, and upon mutual agreement of the parties, the Office of Hearings and Mediation Services (OHMS) may be requested to provide mediation services or other appropriate means to assist in resolving the dispute. Any findings or recommendations made by the OHMS will not be binding on either party.

(h) Final DEC determinations shall be subject to review only pursuant to Article 78 of the Civil Practice Law and Rules.

(i) Pending final determination of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract in accordance with the decision of the designated individual. Nothing in this Contract shall be construed as making final the decision of any administrative officer upon a question of law.

(j) Notwithstanding the foregoing, at the option of the Contractor, the following shall be subject to review by the CRC: Disputes arising under Article 15-A of the Executive Law (Minority and Women Owned Business participation), the Department's determination with respect to the adequacy of the Contractor's Utilization Plan, or the Contractor's showing of good faith efforts to comply therewith. A request for a review before the CRC should be made, in writing, within twenty days of receipt of the Department's determination.

(k) The CRC will promptly convene a review in accordance with Article 15-A of the Executive Law and the regulations promulgated thereunder.

IX. Labor Law Provisions

(a) When applicable, the Contractor shall post, in a location designated by the Department, a copy of the New York State Department of Labor schedules of prevailing wages and supplements for this project, a copy of all re-determinations of such schedules for the project, the Workers' Compensation Law Section 51 notice, all other notices required by law to be posted at the site, the Department of Labor notice that this project is a public work project on which each worker is entitled to receive the prevailing wages and supplements for their occupation, and all other notices which the Department directs the Contractor to post. The Contractor shall provide a surface for such notices which is satisfactory to the Department. The Contractor shall maintain such notices in a legible manner and shall replace any notice or schedule which is damaged, defaced, illegible or removed for any reason. Contractor shall post such notices before commencing any work on the site and shall maintain such notices until all work on the site is complete.

(b) When appropriate, contractor shall distribute to each worker for this Contract a notice, in a form provided by the Department, that this project is a public work project on which each worker is entitled to receive the prevailing wage and supplements for the occupation at which he or she is working. Worker includes employees of Contractor and all Subcontractors and all employees of suppliers entering the site. Such notice shall be distributed to each worker before they start performing any work of this contract. At the time of distribution, Contractor shall have each worker sign a statement, in a form provided by the Department, certifying that the worker has received the notice required by this section, which signed statement shall be maintained with the payroll records required by the following paragraph (c).

(c) Contractor shall maintain on the site the original certified payrolls or certified transcripts thereof which Contractor and all of its Subcontractors are required to maintain pursuant to the New York Labor Law Section 220. Contractor shall maintain with the payrolls or transcripts thereof, the statements signed by each worker pursuant to paragraph (b).

(d) Within thirty days of issuance of the first payroll, and every thirty days thereafter, the Contractor and every subcontractor must submit a transcript of the original payroll to the Department, which transcript must be subscribed and affirmed as true under penalty of perjury.

X. **Offset** In accordance with State Law, the Department has the authority to administratively offset any monies due it from the Contractor, from payments due to the Contractor under this contract. The Department may also (a) assess interest or late payment charges, and collection fees, if applicable; (b) charge a fee for any dishonored check; (c) refuse to renew certain licenses and permits.

XI. **Tax Exemption** Pursuant to Tax Law Section 1116, the State is exempt from sales and use taxes. A standard state voucher is sufficient evidence thereof. For federal excise taxes, New York's registration Number 14740026K covers tax-free transactions under the Internal Revenue Code.

XII. **Litigation Support** In the event that the Department becomes involved in litigation related to the subject matter of this contract, the Contractor agrees to provide background support and other litigation support, including but not limited to depositions, appearances, and testimony. Compensation will be negotiated and based on rates established in the contract, or as may otherwise be provided in the contract.

XIII **Equipment** Any equipment purchased with funds provided under this contract, shall remain the property of the Department, unless otherwise provided in the contract. The Contractor shall be liable for all costs for maintaining the property in good, usable condition. It shall be returned to the Department upon completion of the contract, in such condition, unless the Department elects to sell the equipment to the Contractor, upon mutually agreeable terms.

XIV. **Inventions or Discoveries** Any invention or discovery first made in performance of this Contract shall be the property of the Department, unless otherwise provided in the contract. The Contractor agrees to provide the Department with any and all materials related to this property. At the Department's option, the Contractor may be granted a non-exclusive license.

XV. **Patent and Copyright Protection**

If any patented or copyrighted material is involved in or results from the performance of this Contract, this Article shall apply.

(a) The Contractor shall, at its expense, defend any suit instituted against the Department and indemnify the Department against any award of damages and costs made against the Department by a final judgment of a court of last resort based on the claim that any of the products, services or consumable supplies furnished by the Contractor under this Contract infringes any patent, copyright or other proprietary right; provided the Department gives the Contractor:

- (1) prompt written notice of any action, claim or threat of infringement suit, or other suit, and
- (2) the opportunity to take over, settle or defend such action at the Contractor's sole expense, and
- (3) all available information, assistance and authority necessary to the action, at the Contractor's sole expense.
- (4) The Contractor shall control the defense of any such suit, including appeals, and all negotiations to effect settlement, but shall keep the Department fully informed concerning the progress of the litigation.

(b) If the use of any item(s) or parts thereof is held to infringe a patent or copyright and its use is enjoined, or Contractor believes it will be enjoined, the Contractor shall have the right, at its election and expense to take action in the following order of precedence:

- (1) procure for the Department the right to continue using the same item or parts thereof;
- (2) modify the same so that it becomes non-infringing and of at least the same quality and performance;
- (3) replace the item(s) or parts thereof with noninfringing items of at least the same quality and performance;
- (4) if none of the above remedies are available, discontinue its use and eliminate any future charges or royalties pertaining thereto. The Contractor will buy back the infringing product(s) at the State's book value, or in the event of a lease, the parties shall terminate the lease. If discontinuation or elimination results in the Contractor not being able to perform the Contract, the Contract shall be terminated.

(c) In the event that an action at law or in equity is commenced against the Department arising out of a claim that the Department's use of any item or material pursuant to or resulting from this Contract infringes any patent, copyright or proprietary right, and such action is forwarded by the Department to the Contractor for defense and indemnification pursuant to this Article, the Department shall copy all pleadings and documents forwarded to the Contractor together with the forwarding correspondence and a copy of this Contract to the Office of the Attorney General of the State of New York. If upon receipt of such request for defense, or at any time thereafter, the Contractor is of the opinion that the allegations in such action, in whole or in part, are not covered by the indemnification set forth in this Article, the Contractor shall immediately notify the Department and the Office of the Attorney General of the State of New York in writing and shall specify to what

extent the Contractor believes it is and is not obligated to defend and indemnify under the terms and conditions of this Contract. The Contractor shall in such event protect the interests of the Department and State of New York and secure a continuance to permit the State of New York to appear and defend its interests in cooperation with Contractor as is appropriate, including any jurisdictional defenses which the Department and State shall have.

(d) The Contractor shall, however, have no liability to the Department under this Article if any infringement is based upon or arises out of: (1) compliance with designs, plans, or specifications furnished by or on behalf of the Department as to the items; (2) alterations of the items by the Department; (3) failure of the Department to use updated items provided by the Contractor for avoiding infringement; (4) use of items in combination with apparatus or devices not delivered by the Contractor; (5) use of items in a manner for which the same were neither designed nor contemplated; or (6) a patent or copyright in which the Department or any affiliate or subsidiary of the Department has any direct or indirect interest by license or otherwise.

(e) The foregoing states the Contractor's entire liability for, or resulting from, patent or copyright infringement or claim thereof.

XVI. Force Majeure The term Force Majeure shall include acts of God, work stoppages due to labor disputes or strikes, fires, explosions, epidemics, riots, war rebellion, sabotage or the like. If a failure of or delay in performance by either party results from the occurrence of a Force Majeure event, the delay shall be excused and the time for performance extended by a period equivalent to the time lost because of the Force majeure event, if and to the extent that:

(a) The delay or failure was beyond the control of the party affected and not due to its fault or negligence; and

(b) The delay or failure was not extended because of the affected party's failure to use all reasonable diligence to overcome the obstacle or to resume performance immediately after such obstacle was overcome; and

(c) The affected party provides notice within (5) days of the onset of the event, that it is invoking the protection of this provision.

XVII. Freedom of Information Requests The Contractor agrees to provide the Department with any records which must be released in order to comply with a request pursuant to the Freedom of Information Law. The Department will provide the contractor with an opportunity to identify material which may be protected from release

and to support its position.

XVIII. Precedence In the event of a conflict between the terms of this Appendix B and the terms of the Contract (including any and all attachments thereto and amendments thereof, but not including Appendix A), the terms of this Appendix B shall control. In the event of a conflict between the terms of this Appendix B, and the terms of Appendix A, the terms of Appendix A shall control.

XIX. Article 15-Requirements

PARTICIPATION BY MINORITY GROUP MEMBERS AND WOMEN WITH RESPECT TO STATE CONTRACTS: REQUIREMENTS AND PROCEDURES

(a) General Provisions

(1)The Department is required to implement the provisions of New York State Executive Law Article 15-A and 5 NYCRR Parts 142-144 ("MWBE Regulations") for all State contracts as defined therein, with a value (1) in excess of \$25,000 for labor, services, equipment, materials, or any combination of the foregoing or (2) in excess of \$100,000 for real property renovations and construction.

(2)The Contractor to the subject contract (the "Contractor" and the "Contract," respectively) agrees, in addition to any other nondiscrimination provision of the Contract and at no additional cost to the New York State Department (the "Department", to fully comply and cooperate with the Department in the implementation of New York State Executive Law Article 15-A. These requirements include equal employment opportunities for minority group members and women ("EEO") and contracting opportunities for certified minority and women-owned business enterprises ("MWBEs"). Contractor's demonstration of "good faith efforts" pursuant to 5 NYCRR §142.8 shall be a part of these requirements. These provisions shall be deemed supplementary to, and not in lieu of, the nondiscrimination provisions required by New York State Executive Law Article 15 (the "Human Rights Law") or other applicable federal, state or local laws.

(3)Failure to comply with all of the requirements herein may result in a finding of non-responsiveness, non-responsibility and/or a breach of contract, leading to the withholding of funds or such other actions, liquidated damages pursuant to Section VII of this Article or enforcement proceedings as allowed by the Contract.

(b) Contract Goals

(1) For purposes of this procurement, the Department hereby establishes an overall goal of 30% for Minority and Women-Owned Business Enterprises (“MWBE”) participation, (based on the current availability of qualified MBEs and WBEs).

(2) For purposes of providing meaningful participation by MWBEs on the Contract and achieving the Contract Goals established in Section II-A hereof, Contractor should reference the directory of New York State Certified MWBEs found at the following internet address;

<https://ny.newnycontracts.com>

Additionally, the Contractor is encouraged to contact the Division of Minority and Woman Business Development ((518) 292-5250; (212) 803-2414; or (716) 846-8200) to discuss additional methods of maximizing participation by MWBEs on the Contract.

(3) Where MWBE goals have been established herein, pursuant to 5 NYCRR §142.8, Contractor must document “good faith efforts” to provide meaningful participation by MWBEs as subcontractors or suppliers in the performance of the Contract. In accordance with Section 316-a of Article 15-A and 5 NYCRR §142.13, the Contractor acknowledges that if Contractor is found to have willfully and intentionally failed to comply with the MWBE participation goals set forth in the Contract, such a finding constitutes a breach of contract and the Contractor shall be liable to the Department for liquidated or other appropriate damages, as set forth herein.

(c) Equal Employment Opportunity (EEO)

(1) Contractor agrees to be bound by the provisions of Article 15-A and the MWBE Regulations promulgated by the Division of Minority and Women's Business Development of the Department of Economic Development (the “Division”). If any of these terms or provisions conflict with applicable law or regulations, such laws and regulations shall supersede these requirements. Contractor shall comply with the following provisions of Article 15-A:

(i) Contractor and Subcontractors shall undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, EEO shall apply in the

areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation.

(ii) The Contractor shall submit an EEO policy statement to the Department within seventy two (72) hours after the date of the notice by Department to award the Contract to the Contractor.

(iii) If Contractor or Subcontractor does not have an existing EEO policy statement, the Department may provide the Contractor or Subcontractor a model statement. This statement can be found at the link provided in Section 8.

(iv) The Contractor’s EEO policy statement shall include the following language:

- a. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability or marital status, will undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force.
- b. The Contractor shall state in all solicitations or advertisements for employees that, in the performance of the contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.
- c. The Contractor shall request each employer Department, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employer Department, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex age, disability or marital status and that such union or representative will affirmatively cooperate in the

implementation of the Contractor's obligations herein.

- d. The Contractor will include the provisions of Subdivisions (a) through (c) of this Subsection 4 and Paragraph "E" of this Section III, which provides for relevant provisions of the Human Rights Law, in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the Contract.
- e. **EEO Contract Goals** for the purposes of this procurement, the Department hereby establishes a goal of 5% Minority Labor Force Participation, 5% Female Labor Force Participation.

(2) Staffing Plan Form

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

(3) Workforce Employment Utilization Report Form ("Workforce Report")

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

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

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

(d) MWBE Utilization Plan

- (1) The Contractor represents and warrants that Contractor has submitted an MWBE Utilization Plan either prior to, or at the time of, the execution of the contract.
- (2) Contractor agrees to use such MWBE Utilization Plan for the performance of MWBEs on the Contract pursuant to the prescribed MWBE goals set forth in Section III-A of this Appendix.
- (3) Contractor further agrees that a failure to submit and/or use such MWBE Utilization Plan shall constitute a material breach of the terms of the Contract. Upon the occurrence of such a material breach, Department shall be entitled to any remedy provided herein, including but not limited to, a finding of Contractor non-responsiveness.

(e) Waivers

- (1) For Waiver Requests Contractor should use Waiver Request Form.

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

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

(f) Quarterly MWBE Contractor Compliance Report

Contractor is required to submit a Quarterly MWBE Contractor Compliance Report Form to the Department by the 10th day following each end of quarter over the term of the Contract documenting the progress made towards achievement of the MWBE goals of the Contract.

(g) Liquidated Damages - MWBE Participation

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

(2) Such liquidated damages shall be calculated as an amount equaling the difference between:

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

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

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

(h) Forms

The following forms referenced in Article XVIII 3-A-3, 3B, 3C and 5A can be found at <http://www.dec.ny.gov/about/48854.html>

Appendix C

Standard Clauses for Ethics in all NYSDEC Contracts

The parties to the attached contract, license, lease, grant, amendment or other agreement of any kind (hereinafter "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract. The word "Offeror" herein refers to any party submitting an application, bid, proposal, or other documents in response to this procurement. The word "Contractor" herein refers to any party to the contract, other than the New York State Department of Environmental Conservation (hereinafter "Department").

I. Conflict of Interest

A. Procurement Phase:

1. An Offeror will disclose any existing or contemplated relationship with any other person or entity, including relationships with any member, shareholders of 5% or more, parent, subsidiary, or affiliated firm, which would constitute an actual or potential conflict of interest or appearance of impropriety, relating to other clients/customers of the Offeror or former officers and employees of the Agencies and their Affiliates, in connection with the Offeror rendering services enumerated in this procurement. If a conflict does or might exist, the Offeror will describe how the Offeror would eliminate or prevent it. This description will include, but not be limited to what procedures will be followed to detect, notify the Agencies of, and resolve any such conflicts.
2. The Offeror must disclose whether it, or any of its members, shareholders of 5% or more, parents, affiliates, or subsidiaries, have been the subject of any investigation or disciplinary action by the New York State Joint Commission on Public Ethics or its predecessor State entities (collectively, "Commission"), and if so, a brief description must be included in the Offeror's response indicating how any matter before the Commission was resolved or whether it remains unresolved.
3. The Offeror/Contractor has provided a form (Vendor Assurance of No Conflict of Interest or Detrimental Effect attached hereto as **Attachment 4**), signed by an authorized executive or legal representative attesting that the Offeror's/Contractor's performance of the services does not and will not create a conflict of interest with, nor position the Offeror/Contractor to breach any other contract currently in force with the State of New York, that the Offeror/Contractor will not act in any manner that is detrimental to any State project on which the Offeror/Contractor is rendering services.

B. Contract Phase:

1. The Contractor hereby reaffirms the attestations made in its proposal and covenants and represents that there is and shall be no actual or potential conflict of interest that could prevent the Contractor's satisfactory or ethical performance of duties required to be performed pursuant to the terms of this contract. The Contractor shall have a duty to notify the Department immediately of any actual or potential conflicts of interest.

2. In conjunction with any subcontract under this contract, the Contractor shall obtain and deliver to the Department, prior to entering into a subcontract, a Vendor Assurance of No Conflict of Interest or Detrimental Effect form, signed by an authorized executive or legal representative of the subcontractor. The Contractor shall also require in any subcontracting agreement that the subcontractor, in conjunction with any further subcontracting agreement, obtain and deliver to the Department a signed and completed Vendor Assurance of No Conflict of Interest or Detrimental Effect form for each of its subcontractors prior to entering into a subcontract.
3. The Department and the Contractor recognize that conflicts may occur in the future because the Contractor may have existing or establish new relationships. The Department will review the nature of any relationships and reserves the right to terminate this contract for any reason, or for cause, if, in the judgment of the Department, a real or potential conflict of interest cannot be cured.
4. In performing this contract, the Contractor recognizes that its employees may have access to data, either provided by the Department or first generated during contract performance, of a sensitive nature which should not be released without prior Department approval. If this situation occurs, the Contractor agrees to obtain confidentiality agreements from all affected employees working on requirements under this contract including subcontractors and consultants. Such agreements shall contain provisions which stipulate that each employee agrees not to disclose, either in whole or in part, to any entity external to the Department, Department of Health or the New York State Department of Law, any information or data provided by the Department or first generated by the Contractor under this contract, any site-specific cost information, or any enforcement strategy without first obtaining the written permission of the Department. If a Contractor, through an employee or otherwise, is subpoenaed to testify or produce documents, which could result in such disclosure, the Contractor must provide immediate advance notification to the Department so that the Department can authorize such disclosure or have the opportunity to take action to prevent such disclosure. Such agreements shall be effective for the life of the contract and for a period of five (5) years after completion of the contract.
5. The Department may terminate this contract in whole or in part, if it deems such termination necessary to avoid a conflict of interest, or an unauthorized disclosure of information. If the Contractor fails to make required disclosures or misrepresents relevant information to the Department, the Department may terminate the contract, or pursue such other remedies as may be allowed by law or other applicable provisions of this contract regarding termination.
6. The Contractor will be ineligible to make a proposal or bid on a contract for which the Contractor has developed the statement of work or the solicitation package.
7. ***If this is a contract for work related to action at an inactive hazardous waste site, the following paragraph shall apply to those Contractors whose work requires the application of professional judgment: It does not apply to construction contracts.***

Due to the scope and nature of this contract, the Contractor shall observe the following restrictions on future hazardous waste site contracting for the duration of the contract.

- a. The Contractor, during the life of the work assignment and for a period of three (3) years after the completion of the work assignment, agrees not to enter into a contract with or to

represent any party with respect to any work relating to remedial activities or work pertaining to a site where the Contractor previously performed work for the Department under this contract without the prior written approval of the Department.

- b. The Contractor agrees in advance that if any bids/proposals are submitted for any work for a third party that would require written approval of the Department prior to entering into a contract because of the restrictions of this clause, then the bids/proposals are submitted at the Contractor's own risk, and no claim shall be made against the Department to recover bid/proposal costs as a direct cost whether the request for authorization to enter into the contract is denied or approved.

II. PUBLIC OFFICERS LAW

Contractors, consultants, vendors, and subcontractors may hire former State Agency or Authority employees. However, as a general rule and in accordance with New York Public Officers Law, former employees of the State Agency or Authority may neither appear nor practice before the State Agency or Authority, nor receive compensation for services rendered on a matter before the State Agency or Authority, for a period of two years following their separation from State Agency or Authority service. In addition, former State Agency or Authority employees are subject to a “lifetime bar” from appearing before the State Agency or Authority or receiving compensation for services regarding any transaction in which they personally participated or which was under their active consideration during their tenure with the State Agency or Authority.

III. ETHICS REQUIREMENTS

The Contractor and its subcontractors shall not engage any person who is, or has been at any time, in the employ of the State to perform services in violation of the provisions of the New York Public Officers Law, other laws applicable to the service of State employees, and the rules, regulations, opinions, guidelines or policies promulgated or issued by the New York State Joint Commission on Public Ethics, or its predecessors (collectively, the “Ethics Requirements”).

The Contractor certifies that all of its employees and those of its subcontractors who are former employees of the State and who are assigned to perform services under this contract shall be assigned in accordance with all Ethics Requirements. During the Term, no person who is employed by the Contractor or its subcontractors and who is disqualified from providing services under this contract pursuant to any Ethics Requirements may share in any net revenues of the Contractor or its subcontractors derived from this Contract. The Contractor shall identify and provide the State with notice of those employees of the Contractor and its Subcontractors who are former employees of the State that will be assigned to perform services under this Contract, and make sure that such employees comply with all applicable laws and prohibitions.

The State may request that the Contractor provide it with whatever information the State deems appropriate about each such person’s engagement, work cooperatively with the State to solicit advice from the New York State Joint Commission on Public Ethics, and, if deemed appropriate by the State, instruct any such person to seek the opinion of the New York State Joint Commission on Public Ethics. The State shall have the right to withdraw or withhold approval of any subcontractor if utilizing such subcontractor for any work performed hereunder would be in conflict with any of the Ethics Requirements. The State

shall have the right to terminate this Contract at any time if any work performed hereunder is in conflict with any of the Ethics Requirements.

IV. SUBCONTRACTING

The Contractor agrees not to subcontract any of its services, unless as indicated in its proposal, without the prior written approval of the Department. Approval shall not be unreasonably withheld upon receipt of written request to subcontract.

The Contractor may arrange for a portion/s of its responsibilities under this Contract to be subcontracted to qualified, responsible subcontractors, subject to prior approval of the Department. If the Contractor decides to subcontract a portion of the services, the subcontractors must be clearly identified and the nature and extent of its involvement in and/or proposed performance under this contract must be fully explained by the Contractor to the Department. As part of this explanation, the subcontractor must submit to the Department a completed Vendor Assurance of No Conflict of Interest or Detrimental Effect form, as required by the Contractor prior to execution of this contract.

The Contractor retains ultimate responsibility for all services performed under the contract.

All subcontracts shall be in writing and shall contain provisions, which are functionally identical to, and consistent with, the provisions of this contract including, but not limited to, the body of this contract, Appendix A – Standard Clauses for New York State Contracts, Appendix B – Standard Clauses for All New York State Department of Environmental Conservation Contracts, Appendix C - Standard Clauses for Ethics in all New York State Department of Environmental Conservation Contracts, and the Solicitation Document.

Unless waived in writing by the Department, all subcontracts between the Contractor and subcontractors shall expressly name the State, through the Department, as the sole intended third party beneficiary of such subcontract. The Department reserves the right to review and approve or reject any subcontract, as well as any amendment to said subcontract(s), and this right shall not make the Department or the State a party to any subcontract or create any right, claim, or interest in the subcontractor or proposed subcontractor against the Department.

The Department reserves the right, at any time during the term of the contract, to verify that the written subcontract between the Contractor and subcontractors is in compliance with all of the provisions of this Section and any subcontract provisions contained in this contract. The Contractor shall give the Department immediate notice in writing of the initiation of any legal action or suit which relates in any way to a subcontract with a subcontractor or which may affect the performance of the Contractor's duties under the contract. Any subcontract shall not relieve the Contractor in any way of any responsibility, duty and/or obligation of the contract.

If at any time during performance under this contract total compensation to a subcontractor exceeds or is expected to exceed \$100,000, or as otherwise requested by the Department that subcontractor shall be required to submit and certify a Vendor Responsibility Questionnaire.

APPENDIX **D**

Participation Opportunities
for New York State Certified
Service-Disabled Veteran Owned Businesses
(SDVOB)

PLEASE RETAIN THIS DOCUMENT
FOR FUTURE REFERENCE

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Appendix D

PARTICIPATION OPPORTUNITIES FOR NEW YORK STATE CERTIFIED SERVICE-DISABLED VETERAN-OWNED BUSINESSES

Veterans' Services Law article 3 provides for more meaningful participation in public procurement by certified Service-Disabled Veteran-Owned Businesses ("SDVOB"), thereby further integrating such businesses into New York State's economy. The Department recognizes the need to promote the employment of service-disabled veterans and to ensure that certified service-disabled veteran-owned businesses have opportunities for maximum feasible participation in the performance of Department contracts.

In recognition of the service and sacrifices made by service-disabled veterans and in recognition of their economic activity in doing business in New York State, Bidders are expected to consider SDVOBs in the fulfillment of the requirements of the Contract. Such participation may be as subcontractors or suppliers, as protégés, or in other partnering or supporting roles.

The following link includes additional information regarding the responsibilities associated with the Department's SDVOB program: <https://www.dec.ny.gov/about/61016.html#SDVOB>

I. Contract Goals

- A. The Department hereby establishes an overall goal of 6 % for SDVOB participation, based on the current availability of qualified SDVOBs. For purposes of providing meaningful participation by SDVOBs, the Bidder/Contractor should contact the Department's SDVOB lead with questions regarding compliance with SDVOB participation goals at:

Mark Krisanda

Contract Management Specialist/SDVOB Program Lead
Bureau of Contract and Grant Development

New York State Department of Environmental Conservation

625 Broadway – 10th Floor, Albany, NY 12233-1080

Phone #: (518) 402-9240

sdvob@dec.ny.gov

or reference the directory of New York State Certified SDVOBs found at: <https://online.ogs.ny.gov/SDVOB/search> Additionally, following Contract execution, Contractor is encouraged to contact the Office of General Services' Division of Service-Disabled Veterans' Business Development at 518-474-2015 or <https://ogs.ny.gov/veterans> to discuss additional methods of maximizing participation by SDVOBs on the Contract.

- B. Contractor must document "good faith efforts" to provide meaningful participation by SDVOBs as subcontractors or suppliers in the performance of the Contract (see clause IV below).

II. SDVOB Utilization Plan

- A. Pursuant to 9 NYCRR § 252.2(i), Contractors are required to submit a completed SDVOB Utilization Plan on Form SDVOB 100 prior to contract execution.
- B. The Utilization Plan shall list the SDVOBs that the Bidder intends to use in the performance of the Contract, a description of the work that the Bidder intends the SDVOB to perform to meet the goals on the Contract, the estimated dollar amounts to be paid to an SDVOB, or, if not known, an estimate of the percentage of Contract work the SDVOB will perform. By signing the Utilization Plan, the Bidder acknowledges that making false representations or providing information that shows a lack of good faith as part of, or in conjunction with, the submission of a Utilization Plan is prohibited by law and may result in penalties including, but not limited to, termination of a contract for cause, loss of eligibility to submit future bids, and/or withholding of payments. Any modifications or changes to the agreed participation by SDVOBs after the Contract award and during the term of the Contract must be reported on a revised SDVOB Utilization Plan and submitted to the Department.
- C. The Department will review the submitted SDVOB Utilization Plan and advise the Bidder/Contractor of the Department's acceptance or issue a notice of deficiency within 20 days of receipt.
- D. If a notice of deficiency is issued, Bidder/Contractor agrees that it shall respond to the notice of deficiency, within seven (7) business days of receipt, by submitting to the Department, a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by the Department to be inadequate, the Department shall notify the Bidder/Contractor and direct the Bidder/Contractor to submit, within five business days of notification by the Department, a request for a partial or total waiver of SDVOB participation goals on SDVOB 200. Failure to file the waiver form in a timely manner may be grounds for disqualification of the bid or proposal.
- E. The Department may disqualify a Bidder's bid or proposal as being non-responsive under the following circumstances:
 - (a) If a Bidder fails to submit an SDVOB Utilization Plan;
 - (b) If a Bidder fails to submit a written remedy to a notice of deficiency;
 - (c) If a Bidder fails to submit a request for waiver; or
 - (d) If the Department determines that the Bidder has failed to document good faith efforts.
- F. If awarded a Contract, Contractor certifies that it will follow the submitted SDVOB Utilization Plan for the performance of SDVOBs on the Contract pursuant to the prescribed SDVOB contract goals set forth above.
- G. Contractor further agrees that a failure to use SDVOBs as agreed in the Utilization Plan shall constitute a material breach of the terms of the Contract. Upon the occurrence of such a material breach, the Department shall be entitled to any remedy provided herein, including but not limited to, a finding of Contractor non-responsibility.

III. Request for Waiver

- A. **Prior to submission of a request for a partial or total waiver, Bidder/Contractor shall speak to the Department's Designated Contacts for guidance.**

- B. Pursuant to 9 NYCRR § 252.2(m), a Bidder/Contractor that is able to document good faith efforts to meet the goal requirements, as set forth in clause IV below, may submit a request for a partial or total waiver on Form SDVOB 200, accompanied by supporting documentation. A Bidder may submit the request for waiver at the same time it submits its SDVOB Utilization Plan. If a request for waiver is submitted with the SDVOB Utilization Plan and is not accepted by the Department at that time, the provisions of clauses II (C), (D) & (E) will apply. If the documentation included with the Bidder's/Contractor's waiver request is complete, the Department shall evaluate the request and issue a written notice of acceptance or denial within 20 days of receipt.
- C. Contractor shall attempt to utilize, in good faith, the SDVOBs identified within its SDVOB Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to Contract award may be made at any time during the term of the Contract to the Department, but must be made no later than prior to the submission of a request for final payment on the Contract.
- D. If the Department, upon review of the SDVOB Utilization Plan and Monthly SDVOB Compliance Report (SDVOB 101) determines that Contractor is failing or refusing to comply with the contract goals and no waiver has been issued in regards to such non-compliance, the Department may issue a notice of deficiency to the Contractor. The Contractor must respond to the notice of deficiency within seven business days of receipt. Such response may include a request for partial or total waiver of SDVOB contract goals.

Waiver requests should be sent to:

Mark Krisanda
Contract Management Specialist/SDVOB Program Lead
Bureau of Contract and Grant Development
New York State Department of Environmental Conservation
625 Broadway – 10th Floor, Albany, NY 12233-1080
Phone #: (518) 402-9240
sdvob@dec.ny.gov

IV. Required Good Faith Efforts

Pursuant to 9 NYCRR § 252.2(n), Contractors must document their good faith efforts toward utilizing SDVOBs on the Contract. Evidence of required good faith efforts shall include, but not be limited to, the following:

- (1) Copies of solicitations to SDVOBs and any responses thereto.
- (2) Explanation of the specific reasons each SDVOB that responded to Bidders/Contractors' solicitation was not selected.
- (3) Information describing the specific steps undertaken to reasonably structure the Contract scope of work for the purpose of subcontracting with, or obtaining supplies from, certified SDVOBs.
- (4) Other information deemed relevant to the waiver request.

V. Quarterly SDVOB Contractor Compliance Report

Pursuant to 9 NYCRR § 252.2(q), the Contractor is required to report quarterly SDVOB Contractor Compliance to the Department during the term of the Contract for the preceding month's activity, documenting progress made towards achieving the Contract SDVOB goals. This information must be submitted using form SDVOB 101 distributed by the Department's SDVOB program and should be completed by the Contractor and submitted to the Department, by the 20th day of October, January, April, and July during the term of the Contract, for that quarter's activity to:

Mark Krisanda
Contract Management Specialist/SDVOB Program Lead
Bureau of Contract and Grant Development
New York State Department of Environmental Conservation
625 Broadway – 10th Floor, Albany, NY 12233-1080
Phone #: (518) 402-9240
sdvob@dec.ny.gov

VI. Breach of Contract and Damages

Pursuant to 9 NYCRR § 252.2(s), any Contractor found to have willfully and intentionally failed to comply with the SDVOB participation goals set forth in the Contract, shall be found to have breached the contract and Contractor shall pay damages as set forth therein.

SECTION VIII

General Conditions

ARTICLE 1 - Preliminary Matters

Copies of Documents:

- 1.1 Department shall furnish to Contractor without charge up to five (5) copies of the Contract Documents. Additional copies of the Contract Documents will be furnished, upon request, at the cost of reproduction.

Preconstruction Conference:

- 1.2 No later than twenty (20) calendar days after the Effective Date of the Agreement, but before Contractor starts the Work, a conference will be held on a date and at a location set by Department to:
 - 1.2.1 Review, item by item, the requirements of this Article;
 - 1.2.2 Review the qualifications of Contractor's resident superintendent and the qualifications of any Subcontractors and Suppliers of Contractor;
 - 1.2.3 Discuss Contractor's plans for complying with the requirements of Article 5 – *Contractor's Responsibilities* of the General Conditions;
 - 1.2.4 Formalize procedures for processing of Administrative Agreements, Payment Applications, Shop Drawings and other submittals, Change Orders and Proposed Change Orders, and Contractor requests for clarifications and interpretation of Contract Documents;
 - 1.2.5 Establish a working understanding among the parties as to the Work; and
 - 1.2.6 Discuss any conflicts, errors or discrepancies that Contractor has discovered by review of the Contract Documents.

Commencement of Contract Time and Start of Work at Site:

- 1.3 Before starting, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. Contractor shall immediately report in writing to Engineer any conflict, error or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
- 1.4 Before a Contractor may commence Work on the site but no later than ten (10) calendar days after Notice of Award, Contractor shall submit to Engineer for review and acceptance:

- 1.4.1 An interim progress 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. If Contractor doesn't intend to perform Work on the date when Contract Time commences, Contractor must notify Department as soon as possible in writing when work will commence so inspection services can be scheduled to minimize cost to the Department. The interim progress schedule shall include the information specified in paragraphs 1.4.2 and 1.4.3.
 - 1.4.2 An interim schedule of Shop Drawing, material, soil characteristic, sample collection and analytical test result submissions covering the various stages of Work detailed in the first three (3) months of the interim Progress Schedule; and
 - 1.4.3 An interim schedule of values on the form provided by Engineer covering the various stages of Work detailed in the first three (3) months of the interim Progress Schedule. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by Contractor at the time of submission.
- 1.5 Contractor shall start to perform the Work on the date specified in the Notice to Proceed in a manner consistent with the Contract Documents. No Work shall be done prior to the date specified in the Notice to Proceed unless written permission to do so is given by the Department to the Contractor.

Finalizing Interim Schedules:

- 1.6 Contractor shall submit a proposed progress schedule to finalize the interim schedules submitted in accordance with paragraph 1.4 and the requirements of the Progress Schedule Section of the Standard Specification no later than twenty (20) days after starting work at the site. The progress schedule shall be acceptable to Engineer and Department as providing an orderly progression of the Work to completion within the Contract Time, but such acceptance will not relieve Contractor from full responsibility for the progress or scheduling of the Work. The schedule of Shop Drawing, material, soil characteristic, sample collection, and analytical test results submissions shall be acceptable to Engineer and Department as providing a workable arrangement for processing the submissions. The schedule of values shall be acceptable to Engineer and Department as to form and substance. The first Application for Payment shall not be processed unless Contractor has submitted acceptable schedules.

ARTICLE 2 - Contract Documents: Intent, Amending, Reuse

Intent:

- 2.1 The Contract Documents comprise the entire agreement between Department and Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
- 2.2 The Contract Documents describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any work, materials or equipment that may be necessary to satisfactorily complete the contract must be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society,

organization or association, or to the Laws of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), even though reference may be specifically made to an earlier standard. If there is any conflict or discrepancy between standard specifications, manuals, or codes of any technical society, organization or association, or between Laws, the Engineer shall determine which shall apply and shall be binding on Contractor. Contractor has a duty to comply with the latest standard specification, manual, code, or Laws in effect at the time of opening of bids, without any increase in Contract Price or extension in Contract Time. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in paragraph 8.4. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Department, Contractor or Engineer or any of their consultants, agents or employees from those set forth in the Contract Documents. If there is any conflict or discrepancy between the provisions of the Contract Documents and any such referenced standard specification, manual, or code of any technical society, organization or association, the provisions of the Contract Documents will take precedence.

- 2.3 If during the performance of the Work, Contractor finds a conflict, error or discrepancy in the Contract Documents, Contractor shall so report to Engineer in writing at once and before proceeding with the Work affected thereby, and shall obtain a written interpretation or clarification.

Engineer will promptly investigate the matter and respond to Contractor. Until such interpretation or clarification is obtained from Engineer, any Work done by Contractor after the discovery of such a conflict, error or discrepancy, which is directly or indirectly affected by same, will be at Contractor's own risk and Contractor shall bear all cost arising therefrom. In resolving such conflicts, errors or discrepancies, the Contract Documents shall be given preference in the following order:

- 2.3.1 First, in accordance with the order of preference stated in the conflicting parts of the Contract Documents as provided by Article 4 of the Agreement;
- 2.3.2 In all cases, figured dimensions shall govern over scaled dimensions, but Work not dimensioned shall be as directed, and Work not particularly shown, identified, sized, or located shall be the same as similar parts that are shown or specified. Detail Drawings shall govern over general Drawings, larger scale Drawings take precedence over smaller scale Drawings, Change Order or Proposed Change Order Drawings govern over Contract Drawings, and approved Shop Drawings govern over Contract Drawings. Specifications shall govern as to products, execution and workmanship, and Drawings shall govern as to locations, dimensions, or quantities to be furnished. Further, in all cases where specifications, notes or details in two or more Specifications, or in two or more Drawings, conflict, the requirement calling for the larger quantities, or higher quality product or workmanship shall prevail and be binding on Contractor, unless otherwise directed by Engineer.

Amending and Supplementing Contract Documents:

- 2.4 The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways as defined in Section 2, "Terms and Definitions."

- 2.4.1 An Administrative Agreement,
- 2.4.2 A Change Order (pursuant to Article 9), or
- 2.4.3 A Proposed Change Order signed by Department (pursuant to Article 9).

Contract Price and Contract Time may only be changed by a Change Order.

2.5 In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, not involving an adjustment in Contract Price or Contract Time, in one or more of the following ways:

- 2.5.1 A Field Order (pursuant to Article 8.4),
- 2.5.2 Engineer's approval of a Shop Drawing or sample (pursuant to Article 5.23 thru 5.29),
or
- 2.5.3 Engineer's written interpretation or clarification (pursuant to Article 8.3).

Reuse of Documents:

2.6 Neither Contractor nor any Subcontractor or Supplier or other person or organization shall have or acquire any title to or ownership rights in any of the Drawings, specifications or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Design Engineer; and they shall not reuse any of them on extensions of the Project or any other project without the written consent of Engineer, Design Engineer, and Department.

ARTICLE 3 - Availability of Lands; Physical Conditions; Reference Points

Availability of Lands:

3.1 As indicated in the Contract Documents, Department shall make available the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands as are designated for the use of Contractor. Easements or other authority for permanent structures or permanent changes in existing facilities will be obtained and paid for by Department, unless otherwise provided in the Contract Documents. If Contractor believes that any delay in Department's furnishing of these lands or easements entitles Contractor to an extension of the Contract Time, Contractor may make a request therefore as provided in Article 10 of the General Conditions. If Department and Contractor are unable to agree concerning such an extension, a claim may be made as provided in Articles 9, 10 and 11 of the General Conditions.

3.2 Any lands and easements for access not furnished by Department which Contractor deems necessary for the Work, including but not limited to requirements for temporary construction facilities, access and egress, or for storage of materials, shall be provided by Contractor at no increase in Contract Price nor extension in Contract Time. Contractor shall obtain all necessary permits and written approvals from the appropriate jurisdictional agencies and property owner(s) for use of premises not furnished by Department as described above, and for the use of all off-site areas needed for the Work including but not limited to off-site borrow pits, and waste and disposal areas. If permits and approvals do not specify the required treatment, if any, of said areas during and at the completion of the Work, the Progress Schedule must describe such

treatment. Copies of all permits and approvals applicable to said areas shall be filed with the Engineer before utilization of any said areas. Contractor shall have sole responsibility for any property damage or personal injuries occasioned by an act or omission of Contractor in respect to all lands, and easements obtained pursuant to this paragraph.

- 3.3 Engineering survey horizontal and vertical control reference points for construction which are specified in the Contract Documents or which in Engineer's judgment are necessary to enable Contractor to proceed with the Work, will be provided by Department. Contractor shall be responsible for laying out the Work using such reference points, shall protect and preserve the established reference points; and shall make no changes or relocations without the prior written approval of Engineer. Contractor shall notify Engineer in writing whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations; and shall be responsible for the accurate replacement or relocation of such reference points by a New York State licensed surveyor at Contractor's expense.

Physical Conditions and Existing Structures:

- 3.4 **Explorations and Reports:** Reference is made to the Supplementary Bidding Information and Requirements for identification of those reports of explorations and tests of conditions at the site that have been utilized by the Design Engineer in preparation of the Contract Documents; and for identification of those drawings of physical conditions in or relating to existing surface structures (except Underground Facilities referred to in paragraphs 3.5 and 3.6) which are at or contiguous to the site that have been utilized by Design Engineer in preparation of the Contract Documents. Contractor may rely upon the accuracy of the technical data contained in such reports, as to the location where and at the point in time when data was obtained, but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for Contractor's purposes. Except as indicated in the Bidding Information and Requirements Section and, in paragraphs 3.9 and 3.10, Contractor shall have full responsibility with respect to subsurface conditions which Contractor could reasonably expect or foresee by reason of the technical data and Contractor's inspection of the site, and with respect to physical conditions in or relating to such surface structures.

Physical Conditions - Underground Facilities Shown or Indicated:

- 3.5 The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to the Design Engineer by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
- 3.5.1 Department shall not be responsible for the accuracy or completeness of any such information or data; and,
- 3.5.2 Contractor shall have responsibility: a) for reviewing and checking all such information and data; b) for locating all Underground Facilities shown or indicated in the Contract Documents as to depth and alignment in advance of installations, backfilling or other work required by the Contract Documents; c) for coordination of the Work with the owners of such Underground Facilities during construction, d) for the safety and protection thereof, and e) for repairing any damage thereto resulting from the Work. The cost of and the time required to perform the responsibilities outlined in this paragraph will be considered as having been included in the Contract Price and in Contractor's

schedule for the performance of the Work within the prescribed Contract Time(s) and Contractor shall not be entitled to additional payment therefor.

- 3.5.3 Contractor shall excavate and uncover all Underground Facilities to be crossed or paralleled by the proposed Work a sufficient time in advance to permit change in line and grade of the existing Underground Facility or the proposed Work if the location of the existing Underground Facility should interfere with the Work. Further, a reasonable interval of time, up to thirty (30) days, will be allowed to Engineer and Department in order to resolve issues relating to Underground Facilities shown or indicated which are determined to interfere with the Work. This interval of time will be considered as having been included in the Contract Price and in Contractor's schedule for the performance of the Work within the Contract Time unless otherwise agreed to in writing by Department. If more than thirty (30) days is consumed in resolving such issues, no claim will be allowed unless: 1) Contractor has given the notice required in paragraph 3.7 of the General Conditions, and 2) within fifteen (15) days thereafter, Contractor has submitted to Department a written Proposed Change Order claim in accordance with the requirement of Article 9, 10 and 11 of the General Conditions and the Standard Specifications.
- 3.5.4 Where it is necessary for the Work to be close to or between other underground facilities or structures for short distances, Contractor shall shore, block, and protect the other underground facilities or structures to the satisfaction of the utility agency, state agency, municipality or private owner having ownership or jurisdiction over said underground facilities on structures.
- 3.5.5 Access to various municipal structures shall not be obstructed by Contractor to prevent use of hydrants, valves, manholes, fire alarms, etc. Contractor is to make no connections to existing water mains, or operate valves on existing mains, or otherwise interfere with the operation of the existing water distribution system, without first giving written notice to the owners of such municipal structures and securing their written approval, and satisfactory fulfillment of applicable permits, fees, or requirements of the proposed action.

Underground Facilities Not Shown or Indicated:

- 3.6 If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of, Contractor shall promptly after learning thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 5.23), identify the owner of such Underground Facility and give written notice of such uncovering to that owner and to Engineer and Department. Engineer and Department will promptly review the situation to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and take prompt action to amend the Contract Documents to the extent necessary. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 5.20.
- 3.6.1 Contractor shall schedule excavation and uncovering Work to begin a sufficient time in advance to allow Engineer's review and the possible amendment to the Contract Documents if unanticipated Underground Facilities are discovered as described in paragraph 3.6. Further, up to thirty (30) days, will be allowed to Engineer and

Department to resolve issues and problems related to a report of newly discovered Underground Facilities, not shown or indicated. This interval of time will be considered as having been included in the Contract Price and in Contractor's schedule for the performance of the Work within the Contract Time and Contractor shall not be entitled to any additional payment therefor.

- 3.6.2 No claim by Contractor under paragraph 3.6 of the General Conditions will be allowed unless more than thirty (30) days has elapsed and 1) Contractor has given the notice required in paragraph 3.7 of the General Conditions, and 2) within fifteen (15) days thereafter, Contractor has submitted to Department a written Proposed Change Order claim in accordance with the requirements of Articles 8, 9, 10 and 11 of the General Conditions, and the Standard Specifications.

Report of Differing Site Conditions:

- 3.7 If Contractor believes that any subsurface or physical condition uncovered or revealed at the site renders materially inaccurate any information in the Contract Documents or technical data on which Contractor was entitled to rely as provided in paragraph 3.4, Contractor shall, immediately after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 5.23), notify Department and Engineer in writing about the inaccuracy or difference to allow Department and Engineer to make any necessary changes to minimize the cost of the Work.
- 3.8 Engineer's and Department's Review: Engineer and Department will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto, and notify Contractor in writing of findings and conclusions. Immediately thereafter, Department shall perform or cause to be performed any necessary or appropriate additional investigations and tests with respect to the newly discovered conditions and furnish copies to Contractor.
- 3.9 Possible Document Change: If Engineer concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change in the Contract Documents is required, a Proposed Change Order or a Change Order will be issued as provided in Article 9 to reflect and document the consequences of the inaccuracy or difference, provided Department has not exercised its right to suspend or terminate under Article 14 of Section 8, "General Conditions", Appendix B, or Article 12 of Section 6 "Agreement."
- 3.10 Possible Contract Adjustment: An increase or decrease in the cost of, or the time required to perform any part of the Work, whether or not affected by such differing conditions, and a corresponding adjustment in Contract Price or Contract Time in accordance with Articles 9, 10 and 11 of the General Conditions, or any combination thereof, may be allowable to the extent that they are attributable to any such inaccuracy or difference which Contractor could not reasonably have been expected to anticipate or be aware of. If Department and Contractor are unable to agree as to the adjustment in Contract Price or Contract Time, or if Engineer concludes that there is not a material error in the Contract Documents, or that the uncovered or revealed condition could reasonably have been anticipated by Contractor, and Contractor disagrees, a claim may be made therefor as provided in Articles 9, 10 and 11 of the General Conditions.
- 3.11 No claim by Contractor under paragraph 3.10 of the General Conditions will be allowed unless: 1) Contractor has given the written notice required in paragraph 3.7 of the General Conditions, and 2) within fifteen (15) 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.

- 3.12 Responsibilities and Allowances: Contractor shall schedule excavation and uncovering of Work to begin a sufficient time in advance to allow Engineer's review as described in paragraph 3.8, and Department's issuance of a Change Order or a Proposed Change Order as described in paragraph 3.9 in connection with a report of differing conditions. Further, a reasonable interval of time, not less than thirty (30) days will be allowed to Engineer and Department for those functions required to resolve any report of differing conditions. This interval of time will be considered as having been included in the Contract Price and in Contractor's schedule for the performance of the Work within the Contract Time. If more than thirty (30) days is used, no claim will be allowed unless (1) Contractor has given the written notice required in paragraph 3.7 of the General Conditions, and (2) within fifteen (15) days thereafter, Contractor has submitted to Department a written Proposed Change Order claim in accordance with the requirements of Articles 8, 9, 10 and 11 of the General Conditions, and the Standard Specifications.

ARTICLE 4 - Bonds and Insurance

Performance and Other Bonds:

- 4.1 Contractor shall furnish performance, labor and material payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These Bonds shall remain in effect until at least one year after the date when final payment is made, unless otherwise provided by Law or by the Contract Documents. Contractor shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall: a) be in the form prescribed by the Contract Documents; and b) be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and As Acceptable Reinsuring Companies" as published by the U.S. Treasury Department. Also the surety shall be licensed to do business in New York State. All Bonds signed by an agent must be accompanied by an original or a certified true copy of the agent's power of attorney. Contractor's failure to submit and keep in effect a Bond or form of financial security acceptable to Department in the manner required by this paragraph shall be cause for termination. Contractor shall give written notice to Department and reference the site number and project name, if the surety on any Bond furnished by Contractor is declared bankrupt, becomes insolvent, its right to do business is involuntarily terminated by any state or federal agency, it ceases to meet the requirements of paragraph 4.1, Contractor, if required by Department, shall within fourteen days substitute another Bond or Surety, in an acceptable form of financial security. The top of all bonds shall have "NYSDEC-DER Site No. 336001".

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. Contractor shall furnish Department any modified bond.

Insurance - All Types:

- 4.2 The Contractor agrees to procure and maintain at its own expense and without expense to the Department insurance of the kinds and amounts hereinafter provided by insurance companies licensed to do business in the State of New York, covering all operations under this Contract.

The Contractor shall furnish to the Department a certificate or certificates with the appropriate endorsements showing that it has complied with this Article. The insurance documentation shall provide that:

- a. Liability and protective liability insurance policies shall provide primary and non-contributory coverage to the NYS Department of Environmental Conservation for any claims arising from the Contractor's Work under this contract, or as a result of the Contractor's activities. Insurance policies will not be accepted that:
 - o remove or restrict blanket contractual liability located in the "insured contract" definition (as stated in Section V, Number 9, Item f in the ISO CGL policy) so as to limit coverage against claims that arise out of work; or
 - o remove or modify the "insured contract" exception to the employers liability exclusion; or
 - o do not cover the additional insured for claims involving injury to employees of the named insured or subcontractors.
- b. The Contractor shall provide fully-completed ACORD 855 New York Construction Certificate of Liability Insurance Addendum along with specified General Liability certificate and accompanying endorsements.
- c. The State of New York, NYS Department of Environmental Conservation, its officers, agents and employees, Division of Environmental Remediation, Remedial Bureau E, 625 Broadway, Albany, NY 12233-7017, shall be listed as Certificate Holder on all liability insurance certificate(s), as additional insureds on endorsement(s) and on additional supporting documentation.
- d. The policies shall include a waiver of subrogation endorsement in favor of the Department as an additional insured. The endorsement shall be on ISO Form number CG 24 04 or a similar form with same modification to the policy.
- e. Policies shall not be changed or canceled until thirty (30) days prior written notice has been given to the Department; as evidenced by an endorsement or declarations page.
- f. Insurance documentation shall disclose any deductible, self-insured retention, aggregate limit or any exclusion to the policy that materially changes the coverage required by the Contract.
- g. Endorsements in writing must be added to and made part of the insurance contract for the purpose of changing the original terms to reflect the revisions and additions as described. A copy of these endorsements must be provided to the Department.
- h. Applicable insurance policy number(s) referenced on the ACORD form must be referenced in the supporting documentation requested by the Department and supplied by the insurance company (e.g. endorsement page, declarations page, etc.).
- i. When coverage is provided by a non-admitted carrier, a copy of the declarations page along with the ELANY stamped certification wording affixed to the certificate of insurance must be provided to ensure that the excess line insurance has met all of the requirements for a valid excess line transaction in accordance with Article 21 of the New York State Insurance Law.

- j. Worker's Compensation and Disability Benefits certificates shall name the New York State Department of Environmental Conservation, Division of Environmental Remediation, Remedial Bureau E, 625 Broadway, 12th Floor, Albany, NY 12233-7017, as entity requesting proof of coverage.
- k. This Contract shall be void and of no effect unless the Contractor procures the required insurance policies and maintains them until acceptance or completion of the work, whichever event is later. If at any time during the term of this contract the coverage provisions and limits of the policies required herein do not meet the provisions and limits set forth in the Contract or proof thereof is not provided to the Department, the Contractor shall immediately cease Work on the Project. The Contractor shall not resume Work on the Project until authorized to do so by the Department. Any delay, time lost, or additional cost incurred as a result of the Contractor not having insurance required by the Contract or not providing proof of same in a form acceptable to the Department, shall not give rise to a delay claim or any other claim against the Department. Should the Contractor fail to provide or maintain any insurance required by this contract, or proof thereof is not provided to the Department, the Department may withhold further contract payments, treat such failure as a breach or default of this contract, and/or, after providing written notice to the Contractor, require the Surety "if any" to secure appropriate coverage and/or purchase insurance complying with the Contract and charge back such purchase to the Contractor.
- l. Should the Contractor engage a subcontractor, the Contractor shall impose the insurance requirements of this document on the subcontractor. Contractor shall determine the required insurance types and limits, commensurate with the work of the Subcontractor. The Contractor will maintain the certificate(s) and endorsement(s) for all subcontractors hired as part of the Contractor's records.

The following types and amounts of insurance are required for this Contract:

4.2.1 **Workers' Compensation:** For work to be performed in New York State, the Contractor shall provide and maintain full New York State coverage during the life of this contract for the benefit of such employees as are required to be covered by the New York State Workers' Compensation Law.

If the agreement involves work on or near a shoreline, a U.S. Longshore and Harbor Workers' Compensation Act and/or Jones Act policy as applicable must be provided. Any waiver of this requirement must be approved by the Agency and will only be granted in unique or unusual circumstances.

Evidence of Workers' Compensation and Employers Liability coverage must be provided on one of the following forms specified by the Chairman of the New York State Workers' Compensation Board:

FORM #	FORM TITLE
C-105.2	Certificate of Workers' Compensation Insurance (September 2007, or most current version)
U-26.3	State Insurance Fund Version of the C-105.2 form
SI-12/ GSI-105.2	Certificate of Workers' Compensation Self-Insurance
CE-200	Certificate of Attestation of Exemption (when Contractor meets the requirements.)

All forms are valid for one year from the date the form is signed/stamped, or until policy expiration, whichever is earlier.

Please note - ACORD forms are NOT acceptable proof of New York State Workers' Compensation Insurance coverage.

Additional information can be obtained at the Workers' Compensation website:
<http://www.wcb.ny.gov/content/main/Employers/Employers.jsp>

4.2.2 **Disability Benefits:** For work to be performed in New York State, the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the New York State Disability Benefits Law. Any waiver of this requirement must be approved by the Department of Environmental Conservation and will only be granted in unique or unusual circumstances.

Evidence of Disability Benefits coverage must be provided on one of the following forms specified by the Chairman of the New York State Workers' Compensation Board:

FORM #	FORM TITLE
DB-120.1	Certificate of Insurance Coverage under the New York State Disability Benefits Law
DB-155	Certificate of Disability Self-Insurance
CE-200	Certificate of Attestation of Exemption (when Contractor meets the requirements.)

All forms are valid for one year from the date the form is signed/stamped, or until policy expiration, whichever is earlier.

Please note - ACORD forms are NOT acceptable proof of New York State Disability Benefits Insurance coverage.

Additional information can be obtained at the Workers' Compensation website:
<http://www.wcb.ny.gov/content/main/Employers/Employers.jsp>

4.2.3 **Commercial General Liability Insurance:** Contractor shall provide and maintain Commercial General Liability Insurance (CGL) covering the liability of the Contractor for bodily injury, property damage, and personal/advertising injury arising from all work and operations under this contract. The limits under such policy shall not be less than the following:

- Each Occurrence limit – \$5,000,000
- General Aggregate – \$8,000,000
- Products/Completed Operations – \$5,000,000
- Personal & Advertising Injury - \$1,000,000
- Damage to Rented Premises - \$50,000

- Medical Expense - \$5,000

Coverage shall include, but not be limited to, the following:

- Premises liability;

- Independent contractors;
- Blanket contractual liability, including tort liability of another assumed in a contract;
- Defense and/or indemnification obligations, including obligations assumed under this contract
- Cross liability for additional insureds;
- Products/completed operations for a term of no less than 3 years, commencing upon acceptance of the work, as required by the contract;
- Explosion, collapse, and underground hazards;
- Contractor means and methods; and
- Liability resulting from Section 240 or Section 241 of the New York State Labor Law.

The following ISO forms must be endorsed to the policy:

CG 20 10 11 85 or an equivalent – Additional Insured-Owner, Lessees or Contractors

CG 25 03 11 85 or an equivalent – Designated Construction Project(s) general aggregate limit (only required for construction contracts).

Limits may be provided through a combination of primary and umbrella/excess liability policies.

The CGL aggregate shall be endorsed to apply on a per project basis for construction contracts.

- 4.2.4 **Business Automobile Liability:** Contractor shall provide and maintain Business Automobile Liability insurance covering liability arising out of the use of any registered motor vehicle in connection with the contract, including owned, leased, hired and non-owned vehicles. Such policy shall have a combined single limit for Bodily Injury and Property Damage of at least \$1,000,000.

If the Contractor does not own, lease or hire any registered motor vehicles or will not be using any vehicles on State Land proof of Business Automobile Liability Insurance shall not be required for this Contract.

The Contractor shall assume full responsibility and liability that owners and operators of any registered motor vehicles entering State Land to conduct work under this contract carry the same Business Automobile Liability Insurance of the kinds and amounts listed above. NYS Department of Environmental Conservation reserves the right to request proof of the same.

- 4.2.5 **Environmental Liability:** Contractor shall procure, or otherwise obtain through an approved subcontractor, and maintain in full force and effect throughout the term of the contract, and for two years after completion hereof, pollution legal liability insurance with limits of not less than \$5,000,000 providing **primary** coverage for bodily injury and property damage, including loss of use of damaged property or of property that has not been physically injured. Such policy shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants, including any loss, cost or expense incurred as a result of any cleanup of pollutants or in the investigation, settlement or defense of any claim, suit, or proceedings against the Department of Environmental Conservation arising from the Contractor's work.

This requirement applies to mold as well, if excluded in the commercial general liability policy.

If vehicles are to be used for transporting hazardous materials, the Contractor shall also provide pollution liability broadened coverage for covered autos (endorsement CA 99 48 03 06 or CA 01 12 03 06) as well as proof of MCS 90.

- 4.2.6 **Professional Liability:** The Contractor shall procure and maintain during and for a period of three (3) years after completion of this contract, Professional Liability Insurance in the amount of \$2,000,000 issued to and covering damage for liability imposed on the Contractor by this contract or law arising out of any negligent act, error, or omission in the rendering of or failure to render professional services required by this contract. The professional liability insurance may be issued on a claims-made policy form, in which case the Contractor shall purchase at its sole expense, extended Discovery Clause coverage of up to three (3) years after work is completed if coverage is cancelled or not renewed. The Contractor shall provide coverage for its negligent act, error or omission in rendering or failing to render professional services required by this contract arising out of specifications, installation, modification, abatement, replacement or approval of products, materials or processes containing pollutants, and the failure to advise of or detect the existence or the proportions of pollutants.

Should any subcontractor(s) or supplier(s) retained by the Contractor provide professional services requiring design (i.e. the signature, stamp or certification of a licensed professional), the Contractor shall collect Professional Liability Insurance from the subcontractor(s) or supplier(s) and retain said insurance as part of the contract documents.

- 4.2.7 **Contractor's Equipment:** The Contractor shall secure, pay for, and maintain Property Insurance necessary for protection against the loss of owned, borrowed or rented capital equipment and tools, including any tools owned by employees, and any tools or equipment, staging towers, and forms owned, borrowed or rented by the Contractor. The requirement to secure and maintain such insurance is solely for the benefit of the Contractor. Failure of the Contractor to secure such insurance or to maintain adequate levels of coverage shall not render the Department or their agents and employees responsible for any losses; and the Department, their agents and employees shall have no such Liability.

- 4.2.8 **Owners and Contractors Protective Liability:** The Contractor shall obtain Owners/Contractors Protective Liability (OCP) Policy as follows:

- For work related to street, road, highway, and/or bridge work
 - Form CG 00 09, Owners and Contractors Protective Liability Coverage form – Coverage for Operations of the Designated Contractor; AND
 - Form CG 00 14, Special Protective and Highway Liability Policy – New York Department of Transportation
- For projects not related to street, road, highway, and/or bridge work
 - Form CG 00 09, Owners and Contractors Protective Liability Coverage form – Coverage for Operations of the Designated Contractor ONLY

The policy shall be written on a project basis for the benefit of the People of the State of New York, the Department, its officers, agents, and employees, with respect to all operations under this contract by the Contractor or its subcontractors, including in such coverage any omissions and supervisory acts of the Department, its officers, agents, and employees.

The State of New York and the NYS Department of Environmental Conservation, Division of Environmental Remediation, Remedial Bureau E, 625 Broadway, Albany, NY 12233-7012 shall be the Named Insured in the OCP Policy, which shall be promptly furnished to the Department. OCP policy limits shall be no less than \$1 Million (Each Occurrence) / \$2 Million (General Aggregate).

- 4.2.9 **Unmanned Aircraft Systems (“UAS”) Liability:** UAS Liability will be required whenever the contracted work includes operation of an Unmanned Aircraft System (UAS), also known as a Drone. The Contractor and/or its subcontractor shall provide an Aviation Liability Insurance policy covering the liability of the operator for bodily injury, property damage, and Personal injury arising from all operation in the amount of \$1,000,000.00 per Occurrence.
- 4.2.10 **Umbrella and Excess Liability:** When the limits of the CGL, Auto, and/or Employers’ Liability policies procured are insufficient to meet the limits specified, the Contractor shall procure and maintain Commercial Umbrella and/or Excess Liability policies with limits in excess of the primary; provided, however, that the total amount of insurance coverage is at least equal to the requirements set forth above. Such policies shall follow the same form as the primary.

ARTICLE 5 - Contractor’s Responsibilities

Supervision and Superintendence:

- 5.1 Contractor shall supervise and direct the Work required by the contract competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be responsible for the means, methods, techniques, sequences and procedures of construction; except that Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. Contractor shall be responsible to see that the finished Work conforms with the Contract Documents.
- 5.2 Contractor shall keep on the Site of the Work at all times during its progress, a competent and reliable resident superintendent, who shall not be replaced without written approval of Department. The superintendent will be Contractor’s representative at the site and shall have authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to Contractor.
- 5.2.1 Department may require immediate replacement of the superintendent upon written notice for cause.
- 5.2.2 The superintendent and similar authorized representatives of any Subcontractors as requested by Department or Engineer shall attend all meetings pertaining to the Work.
- 5.2.3 Whenever the superintendent is not present for performance of a particular part of the Work and Engineer is not able to give to Contractor, through the superintendent, information relative to an interpretation of the Contract Documents, or relative to disapproval or rejection of materials or the performance of such work, Engineer may so inform the worker in charge of such Work. Information so given shall be binding as if given to superintendent.
- 5.2.4 Contractor shall issue all communications to Department through Engineer except as provided by Contract Documents. All written correspondence to Engineer shall be copied to Department.

Labor, Working Hours, Materials and Equipment:

- 5.3 Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall, at all times, employ labor and equipment which shall be sufficient to prosecute the several classes of work to full completion in the manner and time specified. All workers must have sufficient skill, experience and Health and Safety training required to perform properly the work assigned them. All workers engaged on special or skilled work shall have had sufficient experience in such work to perform properly and satisfactorily including operation of any equipment involved. Any person employed by Contractor or Subcontractor whom the Engineer or Department may determine incompetent or unfit to perform the work shall be at once discharged or reassigned and not again be employed on Work in connection with this Contract. The Contractor may request review by Department regarding the discharge of such employee(s). Contractor shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during normal working hours as defined in paragraph 5.3.1 below, and Contractor shall not permit overtime Work or the performance of Work during hours other than normal Working hours without: a) prior written notice to Engineer; b) Department's written consent; and c) written approval from the New York State Department of Labor as required by law.
- 5.3.1 Normal working hours shall be defined as a normal working schedule which a) does not exceed eight hours per working day, occurring between the hours set forth at the pre-construction conference, or if none are set forth, beginning no earlier than 7:00 a.m. and ending at no later than 5:00 p.m.; and b) does not exceed 40 hours per week, excluding overtime Work, Work on Saturdays, Sundays, and Federal- or New York State-observed holidays. Work during other than normal working hours may be scheduled by Contractor by first obtaining written permission from Department and as provided in Section 5.3. Department shall be entitled to recover extra costs incurred in providing inspection related to Work done during other than normal working hours in accordance with paragraph 5.3.5 below.
- 5.3.2 If Contractor, for convenience, voluntarily chooses to schedule Work during hours other than normal working hours at no increase in Contract Price, Contractor shall submit details of such proposed schedule with the interim Progress Schedule described in paragraph 1.6 of the General Conditions. Any Progress Schedule calling for Work outside of normal working hours shall be reviewed for acceptance by Engineer and Department and must be in accordance with the requirements of the New York State Labor Law and Articles 1.6 and 5.3 of the General Conditions.
- 5.3.3 If at any time subsequent to the submission and approval of the Progress Schedule pursuant to the General Conditions and the Standard Specifications, an event or delay not meeting the requirements for extensions in Contract Time set forth in Articles 9, 10 and 11 of the General Conditions occurs, and requires Contractor to schedule Work during hours other than normal working hours for Contractor's convenience and at no increase in Contract Price, Contractor shall submit, at least ten (10) working days in advance of the acceleration period, a proposed revised accelerated schedule for review by Engineer and Department. If Department accepts the revised accelerated Progress Schedule, Department will so notify Contractor in writing.

APPENDIX B

Standard Clauses for All New York State Department of Environmental Conservation Contracts

The parties to the attached contract, license, lease, grant, amendment or other agreement of any kind (hereinafter "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract. The word "Contractor" herein refers to any party to the contract, other than the New York State Department of Environmental Conservation (hereinafter "Department").

I. **Postponement, suspension, abandonment or termination by the Department:**

The Department shall have the right to postpone, suspend, abandon or terminate this contract, and such actions shall in no event be deemed a breach of contract. In the event of any termination, postponement, delay, suspension or abandonment, the Contractor shall immediately stop work, take steps to incur no additional obligations, and to limit further expenditures. Within 15 days of receipt of notice, the Contractor shall deliver to the Department all data, reports, plans, or other documentation related to the performance of this contract, including but not limited to source codes and specifications, guarantees, warranties, as-built plans and shop drawings. In any of these events, the Department shall make settlement with the Contractor upon an equitable basis as determined by the Department which shall fix the value of the work which was performed by the Contractor prior to the postponement, suspension, abandonment or termination of this contract. This clause shall not apply to this contract if the contract contains other provisions applicable to postponement, suspension or termination of the contract.

II. **Indemnification and Hold harmless** The Contractor agrees that it will indemnify and save harmless the Department and the State of New York from and against all losses from claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against it by reason of any omission or tortious act of the Contractor, its agents, employees, suppliers or subcontractors in the performance of this contract. The Department and the State of New York may retain such monies from the amount due Contractor as may be necessary to satisfy any claim for damages, costs and the like, which is asserted against the Department and/or the State of New York.

III. **Conflict of Interest**

(a) **Organizational Conflict of Interest.** To the best of the Contractor's knowledge and belief, the Contractor warrants that there are no relevant facts or circumstances which could give rise to an organizational conflict of interest, as herein defined, or that the Contractor has disclosed all such relevant information to the Department.

(1) An organizational conflict of interest exists when the nature of the work to be performed under this contract may,

without some restriction on future activities, impair or appear to impair the Contractor's objectivity in performing the work for the Department.

(2) The Contractor agrees that if an actual, or potential organizational conflict of interest is discovered at any time after award, whether before or during performance, the Contractor will immediately make a full disclosure in writing to the Department. This disclosure shall include a description of actions which the Contractor has taken or proposes to take, after consultation with the Department, to avoid, mitigate, or minimize the actual or potential conflict.

(3) To the extent that the work under this contract requires access to personal, proprietary or confidential business or financial data of persons or other companies, and as long as such data remains proprietary or confidential, the Contractor shall protect such data from unauthorized use and disclosure and agrees not to use it to compete with such companies.

(b) **Personal Conflict of Interest:** The following provisions with regard to management or professional level employee personnel performing under this contract shall apply until the earlier of the termination date of the affected employee(s) or the duration of the contract.

(1) A personal conflict of interest is defined as a relationship of an employee, subcontractor employee, or consultant with an entity that may impair or appear to impair the objectivity of the employee, subcontractor employee, or consultant in performing the contract work. The Contractor agrees to notify the Department immediately of any actual or potential personal conflict of interest with regard to any such person working on or having access to information regarding this contract, as soon as Contractor becomes aware of such conflict. The Department will notify the Contractor of the appropriate action to be taken.

(2) The Contractor agrees to advise all management or professional level employees involved in the work of this contract, that they must report any personal conflicts of interest to the Contractor. The Contractor must then advise the Department which will advise the Contractor of the appropriate action to be taken.

- 5.4.3 Contractor shall light the parts of the Work performed during working hours in the manner required by law and as required by Engineer or Department.
- 5.5 Except as otherwise provided in the Contract Documents, all materials shall be of good quality, good condition and new, and all equipment shall be new, or should be in good working order and of good quality. As required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents.
- 5.5.1 Contractor shall provide to Department for Department's benefit through Engineer all manufacturers' warranties for materials, and products incorporated into the Work, or required by the Contract Documents to be furnished by Contractor.
- 5.5.2 Contractor shall obtain from manufacturers of all materials and products complete information as to any special condition, or restriction to be applied in the use of these items. Should the manner or method of installation, specified performance or test results as set forth in the Specifications be contrary to the manufacturer's recommendations for installation and use of the product, the Contractor shall notify Engineer of same for appropriate action. Lack of such notification shall constitute a certification and guarantee by Contractor that Specification requirements will be met by such materials and products to be incorporated.
- 5.5.3 Contractor shall submit data on all products to be incorporated into the Work required by the Contract Documents, including but not limited to complete maintenance instructions (including preventive maintenance and operating requirement data) and parts lists in sufficient detail to facilitate ordering replacements, in accordance with the procedures set forth in the Special Supplementary Conditions, the Standard Specifications or the Supplementary Specifications.

Adjusting Progress Schedule:

- 5.6 Contractor shall report on the status of and any revisions to the Progress Schedule to Engineer and Department by delivering Progress Schedule status and update submittals to Engineer in accordance with the Specifications and Article 1.6 of the General Conditions. If Contractor does not adequately update the Schedule, Department may reject Contractor's requests for payment, provided that Department gives Contractor ten (10) days written notice of its intention to do so.

"Or-Equal" or Substitute Items:

- 5.7.1 Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function, quality, performance and design criteria required. Unless the name is followed by words indicating that no "or equal" or substitution is permitted, materials or equipment of other Suppliers may be accepted by Engineer if sufficient information is submitted by Contractor to allow Engineer to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by Engineer will include the following as supplemented in the Contract Documents. Requests for review of "or equal" or substitute items of material

and equipment will not be accepted by Engineer from anyone other than Contractor. If Contractor wishes to furnish or use an "or equal" or substitute item of material or equipment, Contractor shall make written application to Engineer for acceptance thereof, certifying that the proposed "or equal" or substitute shall perform the functions and achieve the results called for by the general design, be similar and of equal substance and quality to that specified and be suited to the same use as that specified.

- 5.7.1.1 The application shall state that the evaluation and acceptance by Engineer of the proposed "or equal" or substitute shall not prejudice completion of the Work, or any part thereof, within the Contract Time, or contract times (including Contractor's achievement of Substantial Completion on time), whether or not acceptance of the "or equal" or substitute for use in the Work would require a change in the Work, or any part thereof, or would require the Department or others having a contract with Department for Work on the Project to adapt the Contract Documents to the proposed "or equal" or substitute; and whether or not incorporation or use of the "or equal" or substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed "or equal" or substitute from that specified shall be identified in the application and available maintenance, repair and replacement services shall be indicated. The application shall also contain an itemized estimate of all increases or decreases in the following costs: 1) the cost of, or the time required to perform any part of the Work, and the corresponding adjustments in Contract Price and Contract Time, resulting directly or indirectly from evaluation and acceptance of the proposed substitute, including, but not as a way of limitation, costs and delays associated with redesign, or claims of other contractors affected by the resulting "or equal" or substitute, and 2) increases or decreases in operating, maintenance, repair, replacement or spare part costs, all of which shall be considered by Engineer in evaluating the proposed "or equal" or substitute. In rendering a decision, Department and Engineer shall at a minimum, have access to any available Total Float in the approved Progress Schedule. Engineer may require Contractor to furnish at Contractor's expense additional data about the proposed "or equal" or substitute.
- 5.7.2 If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute only if first approved by Engineer. Contractor shall submit in writing sufficient information to allow Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedures for review by Engineer established by paragraph 5.7.1, and as may be supplemented in the Contract Documents, will apply to reviews under this paragraph.
- 5.7.3 Engineer shall be allowed a reasonable time as determined by Department within which to evaluate each proposed "or equal" or substitute. Engineer and Department shall be the sole judge of acceptability and no "or equal" or substitute shall be ordered, installed or utilized without Engineer's prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. Department may require Contractor to furnish at Contractor's expense a special performance guarantee or other financial security with respect to any substitute. Engineer will keep record of the time required by Engineer and Engineer's consultants in evaluating "or equals" or substitutions proposed by Contractor and in making changes in the Contract Documents occasioned thereby.

Whether or not Engineer accepts an "or equal" or proposed substitute, Department shall be entitled to an offset against any payment due Contractor for the charges of Engineer and Engineer's consultants for evaluating each proposed "or equal" or substitute after the second submittal on such item. In the event that substitute materials or equipment are accepted and are less costly than the originally specified materials or equipment, then the net difference in cost shall benefit Department, and an appropriate Change Order or Proposed Change Order shall be executed to reflect the difference in cost. If Engineer or Department determine that the deduction proposed by Contractor does not reflect the net difference in cost, then this shall be adequate justification to reject the proposed substitute. Additional construction and/or engineering costs identified after Department's acceptance of the proposal and resulting from installation of an "or equal" or substitute shall be borne by Contractor.

Subcontractors, Suppliers and Others:

- 5.8.1 Contractor shall not employ nor award Work to Subcontractors in excess of the amount specified in Article 6 of the Supplementary Bidding Information and Requirements Section. Such percentage may be increased by an Administrative Agreement if, during performance of the Work, Contractor requests an increase and Department at its sole discretion determines that the increase would be to Department's advantage. Contractor shall submit to Department a statement stating the character and amount of the work to be subcontracted and the party to whom it is proposed to subcontract the work. Contractor shall not employ any Subcontractor, Supplier or other person or organization whether initially or as a substitute, unless first approved by Department.
- 5.8.2 Wherever Work to be performed by Contractor or by a Subcontractor is dependent upon Work of other Subcontractor(s) or the work of separate contractor(s), then Contractor shall require such Subcontractor(s) whose Work is so dependent to:
- 5.8.2.1 Provide necessary notices of delay, data or other requirement(s) for performance of dependent Work or work of separate contractor(s),
 - 5.8.2.2 Supply and/or install items to be built into dependent Work or work of separate contractor(s),
 - 5.8.2.3 Make provisions for dependent Work or work of separate contractor(s),
 - 5.8.2.4 Examine previously placed dependent Work or work of separate contractor(s),
 - 5.8.2.5 Check and verify dimensions of previously placed dependent Work or work of separate contractor(s),
 - 5.8.2.6 Notify Engineer in writing immediately upon determining previously placed dependent Work or work of separate contractor(s), the dimensions of which are unsatisfactory or will prevent a satisfactory installation of Work,
 - 5.8.2.7 Not proceed with Work until the unsatisfactory dependent conditions which prevent satisfactory installation of Work have been corrected.

Installation of Work by Contractor or by a Subcontractor in any given area shall constitute acceptance by Contractor or by such Subcontractor of all previously placed dependent Work or work of separate contractor(s) and after such acceptance Contractor shall not make any claims for additional costs based on alleged deficiencies in such Work.

- 5.8.3 Whenever other Contractor(s) will perform portion(s) of the work that depend on the Contractor's portion of the Work; Contractor shall provide all of the notices and information listed in 5.8.2 to such other Contractor(s) in a timely manner.
- 5.9 Contractor shall be responsible and liable to Department and Engineer for Contractor's acts and omissions and all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a contract with any level of Subcontractor or Supplier. Nothing in the Contract Documents shall create any contractual relationship between Department or Engineer and any such Subcontractor, Supplier or other person or organization. Department or Engineer may furnish to any Subcontractor or Supplier, to the extent practicable, evidence of the payments made to Contractor on account of specific Work done.
- 5.10 The various sections, divisions and subdivisions of the Standard and Supplementary Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade. The Standard Specifications, Supplementary Specifications, and Drawings are complementary to each other and are to be read as a whole. Anything mentioned or shown in a division of such Specifications, or Drawings, or in a specific trade Drawing shall be effective as if shown in all divisions of such Specifications and in all Drawings. In addition to the requirements of paragraphs 5.24 through 5.30 of the General Conditions, shop drawings of a specific trade shall be compared to and coordinated with those from other trades by Contractor before submission to Engineer.
- 5.11 All Work performed for Contractor by a Subcontractor will be pursuant to an appropriate agreement between Contractor and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Department.

Patent Fees and Royalties:

- 5.12 Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, device or intellectual processes which is the subject of patent rights or copyrights held by others, both when a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and otherwise. It is the intent of the parties that whenever Contractor is required or desires to use any design, device, material or process covered by letters, patent, trademark or copyright, the right for such use shall be provided for by suitable legal agreements with the patentee or owner, and a copy of this agreement shall be filed with Engineer. However, whether or not such agreement is made or filed as noted, Contractor and Contractor's surety in all cases shall indemnify and hold harmless Department and Engineer and their employees as provided in Appendix B.

Permits:

- 5.13 Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for any permits or licenses required for performance of Work. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids on the Effective Date of the Agreement. Contractor shall pay all charges for connections or disconnections required by the Work to Underground Facilities or utilities owned by third parties.

Laws and Regulations:

- 5.14.1 Contractor shall comply with all Laws applicable to performance of the Work. Except where otherwise expressly required by applicable Laws or Contract Documents, neither Department nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws.
- 5.14.2 If Contractor observes that the Contract Documents are at variance with any applicable Laws, Contractor shall immediately give Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods set forth in paragraph 2.4 and 2.5 of the General Conditions. If Contractor performs any Work knowing or having reason to know that it is contrary to such Laws, and without such notice to Engineer, Contractor shall bear all costs arising therefrom; however, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws.

Taxes:

- 5.15 Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by Contractor in accordance with the Laws of the State of New York which are applicable during the performance of the Work. Materials, supplies and equipment incorporated into the Work or sold to New York State are exempt from New York State sales tax.

Use of Premises:

- 5.16 Contractor shall confine the use and storage of construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by applicable Laws, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Unless otherwise provided in the Contract Documents, use of Department's facilities at or contiguous to the site by Contractor for storage of materials or equipment shall not be permitted. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the acts or omissions of Contractor. Should any claim be made against Department or Engineer by any such owner or occupant because of the performance of the Work, Contractor shall promptly attempt to settle with such other party by agreement or otherwise resolve the Claim. Contractor shall indemnify and hold Department harmless in accordance with the provisions of Appendix B.
- 5.16.1 Temporary buildings (e.g., storage sheds, trailers, shops, offices) and utilities may be erected by Contractor only with the approval of Engineer and shall be built without additional expense to Department. Such temporary buildings and utilities shall remain the property of Contractor and shall be decontaminated as necessary and removed by

Contractor at his expense upon completion of the Work; the buildings and utilities may be abandoned and remain at the site with the written consent of Department.

- 5.16.2 When materials are transported for performance of the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by Federal, State, or local law or regulation. When it is necessary to cross curbs, sidewalks or work which is completed or underway on site, Contractor shall protect them from damage, and shall repair any damage caused.
- 5.16.3 Notwithstanding the designation of site boundaries or the indication of temporary fences or barricades, the provisions of the Contract Documents governing certain phases or portions of the Work may require that certain operations be carried out beyond the site boundaries. Trenching, utility Work, site development, landscaping, other Work, if required beyond such designated limits, shall be scheduled in such a manner as to cause or occasion a minimum of inconvenience or disturbance to or interference with the normal operation of Department, abutting owners and the public. Contractor shall obtain Department's prior approval and all necessary approvals from others, including but not limited to public authorities and utility companies for such operations, and shall conduct such operations expeditiously and restore the affected area to its original condition immediately upon completion of such operations, unless otherwise specified in the Contract Documents.
- 5.16.4 All existing walks, roadways, paved or landscaped areas on which temporary driveways or walks are rerouted shall be restored to their original condition, immediately upon completion of the phases or portions of the Work for which such features were disturbed unless otherwise specified in the Contract Documents.
- 5.16.5 Pumping, draining and control of surface and ground water will be carried out so as to avoid endangering the Work or any adjacent facility or property, or interrupting, restricting or otherwise infringing or interfering with the use thereof, or exceeding the limits allowed by Contract Documents, or applicable Law.
- 5.17 During the progress of the Work, Contractor shall keep the Site free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the Site clean and ready for Department. Contractor shall restore all pavement, sidewalks, driveways, fences, shrubs, lawns, trees and any other public or private property damaged as a result of the Work under this Contract. All such replacement shall be done in accordance with the applicable specifications and no separate or extra payment will be made unless specifically provided for in the Payment Items. In all cases, said replacement shall be at least equal to the original conditions.
- 5.18 Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

As-Built Documents:

- 5.19 Contractor shall maintain in a safe place at the Site one (1) as-built document which shall consist of all Drawings, Specifications, Addenda, written amendments, Change Orders, Proposed

Change Orders, field test records, construction photographs, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 8.3) 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. Pursuant to paragraph 13.2.1 of the General Conditions, failure to maintain a current file of such as-built documents up-to-date may be just cause to recommend withholding of payments for Work performed. These as-built documents together with all approved samples and a copy of all approved Shop Drawings shall be available to Engineer for reference at the Site. Upon completion of the Work, these as-built documents, samples and Shop Drawings shall be delivered to Engineer for Department. Failure by Contractor to produce acceptable as-built documents of the above listed items shall be cause for reduction of Contract Price in an amount equal to Department's cost of generating or producing the as-built documents.

Health, Safety and Protection:

- 5.20 Contractor shall be responsible for initiating, maintaining and supervising all health and safety precautions and programs in connection with the Work which include but are not limited by the Contract Documents and Contractor's Health and Safety Plan. Contractor shall take all necessary precautions for the health and safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees and other persons and organizations who may be affected thereby. Contractor shall comply with all applicable Laws of any public body having jurisdiction for the health and safety of persons or property in order to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such health, safety and protection. Contractor shall notify owners of Underground Facilities and utility owners when performance of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. In addition to any requirements imposed by Laws, Contractor shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site which are in any way affected by the excavations or other operations connected with performance of the Work under the Contract.
- 5.21 All damage, injury or loss to any property referred to in the above paragraph caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or caused by anyone for whose acts any of them may be liable, shall be remedied by Contractor; provided that Contractor shall not be responsible for damage or loss attributable to defects in the Drawings or Specifications or to the acts or omissions of Department or Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and to the extent not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a written notice to Department and Contractor in accordance with paragraph 13.11 that the Work is acceptable, except as otherwise expressly provided in connection with Substantial Completion. Department has the right to suspend Work or terminate this contract for cause for Contractor's failure to comply with any health and safety plan required by the Contract Documents or Law.
- 5.22 Contractor shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to Department.

Emergencies:

- 5.23 In emergencies affecting or threatening to affect the safety or protection of persons or the Work or property at the site or adjacent thereto when prompt action is required and there is no reasonable opportunity for prior consultation with Engineer or Department, then Contractor, without special instruction or authorization from Engineer or Department, is obligated to act to prevent or mitigate threatened damage, injury or loss. Contractor shall give Engineer prompt telephonic or electronic notice followed by written notice thereof, including any significant changes in the Work or variations from the Contract Documents which Contractor believes have been caused thereby. If Engineer determines that a change in the Contract Documents is required because of the action taken in response to an emergency, an Administrative Agreement, Field Order, Proposed Change Order or Change Order shall be issued to document the consequences of the changes or variations. Contractor shall give Engineer and Department name and number of contact for emergencies during non-Work hours.

Shop Drawings and Samples:

- 5.24 After checking and verifying all field measurements and after complying with applicable procedures specified in the Contract Documents, Contractor shall submit to Engineer for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 1.4, hereof) six (6) physical copies and one electronic copy of all Drawings plus additional copies as required by Contractor, unless otherwise specified in the Contract Documents. All such Shop Drawings shall bear a stamp or other specific written indication that Contractor has satisfied the requirements of the Contract Documents with respect to the review of the submissions including but not limited to paragraph 5.26 below. All submissions shall be identified as Engineer may require. The data shown on the Shop Drawings shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable Engineer to review the information as required.
- 5.25 Contractor shall also submit to Engineer for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. Contractor shall check all samples, shall identify them clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended, and shall submit with them a written certification that Contractor has satisfied the requirements of the Contract Documents with respect to the review of such submissions including but not limited to subparagraph 5.26 below.
- 5.26 Before submission of each Shop Drawing or sample, Contractor shall certify that all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto have been reviewed or that each Shop Drawing or sample has been coordinated with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.
5. 27 At the time of each such submission, Contractor shall give Engineer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation of each such variation to be made on each Shop Drawing submitted to Engineer for review and approval.
- 5.28 Engineer will review and approve or disapprove Shop Drawings and samples in 14 days. However, Engineer's review and approval of Shop Drawings will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to the accuracy of other matters that may be contained in the submittals, including but not limited to such matters as dimensions, quantities, performance of

equipment and systems proposed by Contractor, Contractor's means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequences, and procedures of construction is indicated in or required by the Contract Documents) or to safety precautions or program incident thereto, the correctness of which shall remain the sole responsibility of Contractor. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

- 5.28.1 When reviewed by Engineer, each submittal of Shop Drawings and samples will be returned to Contractor as either "Approved", "Approved as Noted", "Resubmit with Revisions", or "Disapproved." Submittals stamped as "Approved" or "Approved as Noted" will indicate Engineer's approval thereof, subject to the provisions of paragraph 5.28.
 - 5.28.2 Contractor shall revise and correct Shop Drawings and samples and resubmit them to Engineer for Engineer's second review and return pursuant to paragraph 5.29. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
 - 5.28.3 Costs associated with Engineer's review and return of a Shop Drawing or sample submission other than ones submitted pursuant to paragraph 5.7 of this Section shall be borne by Contractor after the Engineer's second (2nd) review. Department's charges to Contractor for additional reviews will be equal to Engineer's charges to Department under the terms of Engineer's agreement with 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 the 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.
 - 5.28.4 After the Engineer's second (2nd) review, delays associated with Contractor's resubmittal and Engineer's review and return of a particular Shop Drawing or sample submission shall be the responsibility of Contractor. Such delays shall not justify an increase in Contract Price nor an extension in Contract Time.
- 5.29 Engineer's review and approval of Shop Drawings or samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called Engineer's attention to each such variation at the time of submission as required by paragraph 5.27 and Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by Engineer relieve Contractor from responsibility for errors or omissions in the Shop Drawings or from responsibility for complying with paragraph 5.26.
- 5.30 Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to Engineer's review and approval of the pertinent submission will be the sole expense and responsibility of Contractor.

Continuing the Work:

- 5.31 Contractor shall carry on the Work and adhere to the Progress Schedule during all Claims or Disputes with Department. No work shall be delayed or postponed pending resolution of any Claims or Disputes, except as permitted by Article 14 of the General Conditions or as Contractor and Department may otherwise agree in writing.

Weather Protection:

- 5.32 Contractor shall be responsible for initiating, maintaining and supervising all weather protection precautions and programs in connection with the Work. Additional weather protection provisions, if applicable, are set forth in the Supplementary Conditions, Standard Specifications or Supplementary Specifications.

Cutting and Patching of Work:

- 5.33 Contractor shall be responsible for all cutting of masonry and other materials, and all fitting, drilling or patching which may be necessary to complete the Work or to make its several parts fit together properly, whether or not such Work is expressly specified in the Contract Documents.
- 5.34 Contractor shall not damage or endanger any portion of the Work or the work performed by Department or by any separate contractors by cutting, patching or otherwise altering any work, or by excavation. Contractor shall not cut or otherwise alter work performed by Department or any separate contractors except with the written consent of Department and of such separate contractor. Contractor shall not unreasonably withhold from Department or any separate contractor consent to cutting or otherwise altering the Work.

Quality Control:

- 5.35 Reference is made to the Supplementary Conditions, Standard Specifications and Supplementary Specifications for the identification of Contractor's quality control system requirements under the Contract.

Project Meetings:

- 5.36 Contractor, along with appropriate Subcontractors, suppliers and manufacturers, shall attend weekly, or at an interval agreed to by the Department, project meetings at the site or as requested by Department or Engineer, for the purpose of discussing and resolving matters concerning the various elements of the Work.

Notification of Emergency Services:

- 5.37 Contractor shall notify all local Police, Fire Department and Ambulance Services at least twenty-four (24) hours in advance of construction across or adjacent to existing roadways in order that such services might be aware of any disrupted access.

Conflicts between Contract Documents and Site:

- 5.38 Contractor shall notify Engineer and Department immediately upon discovering any conflicts, ambiguities, error or inconsistencies in the Contract Documents, between the Contract Documents and the actual Site Conditions, or between the Contract Documents and work being done by others. Failure to promptly notify the Engineer and Department may invalidate Contractor's request for an increase in Contract Price and/or Time.

ARTICLE 6 - Other Work

Related Work at Site:

- 6.1 Department may perform other work related to the Project at the site by Department's own forces, have other work performed by utility owners, or enter into other contracts for such other work.
- 6.2 Contractor shall afford each utility owner and other contractor who is a party to a direct contract with Department (or Department, if Department is performing the additional work with Department's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect the Work with theirs. Contractor shall do all the Work that may be required to make its several parts come together properly and integrate with other work. Contractor shall only alter the work of others with the written consent of Engineer and notice to the other contractors whose work will be affected, and shall not endanger any work of others by altering their work. The duties and responsibilities of Contractor under this paragraph are for the benefit of such utility owners and other contractors.
- 6.3 If any part of Contractor's Work depends for proper execution or results upon the work of any such other contractor, utility owner or Department, Contractor shall inspect and promptly report to Engineer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Contractor's failure to report shall constitute an acceptance of the other work as fit and proper for integration with Contractor's Work except for latent or non-apparent defects and deficiencies in the other work.

ARTICLE 7 - Department's Responsibilities

- 7.1 Department may issue communications to Contractor through Engineer.
- 7.2 In case of termination of the employment of Engineer, Department shall appoint an engineer whose status under the Contract Documents shall be the same as the former Engineer.
- 7.3 Department shall promptly furnish the data as required under the Contract Documents and shall make payments to Contractor promptly after they are due as provided in Article 13.
- 7.4 Department is represented by the Project Field Representative, the Project Manager and the Designated Representative whose duties and authority are set forth in the Contract Documents. Department is also represented by Engineer.
- 7.5 Department will not be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, unless the Contract Documents specifically impose such a duty on Department. Department will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.
- 7.6 Department will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 8 - Engineer's Duties and Responsibilities

Project Representation:

- 8.1 The duties and responsibilities and the limitations of authority of Engineer during construction are set forth in the Contract Documents. Engineer's Resident Engineer will assist Engineer in inspecting the performance of the Work. The duties, and authorities of any Resident Engineer and Resident Project Representatives are set forth in the Contract Documents. Secondly Department is represented as set forth in article 7.4 of the General Conditions.

Visits to Site:

- 8.2 Engineer shall make any on-site inspections necessary to check the quality or quantity of the Work and to determine if the Work is proceeding in accordance with the Contract Documents. Engineer's duty to visit the site shall in no way be construed to relieve Contractor of its duty to perform the Work in conformance with the Contract Documents.

Clarifications and Interpretations:

- 8.3 Engineer or Department shall issue with reasonable promptness written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as Engineer or Department may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

Authorized Variations in Work:

- 8.4 Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and will be binding on Contractor who shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an increase in Contract Price or an extension in Contract Time, Contractor shall be required to deliver a written notice thereof to Engineer in accordance with the provisions of Article 9 of the General Conditions. If Department and Contractor are unable to agree as to amount and extent thereof, a claim may be made pursuant to Articles 10 and 11 of the General Conditions.

Rejecting Defective Work:

- 8.5 Engineer, based on its inspections, reports of its Resident Engineer, other information available to it and its professional experience and training, or the direction of Department, may disapprove or reject Work at any time during the construction of the Work, which Engineer believes to be Defective Work. Engineer shall also have authority to require special inspection or testing of the Work as provided in paragraphs 12.4 through 12.10 of the General Conditions, whether or not the Work is fabricated, installed, or completed. When Contractor has been notified by Engineer of disapproval or rejection of Defective Work, Contractor shall take immediate action to correct same at no additional cost.

Shop Drawings, Change Orders and Payments:

- 8.6 Engineer's responsibilities regarding Shop Drawings and samples, are set forth in paragraphs 5.24 through 5.30 of the General Conditions. If Contractor believes that Engineer's approval of a Shop Drawing or sample justifies an increase in Contract Price or an extension in Contract Time, Contractor shall be required to deliver a written notice thereof to Engineer in accordance with the provisions of Article 9 of the General Conditions. If Department and Contractor are unable to agree as to amount and extent thereof, a claim may be made pursuant to Articles 10 and 11 of the General Conditions.
- 8.7 Engineer's duties regarding Change Orders are set forth in Articles 9, 10 and 11 of the General Conditions.
- 8.8 Engineer's duties regarding Applications for Payment, etc., are set forth in Article 13 of the General Conditions.

Determinations for Unit Prices:

- 8.9 Engineer will review and make preliminary determinations on the actual quantities and classifications of acceptable Unit Price Work performed by Contractor. Engineer will review such preliminary determinations with Contractor, before rendering a written decision thereon by recommendation of an Application for Payment or otherwise. Department shall review and approve Engineer's determinations. Department's decisions thereon shall be final unless within ten (10) days after the date of any such decision, Contractor delivers to Department and to Engineer written notice of disagreement with Engineer's Determination including written documentation supporting such position.

Engineer's Determinations and Claims:

- 8.10 Engineer shall interpret the Contract Documents and determine the acceptability of the Work thereunder subject to Department's right to modify or overrule Engineer's determination after consultation with Engineer and Contractor. Claims or other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work, or in respect to changes in the Contract Price or Contract Time will be referred to Engineer in writing with a request for a formal determination in accordance with this paragraph. Engineer shall render such determination in writing within a reasonable time. Written notice of Contractor's disagreement with Engineer's Determination constituting a Claim shall be delivered by Contractor to Engineer and Department within ten days after receipt. Written documentation supporting such position shall be submitted to Department within thirty (30) days of Engineer's Determination, unless the Department allows an extension of time to submit additional information.
 - 8.10.1 A written demand or written assertion by Contractor seeking the payment of money is not a Claim under this Article until certified as required below. Contractor shall submit with the claim a certification executed by Contractor's Authorized Representative specified in the Contract Documents that:
 - 8.10.1.1 The Claim is made in good faith,
 - 8.10.1.2 Supporting Cost and Pricing Data are current, accurate, and complete to the best of the Contractor's knowledge and belief, and

- 8.10.1.3 The amount of the Claim accurately reflects the adjustments in Contract Price or Contract Time for which Contractor believes Department is liable.
- 8.10.2 Contractor agrees that all unresolved claims shall be subject to the Dispute Resolution procedures as provided in Article VIII of Appendix B to the Agreement.
- 8.10.3 Contractor shall proceed diligently with performance of Work under this Contract, and comply with any decision of Engineer or Department pending final resolution of any request for relief, Claim, appeal, or action arising under the Contract.

Limitations on Engineer's Responsibilities:

- 8.11 Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "unreasonable," "unsuitable," "acceptable," "proper," or "satisfactory," or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of Engineer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents unless there is a specific statement indicating otherwise. The use of any such term or adjective shall not be effective to assign to Engineer any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12 or 8.13.
- 8.12 Engineer will not be responsible and Contractor remains responsible for Contractor's means, methods, techniques, sequences and procedures of construction, and the safety precautions and programs incident thereto, unless Contract Documents specifically impose such a duty on Engineer. Engineer will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.
- 8.13 Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 9 - Changes in the Work

- 9.1 Department may, at any time or from time to time and without notice to any surety, order additions, deletions or revisions in the Work or other requirements, which the performance of, or compliance with, is established in the provisions of the Contract Documents. These changes will be initiated by Proposed Change Orders, in Administrative Orders and authorized by Change Orders. 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. The value of any work covered by a Proposed Change Order or a Change Order for an increase or decrease in the Contract Price or the Contract Time, hereafter called the "Work involved", shall be determined by one of the following methods:
- 9.2 Department may order minor changes in the Work which do not involve an adjustment in the Contract Price or in the Contract Time and are consistent with the overall intent and purpose of the Contract Documents. Such minor changes will be authorized by a Field Order which shall be

binding on Department and Contractor who shall perform such changes promptly. If Contractor believes that a Field Order justifies an increase in the Contract Price or the Contract Time, Contractor shall make written notification in accordance with Article 8.10 of the General Conditions within three (3) days and provide documentation within 15 days in a Proposed Change Order to Engineer.

- 9.3 Additional work performed without authorization of a Proposed Change Order will not entitle Contractor to an increase in the Contract Price or an extension in the Contract Time, except in the case of emergency work as provided in paragraph 5.23 of the General Conditions and except in the case of uncovering Work as provided in paragraph 12.9 and 12.10 of the General Conditions.
- 9.4 When changes in the Work, involving adjustments to the Contract Price or Contract Time are contemplated by Department, pursuant to paragraph 9.1, Contractor may be requested to submit a cost proposal prior to being authorized to proceed with the change. If Department and Contractor are unable to agree and Department orders the change, or if Department pursuant to Engineer's review and decision concludes that the written direction, instruction, interpretation or clarification, approval, decision or determination does not require an increase in Contract Price or extension in Contract Time, Contractor will be required to carry on with the Work involved and adhere to the Progress Schedule. Contractor proposals substantiating the amount and extent of any proposed adjustment in Contract Price or Contract Time shall become due within three (3) 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. Unless Contractor gives written notice of intent to appeal Department's determination or to file a claim in accordance with Article 8 of the General Conditions, within said thirty (30) days of the issuance of a Proposed Change Order or the rejection of a Proposed Change Order, Department's determination shall be final and binding upon Contractor.
- 9.5 Upon receipt of a cost proposal from Contractor, pursuant to paragraph 9.4 above, and if Department agrees with the increase or decrease in the Contract Price or Contract Time, Department shall authorize the change in the Work by issuing a Proposed Change Order and shall begin preparation of a Change Order covering the Work involved.
- 9.5.1 A Change Order shall also be any other written order, including direction, instruction, interpretation, determination, or decision embodied in a Field Order, or in a response to a request for clarification or interpretation of the requirements of the Contract Documents, or in an approval of a Shop Drawing or sample, or in a decision relating to a report or differing or unforeseen conditions or the acceptability of Work or Administrative Order which causes any change, provided that Contractor gives Engineer and Department a dated written notice identifying the written order and stating circumstances and other information required in this Article and in Articles 8, 10 and 11 of the General Conditions indicating that Contractor considers the written order a Proposed Change Order.
- 9.5.2 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. Pursuant to this requirement of the Contract Documents, Contractor acknowledges and agrees to the following

waivers when executing Change Orders or Proposed Change Orders authorized in accordance with paragraph 9.4 of the General Conditions:

9.5.2.1 Contractor acknowledges and agrees that the adjustments in Contract Price and Contract Time stipulated in this Change Order represent full compensation for all increases or decreases in the cost of, or the time required to perform the entire Work under the Contract, arising directly or indirectly from this Change Order, including this and all previous Change Orders. Acceptance of this waiver constitutes an agreement between Department and Contractor that the Change Order represents an all-inclusive, mutually agreed upon adjustment to the Contract for all direct, indirect and consequential costs and delays, and that Contractor shall waive all rights to file a claim on this Proposed Change Order after it is properly executed.

9.5.2.2 Acceptance by Contractor is evidence of mutual accord and satisfaction for those adjustments in Contract Price and Contract Time stipulated in this Proposed Change Order, that Contractor shall submit detailed supporting data within fifteen (15) days in accordance with Articles 10 and 11 of the General Conditions to allow negotiation of outstanding issues, and that the changes ordered and documented by this Proposed Change Order will be incorporated into a future Change Order subsequent to agreement on all outstanding issues.

9.6 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. Contractor shall furnish proof to Department of such adjustment.

9.7 No claim by Contractor for an adjustment under this Article of the General Conditions shall be allowed if asserted after the date of final payment under this Contract.

ARTICLE 10 - Change of Contract Price or Time

10.1 The Contract Price constitutes the total compensation, subject to authorized adjustments, payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at its own expense without any change in the Contract Price or the Contract Time.

10.2 The Contract Price and the Contract Time may only be changed by a duly executed Change Order.

10.3 The value of the Work involved shall be determined by one of the following methods:

10.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, those unit prices shall be used to determine the cost of the Work involved.

10.3.2 Where the Work involved is not covered by unit prices contained in the Contract Documents, by application of mutually agreed upon unit prices to the quantities of the items of Work involved.

- 10.3.3 By mutual acceptance of a lump sum.
 - 10.3.4 On the basis of the cost of the Work involved as provided in paragraph 10.4 of this Article plus a Contractor's fee for overhead and profit as provided in paragraph 10.7 of this Article.
 - 10.3.5 Where the Department and Contractor cannot agree on any of the methods described above, and Department directs Contractor to proceed with the Work involved as provided in Article 10 of the General Conditions.
- 10.4 The Cost of the Work involved shall include the following items and shall not include any of the costs disallowed under this Article 10 of the General Conditions:
- 10.4.1 Payroll costs of employees in the direct employ of the Contractor in the performance of the Work involved in job classifications agreed upon by Department and Contractor. Payroll costs shall include, but shall not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers or workmen's compensation, health and retirement benefits, and sick leave applicable thereto. Such employees may include foremen at the site but shall not include employees in the job classifications itemized in paragraphs 10.6.1. The costs of performing the Work involved during other than normal working hours, as defined in paragraph 5.3.1, shall be included in the above to the extent authorized by Department and as required by Law.
 - 10.4.2 Cost of all materials and equipment furnished and incorporated into the Work involved, including costs of transportation and storage thereof, and suppliers' field services connected therewith. All cash discounts shall accrue to Contractor unless Department deposits funds with Contractor with which to make payments, in which case, the cash discounts shall accrue to Department. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to Department, and Contractor shall make provisions so that they may be obtained.
 - 10.4.3 Payments made by Contractor to subcontractors who perform a part of the Work involved. If required by Department, Contractor shall obtain competitive bids from prospective subcontractors acceptable to Contractor and shall deliver such bids to Department who will then determine which bids will be accepted. If a subcontract provides that the subcontractor is to be paid on the basis of cost plus a fee, the subcontractor's cost shall be determined in the same manner as Contractor's cost of the Work involved. All subcontracts shall be subject to the provisions of the Contract Documents, insofar as applicable.
 - 10.4.4 Costs of special consultants, including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants, employed for services specifically related to the Work involved to the extent authorized in writing by Department.
 - 10.4.5 Costs of Contractor owned equipment - Contractor shall be reimbursed for his ownership and operating costs for self-owned equipment employed on the Work involved. The rates of reimbursement shall be as listed on EquipmentWatch.com, its successor or equivalent, in effect on the date of issuance of the applicable Change Order or Proposed

Change Order, or prior to performing the Work in a claim for an increase or decrease in the Contract Price and applied in the following manner.

- 10.4.5.1 Ownership costs - The equipment rates for ownership costs include depreciation on the original purchase, insurance, applicable taxes, interest on investment, storage, repairs, mobilization to and demobilization from the site of the Work involved, and profit reimbursement will be made for the hours on the Work involved. In no event shall the equipment rate billed to Department be at rates exceeding those described below.
- 10.4.5.2 Less than eight (8) hours of actual use or necessary for availability as approved by Engineer: The daily rate or the product of the hours of actual use multiplied by the hourly rate, whichever is less.
- 10.4.5.3 Between eight (8) hours and 40 hours of actual use: The weekly rate or the product of the hours of actual use used divided by eight (8) and multiplied by the daily rate, whichever is less.
- 10.4.5.4 Between 40 hours and 176 hours of actual use: The monthly rate or the product of the hours of actual use divided by 40 multiplied by the weekly rate, whichever is less.
- 10.4.5.5 Over 176 hours of actual use: The product of the hours of actual use divided by 176 multiplied by the monthly rate.
- 10.4.5.6 Operating costs including fuel, lubricants, other operating expendables, and preventive and field maintenance. Operating costs do not include the operator's wages. Contractor shall be reimbursed the product of the hours of actual use multiplied by the estimated operating cost per hour.
- 10.4.5.7 The geographic area adjustment factor and the Rate adjustment tables for federal aid projects shall be applied to the equipment ownership rates.
- 10.4.5.8 The rates used shall be those in effect at the time the Work involved is to be done as listed in the then current EquipmentWatch.com, its successor or equivalent.
- 10.4.5.9 In the event that a rate is not established in EquipmentWatch.com, its successor or equivalent, for a particular piece of equipment, Department will establish rates for ownership and operating costs.
- 10.4.5.10 Equipment to be used by Contractor shall be specifically described by manufacturer and model number and be of suitable size and capacity to accomplish the Work involved. In the event Contractor elects to use equipment of a higher rental rate than equipment suitable for the Work involved, payment will be made at the rate applicable to the suitable equipment. Department and Engineer shall determine the suitability of the equipment. If there is a differential in the rate of pay of the operator of oversized or higher rate equipment, the rate paid for the operator will likewise be related to the suitable equipment.

- 10.4.5.11 Transportation, loading and unloading, installation, dismantling and removal costs shall be included only if such construction equipment and machinery is imported to the site solely to perform the Work involved in the Change Order Proposed Change Order, or Claim. All equipment costs shall cease when the use thereof is no longer necessary to perform the Work involved or the equipment cannot be used to perform the Work involved due to contractor actions or inactions. Payroll costs for employees operating the equipment shall be in accordance with paragraph 10.4.1 of the General Conditions.
- 10.4.5.12 Actual equipment use time documented by Engineer shall be on the basis that the equipment was on and used at the site. In addition to the leasing rate, equipment operational costs shall not exceed the estimated hourly operation rate as set forth in EquipmentWatch.com, is successor or equivalent. Daily records listing the equipment units and their respective operators, identification code, and actual usage and certified at the end of each day by Engineer shall be the record upon which actual equipment use shall be based. For multiple shift work sequences, the allowable equipment rate for second or third shifts shall not exceed 50-percent (50%) of the base rate. Idle equipment at the site and necessary to perform the Work involved but not in actual use shall be paid at the rate determined above. Idle time shall include a reasonable time allowance to and from the site, and be as documented by Engineer.
- 10.4.6 Costs of Contractor rented equipment.
- 10.4.6.1 In the event Contractor must rent a specific piece of equipment, payment will be the actual rental rate for the piece of equipment for the time that it is used on the Work involved or required by Department to be present, not to exceed the rental rate in EquipmentWatch.com, is successor or equivalent, plus the reasonable cost of moving the equipment onto and away from the site of the Work involved.
- 10.4.6.2 Contractor shall also be reimbursed for the operating cost of the rented equipment if that cost is not included in the rental cost. The operating cost shall be determined in the same manner as specified for Contractor owned equipment above. If contractor owned equipment is available on site to complete the work, Contractor shall be reimbursed only at the rate for owned equipment and there shall not be any reimbursement for transportation of equipment to or from site.
- 10.4.6.3 In the event area practice dictates the rental of fully manned or fueled and maintained equipment, payment will be made on the basis of an invoice for the rental of the fully manned, fueled and/or maintained equipment, including all costs incidental to its use, plus costs of moving to and from the site of the Work involved, provided the rate is substantiated by area practice.
- 10.4.6.4 Transportation, loading and unloading, installation, dismantling and removal costs shall be included only if such construction equipment and machinery is imported to the site solely to perform the Work involved in the Change Order, Proposed Change Order, or Claim. All equipment costs shall cease when the use thereof is no longer necessary to perform the Work involved or the

equipment cannot be used to perform the Work involved due to Contractor actions or inactions. Payroll costs for employees operating the equipment shall be in accordance with paragraph 10.4.1 of the General Conditions.

- 10.4.7 The maximum amount of reimbursement for the ownership costs of Contractor owned equipment or for the rental costs of rented equipment shall be limited to the original purchase price of the equipment as listed in EquipmentWatch.com, is successor or equivalent. In the specific event where the reimbursement is limited by the original purchase price, Contractor shall be reimbursed for the operating cost per hour for each hour of actual use.
- 10.4.8 Supplemental costs due solely in connection with the Work involved to include the following:
 - 10.4.8.1 The necessary transportation, travel and subsistence expenses of Contractor's employees who are solely employed in the Work involved.
 - 10.4.8.2 Costs, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site required, but excluding hand tools, protective clothing and other consumables which are used or consumed in connection with the Work involved and are individually valued at less than \$100.00.
 - 10.4.8.3 Sales, consumer use, or similar taxes for which Contractor is liable, exclusive of New York State and local sales taxes for materials, supplies and equipment incorporated into the Work.
 - 10.4.8.4 Royalty payments and fees for licenses and permits.
 - 10.4.8.5 Costs of utilities at the site including but not limited to electricity, telephone, fuel, heat, water, property rental and sanitary facilities.
- 10.5 The amount of credit to be allowed by Contractor to Department for any individual change in the Work which results in a net decrease in cost shall be the amount of the actual net decrease plus a deduction in Contractor's fee equal to one-half of the fee derived from the application of paragraphs 10.7.2.1, 10.7.2.2 and 10.7.2.3 of this Article.
 - 10.5.1 When more than one individual change is covered by one Proposed Change Order or Change Order, the adjustment in Contractor's fee shall be the sum of the individual fees computed on each individual change in accordance with paragraphs 10.7.2.1 through 10.7.2.4.
- 10.6 The cost of the Work involved shall not include any of the following, all of which are to be considered general and overhead costs covered by the Contractor's fee:
 - 10.6.1 Payroll costs and other compensation of Contractor's executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, superintendents, administrators, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Contractor, at the site or not, for general administration of the Work

including any Change Orders, and who are not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 of this Article.

- 10.6.2 Expenses of Contractor's principal and branch offices other than Contractor's office at the site. Costs derived from the computation of an extended or unabsorbed home office overhead rate by application of the Eichleay, Allegheny, Burden Fluctuation, or other similar methods.
- 10.6.3 Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work involved and charges against Contractor for delinquent payments.
- 10.6.4 Cost of premiums for all bonds and insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same.
- 10.6.5 Costs incurred in the preparation of Proposed Change Orders or Change Orders or in preparation or filing of claims.
- 10.6.6 Expenses of Contractor associated with anticipated lost profits or lost revenues, lost income or earnings, lost interest on earnings or unpaid retainage.
- 10.6.7 Small tools used or consumed in the performance of the Work involved having an individual value of less than \$100.00.
- 10.6.8 Costs due to negligence of Contractor or any subcontractor anyone directly or indirectly employed by them for whose acts any of them may be liable, including, but not limited to correction of defective work, disposal of equipment or material wrongly supplied and repairing any damage to property.
- 10.6.9 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4 of this Article, all of which are to be considered general and overhead costs covered by the Contractor's fee.

Contractor's Fee:

- 10.7 The Contractor's fee for general and administrative overhead costs (whether at the site or in Contractor's principal or branch offices), small tools and profit on the Work involved shall be determined by negotiations in accordance with this paragraph.
 - 10.7.1 Contractor shall negotiate with Department for reasonable overhead rates and fair and reasonable profit based on assumptions of risk, exposure to weather, size of the change, labor to material ratio, equipment requirements, and time of performance.
 - 10.7.2 In no case shall the Contractor's fee exceed the following percentages of the various percentages of the Cost of the Work involved.
 - 10.7.2.1 For costs incurred under paragraph 10.4.1 (Payroll Costs) of this Article, the Contractor's fee shall not exceed fifteen-percent (15%).

- 10.7.2.2 For costs incurred under paragraph 10.4.2 (Costs of Materials and Equipment) of this Article, the Contractor's fee shall not exceed ten-percent (10%).
- 10.7.2.3 For costs incurred under paragraph 10.4.3 (Cost of Subcontracts) of this Article, the Contractor's fee shall not exceed five-percent (5%) and the subcontractor's fee shall not exceed ten-percent (10%).
- 10.7.2.4 For costs incurred under paragraph 10.4.3 of this Article, for work performed by a subcontractor's subcontractor, the Contractor's and the first subcontractor's fees shall not exceed five-percent (5%) each and the second subcontractor's fee shall not exceed ten-percent (10%).
- 10.7.2.5 No fee shall be paid on the costs itemized under paragraphs 10.4.4 and 10.4.5 nor on subcontractors' fees derived in accordance with paragraphs 10.7.2.3 and 10.7.2.4.

10.7.3 No fee shall be paid on premium portion of wages nor on increased wages due to delays.

10.8 Changes in the Contract Price due to changes in the Contract Time.

10.8.1 An increase in the Contract Price due solely to delays causing extensions in the Contract Time will be allowed only if the delays to the Work, or parts thereof, arise from acts or omissions of Department or Engineer which are longer than the time period(s) provided for review(s) or decision(s) as provided for in the Contract Documents, and provided further that the delays arise from changes in the Work covered by Proposed Change Orders or Change Orders prepared pursuant to Article 9 of the General Conditions or from suspensions of Work pursuant to paragraph 14.1 of the General Conditions. However no adjustment in the Contract Price shall be made under this paragraph for the following reasons:

- 10.8.1.1 For any extensions granted in the Contract Time to the extent that performance would have been so extended by any other cause including fault or negligence of Contractor or subcontractors, suppliers or other persons or organizations.
- 10.8.1.2 For any acceleration alternative in lieu of an extension proposed by Contractor, to the extent that the acceleration costs exceed those in connection with the alternative extension in Contract Time.
- 10.8.1.3 For which a Contract Price is provided or excluded under any other provision of the Contract Documents.
- 10.8.1.4 For delays which are covered by or which could be covered by reallocating the Total Float or a portion of it.

10.8.2 Recovery of damages for delay on account of extensions in Contractor's Progress Schedule or in connection with acceleration alternatives thereof will be allowed only when said delays extend the Work, or a part thereof, beyond the applicable Contract Time(s).

- 10.8.3 It is further expressly agreed and understood that Contractor will not be entitled to any compensation or damages on account of delays which meet the requirements of paragraph 10.12.3 of the General Conditions for time extensions but which can or could have been avoided by reallocating portions of the Total Float. Under this requirement, it is further understood and agreed that the only remedies for delays which are figured to cause an extension in the Contract Time or form the basis for a proposal for an acceleration alternative thereof solely due to the use of Total Float will consist of an increase in Contract Time only and shall exclude Contractor's right to recover any delay damages or compensation from Department.
- 10.9 In submitting proposals or asserting claims for changes under this Article, Contractor acknowledges and agrees that no adjustment shall be made: 1) for any escalation costs for any part of the Work which is not delayed beyond the applicable latest possible dates specified in the approved Progress Schedule, or 2) for any acceleration costs incurred without prior authorization from Department, or 3) for which an adjustment has been provided for, limited as to extent, or excluded under any other provision of the Contract Documents.
- 10.10 Contractor quotations substantiating the amount or extent of any proposed adjustment in Contract Price or Contract Time shall cover all known amounts or extents (direct, indirect and overhead) to which Contractor is entitled as a result of the proposed change. Pursuant to this requirement, Contractor acknowledges and agrees to the following waivers when executing Proposed Change Orders and Change Orders authorized in accordance with Article 9:
- 10.10.1 Contractor acknowledges and agrees that the adjustments in Contract Price and Contract Time stipulated in the Change Order represent full compensation for all increases or decreases in the cost of, or the time required to perform, the entire Work under the Contract arising directly or indirectly from the Change Order. Acceptance of this waiver constitutes an agreement between Contractor and Department that the Change Order represents an all-inclusive, mutually agreed upon, adjustment to the Contract for all direct, indirect and consequential costs and delays, and that Contractor will waive all rights to file a claim on the Change Order after it is duly executed.
- 10.10.2 Acceptance by Contractor is evidence of mutual accord and satisfaction for those adjustments in the Contract Price and Contract Time stipulated in the Proposed Change Order, that Contractor will submit detailed supporting data within fifteen (15) days in accordance with Articles 10 and 11 of the General Conditions to allow negotiation of outstanding issues, and that the changes ordered and documented by the Proposed Change Order will be incorporated into a future Change Order subsequent to agreement on all outstanding issues.
- 10.11 Additional costs incurred due to acceleration or additional work performed by Contractor without an agreed upon Proposed Change Order will not entitle Contractor to an increase in Contract Price or Contract Time, except in the case of emergency work as provided in paragraph 5.23 of the General Conditions or in the case of uncovering Work as provided in paragraph 12.9 of the General Conditions.
- 10.12 The Contract Time may be changed only by a duly executed Change Order. Any proposal for an extension or shortening of the Contract Time shall be based on a Proposed Change Order in accordance with the provisions of this Article.

- 10.12.1 Contractor requests substantiating the extent of increase in the Contract Time shall be delivered to Engineer within fifteen (15) days of the event causing the proposed need for the extension in the Contract Time unless Department, in writing, allows an additional period of time. Contractor shall prove that the delays have materialized or will materialize despite reasonable, prudent, and diligent efforts to prevent such delays and meet the criteria set forth in this Article. Any delays by Contractor in submittal of proposals will not justify a delay or be basis for an extension of the Contract Time.
- 10.12.2 Extensions in Contract Time due to delays to parts of the Work will not be granted until all Total Float available for those parts of the Work has been used.
- 10.12.3 An extension in the Contract Time will not be granted unless Contractor can demonstrate, through an analysis of the Progress Schedule approved in accordance with the applicable provisions of the Standard Specifications, that the delay in completing the applicable parts of the Work within the applicable Contract Time(s) arises from unforeseeable causes beyond the control and without the fault or negligence of Contractor or its Subcontractors, Suppliers or other persons or organizations, and which Contractor could not have guarded against, and that such causes do or will cause extension of the schedule for that part of the Work beyond the applicable Contract Time. Examples of such causes include 1) acts of God or of the public enemy, 2) fires, floods, epidemics, quarantine restrictions, 3) strikes, freight embargoes, 4) unusually severe weather, 5) delays of Subcontractors or Suppliers at any tier arising from unforeseeable causes beyond the control and without fault or negligence of both Contractor and the Subcontractors, Suppliers or other persons organizations.
- 10.12.4 All time limits stated in the Contract Documents are of the essence. They have been developed by taking into account:
 - 10.12.4.1 The scope of the Work under the Contract Documents;
 - 10.12.4.2 Reasonable time for performance of the Work, or parts thereof, as a whole; and,
 - 10.12.4.3 The perceived sensitivity of the Work, or parts thereof, as a whole, to the potential delaying effect of causes meeting the requirements of paragraph 10.12.3.
 - 10.12.4.4 Therefore, and as long as delays meeting the requirements of paragraph 10.12.3 are not to be considered by Contractor in the initial development of the Progress Schedule pursuant to paragraph 1.6 of the General Conditions and the Progress Schedule Section of the Standard Specifications, the initial Progress Schedule developed by Contractor could show Total Float with respect to the Contract Time, or contract Times. Pursuant to the Float sharing requirements of the Contract Documents (as set forth in the provisions of Progress Schedule Section of the Standard Specifications) any such Total Float materializing between Contractor's completion of the Work, or part thereof, as anticipated by Contractor's approved progress Schedule, and the corresponding Contract Time(s) will be available to Department, Engineer, Contractor and others to absorb delays that cannot be mitigated by any other means.

- 10.12.5 The provisions of Section 10.11 of this Article shall govern and be applicable to the following:
- 10.12.5.1 Changes in Contract Time initiated by Department or Contractor due to delays which meet the requirements of paragraph 10.12.4.
 - 10.12.5.2 Contractor proposals to accelerate the Progress Schedule, in lieu of the alternate extension of Contract Time, due to delays meeting the requirements of paragraph 10.12.3.
- 10.12.6 The provisions of paragraphs 10.11, 10.12.2, and 10.12.3 shall exclude recovery for damages arising out of an acceleration alternative to an extension in Contract Time on account of delays not meeting the requirements for extensions in Contract Time set forth in this Article.
- 10.12.7 The provisions of this Article 10 shall not exclude recovery for damages (including compensation for additional professional services and court costs) for delay by either party, except as otherwise specifically disallowed in this Article and in other provisions of the Contract Documents.
- 10.13 Failure, refusal or neglect by Contractor to comply with the time requirements for delivery of written Proposed Change Orders or notice of a claim shall be considered to be a waiver by Contractor of any request or claiming for extension in Contract Time.
- 10.13.1 Contractor proposals (or claims) substantiating Contractor's proposed adjustment in Contract Price shall be delivered within the time period stipulated in paragraph 9.3 and 9.4, unless Department in writing, allows an additional period of time to ascertain accurate cost data. Contractor shall prove that additional costs were necessarily incurred, despite Contractor's reasonable, prudent, and diligent efforts to prevent such costs and which meet the criteria set forth in this Article. Any delays in the submittal of Contractor proposals relative to adjustments in Contract Price will not justify a delay or constitute basis for an increase in Contract Price or an extension in Contract Time.
 - 10.13.2 Contractor proposals (or claims) shall be submitted on forms required by Contract Documents, and shall remain firm for a period of at least 60 days from delivery of the proposal (or claim). Proposals (or claims) shall include itemized estimates of all costs and schedule adjustments that will result directly or indirectly from the changes described. Unless otherwise specified, itemized estimates shall be in accordance with the requirements of this Article of the General Conditions and in sufficient detail to reasonably permit an analysis by Engineer and Department of all quantities involved, labor and payroll costs, productivity rates, material costs, Subcontractor and Supplier costs, supplemental costs as described in paragraph 10.4.8, special consultant costs as described in paragraph 10.4.4, equipment costs, general and administrative overhead costs, field office overhead costs, and profit and shall cover all aspects of the Work involved in the change, whether such was deleted, added, changed, or impacted. Any amount claimed for Subcontractors, Suppliers or other persons or organizations shall be similarly supported. Itemized schedule adjustments shall be sufficiently detailed to permit an analysis of effects on the Progress Schedule as required in the Standard Specifications.

ARTICLE 11 - Unit Price Work and Cash Allowances

Cash Allowances:

- 11.1 Contractor shall include in the Contract Price all cash allowances named in the Contract Documents and all Work covered by those cash allowances shall be performed for an amount not to exceed those allowances without prior approval in writing by Engineer.
 - 11.1.1 The allowances include the cost to Contractor (less any applicable trade discounts) of materials labor and equipment required by the allowances to be delivered at the site, and all applicable taxes; and the cost documentation requirements of Articles 9, 10, 11 apply to cash allowances.
 - 11.1.2 Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

Unit Price Work:

- 11.2 Where the Contract Documents provide that all or part of the Work to be performed on the basis of Unit Prices, the following shall apply:
 - 11.2.1 The original Contract Price shall include the sum of the bid unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated on the Contract Bid Form.
 - 11.2.2 Unless otherwise provided by the Contract Documents, the estimated quantities of Unit Price Work are not guaranteed and are solely for the purpose of comparing Bids and determining the initial Contract Price.
 - 11.2.3 Engineer shall determine the actual quantities and classifications of Unit Price Work performed by Contractor and will review with Contractor preliminary determinations before recommending an Application for Payment for those items.
 - 11.2.4 Contractor shall have included overhead and profit in the price of each separately stated unit price item bid.
 - 11.2.5 The unit price of an item of Unit Price Work shall be subject to re-evaluation, negotiation, and possible adjustment under the following conditions:
 - 11.2.5.1 If the total cost of a particular item of Unit Price Work changes by \$30,000 or five-percent (5%) or more of the total Contract Price, whichever is less, and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than fifteen-percent (15%) from the estimated quantity of such item indicated in the Agreement; and
 - 11.2.5.2 If Contractor justifies and adequately documents to the Department's satisfaction additional expenses have been incurred as a result thereof, or
 - 11.2.5.3 If Department believes that the quantity variation entitles Department to an adjustment in the Unit Price,

Either Department or Contractor may make a request for an adjustment in the Contract Price in accordance with the Contract Documents. If the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed, a claim may be made.

- 11.2.6 The negotiated Unit Price shall be applicable only to the variation in quantities above one hundred-fifteen-percent (115%) or below eighty-five-percent (85%) of the quantities estimated or indicated.
- 11.2.7 If Department or Contractor believes that the quantity variation requires an extension or shortening in Contract Time, either party shall within seven (7) working days of knowledge of the variation in quantities, submit a written Proposed Change Order to the other party and to Engineer, and substantiate the request within fifteen (15) days thereafter in accordance with the analysis and documentation provisions of the Standard and Supplementary Specifications.

ARTICLE 12 - Warranty and Guarantee; Tests and Inspections; Correction, Removal or Acceptance of Defective Work

Warranty and Guarantee:

- 12.1 Contractor warrants and guarantees to Department that all Work shall be in accordance with the Contract Documents and shall not be defective. Immediate notice of all defects shall be given to Contractor by Engineer. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article.
 - 12.1.1 The obligations of Contractor under this paragraph 12.1 shall be in addition to and not in limitation of any obligation imposed upon it by special guarantees required by the Contract Documents or by Law.
 - 12.1.2 Notwithstanding anything in these Contract Documents to the contrary, when a particular item of equipment or part of the Work reaches Substantial Completion upon successful performance of Pre-operational Testing, and a) is not placed in continuous service until the commencement of the Correction Period, or b) is placed in continuous service upon reaching Substantial Completion (as a segment of a completed Project) but use will be limited until all segments of the Project reach substantial completion thereby commencing the Correction Period, and notwithstanding anything in the Contract Documents to the contrary, Contractor shall maintain the particular item of equipment or part of the Work in good order and in proper working condition during the period between the particular Substantial Completion date and the commencement of the Correction Period, and for such maintenance Contractor shall receive no adjustment in Contract Price. Also Contractor shall maintain the warranties and guarantees required under paragraph 12.1 of the General Conditions in full force and effect during the period between the particular item's Substantial Completion date and the commencement of the Correction Period, and for such warranties and guarantees Contractor shall receive no adjustment in Contract Price.
 - 12.1.3 The warranties and guarantees provided by Contractor under paragraph 12.1 of the General Conditions shall remain in full force and effect from the date of Substantial

Completion of the Work, or part thereof, until one year after the date of commencement of the Correction Period or such a longer period as may be prescribed by Law or the terms of any applicable specific warranty or guarantee required by the Contract Documents or by any specific provision of the Contract Documents.

One Year Correction Period:

- 12.2 If within the period from the date of Substantial Completion of a particular item of equipment or a designated part of the Work to one (1) year after the commencement of the Correction Period, or such longer period as may be prescribed by Federal or New York State Law or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, the particular item of equipment or designated part of the Work is found to be defective, Contractor shall promptly, without an adjustment in Contract Price and in accordance with Department's or Engineer's written instructions, either correct such Defective Work, or if it has been rejected by Department or Engineer, remove it from the site and replace it with Work which conforms to the requirements of the Contract Documents. Department or Engineer may direct the correction or removal and replacement of Defective or rejected Work. In addition to any other remedies which Department may have, Contractor shall pay the indirect and consequential costs of such correction or removal and replacement, including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations, if the Defective Work is not corrected or the rejected Work is not removed and replaced within 30 days of the Department's or Engineer's written rejection or request for rejection of Work unless otherwise provided for in writing. In the event that Contractor fails to pay such costs within 30 days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount, and Department shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, a claim may be made therefore as provided in Articles 8, 9 and 10 of the General Conditions.
- 12.2.1 At the date of Substantial Completion of the Work, the parties have agreed on the date for commencement of the Correction Period. However, Department may at its sole option advance or delay the date for commencement of the Correction Period, and Contractor's obligations to extend warranties and guarantees in accordance with paragraphs 12.1.2 and 12.1.3 or to maintain the Work in accordance with paragraph 12.1.2 and 12.1.3 until then shall remain absolute. Applicable Change Orders or Proposed Change Orders shall be executed by the parties to adjust the Contract Price, as appropriate, on the basis of the unit prices declared in Contractor's Bid for extended warranty and extended maintenance requirements.
- 12.2.2 No later than 30 days before the date for commencement of the Correction Period, Engineer shall notify Contractor in writing of the date upon which the Correction Period is expected to commence, and Contractor shall ensure that the parts of the Work which reached Substantial Completion upon successful performance of Pre-operational Testing but were not placed in continuous service, are ready in their entirety by such date for use by Department as contemplated in the Contract Documents. In addition to any other damages payable by Contractor under these Contract Documents, Contractor shall also be liable for any damages suffered by Department on account of the parts of the Work which reached Substantial Completion upon successful performance of Pre-operational Testing but were not placed in continuous service at the beginning of the

Correction Period because they were not ready for continuous utilization for the purposes for which they are intended.

- 12.2.3 Each month during the period between the date of Substantial Completion of parts of the Work which reached Substantial Completion upon successful performance of Pre-operational Testing and the date of commencement of the Correction Period, Contractor shall certify to Engineer in writing that the said parts of the Work are being properly maintained and will be ready for use by Department upon commencement of the Correction Period.
- 12.2.4 During the period described in Section 12.2.3 until commencement of the Correction Period, Contractor shall bear all risks of injury, loss, or damage to any part of the Work arising from the elements or from any other cause. Contractor shall rebuild, repair, restore, and make good at no cost to Department all injuries, losses, or damage to any portion of the Work occasioned by any cause and shall at no expense to Department provide suitable drainage and erect such temporary structures and take all other actions as are necessary for the protection of the Work. Suspension of the Work or the granting of an extension in Contract Time for any cause shall not relieve Contractor of its responsibility for the Work as herein specified.
- 12.2.5 Contractor's responsibilities under this Paragraph 12.2 are in addition to, not in lieu of, all other obligations imposed by these Contract Documents.

Access to Work:

- 12.3 Representatives of Department, Engineer, and representatives of testing agencies and governmental agencies with jurisdictional interests will have access to the Work at all times for observation, inspection and testing. Contractor shall provide proper and safe conditions for such access. Inspections, tests or observations by Engineer, Department or third parties may be performed to provide information to Department on the progress of the Work, however, this provision is not intended to create any duty or obligation to Contractor by Department or Engineer, nor is the information provided intended to fulfill Contractor's obligations under the Contract.

Tests and Inspections:

- 12.4 Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests or approvals.
- 12.5 If a Law specifically requires any Work or part thereof, to be inspected, tested or approved, Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish to Engineer the required certificates of inspection, testing or approval. Except as provided in Article 5, Contractor shall be responsible for and shall pay all costs in connection with any inspection or testing required in connection with Department's or Engineer's acceptance of materials or equipment proposed or submitted to Department and Engineer for approval prior or subsequent to Contractor's purchase thereof for incorporation in the work. The cost of all inspections, tests and approvals in addition to the above which are required by the contract documents shall be paid by Contractor.

- 12.6 All inspections, tests or approvals other than those required by Law to be performed or given by public body having jurisdiction over the Work or any part thereof, shall be performed by organizations acceptable to Department and Engineer. Contractor shall perform sufficient inspection and testing of the Work to support the warranty and guarantee requirements of paragraph 12.1 and 12.2 of the General Conditions. Reference is made to the Supplementary Conditions, Standard Specifications and Supplementary Specifications for provisions applicable to the procurement of an independent testing laboratory.
- 12.7 If any Work, including the work of others, which is to be inspected, tested or approved is covered without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for inspection. Such uncovering shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.
- 12.8 Neither inspections by Engineer nor inspections, tests or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract Documents.

Uncovering Work:

- 12.9 If any work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's inspection and replaced at Contractor's expense.
- 12.10 If Engineer considers it necessary or advisable that covered Work be inspected by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose or otherwise make available for observation, inspection or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material and equipment.
- 12.10.1 If it is found that such Work is Defective, Contractor shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing, and of satisfactory reconstruction, including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations, Contractor shall further bear the responsibility for keeping the Work on schedule and shall not be entitled to any extension of Contract Time or recovery of any delay damages due to the uncovering.
- 12.10.2 If, however, such Work is not found to be Defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction pursuant to Articles 9, 10 and 11.
- 12.10.3 When covered Work is uncovered and found to be Defective, all direct, indirect and consequential costs as established in paragraph 12.10.1 shall be paid by Contractor. In the event that Contractor fails to pay such costs within thirty (30) days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount as an appropriate reduction in the Contract Price, and if the parties are unable to agree as to the amount thereof, the Contractor may make a claim therefore as provided in Articles 9 and 10 of the General Conditions.

Department May Stop the Work:

12.11 If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, Department may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Department to stop the Work shall not give rise to any duty on the part of Department to exercise this right for the benefit of Contractor or any other party.

12.11.1 Contractor shall bear all direct, indirect and consequential costs of such order to Contractor to stop Work including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations, and Contractor shall further bear the responsibility for maintaining schedule and shall not be entitled to any extension of contract time or recovery of any delay damages due to the order to stop Work.

12.11.2 In the event that Contractor fails to pay such costs within thirty (30) days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount as an appropriate reduction in the Contract Price. If the parties are unable to agree as to the amount thereof, the Contractor may make a claim therefore as provided in Articles 8, 9, 10, and 11 of the General Conditions.

Correction or Removal of Defective Work:

12.12 If required by Engineer, Contractor shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by Engineer, remove it from the site and replace it with non-defective Work that conforms with the Contract Documents. Contractor shall bear all direct, indirect and consequential costs of such correction or removal including but not limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations. Contractor shall further bear the responsibility for keeping the Work on schedule and shall not be entitled to any extension in Contract Time or recovery of any delay damages due to the correction or removal. In the event that Contractor fails to pay such costs within thirty days after receipt of an invoice from Department, a Change Order or Proposed Change Order may be issued incorporating the unpaid amount, as an appropriate reduction in the Contract Price. If the parties are unable to agree as to the amount thereof, the Contractor may make a claim therefore as provided in Articles 8, 9, 10, and 11 of the General Conditions.

Acceptance of Defective Work:

12.13 If, instead of requiring correction or removal and replacement of defective Work, Department prefers to accept it, Department may do so. Contractor shall bear all direct, indirect and consequential costs attributable to Department's evaluation and determination to accept such Defective Work, such costs to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, any additional expenses incurred by Department due to delays to others performing work under a separate contract with Department, and other contractual obligations. Contractor shall further bear the responsibility for keeping the Work on schedule and shall not be entitled to any extension in Contract Time or recovery of any delay or

acceleration damages due to Department's evaluation and determination to accept such Defective Work. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order may be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Department shall be entitled to an appropriate reduction in the Contract Price. In the event that Contractor fails to pay such costs within thirty (30) days after receipt of an invoice from Department, or if the parties are unable to agree as to the amount thereof, Contractor may make a claim therefore as provided in Articles 8, 9, 10, and 11 of the General Conditions. If the acceptance occurs after final payment, an appropriate amount will be refunded by Contractor to Department.

Department May Correct Defective Work:

12.14 If Contractor fails within a reasonable time after written notice of Engineer to proceed to correct and to correct Defective Work or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Department may, after seven (7) days' written notice to Contractor, correct and remedy any such deficiency. To the extent necessary to complete corrective and remedial action, Department may exclude Contractor from all or part of the site, take possession of all or part of the work and suspend or terminate Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which Department has paid Contractor but which are stored elsewhere. Contractor shall allow Department, and Department's representatives, agents and employees such access to the site as may be necessary to enable Department to exercise the rights and remedies provided by this paragraph and the Contract Documents. All direct, indirect and consequential costs of Department in exercising such rights and remedies will be charged against Contractor in an amount approved as to reasonableness by Engineer, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Department shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Contractor may make a claim therefore as provided in Article 8, 9, 10, and 11. Such direct, indirect and consequential costs shall include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all costs of delay and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of Contractor's Defective Work. Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by Department of Department's rights and remedies hereunder.

ARTICLE 13 - Payments to Contractor and Completion

Schedule of Values:

13.1 The schedule of values established as provided in paragraph 1.4 and 1.6 of the General Conditions shall serve as the basis for progress payments. Progress payments for Unit Price Work shall be based on the number of units completed. Department will furnish Application for Payment forms.

Application for Progress Payment:

13.2 At least fourteen (14) days before each progress payment is scheduled to be submitted to the Department, Contractor shall submit to Engineer for review an Application for Payment on forms

furnished by Department filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by bills of sale, invoices or other documentation supporting the cost, together with documents warranting that Department has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (each and all of these terms are hereinafter referred to as "Liens"). Each Application for Payment shall contain a certification by Contractor that progress payments received from Department on account of the Work have been applied by Contractor and its Subcontractors to discharge in full all of Contractor's and its Subcontractors' obligations stated in the prior Application for Payment, and that Contractor has verified the accuracy of the progress reported to have been completed by Contractor or its Subcontractors in the Application for Payment. Notwithstanding any other provisions of the Contract Documents to the contrary, neither Department nor Engineer are under any duty or obligation whatsoever to any Subcontractor or Supplier to insure that payments due and owing by Contractor to any of them are or will be made. Such parties shall rely only on Contractor's surety bonds for remedy of nonpayment by Contractor. The amount of retainage with respect to progress payments will be as provided for by the laws of New York State.

- 13.2.1 An Application for Payment a) will not be approved if the as-built documents, including but not limited to Drawings legibly marked in accordance with Contract Documents to record actual construction, are not kept current, and b) will not be approved until the completed as-built documents, showing all variations between the Work as actually constructed and as originally shown on the Drawings and other Contract Documents, have been inspected by Engineer. For the purpose of this paragraph, the as-built documents will be considered current if they include all of the documents itemized in paragraph 5.19 together with any other information that supplements or changes the original Contract Documents which has been delivered or otherwise made known to Contractor prior to the time when Application for Payment is to be reviewed by Engineer.
- 13.2.2 An Application for Payment will not be approved until Contractor has submitted and Engineer has reviewed the Progress Schedule and submittals required in Contract Documents which are due prior to that Application for Payment.

Contractor's Warranty of Title:

- 13.3 Contractor warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether or not incorporated in the Project, shall pass to Department no later than the time of payment free and clear of all Liens.

Review of Applications for Progress Payment:

- 13.4 Engineer shall, within five (5) days after receipt of each Application for Payment, either recommend payment in writing and present the Application to Department or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the application. After presentation of the application for payment with Engineer's recommendation, the amount recommended shall be paid in accordance with New York State Law upon approval of the Department.

- 13.5 Department may refuse to make payment of the full amount recommended by Engineer for one or more of the following reasons: claims have been made against Department on account of Contractor's performance, or furnishing of the Work, Liens have been filed in connection with the Work, there are other facts or circumstances entitling Department to a set-off against the amount recommended, or Department has determined that Work performed by Contractor does not conform to Contract Documents including, but not limited to, moneys payable by Contractor to Department pursuant to the requirements of Articles 5 and 12 of the General Conditions. In the event of such refusal to pay the full recommended amount, Department must give Contractor prompt written notice (with a copy to Engineer) stating the reasons for such action.

Substantial Completion:

- 13.6 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 or specified part thereof, is substantially complete except for items specifically listed by Contractor as incomplete, and request that Engineer issue a certificate of Substantial Completion for the Work, or such specified part thereof. Within a reasonable time thereafter, not to exceed 30 days, Department, Contractor and Engineer shall make an inspection of the Work, or specified part thereof, to determine the status of completion. If Engineer or Department does not consider the Work, or specified part thereof, substantially complete, Engineer shall notify Contractor in writing giving the reasons therefor, after consultation with the Department. If Engineer considers the Work, or part thereof, substantially complete, Engineer shall prepare and deliver to Department a tentative certificate of Substantial Completion for the Work, or part thereof, which shall fix the date of Substantial Completion. There shall be attached to the certificate a list of items to be completed or corrected before final payment, and Engineer's written recommendation as to a division of responsibilities between Department and Contractor pending final payment including but not limited to security, operation, safety, maintenance, heat, utilities, insurance and warranties. Department shall have seven (7) days after receipt of the tentative certificate with attachments during which to make written objection to Engineer as to any provisions of the referenced submittals and to direct a revision of the tentative certificate. Unless Department and Contractor agree otherwise in writing and so inform Engineer or Department directs the revision of the certificate of Substantial Completion for the Work, or specified part thereof, Engineer's recommendation will be binding on Contractor until final payment.
- 13.7 Department shall have the right to exclude Contractor from the Work, or part thereof, after the date of Substantial Completion for the Work, but Department shall allow Contractor reasonable access to complete or correct items on the tentative list.

Partial Utilization:

- 13.8 Department may use any finished part of the Work which has specifically been identified in the Contract Documents, or which Department, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Department without significant interference with Contractor's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:
- 13.8.1 Department at any time may direct Contractor in writing to permit Department to use any such part of the Work which Department believes to be ready for its intended use and substantially complete. Contractor may certify to Department and Engineer that said

part of the Work is substantially complete and request Engineer to issue certificate of Substantial Completion for that part of the Work. Within a reasonable time after such direction, Department, Contractor and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not determine that part of the Work to be substantially complete, Engineer will notify Department and Contractor in writing giving the reasons therefor. The provisions of paragraphs 13.6 and 13.7 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

- 13.8.2 Department may at any time direct Contractor in writing to permit Department to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to Engineer and within a reasonable time thereafter Department, Contractor and Engineer shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to Department and Engineer that such part of the Work is not ready for separate operation by Department, Engineer shall submit to Department a list of items to be completed or corrected together with a written recommendation as to a division of responsibilities between Department and Contractor, including but not limited to security, operation, safety, maintenance, utilities, insurance and warranties pending final payment for such Work. Department shall have seven (7) days to make written objection to Engineer's list and recommended division of responsibilities to direct a revision thereof. Such directed revision or otherwise objected list and recommended division of responsibilities, shall become binding upon Department and Contractor at the time when Department takes over such operation unless they shall have agreed otherwise in writing. During such operation and prior to Substantial Completion of such part of the Work, Department shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.

Final Inspection:

- 13.9 Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will make a final inspection with Department and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

Final Application for Payment:

- 13.10 After Contractor has completed all corrections to the satisfaction of Engineer and Department and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, as-built documents (as provided in paragraph 5.19) and other documents - all as required by the Contract Documents, and after Engineer has indicated that the Work is acceptable (subject to the provisions of paragraph 13.12), Contractor may make application for final payment following the procedures for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers satisfactory to Department of all Liens arising out of or filed in connection with the Work. In lieu thereof and as provided for by the laws of New York State and approved by Department, Contractor may furnish receipts or releases in full and an affidavit of Contractor that such receipts and releases include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and

other indebtedness connected with the Work for which Department or Department's property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Department to indemnify Department against any Lien.

Final Payment and Acceptance:

- 13.11 If, on the basis of Engineer's inspection of the work during construction and final inspection, and Engineer's review of the final application for payment and accompanying documentation, Engineer has determined that the work has been completed in substantial conformance with the Contract Documents and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten (10) days after receipt of the final application for payment, indicate in writing Engineer's recommendation of payment and present the application to Department for payment along with a certificate that the work was completed in substantial conformance with the contract documents. Thereupon Engineer will give written notice to Department and Contractor that the work is acceptable subject to the provisions of paragraph 13.13. Otherwise, Engineer will return the application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. After presentation to Department of the application and accompanying documentation, in appropriate form and substance, and with Engineer's recommendation and certification of substantial conformance with the Contract Documents, final payment will be paid by Department to Contractor in accordance with New York State Law. If Department believes deficiencies exist, it will so notify Engineer and Contractor in writing.
- 13.12 If, through no fault of Contractor, final completion of the Work is significantly delayed and if Engineer so confirms, Department shall, upon receipt of Contractor's final Application for Payment and recommendation of Engineer, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted.

Waiver of Claims:

- 13.13 The making and acceptance of final payment will constitute:
- 13.13.1 A waiver of all claims by Department against Contractor, except claims arising from unsettled Liens, from Defective Work appearing after final inspection pursuant to paragraph 13.11 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by Department of any claims or rights with respect to Contractor's continuing obligations under the Contract Documents; and
- 13.13.2 A waiver of all claims by Contractor against Department other than those previously made in writing and still unsettled.

ARTICLE 14 - Suspension of Work and Termination

Department May Suspend Work:

- 14.1 Department may for its convenience, order Contractor in writing at any time to suspend the Work or any portion thereof for such a period of time as Department may determine to be appropriate. A suspension of Work order will fix the date on which the Work, or portion thereof, will be resumed. Contractor shall resume the Work, or portion thereof, on the date so fixed.
- 14.1.1 If the performance of the Work or portion thereof is suspended for a period of time which exceeds the Total Float available in the approved Progress Schedule for the portion or portions controlling the Work affected by a suspension of Work order pursuant to paragraph 14.1, or by an act of Department or Engineer in the administration of the Contract, or by Department's or Engineer's failure to act within the applicable latest dates substantiated in the approved Progress Schedule, Contractor will be allowed an increase in Contract Price or an extension in Contract Time, or both, necessarily caused by such suspension which extends the applicable latest dates in the approved Progress Schedule. However, no adjustment will be made under this paragraph of the General Conditions for any suspension to the extent: 1) that performance would have been so suspended by any other cause, including the fault and negligence of Contractor, or 2) for which an adjustment is provided, limited as to extent, or excluded under any other provision of the Contract Documents.
- 14.1.2 Contractor shall deliver to Engineer a written Proposed Change Order including at a minimum, justification for the request within seven (7) days or earlier if so required elsewhere in the Contract Documents, of the act or failure to act which Contractor believes gives rise to an adjustment in Contract Price or Contract Time pursuant to paragraph 14.1.1. Failure by Contractor to comply with the time requirements for delivery of written Proposed Change Orders will be considered to be a waiver by Contractor of any request for adjustment or claim for an increase in Contract Price or Contract Time for the period of time during which the Proposed Change Order has not been submitted.
- 14.1.3 Contractor's proposal with all supporting data shall be delivered within 15 days of such notice or within twenty-two (22) days of such occurrence, whichever is later, unless Department allows an additional period of time to obtain more accurate data. Contractor shall prove that additional costs and delays were necessarily incurred which meet the criteria set forth in Articles 9, 10 and 11 of the General Conditions, despite Contractor's reasonable, prudent, and diligent efforts to prevent such costs or delays.
- 14.2 In addition to the provisions of Appendix B, if Department stops Work in accordance with Article 12.11 of the General Conditions or suspends Contractor's services in accordance with Article 12.11, or suspends the work or any portion thereof because of Contractor's failure to prosecute the work and to protect persons and property, Contractor shall not be entitled to an extension of Contract Time or an increase in Contract Price.

Department May Terminate:

- 14.3 Department may serve written notice upon Contractor and its surety that it intends to terminate the Contract for cause upon the date specified which shall not be less than seven (7) days from the date of the notice. Such notice shall contain the reasons for the intended termination which shall be effective on the date specified unless Contractor shall cease the violation(s) or make arrangements which are satisfactory to the Department to address the violation(s). Upon

termination, the Department may exclude Contractor from the site and take possession of the Work and of all Contractor's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by Contractor without liability to Contractor for trespass or conversion, incorporate in the work all materials and equipment stored at the site or for which Department has paid Contractor but which are stored elsewhere, and finish the Work as Department may deem expedient. In such case Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs, such excess will be paid to Contractor. If such costs exceed such unpaid balance, Contractor shall pay the difference to Department. Such costs incurred by Department will be approved as to reasonableness by Engineer and incorporated in a Change Order or Proposed Change Order.

Department may terminate for cause upon the occurrence of any one or more of the following events:

- 14.3.1 If Contractor commences a voluntary case under any chapter of the Bankruptcy Code, as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;
 - 14.3.2 If a petition is filed against Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;
 - 14.3.3 If Contractor makes a general assignment for the benefit of creditors;
 - 14.3.4 If a trustee, receiver, custodian or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;
 - 14.3.5 If Contractor admits in writing an inability to pay its debts generally as they become due;
 - 14.3.6 If Contractor fails to perform the Work in accordance with the Contract Documents, including, but not limited to, failure to supply sufficient skilled workers, or suitable materials or equipment, or failure to adhere to the progress schedule established under paragraph 1.6 as revised from time to time or failure to submit an updated schedule as required by paragraph 5.6;
 - 14.3.7 If Contractor disregards Laws or Regulations of any public body having jurisdiction;
 - 14.3.8 If Contractor disregards the authority of Engineer;
 - 14.3.9 If Contractor filed certification in accordance with New York State Finance Law §139-k which was intentionally false or intentionally incomplete; or
- 14.4 Where Contractor's services have been so terminated by Department, the termination shall not affect any rights or remedies of Department against Contractor then existing or which may

thereafter accrue. Any retention or payment or moneys due Contractor by Department will not release Contractor from liability.

- 14.5 The Department may without cause and without prejudice to any other right or remedy terminate the Contract for convenience upon seven (7) days written notice to Contractor, its surety and Engineer, and elect to abandon the Work and terminate the Agreement. In such case, Contractor shall be paid for all Work accepted by Department.

Contractor May Stop Work or Terminate:

- 14.6 If, through no act or fault of Contractor, Engineer fails to act on any Application for Payment within thirty (30) days after it is submitted, or Department fails for one hundred and twenty (120) days to pay Contractor any sum finally determined to be due by Department, then Contractor may, upon seven (7) days' written notice to Department and Engineer, terminate the Agreement and recover from Department payment for all Work accepted by Department. In lieu of terminating the Agreement, if Engineer has failed to act on an Application for Payment or Department has failed to make any payment as aforesaid, Contractor may upon seven (7) days written notice to Department and Engineer stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve Contractor of the obligations under paragraph 5.31 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with Department.

ARTICLE 15 - Miscellaneous

Notice and Service:

- 15.1 The term "notice" in this Article shall refer to any notice required under the Contract for claims (delay, change order, extra work, liquidated damages, etc.) or initial contract disputes against the Department. When notice is required to be sent by the Contractor to the Department, it must be in writing and provided within 15 calendar days of the date that the Contractor knew or should have known of the facts that form the basis of the claim or dispute. Notice should be as factually complete as possible, and contractors should have a continuing duty to promptly provide the agency with information about conditions of the claim. If a claim or dispute involves a matter of life, health or safety, notice must be made immediately to the Department.
- 15.1.1 The Contractor shall give the Department immediate notice in writing of the initiation of any legal action or suit which relates in any way to a subcontract with a subcontractor or which may affect the performance of the Contractor's duties under the contract.
- 15.1.2 The written notice must be addressed and delivered to the Project Manager at the address provided in Article 2 of Section IV.
- 15.1.3 Written notice may be provided by the Contractor to the Department in one of the three methods to achieve actual notice: (i) first class mail and email; (ii) certified mail and first-class delivery; or (iii) overnight mail and first-class delivery. The written notice shall

contain a sufficient description of the claim or dispute pursuant to the provisions of the Contract.

- 15.1.4 Upon receipt of the written notice from the Contractor, the Department shall provide a written acknowledgment of receipt of notice. The Department's failure to provide written acknowledgment shall not be deemed a breach of contract or alter the Contractor's obligation to provide timely notice.
- 15.1.5 Any notice to or demand upon Contractor shall be deemed served if delivered to Contractor's representative at the site or if delivered to the individual proprietor if Contractor is an individual, to a partner if Contractor is a partnership or to an officer of the corporation if Contractor is a corporation, at the office of Contractor specified in the Contract Documents, or if deposited in the United States mail in a sealed, postage prepaid envelope, addressed to the principal office of Contractor listed in the Contract Documents, or emailed to the electronic address provided in Section V- Bid Forms and Acknowledgement and followed by written notice.
- 15.1.6 Any written notice or other communication to Contractor's Surety or Sureties shall be delivered or mailed to the home office of the Surety or Sureties, or to the agent or agents who executed the Bonds on behalf of the Surety or Sureties.
- 15.1.7 Any such notice or demand shall be deemed to have been given or made as of the time of actual delivery, or, in the case of mailing, at the time of actual receipt thereof.

Computation of Time:

- 15.2 When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last calendar day of such period. If the last calendar day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the State of New York, such day will be omitted from the computation. This does not apply to contract completion time as set forth in Article 6 of the Agreement.

General:

- 15.3 Should Department or Contractor suffer injury or damage to person or property because of an act or omission to act of the other party, its employees or agents or others for whose acts the other party is legally liable, a Claim may be made therefore, in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.
- 15.4 The duties and obligations imposed by these General Conditions and the rights and remedies available to the parties hereunder, including but not limited to the warranties, guarantees and obligations imposed upon Contractor by Contract Documents and all of the rights and remedies available to Department thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by New York State Laws, by special warranty or guarantee or by other provisions of the Contract Documents. The provisions of this paragraph shall be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right

and remedy. All representations, warranties and guarantees made in the Contract Documents shall survive final payment and termination or completion of the Agreement.

- 15.5 The obligation of Contractor to maintain the Work, or any part thereof, until the completion of the Correction Period shall survive final payment and termination or completion of the Agreement.

No Waiver of Legal Rights:

- 15.6.1 Inspection by Engineer or by any of its duly authorized representatives, any measurement or report by Engineer, any order by Department for the payment of money, any payment for or acceptance or possession of any Work or any extension in Contract Time or any possession taken by Department shall not operate as a waiver of any provision of the Contract Documents, or any power therein preserved to Department, or of any right to damages therein provided. Any Waiver of any breach of this Contract shall not be held to be a waiver of any other or subsequent breach.
- 15.6.2 Department reserves the right to correct any error that may be discovered in any estimate that may have been paid, and to adjust the same to meet the requirements of the Contract Documents. Department further reserves the right, should proof of Defective Work on the part of Contractor be discovered after the final payment has been made, to claim, and recover by process of law, such sums as may be sufficient to correct the error, or make good the defects in the Work.
- 15.6.3 Any waiver of any provision of the Contract Documents shall be specific, shall apply only to the particular item or matter concerned and shall not apply to other similar or dissimilar items or matters.

Affidavit and Release of Lien:

- 15.7.1 When the Work has been completed, Contractor shall execute a final release of Lien and an Affidavit declaring that all bills have been paid in full, and that the requirements of the New York State Labor Law have been complied with.
- 15.7.2 These documents will be furnished to Department on the forms provided by Department.
- 15.7.3 Contractor shall be responsible for obtaining and submitting these forms to Department for all subcontractors involved in the Work.

Recovery Rights Subsequent to Final Payment:

- 15.8 Department reserves the right, should an error be discovered in an Application for Payment or should proof of Defective Work or materials used by or on the part of Contractor be discovered after the final payment has been made, to claim and recover from Contractor or his Surety, or both, by process of law, such sums as may be sufficient to correct the error or make good the defects in the Work and materials.

General Guarantee:

- 15.9 Neither the final acceptance, nor final payment by Department, nor any provision of the Contract Documents, nor partial or entire use of the Work by Department, shall constitute an acceptance

of Work not done in accordance with the Contract Documents or relieve Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. Contractor guarantees the remedy of all Defective Work and payment for all damage to other Work, persons or property resulting therefrom which shall occur within one (1) year from the date of final acceptance unless a longer period is required by Contract Documents, by Law, or by standard practice. Department will give notice of observed Defective Work with reasonable promptness. Contractor shall ensure that its Surety shall be bound with and for Contractor in the faithful observance of this General Guarantee.

Audit; Access to Records:

- 15.10.1 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.
- 15.10.2 Contractor shall make available at Contractor's office at all reasonable times the materials described in paragraph 15.10.1 above, for examination, audit, or reproduction, until six (6) years after final payment under this Contract.
 - 15.10.2.1 If this Contract is completely or partially terminated, the records relating to the Work terminated shall be made available for six (6) years after any resulting final termination settlement.
 - 15.10.2.2 Records pertaining to appeals under Article 8 of Appendix B of the Agreement, to litigation or the settlement of claims arising under or relating to the performance of this Contract shall be made available until disposition of such appeals, litigation, or claims.
- 15.10.3 A provision stating that all the requirements of this Article of the General Conditions are applicable to Subcontracts under this Contract exceeding \$50,000 in value shall be inserted by Contractor in all such subcontracts.

Price Reduction for Defective Cost or Pricing Data:

- 15.11.1 This provision shall become operative only for any Change Order, or Proposed Change Order or claim settlement under this Contract involving aggregate increases and/or decreases in costs, plus applicable profits, of more than \$10,000; except that this provision shall not apply to any amendment to the Contract for which the price of the Work involved in the amendment is:
 - 15.11.1.1 Based on adequate price competition;
 - 15.11.1.2 Based on established catalog or market prices of commercial items sold in substantial quantities to the general public, or

15.11.1.3 Set by New York State law.

15.11.2 If any price, including profit, negotiated in connection with any Change Order, Proposed Change Order or claim settlement under this provision, was increased because: 1) Contractor or a Subcontractor, Supplier, other person or organization furnished Cost and Pricing Data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data; 2) a designated or prospective Subcontractor, Supplier, other person or organization furnished Contractor Cost and Pricing Data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost and Pricing Data; or 3) any of these parties furnished data of any description that were not accurate, the price shall be changed accordingly and the Contract shall be adjusted to reflect the change. This right to a change in Contract Price is limited to that resulting from defects in data relating to amendments to the Contract for which this provision becomes operative under paragraph 15.11.1 above.

15.11.3 Any decrease in Contract Price under paragraph 15.11.2 above due to defective data from a designated or prospective Subcontractor, Supplier, other person or organization that was not subsequently awarded the Subcontract or purchase order shall be limited to the amount, plus applicable overhead and profit markup, by which 1) the actual Subcontract or purchase order or 2) the actual cost to Contractor, if there was no Subcontract or purchase order, was less than the prospective Subcontract or purchase order, cost estimate submitted by Contractor; provided, that the actual Subcontract or purchase order price was not itself affected by defective cost or Pricing data.

15.11.4 Before awarding any Subcontract or purchase order which exceeds or can be reasonably expected to exceed \$150,000 when entered into, or pricing any Change Order or Proposed Change Order or claim settlement involving a pricing adjustment expected to exceed \$10,000, Contractor shall require the Subcontractor, Supplier, other person or organization to submit Cost or Pricing data (actually or by specific identification in writing), unless the price is:

15.11.4.1 Based on adequate price competition;

15.11.4.2 Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or

15.11.4.3 Set by New York State law.

15.11.5 Contractor shall require such Subcontractor, Supplier, other person or organization to certify in the form prescribed in the Contract Documents, that to best of its knowledge and belief, the data submitted under paragraph 15.11.4 is accurate, complete, and current as of the date of agreement on the negotiated price of the Subcontract, purchase order, Change Order, Proposed Change Order, or claim settlement affecting the Subcontract.

15.11.6 Contractor shall make the provisions of this Article applicable to all Subcontracts or purchase orders that exceed or can be reasonably expected to exceed \$150,000.

No Waiver:

15.12.1 The rights and remedies set forth in the Contract Documents are not exclusive and are in addition to any other rights and remedies provided by law or equity. The duties and

obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by New York State law.

- 15.12.2 No act or omission by Department or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract Documents, nor shall any such act or omission constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

Comparable or Equivalent Terms:

- 15.13.1 Contractor warrants, represents and guarantees that all of the prices, terms, warranties and benefits granted to Department under the Contract are comparable to or better than the equivalent terms, prices, warranties and benefits offered to any other existing customer for similar Work.
- 15.13.2 In addition to the other remedies available, Department may demand repayment for any excess payment, plus interest thereon, for failure of Contractor to comply with paragraph 15.13.1.

Unlawful Provisions Deemed Stricken:

- 15.14.1 If the Contract Documents contain any unlawful provisions, such unlawful provisions shall be of no effect. Any provision determined to be unlawful by a court of competent jurisdiction, shall be deemed stricken from the Contract Documents without affecting the validity of the remaining provisions of the Contract Documents.

All Legal Provisions Included:

- 15.15.1 All provisions of Law required to be included in the Contract Documents shall be and are inserted herein. If through mistake, neglect, oversight or otherwise, any such provision has not been included or included in improper form, upon the application of either party, the Contract Documents shall be amended in writing at no increase in Contract Price nor extension in Contract Time, so as to comply with the Law.

No Estoppel:

- 15.16 Department or any officer, employee, servant or agent thereof, shall not be estopped, bound or precluded by any determination, return, decision, approval, order, letter, payment or certificate made or given by Engineer or any other officer, employee, servant or agent of Department, at any time, either before or after final completion and acceptance of the Work and payment therefor:
- 15.16.1 From showing the true and correct amount, classification, quality, and character of the Work completed and materials furnished by Contractor or any other person under the Contract, or from showing at any time that any determination, return, decision, approval, order, letter, payment, or certificate is untrue and incorrect, or improperly made in any particular, or that the Work or the materials or any part thereof, do not in fact conform to the Contract Documents; or,

- 15.16.2 From demanding the recovery of any overpayments made to Contractor, or such damages as Department may sustain by reason of failure to perform each and every term, provision or condition of the Contract in accordance with its terms.

Prohibited Interests:

- 15.17 No official of Department who is authorized in such capacity on behalf of Department to negotiate, make, accept or approve or to take part in the negotiating, making or approving any architectural, engineering, inspection, construction or material supply contract or any Subcontractor in connection with the Work or the Project of which the Work is a part, shall be knowingly permitted by Contractor to become directly or indirectly interested personally in this Contract or in any part thereof. No officer, employee, architect, attorney, engineer or project representative of or for Department who is authorized in such capacity and in behalf of Department to exercise any executive, supervisory or other similar function in connection with the Work or the Project of which the Work is a part shall be knowingly permitted by Contractor to become directly interested personally in this Contract or in any part thereof.

No Third Party Beneficiary:

- 15.18 Contractor acknowledges and agrees that it is not a third party beneficiary to any other agreement between the Department and any third party and/or any work product prepared or work performed for the Department by any third party, including but not limited to the contract between and/or work or work product performed by the Engineer; that nothing in the bid documents or the contract document shall be construed so as to give the contractor any legal or equitable claim, right or remedy against any other party with whom the Department has contracted, including but not limited to the Engineer; that nothing in any separate agreement between Department and any third party, including but not limited to the Engineer shall be construed to give the contractor any legal or equitable claim, right or remedy against such third party; rather such agreements are acknowledged and agreed to be intended to be for the sole exclusive benefit of the parties thereto. Contractor further acknowledges and agrees that its sole rights and remedies in connection with its bidding and performance of the work to be performed by it under the bid documents and contract documents are limited to such rights and remedies as are provided under the bid documents and contract documents. Further, contractor acknowledges and agrees that no claim against any third party, including but not limited to the Engineer, which is in separate contractual privity with the Department, shall arise out of such contractor's or the Engineer's performance of services for the Department pursuant to such separate contract.

Nothing herein shall release or waive any direct claim which the Department may have against any such separate contractor, including the Engineer, pursuant to the terms of the Department's contract with such third party.

Should any direct claim be brought by contractor against any third party in separate direct contractual relationship with the Department, contractor agrees to reimburse to the Department and to such separate contractor, including Engineer, their reasonable and necessary costs, including legal fees, incurred in the defense of such claim or claims.

SECTION IX

Supplementary Conditions

These Supplementary Conditions (SC) amend or supplement the provisions, as indicated below, of the Contract Documents. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in Section II – Terms and Definitions. Additional terms, if any, used in these Supplementary Conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

Permits

A State Pollutant Discharge Elimination System (SPDES) equivalent permit has been obtained for treatment and discharge of construction water generated during dewatering activities and is attached to this Section.

A Joint Application Permit will be issued by the U.S. Army Corps of Engineers (USACOE) prior to the start of remedial activities to be conducted. The substantive requirements of this permit are incorporated into the contract; supplementary conditions may be added through future addenda.

A Water Quality Certification under Section 401 – Clean Water Act issued by the NYSDEC Regional Administrator has been obtained for remedial activities to be conducted. The certification is attached to this Section.

Approval for Cleanup and Disposal of PCB Remediation Waste under 40 CFR 761.61(a). United States Environmental Protection Agency is attached.

Section VIII, Article 4.2. c -

Section VIII, Article 4, Paragraph 4.2 (c.) additionally insured parties identified should be include on liability certificates and endorsements. The State of New York, NYS Department of Environmental Conservation, its officers, agents and employees, Division of Environmental Remediation, Remedial Bureau E, 625 Broadway, Albany, NY 12233-7017, shall be listed as Certificate Holder on all liability insurance certificate(s), as additional insureds on endorsement(s) and on additional supporting documentation. Additionally Insured for this contract shall include:

AECOM as an Agent for NYSDEC
125 Broad Street
New York, New York 10004i

LBH Real Estate
501 Chestnut Ridge Road, Suite 310
Chestnut Ridge, NY 10977

Orange County (
c/o Director of Operations

255 Main Street
Goshen, NY 10924

Section VIII, Article 5.13

The following agreements and permits are attached for the Contractor's information and use in developing the schedule and pricing. Fully executed permits will be provided as the agreements become available:

1. USEPA Risk Based Disposal Approval, Dated March 25, 2022, Modification Dated March 31, 2023
2. US Army Corps of Engineers (USACE) application for Nationwide Permit 38; Joint Application for Permit submitted to USACE and NYSDEC on xxx date; Fully executed permit to be provided through addenda.
3. SPDES Permit Equivalent, Dated April 18, 2023
4. Water Quality Certification Under Section 401; Clean Water Act Dated August 26, 2021

Section IX

Attachment List

Attachment 1 – EPA Approval Risk Based Disposal

Attachment 2 – Nationwide Permit (NWP) 38 Application

Attachment 3 – SPDES Permit Equivalent

Attachment 4 – Section 401 Water Quality Certification

SECTION IX

Attachment 1: EPA Approval Risk Based Disposal

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Office of the Director
625 Broadway, 12th Floor, Albany, New York 12233-7011
P: (518) 402-9706 | F: (518) 402-9020
www.dec.ny.gov

Transmitted Via Email Only

March 25, 2022

Ariel Iglesias - Director
Land, Chemicals and Redevelopment Division
United State Environmental Protection Agency
290 Broadway, 256h Floor
New York, NY 10007-1866
Iglesias.Ariel@epa.gov

Subject: **USEPA Region 2 PCB Program**
Acceptance of Conditions
PCB Risk-Based Disposal Approval under 40 CFR §761.61(c)
C&D Power Systems (C&D Batteries) Site # 336001
Huguenot, New York

Dear Ariel Iglesias,

The New York State Department of Environmental Conservation (DEC) is in receipt of the above referenced approval from the United States Environmental Protection Agency. We have reviewed the conditions of the approval, and in accordance with Condition 1 of the approval, this letter is being provided to notify you that DEC accepts the approval conditions and will perform the PCB cleanup in accordance with the approval and the notification referenced therein.

If you have any questions, comments, or concerns you may contact the DEC project manager, Justin Starr, by phone at 518-402-9662 or by email at justin.starr@dec.ny.gov.

Sincerely,

Susan H. Edwards

Susan Edwards, P.E.
Acting Division Director
Division of Environmental Remediation

ec: A. Tamuno - alali.tamuno@dec.ny.gov
J. Brown – janet.brown@dec.ny.gov
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P. Haskell - patrick.haskell@aecom.com
A. Park – Park.Andy@epa.gov
W. Palomino - Palomino.Wilfredo@epa.gov
D2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

March 31, 2023

Lisa A. Gorton, P.E.
Project Manager
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7011
Lisa.Gorton@dec.ny.gov

Re: Modification to EPA's PCB Risk-Based Cleanup and Disposal Approval
C&D Power Systems (C&D Batteries) Site, Huguenot, New York

Dear Ms. Gorton:

This is in response to a letter dated February 23, 2023 submitted by AECOM, on behalf of the New York State Department of Environmental Conservation or NYSDEC (the Letter), requesting a modification to the Polychlorinated Biphenyl (PCB) Risk-Based Cleanup and Disposal Approval issued by the Environmental Protection Agency Region 2 (EPA) for the C&D Power Systems Site on March 23, 2022 (Approval). The Letter requests that Area 1 of the sediment excavation plan in Tributary D-1-7 (the Tributary) to the Neversink River (see Figure 1 of the February 23 letter) be omitted from the sediment excavation plan due to the technical challenges for implementing the Area 1 cleanup and potential adverse impact to the wetlands. EPA has reviewed the request and has concluded that the request is acceptable.

Remediation design activities performed subsequent to issuance of the Approval identified technical challenges to implementing remediation of Area 1, the upstream area near the railroad bridge, as AECOM and NYSDEC determined it is difficult to access the area with the necessary equipment. Due to the presence of the railroad abutment, placement of a coffer dam on the upstream side could not be accomplished. There is no adjacent access pathway and creating a new pathway would require construction of a roadway through the wetland buffering the Tributary, which would impact a large extent of ecological habitat.

Furthermore, in efforts to assess the protectiveness of the requested modification, a surface weighted-average concentration (SWAC) analysis of PCB concentrations for pre- and post-remediation in a northern section of the Study Area, called Reach 1, and the entire Study Area were performed. PCB SWACs for Reach 1 without and with excavation are 0.457 microgram per kilogram (mg/kg as known as part per million (ppm)) and 0.317 mg/kg, respectively. SWACs of PCBs for the entire Study Area for pre- and post-excavation are 0.308 mg/kg, 0.206 mg/kg (including Area 1 sediment excavation) and 0.223 mg/kg (excluding Area 1 sediment excavation), respectively. All SWACs are below the PCB remediation standard of 1 mg/kg. No significant changes in the PCB SWACs for Reach 1 and the entire Study Area without and with the Area 1 sediment excavation are noted.

In summary, EPA has concluded that NYSDEC's request to modify the work required to be performed under the Approval (as more fully described in the C&D Power Systems Risk Based Plan (RBP) dated

July 13, 2021 referenced therein) to exclude from the remedial excavation footprint a small, difficult-to-access portion of the river (or tributary) located at the bank of the site is acceptable. This conclusion is based on review of the potential impacts to the wetlands buffering the tributary, which would occur due to the physical requirements to implement excavation in the approved remediation footprint, and an analysis of residual PCB concentrations following remediation.

Please note that nothing in this letter is to be interpreted as modifying any other aspect of the Approval. The remainder of the contaminated area is to be managed and remediated in accordance with the Approval.

Should you have any questions or want to discuss this matter further, please free to contact Wilfredo Palomino, of my staff, at (212) 637-4179.

Sincerely,

Adolph Everett, Chief
Land and Redevelopment Programs Branch

cc: Benjamin Rung, NYSDEC, Benjamin.Rung@dec.ny.gov
Patrick Haskell, AECOM, Patrick.Haskell@aecom.com
Amit Haryani, AECOM, Amit.Haryani@aecom.com
430 US RTE 209 LLC C/O Berel Krug, berel@lbhrealestate.com

**U.S. Environmental Protection Agency
Region 2**

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In the Matter of

C&D Power Systems (C&D Batteries) Site
Huguenot, New York

Approval for Risk-Based Cleanup
and Disposal of Polychlorinated
Biphenyl Remediation Waste

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This document is the United States Environmental Protection Agency, Region 2's ("EPA Region 2") response to and approval of the request for a risk-based disposal of polychlorinated biphenyl ("PCB") remediation waste (as defined at 40 C.F.R. § 761.3) ("Approval"). The disposal approval request was submitted to EPA Region 2 by AECOM, the consultant for the New York State Department of Environmental Conservation (hereafter referred to as "NYSDEC"), in the form of a Risk Based Cleanup and Disposal Plan ("Plan") dated July 13, 2021. The Plan addresses the remediation of PCB-contamination located at the C&D Power Systems (C&D Batteries) Site in Huguenot, New York ("Site"). The Site is currently owned by 430 US Route 209, LLC (hereinafter "the Owner").

The completed application that EPA Region 2 considered in determining whether to approve NYSDEC's request consists of the Plan submitted by AECOM dated July 13, 2021 ("Application").

EPA Region 2 reviewed NYSDEC's Application to determine whether the remedial actions proposed in the Application would be protective of human health and the environment, and technically feasible and appropriate. EPA Region 2 has also reviewed NYSDEC's Application to ensure that safeguards, including long-term maintenance and monitoring commitments, associated with the remediation of the Site will be in place.

Based on the information provided in the Application, EPA Region 2 has determined that implementation of the remedial actions proposed in the Application to address the presence of residual PCBs at the Site will not pose an unreasonable risk of injury to health or the environment.

EPA hereby issues this Approval to NYSDEC and to the Owner for the risk-based disposal of PCB remediation waste at the Site, subject to the terms and conditions specified herein. EPA's authority to issue Approvals derives from the federal regulations for PCBs promulgated pursuant to the Toxic Substances Control Act ("TSCA"), 15 U.S.C. §§ 2601 - 2697 et seq. as amended and set forth in Part 761 of Title 40 of the Code of Federal Regulations (40 C.F.R. Part 761). In EPA Region 2, the authority to issue Approvals under 40 C.F.R. § 761.61(c)(2) has been delegated to the Director of the Land, Chemicals & Redevelopment Division ("LCRD"). This Approval also constitutes an order issued under the authority of Section 6 of TSCA, 15 U.S.C. § 2605.

1. Effective Date

This Approval shall become effective on the date the Director of LCRD, EPA Region 2, receives written notification from both NYSDEC and the Owner, signed by an authorized representative of each, of their respective acceptance of, and intention to comply with, the terms and conditions of this

Approval. This Approval may be withdrawn if EPA Region 2 does not receive, within forty-five (45) calendar days of the date of this Approval, written notification from both NYSDEC and the Owner of each's acceptance of, and intention to comply with, the terms and conditions of this Approval.

2. Description of the Site and the Extent of PCB Contamination

The Site is 17+ acres in area and is located immediately southwest of Tributary D-1-7 of the Neversink River (the "Tributary") at 430 US Route 209, Huguenot, Orange County, New York, 12746. One three-acre single-story structure is located on the Site, and the Site is currently vacant. The Site was owned by Empire Tube Company between 1959 and 1970 and used for the manufacture of black and white television picture tubes. In or about 1970, C&D Technologies Inc. ("C&D") became the owner and operator of the Site and used it for the manufacture of lead acid batteries until ceasing operation in 2006. In 2007, the Site was sold to Star Realty Associates LLC and was later sold to the Owner in 2018.

The Site has been the subject of a series of environmental investigations, most of which were performed by C&D between 1981 and 2008. C&D completed a Feasibility Study between 2008 and 2014. In March 2002, NYSDEC issued a Record of Decision ("ROD") for Operable Unit ("OU")-1 of the Site. In March 2015, NYSDEC issued a ROD and ROD Amendment for the Site for OU-1 and OU-2 (combining OU-1 and OU-2 into a single OU and replacing the original ROD for OU-1 of the Site dated March 2002). NYSDEC is currently performing investigation and remediation of the Site under the New York State Superfund Program.

The results of the investigations indicate the presence of PCBs in soil within the footprint of a former 15-foot deep waste lagoon and in sediments of the Tributary to which the lagoon previously discharged. PCBs have been detected in lagoon soils at concentrations up to 1,100 milligrams per kilogram (mg/kg, also referred to as parts per million or ppm). PCBs have been detected in Tributary sediments at concentrations between 0.031 and 1.47 mg/kg and in off-Site soils at concentrations between 0.15 to 3.3 mg/kg.

PCBs have previously been found in on-Site groundwater at concentrations below 0.5 parts per billion, but the most recent sampling of the 11 on-Site monitoring wells (in 2019) did not detect concentrations of PCBs.

3. Work to be Performed

NYSDEC shall perform the work and shall comply with all the conditions in this Approval and complete and/or implement the work as described in the Application. The Owner shall also be responsible for the tasks specified below in the Approval, including but not limited to Sections 7-10. and Section 13. All work required by this Approval must be conducted in accordance with the federal PCB regulations including but not limited to the regulatory provisions regarding on-Site storage of remediation waste, off-Site transport and disposal, and decontamination of equipment utilized in remediation. Specifically, the following work shall be completed:

- 1) excavation of PCB-contaminated soil to 50 mg/kg from the lagoon, with off-Site disposal of the excavated soil;
- 2) post-excavation sampling in the lagoon, as described in the Application, to verify that PCBs at concentrations greater than 50 mg/kg have been removed;
- 3) in-situ stabilization of soil containing less than 50 mg/kg below the lagoon at depths of up to 35 feet below the lagoon surface grade;
- 4) up to approximately 940 cubic yards of sediment and floodplain soils containing PCB concentrations greater than 1 mg/kg will either be removed and disposed in accordance with 40 C.F.R. § 761.61(a)(5)(i)(B)(2)(ii) or stabilized and consolidated in the bottom of the lagoon;
- 5) filling the lagoon to one foot below grade and placement of clean fill and asphalt pavement cover to serve as a cap (“Cap”);
- 6) implementation of a Site Management Plan (“SMP”), prepared in accordance with Section 6 below as it pertains to PCB contamination present on the Site, for long-term (no less than 30 years) maintenance and monitoring of the Cap to ensure effective isolation and containment of the PCBs remaining on the Site;
- 7) the recording of a deed notice, in the form of a Declaration of Covenants, Restrictions and Environmental Easement, to restrict the Site to commercial or industrial use and specify the institutional controls, specifically the ongoing monitoring and maintenance of the Cap (The Owner’s responsibility with respect to this is described below in Sections 7-9); and
- 8) any other remedial actions, if deemed necessary, to prevent migration of or unacceptable exposures to PCB contamination at the Site.

To the extent that NYSDEC hires any sub-contractor, independent agent or other third party to perform said work, NYSDEC shall be responsible to ensure that any such sub-contractor, independent agent or other third party performs said work in accordance with the terms and conditions of the Application and this Approval.

Nothing herein shall preclude additional work measures from being implemented, provided that any such measure is not inconsistent with nor violates any express provision in this Approval or any provision of 40 C.F.R. Part 761.

4. Reporting Requirements

The following reports shall be made:

Work Schedule. Within thirty (30) calendar days after this Approval becomes effective, NYSDEC shall submit to EPA Region 2 a reasonably detailed schedule for performance of the remedial work

identified in Section 3 [1– 5].

Work Status Report. After the effective date of this Approval, NYSDEC shall provide EPA Region 2 with a written report, every three (3) months, of the status of the relevant remedial actions performed in accordance with Section 3 of this Approval (Work to be Performed) and any other remedial actions, if deemed necessary, under this Approval.

Remedial Action Report. Within sixty (60) calendar days of completing the work specified in Section 3[1-5, 8] of this Approval, NYSDEC shall submit to EPA Region 2 for review and approval a Remedial Action Report (“RAR”) in accordance with Section 5 below.

Deed Notice. Within seven (7) calendar days of recording the *Declaration of Covenants, Restrictions and Environmental Easement* identified in Section 3[7] above and further described in Section 9 below, the Owner shall submit proof of recording to EPA Region 2 in accordance with Section 9.

Annual Report. Beginning July first following the completion of the work identified in Section 3 and continuing every July thereafter, NYSDEC shall submit to EPA Region 2, no later than July 31, an annual written report covering the previous annual reporting period (July 1 through June 30) (the “Annual Report”). (See also Section 6.)

The Annual Report shall include the information collected during implementation of the long-term maintenance and monitoring performed pursuant to Sections 3 and 6 of this Approval.

5. Remedial Action Report

Within sixty (60) calendar days of completing the work specified in Section 3[1-5] of this Approval, NYSDEC shall submit to the Region a RAR that includes the following:

- 1) a detailed description of the specific activities performed to address the PCB contamination present on the Site;
- 2) a tabular summary (with supporting laboratory documentation) of the results of all sampling conducted in connection with the remedial work and corresponding figures;
- 3) documentation of off-Site disposal, including certificates of disposal or similar certifications issued by the disposal facility, of any PCB remediation waste that is removed from the Site;
- 4) “as-built” figures depicting conditions at the Site after the remedial work has been completed; and,
- 5) a certification, signed by a professional engineer licensed by the State of New York and on behalf of NYSDEC, verifying that all engineering components directed by this Approval have been completed in accordance with this Approval.

A supplemental RAR shall be submitted within sixty (60) calendar days of completing any other

remedial action as identified under Section 3[8] of this Approval and shall include the information specified above.

6. Inspection, Monitoring, Maintenance, and Related Obligations

No Site Management Plan (SMP) was prepared as part of the risk-based PCB cleanup and disposal application. Within thirty (30) calendar days of the completion of the remedial work identified in Sections 3 [1-5], NYSDEC shall submit a comprehensive SMP to EPA Region 2. EPA Region 2 shall review and approve the PCB-specific items that are detailed within the SMP. Within thirty (30) calendar days from EPA Region 2's approval of the SMP, NYSDEC shall commence implementation of the SMP.

Annual inspections and reporting are to be required as part of the SMP. The Cap shall be maintained to prevent access to or release of contaminated material. NYSDEC shall perform at least annual visual inspections of the Cap to document its integrity and effectiveness and shall timely perform any necessary activities to maintain the Cap. NYSDEC shall prepare written reports of all inspections performed and maintenance activities completed and shall submit to EPA Region 2 as part of the Annual Report required by Section 4, above, a copy of all such Cap inspection and maintenance reports, as well as any other information pertaining to maintenance of the Cap.

If NYSDEC identifies a breach in the Cap, NYSDEC shall notify EPA Region 2 in writing within fourteen (14) calendar days of discovery. The notification shall include the anticipated corrective measures and a schedule for implementation.

Any proposed revisions or modifications to the SMP pertaining to PCB-specific items that are detailed within the SMP will be provided to EPA Region 2 for review and approval under this Approval.

7. Financial Assurance

NYSDEC will be responsible for the work to be performed at the Site including approximately 30 years of operation and maintenance. As such, neither NYSDEC nor the Owner need make a showing of financial assurance unless required under Section 10.

In the event that the Owner sells or leases any portion of the Site or the Site in its entirety, then the Owner shall ensure that the sales contract or lease shall include the provisions set forth in this Section and shall advise the buyer or lessee that it may be required to comply with the terms and conditions specified in this Section and Section 10, below. Upon EPA's notification of the need to comply, such buyer or lessee shall demonstrate that it has in place financial assurance sufficient for the costs of operation and maintenance as will be described in the SMP and the Declaration of Covenants, Restrictions and Environmental Easement by choosing among the financial assurance mechanisms set forth in 40 C.F.R. § 761.65(g) (referencing provisions of Subpart H of 40 C.F.R. Part 264). Following such notification, no later than March 1st of each year following the year of acquisition of its interest in the Site, such buyer or lessee shall submit an annual certification to EPA Region 2 that the selected financial assurance mechanism(s) covered the prior calendar year and that the buyer/lessee has and will

maintain such coverage for the current year. Beginning five years from the effective date of the acquisition of its interest in the Site and repeating every five years thereafter, the buyer or lessee shall demonstrate to EPA Region 2 that the financial assurance mechanism(s) is/are sufficient to cover any reasonably contemplated costs of a future cleanup.

If the Owner sells or leases any portion of the Site or the Site in its entirety, but satisfactory demonstration of financial assurance has not been provided by the buyer or lessee to EPA, NYSDEC shall remain liable for funding all obligations required by this Approval as if such sale or leasing arrangement had not taken place.

8. Records

As long as PCB remediation waste above 1 ppm remains on the Site, subject to Paragraph 10 regarding the transfer of all responsibility to comply with the terms and conditions of the Approval, NYSDEC shall maintain the following records at 625 Broadway, Albany, NY 12233 and shall make them available to EPA upon request¹:

- 1) the final construction drawings and any other construction-related documents pertaining to the Cap;
- 2) all records and information related to characterization, analysis,² sampling, shipping and disposal of PCB-contaminated material at the Site; and,
- 3) all records and information related to the long-term monitoring including monitoring of the Cap.

The Owner (or any new owner/lessee pursuant to Section 10) shall confirm and certify that these records are maintained at NYSDEC's central office location at 625 Broadway, Albany, NY 12233. Such certification shall be provided to EPA with the notification pursuant to Section 1, above. In the event that the three conditions listed below in Section 10 of this Approval are met and the Approval is reissued to and accepted by a new owner or lessee, NYSDEC will, unless otherwise approved by EPA, transfer custody of the documents required to be preserved pursuant to 40 C.F.R. Part 761, and to the extent not inconsistent with applicable TSCA statutory or regulatory requirements, NYSDEC will then be released from any further record-keeping obligations, mandated by this Approval.

9. Declaration of Covenants, Restrictions and Environmental Easement and Certification to EPA

Within sixty (60) calendar days of completion of the work specified in Section 3-1 through 3-5 and the approval of the Site Management Plan under 3-6 and Section 6 of this Approval, the Owner shall in

¹ Public access to these documents is also available at: <https://www.dec.ny.gov/data/DecDocs/336001/>

² NYSDEC shall use an appropriately sensitive and selective testing method from the latest update of the document entitled: "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," also known as SW-846, or validated equivalent, or as otherwise specified in this Approval.

consultation with NYSDEC do both of the following:

- 1) Prepare and record a Declaration of Covenants, Restrictions and Environmental Easement with the County Clerk's Office, Orange County, New York in accordance with 40 C.F.R. § 761.61(a)(8) and applicable New York State law. The Declaration of Covenants, Restrictions and Environmental Easement shall, at a minimum, include a description of the extent of PCB contamination found at the Site; a description of the work performed under this Approval; the restrictions on use included in Section 11 of this Approval and any additional limitations; a description of the inspection, maintenance, and reporting requirements associated with the final approved SMP; and a copy of this Approval, appended as an attachment.
- 2) Submit to EPA Region 2 (see the addressee in Section 15) proof of recording of the Declaration of Covenants, Restrictions and Environmental Easement for the Site, complete with book and page number or instrument number, specified in subparagraph (1) of this Section.

10. Sale or Lease of the Site

The Owner shall not sell or lease any portion of the Site (or the Site in its entirety) unless it notifies EPA Region 2 and NYSDEC (the notification to NYSDEC to be in accordance with applicable state law and regulations), in writing, no less than thirty (30) calendar days prior to such sale or lease. This notification shall include the name, mailing and email address and telephone number of the proposed new owner(s) or lessee(s) and contact information for any person representing them. The Owner must ensure that any sale or lease agreement explicitly provides that NYSDEC has continued access to the Site to perform its obligations under the Approval, and that EPA has access to the Site for inspection and/or monitoring activity. Furthermore, any sale or lease agreement must state that the owner or lessee's use of the property will be subject to the terms and conditions of the recorded Declaration of Covenants, Restrictions and Environmental Easement.

In the event that the Owner sells or leases any portion of the Site (or the Site in its entirety), NYSDEC and the Owner shall continue to be bound by all the terms and conditions of this Approval, and be responsible to ensure the timely and satisfactory completion of all work required thereunder, unless and until the following three conditions occur:

- 1) the new owner or lessee requests, in writing, that EPA Region 2 reissue this Approval to the new owner or lessee, transferring all responsibility to comply with the terms and conditions of this Approval to the new owner or lessee, and the new owner or lessee indicates how it intends to comply with the financial assurance and other requirements of this Approval;
- 2) EPA Region 2 reissues this Approval to the new owner or lessee, transferring all responsibility to comply with the terms and conditions of this Approval to the new owner or lessee; and,
- 3) the new owner or lessee provides written notification to EPA Region 2 of its acceptance of and intention to comply with the terms and conditions of the reissued Approval.

EPA Region 2 may withdraw the reissued Approval if EPA does not receive written notification from the new owner or lessee of its acceptance of, and intention to comply with, the terms and conditions of the reissued or as modified Approval within forty-five (45) calendar days of the date of the reissued or as modified Approval. Where EPA Region 2 has withdrawn the reissued or as modified Approval, this Approval, as originally issued to NYSDEC and the Owner, will remain in effect and the Owner shall provide EPA Region 2, in writing, documentation that NYSDEC and EPA will continue to be afforded access to the Site, as necessary, to fulfill any and all obligations included in this Approval.

In the event that the three conditions listed above are met and the Approval is reissued to and accepted by a new owner or lessee, NYSDEC will transfer custody of the documents required to be preserved pursuant to 40 C.F.R. Part 761, and to the extent not inconsistent with applicable TSCA statutory or regulatory requirements, NYSDEC will then be released from any further obligations, except as otherwise set out in Section 7 (Financial Assurance), above, mandated by this Approval.

11. Restrictions on Use

As long as PCB remediation waste above 1 ppm is present on the Site, the Owner or any successor in interest may not use any area of the Site for purposes other than commercial or industrial use as set forth in the Application and in accordance with any additional limitations recorded in the Declaration of Covenants, Restrictions and Environmental Easement, unless otherwise approved in writing by EPA Region 2.

12. Modifications and Changes in Use

Any proposed modification to any of the terms or conditions of this Approval, whether expressly stated herein or incorporated by reference, must receive prior written approval from the Director of LCRD, EPA Region 2. NYSDEC or the Owner (whichever party is seeking the modification) shall notify EPA Region 2 in writing of any such proposed modification at least sixty (60) calendar days prior to the anticipated date for implementation of the modification unless EPA agrees in writing to shorten the prior notice period. No action shall be taken to implement any such modification unless EPA Region 2 has approved the modification in writing. In determining whether to approve the modification, EPA Region 2 may request additional information or seek input from the parties.

At least sixty (60) calendar days before any work that requires modification of the Cap identified in Section 3[5], above, the party seeking the modification shall submit to EPA Region 2, for approval, a work plan that describes in detail the specific activities including, but not limited to:

- the reason for the modification
- how the Cap is to be modified
- installation of stormwater controls
- any off-Site disposal of materials that are either contaminated or potentially contaminated with PCBs

- any necessary proposed revisions to the SMP to address the modification (any proposed revisions or modifications to the SMP shall be made in accordance with Section 6, above).

If a proposed modification to the terms and conditions of the Approval involves a change in the use of the Site that has the potential to affect the Cap or to result in other unacceptable changes, EPA Region 2 may not approve the proposed modification. If EPA determines that the change in use of the Site may pose an unreasonable risk to human health or to the environment, or if EPA Region 2 does not receive the information from the seeker of the modification that EPA requires to assess and/or make a determination regarding such potential risk, then EPA Region 2 may deny the proposed modification; revoke, suspend and/or modify this Approval; or take other action as appropriate.

The Owner shall prepare and record any amendment to the Declaration of Covenants, Restrictions and Environmental Easement and/or this Approval, resulting from any approved modification(s), within sixty (60) days of such changes(s).

13. EPA Region 2 Authority for Entry and Inspection and NYSDEC Access to Site

By accepting this Approval (as provided in Section 1 above), NYSDEC and the Owner consent to EPA Region 2's and NYSDEC's authorized representatives entering the Site at reasonable times, upon notice to NYSDEC to coordinate such access, for any purpose authorized by Section 11 of TSCA, 15 U.S.C. § 2610, including but not limited to the following purposes:

- 1) to inspect the Site to assess compliance with this Approval and/or the federal PCB regulations; and
- 2) to collect samples to assess compliance with this Approval and/or the federal PCB regulations. NYSDEC will be given the opportunity to split samples collected by EPA Region 2 representatives, provided this does not compromise EPA Region 2's sampling activities or the samples which EPA Region 2 collects.

By accepting the Approval, the Owner also grants NYSDEC access to the Site to perform the tasks set out in this Approval.

Any refusal to allow any of the above actions may result in the suspension and/or revocation of this Approval.

14. Confidential Business Information

Information supplied to EPA is presumptively available to the public under the Freedom of Information Act, 5 U.S.C. § 552, and the regulations at 40 C.F.R. Part 2. As provided in Section 14(c) of TSCA, 15 U.S.C. § 2613(c), NYSDEC and its contractors may claim information provided to EPA Region 2 to be Confidential Business Information ("CBI") provided it complies with the substantive criteria in 40 C.F.R. § 2.208. Information designated as CBI will be disclosed by EPA Region 2 only to the extent, and by means of the procedures, set forth in 40 C.F.R. Part 2.

Factors that EPA Region 2 considers in determining whether a claim of CBI is valid, and in the evaluation of a claim, are set out in TSCA § 14(c) and at 40 C.F.R. § 2.204(e)(4). These factors include but are not limited to the following:

- 1) NYSDEC's contractor has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures;
- 2) the information is not, and has not been, reasonably obtainable without NYSDEC's contractor's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on showing of special need in a judicial or quasi-judicial proceeding);
- 3) the information is not publicly available elsewhere; and,
- 4) disclosure of the information would cause substantial harm to NYSDEC's contractor's competitive position.

The information requested under this Approval concerns the proper handling of PCB remediation waste and is not expected to involve CBI. However, if that information is claimed to be CBI by NYSDEC or its contractor, it must be clearly identified as such on the documents submitted and the claims to confidentiality must be certified and substantiated at the time of submittal. Additional information on TSCA CBI, including certification and substantiation templates, can be found at <https://www.epa.gov/tasca-cbi>.

15. Addresses for Correspondence

- 1) EPA Addresses:
 - (a) All non-CBI correspondence to be submitted to EPA Region 2 shall be sent via electronic mail to:

Andrew Park, Chief
Corrective Action Section
Land and Redevelopment Programs Branch
United States Environmental Protection Agency, Region 2,
290 Broadway
New York, New York 10007-1866
park.andy@epa.gov
 - (b) All CBI information with cover letter designating it as such that is to be submitted to EPA Region 2 shall be placed in a sealed envelope marked 'CONTAINS TSCA CBI TO BE OPENED BY ADDRESSEE ONLY' and that envelope shall be placed inside a regular mailing envelope addressed as below. DO NOT indicate on the outer envelope that it contains CBI or that the addressee is the Document Control Officer. The records should be submitted to:

Chief, Land and Redevelopment Programs Branch
United States Environmental Protection Agency, Region 2
290 Broadway
New York, New York 10007-1866

- 2) NYSDEC Address. All correspondence to NYSDEC shall be submitted to the following representatives:

Justin Starr
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7012
justin.starr@dec.ny.gov

and

Benjamin Rung
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7012
Benjamin.rung@dec.ny.gov

- 3) The Owner Address. All correspondence to 430 US Route 209, LLC shall be submitted to the following address:

430 US RTE 209 LLC
C/O Berel Krug
501 Chestnut Ridge Rd Ste. 310
Chestnut Ridge NY 10977
berel@lbhrealestate.com

- 4) The EPA, NYSDEC, and the Owner may designate additional or different addressees for communication upon advance written notice to the other parties.

16. Conclusion

Based on the information included in the Application, EPA Region 2 finds that the PCB disposal authorized by this Approval and the use of the Site as set forth in the Application does not present an unreasonable risk to human health or the environment. Acceptable concentrations of PCB remediation waste remaining on-Site under this Approval are based on a Site-specific risk determination pursuant to TSCA and are not applicable to any other site. Notwithstanding any other provision of this

Approval, this Approval may be reviewed, revoked, suspended and/or modified at any time before or after NYSDEC's and the Owner's acceptance thereof if EPA Region 2 determines that implementation of this Approval may present an unreasonable risk to human health or the environment. Nothing in this Approval is intended or is to be construed as prejudicing, waiving or negating any authority or sanction available to EPA (or the United States on behalf of EPA) under Section 6 of TSCA, 15 U.S.C. § 2605, any other section of TSCA, and 40 C.F.R. Part 761, and/or under other applicable law or regulation, nor is anything in this Approval intended or is to be construed as barring or precluding EPA (and/or the United States on behalf of EPA) from commencing and maintaining an enforcement action under Sections 16 and 17 of TSCA, 15 U.S.C. §§ 2615 and 2616, respectively, for any relief authorized thereunder, with regard to or concerning the Site.

This Approval, issued pursuant to 40 C.F.R. § 761.61(c), is based upon NYSDEC, including its consultant, having provided EPA Region 2 with a complete and truthful disclosure of all material facts related to the Site in its Application. The misrepresentation or omission by NYSDEC of any material fact in its Application or in any document associated with or supporting this Approval may result in EPA Region 2's revocation, suspension and/or modification of this Approval, and such other legal or equitable remedy, either civil or criminal, that EPA (or the United States on behalf of EPA) is authorized to pursue under applicable law.

The acceptance by each party -- NYSDEC and the Owner -- of this Approval pursuant to Section 1 above constitutes both parties' agreement that they shall comply with the following:

- 1) all terms and conditions of this Approval; and,
- 2) all applicable provisions of federal, state and local law pertaining to the PCB remediation waste present in or beneath the Site. This Approval only specifies the applicable requirements under TSCA and does not cite to or make any determination regarding the requirements that may be applicable under other federal, state or local law. TSCA disposal requirements do not supersede other, more stringent, applicable federal, state or local laws. Any failure by both parties to comply with any condition or term of this Approval shall constitute a violation of the Approval, which has been issued pursuant to 40 C.F.R. § 761.61(c). Any such violation is made unlawful by Section 15(1)(C) of TSCA, 15 U.S.C. § 2614(1)(C), and may result in EPA Region 2's revocation, suspension and/or modification of this Approval and/or its pursuit of such other legal or equitable remedy that EPA Region 2 (or the United States on behalf of EPA) may choose to pursue under applicable law.

Ariel Iglesias, Director
Land, Chemicals & Redevelopment Division
United States Environmental Protection Agency, Region 2

March 23, 2022
Date

SECTION IX

Attachment 2: USACE Nationwide Permit No. 38

(To be supplied pending final issuance)

The Application Package is provided in the

Limited Site Data Document as a reference.

SECTION IX

Attachment 3: SPDES Permit Equivalent

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Water Permits

625 Broadway, Albany, New York 12233

www.dec.ny.gov

MEMORANDUM SPDES Permit Equivalent

TO: Lisa Gorton, DER
FROM: Alison Wasserbauer, Bureau of Water Permits, DOW
SUBJECT: SPDES Permit Equivalent: C&D Power Systems, DER Site ID# 3-36-001
DRAINAGE BASIN: 14 / 02
DATE: April 18, 2023

In response to your request dated April 17, 2023, attached please find the extended permit equivalent with effluent limitations and monitoring requirements for the above noted remediation discharge.

The discharge consists of treated water from dewatered solids. The treatment system consists of bag filters and if necessary, Granular Activated Carbon (GAC) beds, cartridge filters and an equalization tank.

The DOW does not have any regulatory authority over a discharge from a State, PRP, or Federal Superfund Site. DER will be responsible for ensuring compliance with the attached effluent limitations and monitoring requirements, and approval of all engineering submissions. The additional conditions identifies the appropriate DER contact person who will receive all effluent results, engineering submissions, and modification requests. The Regional Water Engineer should be kept apprised of the status of this discharge and, in accordance with the attached criteria, receive a copy of the effluent results for informational purposes.

If you have any questions, please call Alison Wasserbauer at 518-402-8126.

Attachment (Effluent Limitations and Monitoring Requirements)

cc: Region 3 Regional Water Engineer (via email, w/attach)
BWP Section Chief, DOW (via email, w/attach)

EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

OUTFALL	DISCHARGE TYPE	LATITUDE/ LONGITUDE	RECEIVING WATER and CLASS	EFFECTIVE	EXPIRING
001	Treated Remediation Wastewater	41° 25' 2.89" N 74° 37' 34" W	Trib. to Neversink River, Class C(T)	4/18/2023	5/31/2025

The discharges from the treatment facility shall be limited and monitored by the operator as specified below:

Outfall and Parameters	CAS No.	Monthly Avg. Limits	Daily Max Limits	Units	Minimum Monitoring Requirements		FN
					Measurement Frequency	Sample Type	
Outfall 001							
Flow	NA	Monitor	72000	GPD	Continuous	Recorder	
pH	NA	-	6.0 - 9.0	SU	Monthly	Grab	1
Temperature	NA	Monitor	Monitor	Deg C	Monthly	Grab	1
Total Suspended Solids	NA	20	40	mg/L	Monthly	Grab	1
Total Dissolved Solids	NA	Monitor	Monitor	mg/L	Monthly	Grab	1
Barium	7440-39-3	Monitor	Monitor	ug/L	Monthly	Grab	1
Cadmium, Total	7440-43-9	Monitor	1.7	ug/L	Monthly	Grab	1
Chromium, Total	7440-47-3	Monitor	Monitor	ug/L	Monthly	Grab	1
Fluoride	16984-84-8	Monitor	1500	ug/L	Monthly	Grab	1
Lead, Total	7439-92-1	Monitor	2.4	ug/L	Monthly	Grab	1
Vanadium	7440-62-2	Monitor	22	ug/L	Monthly	Grab	1
Zinc, Total	7440-66-6	Monitor	62	ug/L	Monthly	Grab	1
PCB, sum	Multiple	Monitor	0.20	ug/L	Monthly	Grab	1,2,3,4

Footnotes:

1. The measurement frequency of parameters listed on this page shall be Monthly following a period of 12 (twelve) consecutive weekly sampling events showing no exceedances of the stated discharge limitations. If discharge limitation of any parameter listed on this page exceeds the stated limit, the measurement frequency for all parameters listed on this page shall again be weekly, until a period of four consecutive sampling events showing no exceedances at which point monthly monitoring may resume.
2. Discharge limit is set at the Practical Quantitation Limit (PQL). The actual standard or guidance value concentration is below this limit. Analysis of this parameter shall be conducted using the most stringent USEPA approved method in accordance with 40 CFR 136.



Site Name: C&D Power Systems

DER Site ID#: 3-36-001

Page 2 of 4 v1.0

3. PCBs:

- a. The treatment plant operator must monitor this discharge for PCBs using USEPA laboratory method 608. The laboratory must make all reasonable attempts to achieve a Minimum Detection Level (MDL) of 0.065 µg/l.
- b. 0.065 µg/l is the discharge goal. The treatment plant operator shall report all values above the MDL (0.065 µg/l per Aroclor). If the level of any Aroclor is above 0.065 µg/l, the treatment must evaluate the treatment system and identify the cause of the detectable level of PCBs in the discharge.
- c. If the Department determines that effluent monitoring results above can be prevented by implementation of additional measures as proposed by the treatment plant operator in footnote 3.b above, and approved by the Department, the treatment plant operator shall implement such additional measures.

4. Applies to the sum of these substances.

Additional Conditions:

1. Discharge is not authorized until such time as an engineering submission showing the method of treatment is approved by the Department. The discharge rate may not exceed the effective or design treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to:

Lisa Gorton
Division of Environmental Remediation
NYSDEC, 625 Broadway, Albany, New York 12233- 7015,
Tel: 518-402- 9574

With a copy sent to:

Regional Water Engineer, Region 3
100 Hillside Avenue, Suite 1W, White Plains, New York, 10603-2860
Phone: (914) 428-2505

2. Samples and measurements, to comply with the monitoring requirements specified above, must be taken from the effluent side of the final treatment unit prior to discharge to the receiving water body unless otherwise noted above.
3. Only site generated wastewater is authorized for treatment and discharge.
4. 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.
5. Both concentration (mg/l or µg/l) and mass loadings (lbs/day) must be reported to the Department for all parameters except flow and pH.

Site Name: C&D Power Systems

DER Site ID#: 3-36-001

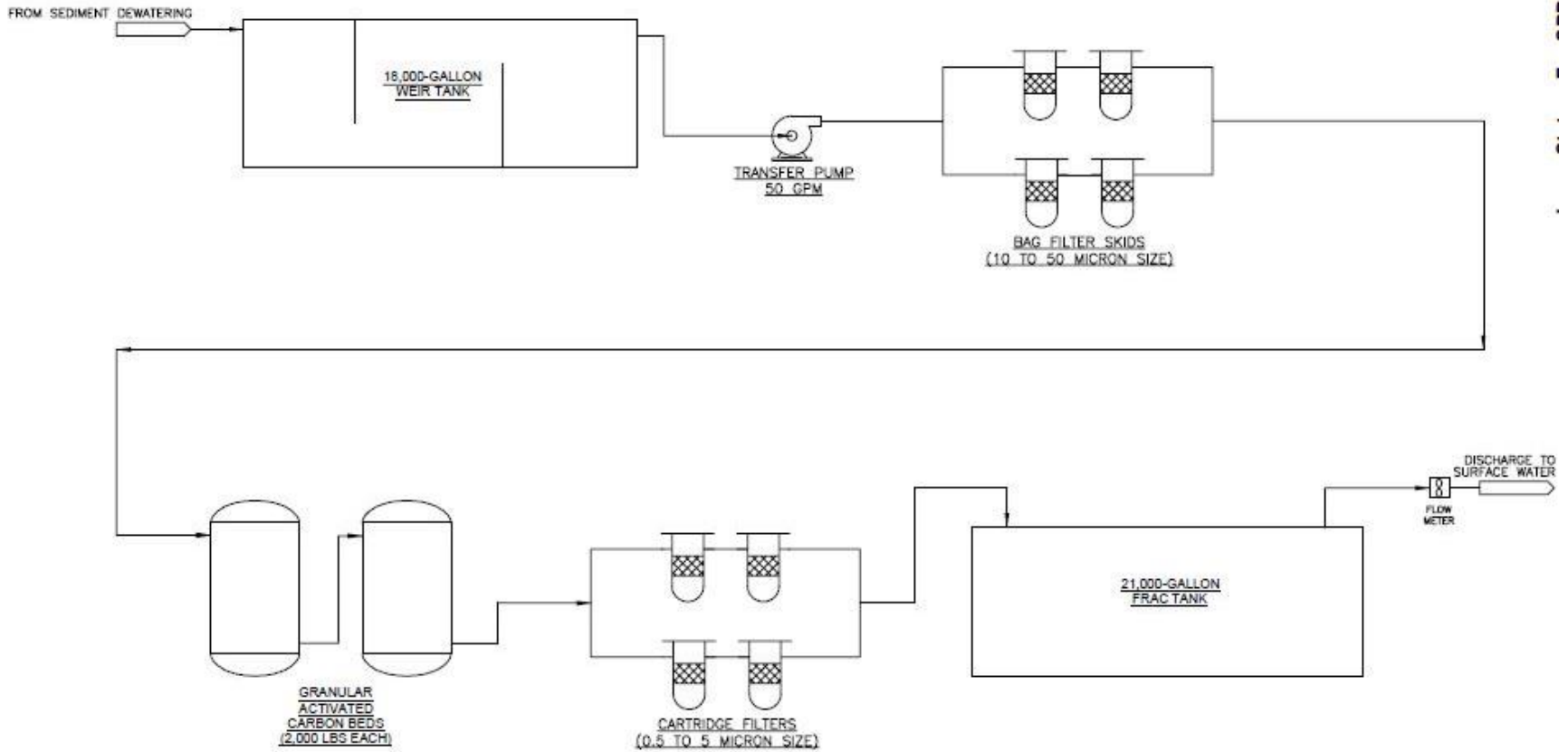
Page 3 of 4 v1.0

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



Department of
Environmental
Conservation

MONITORING LOCATIONS



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, NY 12561-1620
P: (845) 256-3054 | F: (845) 255-4659
www.dec.ny.gov



Department of
Environmental
Conservation

IMPORTANT NOTICE TO ALL PERMITTEES

The permit you requested is enclosed. Please read it carefully and note the conditions that are included in it. The permit is valid for only that activity expressly authorized therein; work beyond the scope of the permit may be considered a violation of law and be subject to appropriate enforcement action. Granting of this permit does not relieve the permittee of the responsibility of obtaining any other permission, consent or approval from any other federal, state, or local government which may be required.

Please note the expiration date of the permit. Applications for permit renewal should be made well in advance of the expiration date (minimum of 30 days) and submitted to the Regional Permit Administrator at the above address. For SPDES, Solid Waste and Hazardous Waste Permits, renewals must be made at least 180 days prior to the expiration date.

The DEC permit number & program ID number noted on page 1 under "Permit Authorization" of the permit are important and should be retained for your records. These numbers should be referenced on all correspondence related to the permit, and on any future applications for permits associated with this facility/project area.

If a permit notice sign is enclosed, it must be posted at the work site with appropriate weather protection, per General Condition 1 and any other applicable permit conditions.

If you have any questions on the extent of work authorized or your obligations under the permit, please contact the staff person indicated below or the Division of Environmental Permits at the above address.

Chris Lang

Chris Lang
Division of Environmental Permits, Region 3
Telephone (845) 256-3096



PERMIT
Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:

NYS Dept of Environmental Conservation

625 BROADWAY
ALBANY, NY 12233

Facility:

STAR REALTY ASSOCIATES HUGUENOT
FACILITY
430 US RTE 209
HUGUENOT, NY 12746

Facility Location: in DEERPARK in ORANGE COUNTY

Facility Principal Reference Point: NYTM-E: 530.991 NYTM-N: 4585.334
Latitude: 41°25'08.3" Longitude: 74°37'44.9"

Authorized Activity: This permit authorizes disturbance to an unnamed tributary of the Neversink River [DEC Waters Index No. D-1-7, Class C(T)] associated with the removal of contaminated sediments as part of a State Superfund Program remedial project for the C&D Power Systems (C&D Batteries) Site (Remedial Site ID 336001).

Permit Authorizations

Water Quality Certification - Under Section 401 - Clean Water Act

Permit ID 3-3328-00040/00031

New Permit

Effective Date: 8/26/2021

Expiration Date: 12/31/2026

Stream Disturbance - Under Article 15, Title 5

Permit ID 3-3328-00040/00032

New Permit

Effective Date: 8/26/2021

Expiration Date: 12/31/2026

Excavation & Fill in Navigable Waters - Under Article 15, Title 5

Permit ID 3-3328-00040/00033

New Permit

Effective Date: 8/26/2021

Expiration Date: 12/31/2026

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

Permit Administrator: CHRISTOPHER LANG, Deputy Regional Permit Administrator
Address: NYSDEC Region 3 Headquarters
 21 S Putt Corners Rd
 New Paltz, NY 12561

Authorized Signature: _____

Date 08 / 26 / 2021



Distribution List

Mike Fraatz, DEC Bureau of Ecosystem Health
John Rollino, AECOM
Brian Orzel, US Army Corps of Engineers
Eric Ruscher, Orange County
Town of Deerpark

Permit Components

NATURAL RESOURCE PERMIT CONDITIONS

WATER QUALITY CERTIFICATION SPECIFIC CONDITION

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

NATURAL RESOURCE PERMIT CONDITIONS - Apply to the Following Permits: WATER QUALITY CERTIFICATION; STREAM DISTURBANCE; EXCAVATION & FILL IN NAVIGABLE WATERS

1. Conformance With Plans All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or applicant's agent as part of the permit application. Such approved plans were prepared by the applicant or applicant's agent, as cited in Natural Resource Permit Condition 2.

2. Conformance with Plans - Addenda In addition to plans referenced in the Condition titled "Conformance with Plans," the activities authorized by this permit must be in strict conformance with the following approved plans and/or submissions made as part of the permit application:

- a. Drawings prepared by AECOM, entitled "Former C&D Power Systems, Site No. 336001 Sediment Remediation", sheets C-02.1, C-02.10, C-03.1, C-03.4, C-03.5, C-04.6, X-05, and D-01.5, received by DEC March 31, 2021;
- b. Drawing sheets C-02.9 and G-04, prepared by AECOM, received by DEC May 14, 2021;
- c. "Responses to Comments" narrative, received by DEC March 31, 2021.

3. Notification of Pre-Construction Meeting Prior to commencement of any work, the permittee must notify Michael Fraatz of the Bureau of Ecosystem Health via email (michael.fraatz@dec.ny.gov) a minimum of 5 business days prior to scheduling an on-site preconstruction meeting with the permittee and/or contractors.



- 4. Notice of Intent to Commence Work** The permittee must notify Mike Fraatz of the DEC Bureau of Ecosystem Health via email (michael.fraatz@dec.ny.gov) no less than 48 hours prior to the commencement of work.
- 5. Post Permit Sign** The permit sign enclosed with this permit shall be posted in a conspicuous location on the worksite and adequately protected from the weather.
- 6. Install Erosion Controls Prior to Work** No site preparation work shall be undertaken until all required erosion control measures have been installed.
- 7. Work During Low Flows** All work shall be performed during low flow conditions.
- 8. Install Cofferdam** Prior to commencing the project, a temporary cofferdam made of clean gravel, sandbags and/or plastic liners shall be installed to isolate the work area from the rest of the stream. The cofferdam shall be entirely removed immediately upon completion of work.
- 9. Use of Timber Matting** Disturbance to wetlands, streams and other waterbodies by construction equipment shall be minimized through the use of timber mats and low ground weight construction.
- 10. Removal of Timber Mats** Timber mats shall be removed in all work areas as soon as construction has been completed and such areas shall be immediately seeded and mulched as appropriate.
- 11. No Turbidity from Dewatering** No turbid water resulting from dewatering operations shall be discharged directly to or allowed to enter the wetland. Such water shall be pumped to settling basins or to an upland vegetated area prior to any discharge to any surface waters or wetlands. All other necessary measures shall be implemented to prevent any visible increase in turbidity or sedimentation downstream of the work site.
- 12. Environmental Monitor and Reports** An environmental monitor is required to be on site during all in-stream work. Reports which include photographs and a narrative of project progress must be submitted via email to Mike Fraatz of the DEC Bureau of Ecosystem Health (michael.fraatz@dec.ny.gov) once per week during the course of construction.
- 13. Maintain Water Flow During Work** During periods of work activity, sufficient flow of water shall be maintained at all times to sustain aquatic life downstream.
- 14. Precautions Against Contamination of Waters** All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.
- 15. Return Stranded Fish** Any fish remaining in the dewatered area shall be returned to the stream, lake or wetland.
- 16. Storage of Materials** Excavated materials and or fill materials shall be stockpiled more than 100 feet landward of the wetland or water body and shall be contained by straw bales or silt fencing to prevent erosion.



17. Seed, Mulch Disturbed Soils All areas of soil disturbance resulting from this project (above the mean high water line) shall be seeded with an appropriate perennial grass seed and mulched with straw within one week of final grading.

18. Prior Approval of Changes If the permittee desires to make any minor changes to the scope of work shown in the approved plans referenced in Natural Resource Permit Condition 1, the permittee shall submit a request via email to Mike Fraatz of the DEC Bureau of Ecosystem Health (michael.fraatz@dec.ny.gov) to make such proposed changes. The proposed changes shall not be implemented unless authorized in writing by the Department. Issuance of such approval without modification of the permit is at the Department's discretion.

19. No Interference With Navigation There shall be no unreasonable interference with navigation by the work herein authorized.

WATER QUALITY CERTIFICATION SPECIFIC CONDITIONS

1. Water Quality Certification The authorized project, as conditioned pursuant to the Certificate, complies with Section 301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act, as amended and as implemented by the limitations, standards, and criteria of state statutory and regulatory requirements set forth in 6 NYCRR Section 608.9(a). The authorized project, as conditioned, will also comply with applicable New York State water quality standards, including but not limited to effluent limitations, best usages and thermal discharge criteria, as applicable, as set forth in 6 NYCRR Parts 701, 702, 703, and 704.

GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. Facility Inspection by The Department The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. Relationship of this Permit to Other Department Orders and Determinations Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.



3. Applications For Permit Renewals, Modifications or Transfers The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator
NYSDEC Region 3 Headquarters
21 S Putt Corners Rd
New Paltz, NY12561

4. Submission of Renewal Application The permittee must submit a renewal application at least 30 days before permit expiration for the following permit authorizations: Excavation & Fill in Navigable Waters, Stream Disturbance, Water Quality Certification.

5. Permit Modifications, Suspensions and Revocations by the Department The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

- a. materially false or inaccurate statements in the permit application or supporting papers;
- b. failure by the permittee to comply with any terms or conditions of the permit;
- c. exceeding the scope of the project as described in the permit application;
- d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. Permit Transfer Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or



intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

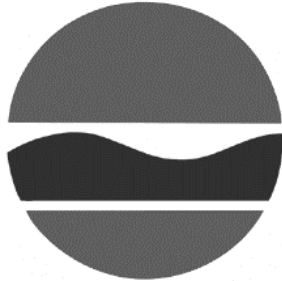
This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

Item E: SEQR Type II Action Under the State Environmental Quality Review Act (SEQR), this project has been determined to be a Type II Action and therefore is not subject to further procedures under this law.

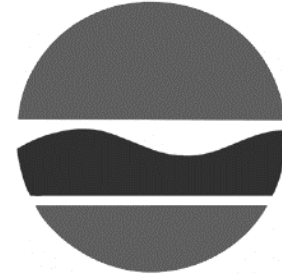
SECTION IX

Attachment 4: Section 401 Water Quality Certification

New York State
Department of Environmental Conservation



NOTICE



The Department of Environmental Conservation (DEC) has issued permit(s) pursuant to the Environmental Conservation Law for work being conducted at this site. For further information regarding the nature and extent of work approved and any Department condition on it, contact the DEC at 845-256-3054. Please refer to the permit number shown when contacting the DEC.

Permittee: NYSDEC

Permit No. 3-3328-00040/00032

Effective Date: August 26, 2021

Expiration Date: December 31, 2026

Applicable if checked. No instream work allowed between October 1 & April 30

NOTE: This notice is NOT a permit.

SECTION X

Standard Specifications

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SECTION X

STANDARD SPECIFICATIONS

DIVISION 1

01 25 00	Substitution Procedures.....	01 25 00-1
01 25 00A	Substitution Request Form	01 25 00-1
01 25 00B	Proposed Substitution Checklist.....	01 25 00-1
01 26 00	Contract Modification Procedures	01 26 00-1
01 26 00A	Request for Interpretation.....	01 26 00-1
01 26 00B	Proposed Change Order Request	01 26 00-1
01 26 00C	Proposed Change Order	01 26 00-1
01 26 00D	Field Order Form	01 26 00.D-1
01 26 00E	MURK Forms	01 26 00.E-1
01 29 73	Schedule of Values	01 29 73-1
01 29 76	Progress Payment Procedures.....	01 29 76-1
01 31 19.13	Pre-Construction Conference	01 31 19.13-1
01 31 19.23	Progress Meetings.....	01 31 19.23-1
01 31 26	Electronic Communication Protocols	01 31 26-1
01 32 16	Progress Schedule	01 32 16-1
01 32 33	Photographic Documentation	01 32 33-1
01 33 00	Submittal Procedures	01 33 00-1
01 35 29	Contractor’s Health and Safety Plan.....	01 35 29-1
01 35 43.13	Environmental Procedures for Hazardous Materials	01 35 43.13-1
01 42 00	References	01 42 00-1
01 45 29.13	Testing Laboratory Services Furnished by Contractor	01 45 29.13-1
01 51 05	Temporary Utilities and Controls	01 51 05-1
01 52 11	Engineer’s Field Office	01 52 11-1
01 52 13	Contractors Field Office and Sheds	01 52 13-1
01 55 13	Access Roads and Parking Areas.....	01 55 13-1
01 57 33	Security.....	01 57 33-1
01 58 00	Project Identification and Signs.....	01 58 00-1
01 62 00	Product Options	01 62 00-1
01 65 00	Product Delivery Requirements.....	01 65 00-1
01 66 00	Product Storage and Handling Requirements.....	01 66 00-1
01 71 23	Field Engineering.....	01 71 23-1
01 76 50	Nuisance Controls.....	01 76 50-1
01 77 19	Closeout Requirements	01 77 19-1
01 77 19A	Sample Letter – Request for Substantial Completion.....	01 77 19-1
01 77 19B	Sample Checklist for Final Inspection	01 77 19-1
01 77 19C	Sample Letter – Request for Final Completion.....	01 77 19-1
01 77 23	Inspection	01 77 23-1
01 78 39	Project Record Documents.....	01 78 39-1
01 89 29	Green Remediation Practices.....	01 89 29-1
01 89 29A	Green Remediation – Form A	01 89 29A-1

34 78 13 Portable Truck Scales.....34 78 13-1

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 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. 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.
 - e. 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.
- i. The change order backup shall be completed using the NYS Standard MURK 2018 (or current) format (or equivalent).

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 form (one page).
2. Proposed Change Order Request (one page).
3. Proposed Change Order (one page).

4. Field Order Form EJCDC C-942

++ END OF SECTION ++

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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 logo of issuing entity]

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

Site Name: C&D Power Systems (C&D Batteries)	PCO No.:
Site Location: Town of Deerpark, Orange County, New York	Date Issued:
Owner:	Site No.: 336001
Contractor:	Contract No.: D012095
	Associated RFI or FO:
	<input type="checkbox"/> RFI No.: _____ <input type="checkbox"/> FO No.: _____ <input type="checkbox"/> None

PROPOSAL

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.

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

	Associated Bid Item:
<input type="checkbox"/>	Attachments: <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/>	If yes, describe:
<input type="checkbox"/>	Relevant Contract Documents:
<input type="checkbox"/>	Specification Section:
	Drawing No.: _____ Detail: _____

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.

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.

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.

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.

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.

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.

Issued By:

Signature

Date

C&D Power Systems (C&D Batteries)

Site No. 336001

Contract No. D012095

Change Order No. XX

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
By:
Print Name:
Title:
Dated:

DEPARTMENT SIGNATURE
By:
Print Name:
Title:
Dated:

<p>Contractor Acknowledgement State of _____) _____) ss.: County of _____)</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>
--

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

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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 cost to each item of the Work. Schedule of Value list of line items shall correspond to each aspect of the Work, established in Section III, Article 12, Section V, Contract Bid Form and Section VII, Measurement and 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 Section 01 29 76, Progress Payment Procedures.

2. Organization in Accordance with General Conditions Section V, Bid Form and Section VII, 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 Schedule of Values and 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 VII, 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 29 76

PROGRESS PAYMENT PROCEDURES

PART 1 - GENERAL

1.1. PROGRESS PAYMENTS

A. General:

1. CONTRACTOR's requests for payment shall be in accordance with the Agreement and the Specifications.
2. Applications for Payment shall be in the form supplied by the DEPARTMENT, "Contractor's Application for Payment".

B. Procedure:

1. Review with the ENGINEER quantities and the Work proposed for inclusion in each progress payment. Application for Payment shall cover only the Work and quantities recommended by the ENGINEER.
2. Submit to the ENGINEER one electronic version of Application for Payment and other documents to accompany the Application for Payment.
3. The DEPARTMENT will act on request for payment upon receipt of the ENGINEER's recommendation for payment, and in accordance with the Agreement.

C. Each request for progress payment shall include:

1. Completed Application for Payment form, including summary/signature page, progress schedule of values, Green Remediation Form 01 89 29A, certified payroll, supporting quantity documentation in accordance with Section XII, Measurement and Payment. Progress estimate sheets shall have the same level of detail as the schedule of values, including monthly and earned value to date for each unit price and lump sum payment item.
2. Legibly indicate on invoice or bill of sale the specific materials or equipment included in the payment request and corresponding bid item number for each.
3. For payment requests (other than requests for final payment) that include reduction or payment of retainage in an amount greater than that required in the contract documents, submit on for acceptable to the DEPARTMENT consent of surety to partial release or reduction of retainage.

D. Requirements for request for final payment are in Section 01 77 19, Closeout Requirements.

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 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 not less than eight copies of each of 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 not less than eight (-8-) copies of each of 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	O., C	R	
Product data	PDF	E	EMA	O., C	R	
Informational and closeout submittals:	PDF	E	EMA	O., C	R	
Documentation of delivery of maintenance materials submittals	PDF	E	EMA	O. 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:

1. Data Format:

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

2. Transmitting Party:

- a. D DEPARTMENT
- b. C CONTRACTOR
- c. E ENGINEER

3. Transmission Method:

- a. EM Via e-mail

- b. EMA As an attachment to an e-mail transmission
 - c. CD Delivered via compact disc
 - d. PW Posted to Project website
 - e. FTP FTP transfer to receiving FTP server
4. Receiving Party:
- a. D DEPARTMENT
 - b. C CONTRACTOR
 - c. E ENGINEER
5. Permitted Uses:
- a. S Store and view only
 - b. R Reproduce and distribute
 - c. I Integrate (incorporate additional electronic data without modifying data received)
 - d. M Modify as required to fulfill obligations for the Project
 - e. 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 with 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 prosecuting 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 (still photographs only) 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 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 as accepted by ENGINEER.
 - 2. Construction Progress Photographic and Video Documentation: Submit acceptable construction progress photographic and video documentation (digital files) not less-often than monthly, 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 provide 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, “Project Name Preconstruction 01.05.2022 Photo 1.jpg”, or “Project Name 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: “Project Name – Photos 04.06.2022”, or “Project Name – Videos 04.06.2022”.

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 between 100 and 150 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. 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 between 100 and 150 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 two (2) 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 between 100 and 150 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.

+ + END OF SECTION + +

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 OWNER 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 OWNER:

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 OWNER for ENGINEER's charges for such time.

3. In the event that CONTRACTOR requests a substitution for a previously approved item, Contractor shall reimburse OWNER for ENGINEER's charges for such time unless the need for such substitution is beyond the control of CONTRACTOR.
4. OWNER may impose set-offs against CONTRACTOR for the costs for which CONTRACTOR is to reimburse or compensate OWNER, 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.
 - h. 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
 - 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-Bidding Information and Requirements, Article 12- Bid Breakdown.
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 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:

Example Description	Submittal Identification	
	Submittal No.	Review Cycle
Initial (first) review cycle of the third submittal provided under Section 40 05 19, Ductile Iron Process Pipe	40 05 19-003-	01
Second review cycle (first re-submittal) of third submittal provided under Section 40 05 19, Ductile Iron Process Pipe	40 05 19-003-	02

- 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, OWNER’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;
 - 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:	
----- <i>Reference</i> -----	
Submittal Title:	
Specifications:	
Section:	
Page No.:	
Paragraph No.:	
Drawing No.:	
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:

TABLE 01 33 00-A: SUBMITTAL CONTACTS AND REQUIRED FORMAT

Address for Deliveries	Contact Person	E-mail Address	Format*	No. of Printed Copies
a. Engineer: (TBD)	(TBD)	(TBD)	E	Zero
b. Resident Project Representative: At the Site.	(TBD)	(TBD)	E & P	One
* Format: E = Electronic files; P = Printed copies. TBD = To Be Determined				

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 OWNER’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. OWNER.
 - 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 ++

SUBMITTALS FOR APPROVAL			Critical Submittals	Contractor's Projected Dates Allow at most 2 weeks for Approval (allows time for any resubmission)		
Spec Section	Type	Description	Mark "X" for all that apply	Projected Transmittal Date:	Projected Approval Date:	Projected Delivery Date:
01 11 13		SUMMARY OF WORK				
01 11 13	SD	Project Work Plan				
01 29 73		SCHEDULE OF VALUES				
01 29 73-1	SD	Schedule of Values				
01 31 13		PROJECT COORDINATION				
01 31 13-1	SD	List of Subcontractors				
01 31 13-2	SD	Staging Areas and Haul Routes				
01 32 16		PROGRESS SCHEDULE				
01 32 16-1	SD	Interim Schedule				
01 32 16-2	SD	Progress Schedules				
01 32 16-3	SD	Recovery Schedules				
01 32 16-4	SD	Accelerated Schedules				
01 32 16-5	SD	Adjusted Progress Schedules				
01 32 33		PHOTOGRAPHIC DOCUMENTATION				
01 32 33-1	SD	Remote Pilot Certificate from the FAA				
01 32 33-2	SD	Commercial Drone Liability Insurance Certificate(s)				
01 32 33-3	SD	Documentation of Authorization for Each Flight Plan through LAANC				
01 32 33-4	SD	Unmanned Aircraft System (UAS) Mission Planning Form				
01 32 33-5	SD	Pre-construction Photographic and Video Documentation				
01 32 33-6	SD	Construction Progress Photographic and Video Documentation				
01 32 33-7	SD	Qualifications Statements				
01 32 33-8	CCS	Final Photographic and Video Documentation				
01 33 00		SUBMITTAL PROCEDURES				
01 33 00-1	SD	Submittal Transmittal Template				
01 35 29		CONTRACTOR'S HEALTH AND SAFETY PLAN				
01 35 29-1	SD	Site Specific Health and Safety Plan				
01 35 29-2	SD	Job Safety Analyses				
01 35-29-4	SD	Health and Safety Reports				
01 35-29-5	SD	Accident Reports				
01 35-29-6	SD	Qualifications Statements				
01 35 43.13		ENVIRONMENTAL PROCEDURES FOR HAZARDOUS MATERIALS				
01 35 43.13-1	SD	Constituents of Concern (including Chemicals) Proposed for Use at the Site				
01 35 43.13-2	SD	Material Containing Constituents of Concern Generated at the Site				
01 35 43.13-3	SD	Permits				
01 35 43.13-4	SD	Hazardous Materials Management Plan				
01 45 29.13		TESTING LABORATORY SERVICES FURNISHED BY CONTRACTOR				
01 45 29.13-1	QCS	Sampling Plan				
01 45 29.13-2	QCS	Quality Control Project Plan				
01 45 29.13-3	QCS	Test Reports				
01 45 29.13-4	QCS	Qualifications Statements				
01 51 00		TEMPORARY BYPASS PUMPING				
01 51 00-1	SD	Temporary Bypass Pumping Plan				
01 51 05		TEMPORARY UTILITIES AND CONTROLS				
01 51 05-1	SD	Furnishings and Facilities Shop Drawings				
01 51 05-2	SD	Staging Area Shop Drawings				
01 55 13		ACCESS ROADS AND PARKING AREAS				
01 55 13-1	PD	Crushed Stone Aggregate Materials Gradation				
01 55 13-2	PD	Geotextile, Non-Woven Fabric Manufacturer's Information				
01 55 13-3	PD	Supplier Source Certification				
01 55 26		MAINTENANCE AND PROTECTION OF TRAFFIC				
01 55 26-1	SD	Transportation Plan				
01 55 26-2	SD	Traffic Control Plan				
01 57 13		EROSION AND SEDIMENT CONTROL				
01 57 13-1	SD	Erosion and Sediment Control Plan				
01 57 26		SITE WATERING FOR DUST CONTROL				
01 57 26-1	SD	Dust Control Plan				
01 57 33		SECURITY				
01 57 33-1	SD	Temporary Fencing Shop Drawings				
01 57 33-2	PD	Temporary Fencing Product Data				
01 57 33-3	SD	Security Firm Qualifications and Resumes				
01 57 33-4	CCS	Security Logs and Incident Reports				
01 57 33-5	SD	Security Standard Operating Procedure to Contingencies				
01 57 33-6	SD	List of Emergency Contacts				
01 57 33-7	SD	List of Authorized Persons				

SUBMITTALS FOR APPROVAL			Critical Submittals	Contractor's Projected Dates Allow at most 2 weeks for Approval (allows time for any resubmission)		
Spec Section	Type	Description	Mark "X" for all that apply	Projected Transmittal Date:	Projected Approval Date:	Projected Delivery Date:
01 58 00		PROJECT IDENTIFICATION AND SIGNS				
01 58 00-1	SD	Sign Layout				
01 58 00-2	PD	Product Data				
01 58 00-3	SAM	Color Samples				
01 71 23		FIELD ENGINEERING				
01 71 23-1	SD	Certificates				
01 71 23-2	SD	Field Engineering Daily Reports				
01 71 23-3	SD	Field Engineering Accuracy Documentation				
01 71 23-4	SD	Example of Survey Data				
01 71 23-5	SD	Raw Instrument Data/Field Data				
01 71 23-6	SD	Certified Survey				
01 71 23-7	SD	Field Engineer Qualifications				
01 71 23-8	SD	Surveyor Qualifications				
01 74 19		CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL				
01 74 19-1	SD	Disposal Facility Information				
01 74 19-2	SD	Waste Profiles				
01 74 19-3	SD	Recycling Facility Information				
01 74 19-4	SD	Signed Bills of Lading				
01 74 19-5	SD	Waste Transporter Permit and USEPA Transporter Identification				
01 74 19-6	SD	Certified Weight Tickets				
01 74 19-7	SD	Signed Manifests				
01 76 50		NUISANCE CONTROLS, MANAGEMENT AND CORRECTIVE MEASURES				
01 76 50-1	SD	Nuisance Controls and Management Plan				
01 76 50-2	SD	Summary of General Practices				
01 76 50-3	SD	Monitoring Reports				
01 76 50-4	SD	Community Relations Liaison Qualifications				
01 77 19		CLOSEOUT REQUIREMENTS				
01 77 19- 1	CCS	Project Record Documents:				
01 77 19- 2	CCS	Contractor's Quality Control Summary:				
01 77 19- 3	CCS	Project Closeout Submittals				
01 78 39		PROJECT RECORD DOCUMENTS				
01 78 39-1	CCS	As-Built Documents				
01 78 39-2	CCS	As-Built Drawings				
01 78 39-2	CCS	Project As-Built Documents				
01 89 29		GREEN REMEDIATION PRACTICES				
01 89 29-1	CCS	Form "A" - Summary of Green Remediation Metrics				

SUBMITTALS FOR APPROVAL			Critical Submittals	Contractor's Projected Dates Allow at most 2 weeks for Approval (allows time for any resubmission)		
Spec Section	Type	Description	Mark "X" for all that apply	Projected Transmittal Date:	Projected Approval Date:	Projected Delivery Date:
02 21 13		SURVEY				
02 21 13-1	PACK	Surveyor Credentials				
02 21 13-2	PACK	Photographic Documentation of Pre-Construction Site Conditions				
02 21 13-3	PACK	Photographic Documentation of Completed Work Areas				
02 21 13-4	SD	Initial Topographic Map				
02 21 13-5	SD	Critical Remedial Features and Locations				
02 21 13-6	SD	Post Excavation Survey				
02 21 13-7	SD	Post ISS Survey				
02 21 13-8	SD	Post ESS Survey				
02 21 13-9	SD	Final Survey				
02 21 13-10	PACK	Post Construction Records				
02 24 23		SAMPLING AND ANALYSIS				
02 24 23-1	PACK	Analytical Laboratory Credentials				
02 24 23-2	PACK	Analytical Results and Electronic Data Documents (EDDs)				
02 24 23-3	PACK	Site Specific Sampling and Analysis Plan (SAP)				
02 24 23-4	PACK	Site Specific Quality Assurance Project Plan (QAPP)				
02 24 23-5	PACK	Data Validator Credentials				
02 24 23-6	PACK	Data Usability Summary Reports (DUSRs)				
02 24 23-7	PACK	Application and Acceptance for State Pollutant Discharge Elimination System (SPDES) Permit Program				
02 24 23-8	PACK	Batch Analysis Reports of Treated Waste Water				
02 51 29		DECONTAMINATION STATION				
02 51 29-1	SD	Decontamination Pad Shop Drawing				
02 61 13		EXCAVATION AND HANDLING OF CONTAMINATED MATERIAL				
02 61 13-1	SD	Excavation Work Plan				

SUBMITTALS FOR APPROVAL			Critical Submittals	Contractor's Projected Dates Allow at most 2 weeks for Approval (allows time for any resubmission)		
Spec Section	Type	Description	Mark "X" for all that apply	Projected Transmittal Date:	Projected Approval Date:	Projected Delivery Date:
03 34 00		CONTROLLED LOW STRENGTH MATERIAL				
03 34 00-1	PD	Design Mix and CLSM Materials				
03 34 00-2	QCS	Affidavit				
03 34 00-3	SD	Placement Procedures				

SUBMITTALS FOR APPROVAL			Critical Submittals	Contractor's Projected Dates Allow at most 2 weeks for Approval (allows time for any resubmission)		
Spec Section	Type	Description	Mark "X" for all that apply	Projected Transmittal Date:	Projected Approval Date:	Projected Delivery Date:
31 11 00		SITE CLEARING				
31 11 00-1	PD	Transportation and Disposal Plan				
31 14 13.16		SOIL STOCKPILING				
31 14 13.16-1	PD	Amendment Material				
31 14 13.16-2	PD	Geomembrane Material				
31 23 23		BACKFILL				
31 23 23-1	SD	Backfill Plan				
31 23 23-2	SD	Supplier Statement Identifying Backfill Source and Compliance with NYSDEC DER-10				
31 23 23-3	SD	Backfill Report				
31 23 23-4	PACK	Analytical Reports				
31 23 23-5	SAM	Backfill Sample				
31 23 23-5	SD	Compaction Test Reports				
31 32 13		IN-SITU SOLIDIFICATION				
31 32 14-1	SD	Work Plan				
31 32 14-2	SD	Daily Summary				
31 32 14-3	SD	Final Job Summary				
31 32 14-4	SD	Mix Design				
31 32 14		EX-SITU STABILIZATION				
31 32 14-1	SD	Work Plan				
31 32 14-2	SD	Daily Summary				
31 32 14-3	SD	Final Job Summary				
31 32 14-4	SD	Mix Design				

SUBMITTALS FOR APPROVAL			Critical Submittals	Contractor's Projected Dates Allow at most 2 weeks for Approval (allows time for any resubmission)		
Spec Section	Type	Description	Mark "X" for all that apply	Projected Transmittal Date:	Projected Approval Date:	Projected Delivery Date:
32 13 13		ASPHALT CONCRETE PAVING				
32 13 13-1	SD	Asphalt supplier				
32 13 13-2	PACK	Product and design data				
32 13 13-3	QCS	Testing Firm				
32 13 13-4	SD	Paving Plan				
32 30 00		SITE RESTORATION				
32 30 00-1	SD	Site Restoration Plan				
32 30 00-2	SD	Schedule of Restoration Operations				
32 30 00-3	PACK	Seed Mix				
32 30 00-4	SD	Site Restoration Construction and Maintenance Quantities				
32 31 00		FENCING				
32 31 00-1	SD	Shop Drawings				
32 93 01		PLANTS				
32 93 01-1	SD	List of Plants				
32 93 01-2	PACK	Plant material invoices				
32 93 01-3	PACK	Certificates of inspection				
32 93 01-4	PACK	Labels of each plant or plant bundle				
32 93 01-5	QCS	Workers Qualifications				

SUBMITTALS FOR APPROVAL			Critical Submittals	Contractor's Projected Dates Allow at most 2 weeks for Approval (allows time for any resubmission)		
Spec Section	Type	Description	Mark "X" for all that apply	Projected Transmittal Date:	Projected Approval Date:	Projected Delivery Date:
33 00 00		PROTECTION RELOCATION AND ABANDONMENT OF EXISTING UTILITIES				
33 00 00-1	SD	Utility Protection, Relocation, and Abandonment Plan				

SUBMITTALS FOR APPROVAL			Critical Submittals	Contractor's Projected Dates Allow at most 2 weeks for Approval (allows time for any resubmission)		
Spec Section	Type	Description	Mark "X" for all that apply	Projected Transmittal Date:	Projected Approval Date:	Projected Delivery Date:
34 78 18		PORTABLE TRUCK SCALE				
34 78 18-1	SD	Product Data, and Shop Drawings				
34 78 18-2	SD	Source Quality Control, and Site Quality Control				
34 78 18-3	SD	Operation and Maintenance Manuals				
34 78 18-4	SD	Extra Stock Materials				

SUBMITTALS FOR APPROVAL			Critical Submittals	Contractor's Projected Dates		
			Mark "X" for all that apply	Allow at most 2 weeks for Approval (allows time for any resubmission)		
Spec Section	Type	Description		Projected Transmittal Date:	Projected Approval Date:	Projected Delivery Date:
44 00 05		DEWATERING AND CONTACT WATER TREATMENT				
44 00 05-1	SD	Contact Water Treatment System Design				
44 00 05-2	SD	Cleanliness Certificates for Rented Equipment				
44 00 05-3	SD	Shop Drawings of Contact Water Collection and Treatment Equipment				
44 00 05-4	SD	SPDES Permit				
44 00 05-5	PACK	Daily Logs				
44 00 05-6	SD	Biweekly Report				
44 00 05-7	PACK	Analytical Results				
44 00 05-8	SD	Discharge Monitoring Report				
44 00 05-9	SD	Total Discharge Volume				
44 00 05-10	PACK	All Contact Water Treatment System Analytical Results				
44 00 05-11	PACK	Baseline and Post-Construction Sampling Results				
44 10 00		COMMUNITY AIR MONITORING				
44 10 00-1	SD	Community Air Monitoring Program				
44 10 00-2	SD	Weekly Community Air Monitoring Reports				
44 10 00-3	SD	Raw Total VOC, PM-10, and Meteorological Monitoring Data				

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. 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 certified by the Board of Certified Safety Professionals, to prepare or supervise preparation of SSHASP. The CIH 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 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).

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, including copy 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 Protection Plan consisting of the following:
- a. Develop, as part of this HASP, a Community Protection Plan (CPP). The CPP shall outline those steps to be implemented to protect the health and safety of surrounding human population and the environment.
 - b. 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) Particulates shall be continuously monitored at the 4 documentation sampling stations for a total of 4 dust monitors. If the downwind particulate level is 150 ug/m³ greater than the upwind particulate level, dust suppression techniques shall be employed. All readings shall be recorded and be available for State (DEC & DOH) 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 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.
- e. Major Vapor Emission Response Plan consisting of the following:
 - 1) Upon activation, the following shall be undertaken:
 - a) All Emergency Response Contracts as listed in the Subpart titled "Emergency Response and Contingency Plan" paragraph titled "Telephone List."
 - 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) The Air Monitoring Program shall include real-time air monitoring and shall be conducted at the perimeter of the site. 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.
 - 3) Coordinate with local officials to arrange for notification and evacuation of the surrounding community in the event that off-site emissions pose a threat.
- f. 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.
- g. 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 Section 01 35 44, Spill Prevention Control and Countermeasures Plan.
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 representative.
 - 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.
 - d. Other personnel required for operations involving Constituents of Concern and Hazardous Environmental Conditions and emergency response, and general functions and responsibilities of each.
 - e. 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, onsite 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:

- 1) Object to be measured: Dust, Mists, Aerosols
 - 2) Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000 µg/m³)
 - 3) Precision (2-sigma) at constant temperature: ±10 µg/m³ for one second averaging; ±1.5 µg/m³ for sixty second averaging
 - 4) Accuracy: ±5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 µm, g= 2.5, as aerosolized)
 - 5) Resolution: 0.1% of reading or 1 µg/m³, whichever is larger
 - 6) Particle Size Range of Maximum Response: 0.1-10 µ
 - 7) Total Number of Data Points in Memory: 10,000
 - 8) 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.
 - 9) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes)
 - 10) Operating Time: 48 hours (fully charged NiMH battery); continuously with charger
 - 11) Operating Temperature: -10 to 50°C (14 to 122°F)
 - 12) 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 will be completed and prominently posted at the field office. At minimum, the list will have telephone numbers of all project personnel, emergency services including hospital, fire, police, and utilities. In addition, two copies with telephone numbers are to be given to the DEPARTMENT for emergency reference purposes.

Emergency Service	Telephone Number
Fire Department	911
Police Department	911
Ambulance	911
Hospital/Emergency Care Facility (INSERT NAME Hospital)	ADD
Poison Control Center	(800) 336-6997
Chemical Emergency Advice (CHEMTREC)	(800) 424-9300
NYSDEC Central Office	(518) 457-7878 After Hours(800) 342-9296 (leave message)
NYSDEC Regional Office	Work Hours ADD
INSERT County Dept. of Health	ADD
New York State Dept. of Health - Albany	(518) 402-7890
New York State Dept. of Health - Region	ADD

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

++ END OF SECTION ++

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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 (MSDS) 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 least 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 not less than 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. MSDS 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) material safety data sheets (MSDS) 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 Material 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 ++

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:

1. alternating current	a-c
2. ampere	A
3. antemeridian	a.m.
4. Architectural Barriers Act	ABA
5. Americans with Disabilities Act	ADA
6. Americans with Disabilities Act Accessibility Guidelines	ADAAG
7. ante meridian	a.m.
8. average	avg
9. biochemical oxygen demand	BOD
10. five-day biochemical oxygen demand	BOD ₅
11. brake horsepower	bhp
12. British thermal unit	Btu
13. building information model	BIM
14. carbonaceous biochemical oxygen demand	CBOD
15. five-day carbonaceous biochemical oxygen demand	CBOD ₅
16. chemical oxygen demand	COD
17. Centigrade (or Celsius)	C
18. chlorinated polyvinyl chloride	CPVC
19. chlorofluorocarbons	CFC
20. Code of Federal Regulations	CFR
21. computer-aided drafting and design	CADD, or CAD
22. cubic inch	cu in
23. cubic foot	cu ft
24. cubic yard	cu yd, or CY
25. cubic feet per minute	cfm

26. cubic feet per second	cfs
27. decibel	db
28. degree Centigrade (or Celsius)	(Write)degrees C, °C, or deg C
29. degrees Fahrenheit	degrees F, °F, or deg F
30. diameter	dia
31. direct current	d-c
32. dollars	\$
33. each	ea
34. efficiency	eff
35. Fahrenheit	F
36. feet	ft
37. feet per hour	fph, or ft/hr
38. feet per minute	fpm
39. feet per second	fps, or ft/min
40. figure	fig
41. flange	flg
42. foot-pound	ft-lb
43. gallon	gal
44. gallons per hour	gph, or gal/hr
45. gallons per minute	gpm
46. gallons per second	gps
47. gram	g
48. grams per liter	g/L
49. Hertz	Hz
50. horsepower	hp or HP
51. hour	hr
52. human-machine interface	HMI
53. inch	in.
54. inches of mercury	in. Hg
55. inches water gage	in. w.g.
56. inch-pound	in.-lb
57. inside diameter	ID
58. iron pipe size	IPS
59. thousand pounds	kips
60. thousand pounds per square inch	ksi
61. kilovolt-ampere	kva
62. kilowatt	kw
63. kilowatt-hour	kwhr or kwh
64. linear foot	lin ft or LF
65. liter	L
66. Leadership in Energy and Environmental Design (USGBC)	LEED
67. maximum	max
68. mercury	Hg
69. milligram	mg
70. milligrams per liter	mg/l or mg/L

71. milliliter	ml
72. millimeter	mm
73. million gallons per day	mgd or MGD
74. million gallon	MG
75. minimum	min
76. national pipe threads	NPT
77. net positive suction head	NPSH
78. net positive suction head available	NPSHA
79. net positive suction head required	NPSHR
80. nitrogen oxide (total concentration of mono-nitrogen oxides such as nitric oxide (NO) and nitrogen dioxide (NO ₂))	NO _x
81. nominal pipe size	NPS
82. number	no.
83. operator interface terminal	OIT
84. ounce	oz
85. ounce-force	ozf
86. outside diameter	OD
87. parts per hundred	pph
88. parts per million	ppm
89. parts per billion	ppb
90. polyvinyl chloride	PVC
91. post meridian	p.m.
92. pound	lb
93. pounds per square inch	psi
94. pounds per square inch absolute	psia
95. pounds per square inch gauge	psig
96. pounds per square foot	psf
97. process control system	PCS
98. programmable logic controller	PLC
99. revolutions per minute	rpm
100. second	sec
101. specific gravity	sp gr, or SG
102. square	sq
103. square foot	sq ft, sf, or ft ²
104. square inch	sq in., or in ²
105. square yard	sq yd, or SY
106. standard	std
107. standard cubic feet per minute	scfm
108. total dynamic head	TDH
109. totally-enclosed fan-cooled	TEFC
110. volt	V
111. volts alternating current	vac
112. volts direct current	vdc
113. volatile organic compounds	VOC

1.5. 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.

1.	AA	Aluminum Association
2.	AABC	Associated Air Balance Council
3.	AAMA	American Architectural Manufacturers Association
4.	AASHTO	American Association of State Highway and Transportation Officials
5.	ACI	American Concrete Institute
6.	ACS	American Chemical Society
7.	ADSC-IAFD	International Association of Foundation Drilling.
8.	AEIC	Association of Edison Illuminating Companies
9.	AF&PA	American Forest and Paper Association
10.	ABMA	American Bearing Manufacturers Association (formerly Anti-Friction Bearing Manufacturers Association (AFBMA))
11.	AGMA	American Gear Manufacturers Association
12.	AI	Asphalt Institute
13.	AIA	American Institute of Architects
14.	AIChE	American Institute of Chemical Engineers
15.	AISC	American Institute of Steel Construction
16.	AISI	American Iron and Steel Institute
17.	AITC	American Institute of Timber Construction
18.	ALSC	American Lumber Standards Committee
19.	AMA	Acoustical Materials Association
20.	AMCA	Air Movement and Control Association
21.	AMP	National Association of Architectural Metal Manufacturers, Architectural Metal Products Division
22.	ANSI	American National Standards Institute
23.	APA	The Engineered Wood Association
24.	APHA	American Public Health Association
25.	API	American Petroleum Institute
26.	AREA	American Railway Engineering Association
27.	ARI	Air Conditioning and Refrigeration Institute
28.	ASAE	American Society of Agricultural Engineers

29. ASCE American Society of Civil Engineers
30. ASHRAE American Society of Heating, Refrigerating and Air Conditioning Engineers
31. ASME American Society of Mechanical Engineers
32. ASNT American Society for Non-Destructive Testing
33. ASQ American Society for Quality
34. ASSE American Society of Safety Engineers
35. ASTM American Society for Testing and Materials
36. AWCI Association of the Wall and Ceiling Industry
37. AWI Architectural Woodwork Institute
38. AWPA American Wood Protection Association
39. AWPI American Wood Preservers Institute
40. AWS American Welding Society
41. AWWA American Water Works Association
42. BAAQMD Bay Area Air Quality Management District
43. BHMA Builders Hardware Manufacturers Association
44. BIA Brick Industry Association
45. CBMA Certified Ballast Manufacturers Association
46. CDA Copper Development Association
47. CEMA Conveyor Equipment Manufacturers Association
48. CGA Compressed Gas Association
49. CISCA Ceilings and Interior Systems Construction Association
50. CISPI Cast Iron Soil Pipe Institute
51. CLFMI Chain Link Fence Manufacturers Institute
52. CMAA Crane Manufacturers Association of America
53. CRSI Concrete Reinforcing Steel Institute
54. CSI Construction Specifications Institute
55. DIN Deutsches Institut für Normung eV (German Institute for Standardization)
56. DIPRA Ductile Iron Pipe Research Association
57. EJCDC Engineers Joint Contract Documents Committee
58. EJMA Expansion Joint Manufacturers Association, Inc.
59. ETL Intertek Testing Services, Inc. (formerly ETL Testing Laboratories, Inc.)
60. FCC Federal Communications Commission
61. FEMA Federal Emergency Management Agency
62. FHWA Federal Highway Administration
63. FM Factory Mutual (FM Global)
64. FRPI Fiberglass Reinforced Plastics Institute
65. FS Federal Specification
66. GA Gypsum Association
67. GANA Glass Association of North America
68. HEW United States Department of Health, Education and Welfare
69. HI Hydraulic Institute
70. HMI Hoist Manufacturers Institute
71. HUD United States Department of Housing and Urban Development

72.	IBC	International Building Code
73.	ICC	International Code Council
74.	ICEA	Insulated Cable Engineers Association
75.	IEEE	Institute of Electrical and Electronics Engineers
76.	IESNA	Illuminating Engineering Society of North America
77.	IFI	Industrial Fasteners Institute
78.	IRI	Industrial Risk Insurers
79.	ISA	Instrumentation, Systems, and Automation Society (formerly Instrument Society of America)
80.	ISO	Insurance Services Office
81.	ISO	International Organization for Standardization
82.	LPI	Lightning Protection Institute
83.	MIA	Marble Institute of America
84.	ML/SFA	Metal Lath/Steel Framing Association
85.	MS	Military Specifications
86.	MSS	Manufacturers' Standardization Society
87.	MMA	Monorail Manufacturers Association
88.	NAAMM	National Association of Architectural Metal Manufacturers
89.	NACE	National Association of Corrosion Engineers
90.	NAPF	National Association of Pipe Fabricators, Inc.
91.	NARUC	National Association of Regulatory Utilities Commissioners
92.	NBHA	National Builders Hardware Association
93.	NBS	United States Department of Commerce, National Bureau of Standards
94.	NCMA	National Concrete Masonry Association
95.	NEC	National Electric Code
96.	NELMA	Northeastern Lumber Manufacturers' Association
97.	NEMA	National Electrical Manufacturers Association
98.	NESC	National Electrical Safety Code
99.	NETA	International Electrical Testing Association
100.	NFPA	National Fire Protection Association
101.	NFRC	National Fenestration Rating Council
102.	NGA	National Glass Association
103.	NHLA	National Hardwood Lumber Association
104.	NHPMA	Northern Hardwood and Pine Manufacturers Association
105.	NIST	United States Department of Commerce, National Institute of Standards and Technology
106.	NLGA	National Lumber Grades Authority
107.	NRCA	National Roofing Contractors Association
108.	NRMCA	National Ready Mixed Concrete Association
109.	NSF	National Sanitation Foundation
110.	NSSGA	National Stone, Sand, and Gravel Association
111.	NTMA	National Terrazzo and Mosaic Association
112.	OSHA	Occupational Safety and Health Administration
113.	PCA	Portland Cement Association
114.	PCI	Precast/Prestressed Concrete Institute

115. PEI	Porcelain Enamel Institute
116. PFI	Pipe Fabrication Institute
117. PPI	Plastics Pipe Institute
118. PGMC	Primary Glass Manufacturers Council
119. PS	Product Standards Section, United States Department of Commerce
120. RCSC	Research Council on Structural Connections (part of AISC)
121. RMA	Rubber Manufacturers Association
122. SAE	Society of Automotive Engineers
123. SCAQMD	Southern California Air Quality Management District
124. SCPRF	Structural Clay Products Research Foundation
125. SCTE	Society of Cable Telecommunications Engineers
126. SDI	Steel Deck Institute
127. SDI	Steel Door Institute
128. SIGMA	Sealed Insulating Glass Manufacturing Association
129. SJI	Steel Joist Institute
130. SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
131. SPI	Society of the Plastics Industry
132. SPIB	Southern Pine Inspection Bureau
133. SSPC	Society for Protective Coatings
134. SWI	Steel Window Institute
135. TCNA	Tile Council of North America
136. TEMA	Tubular Exchanger Manufacturers Association
137. TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
138. UL	Underwriters Laboratories, Inc.
139. USAB	United States Access Board
140. USDOE	United States Department of Energy
141. USEPA	United States Environmental Protection Agency
142. USGBC	United States Green Building Council
143. USGS	United States Geological Survey
144. USPHS	United States Public Health Service
145. WCLIB	West Coast Lumber Inspection Bureau
146. WCMA	Window Covering Manufacturers Association
147. WCMA	Wood Component Manufacturers Association
148. WDMA	Window and Door Manufacturers Association
149. WEF	Water Environment Federation
150. WWEMA	Water and Wastewater Equipment Manufacturers Association
151. 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. 02 24 23 – Sampling and Analysis
4. 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.
5. 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 ELAP certified.

1.4. SUBMITTALS

A. Informational Submittals: Submit the following:

1. Sampling Plan and Quality Control Project Plan 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 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 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 QAO's resume and training certificates. QAO must be proficient in analytical methodology, data interpretation and validation, quality control procedures and auditing techniques. The QAO 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 Labs
 - 2) Statement of Qualifications – Geotechnical Labs

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 the following:
 - a. Electricity.
 - b. Lighting.
 - c. Telephone and communications.
 - d. Heating, cooling, ventilating, and temporary enclosures.
 - e. Water.
 - f. Fire protection.
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, 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. 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.

5. Provide general service lamps and guard cages or tempered glass enclosures where lamp is exposed to breakage by removal operations. Use liquid-tight enclosures or boxes for the devices.
6. 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.
7. Install overload protection and disconnect switches for each temporary circuit at the power source.
8. Install all cable or extension cords in the work area in such a manner that visual surveillance is easily accomplished.

B. Lighting.

1. Provide lighting at the Site of not less than five foot-candles for open areas and not less than ten foot-candles for stairs and shops. Provide not less than one, 300-watt lamp every 15 feet in indoor work areas. Provide night security lighting of not less than five foot-candles within 50 feet of all parts of the Site during hours of darkness, controlled by photocell.
2. Do not work in areas with insufficient lighting. Where lighting is insufficient for the work activities to be performed, provide additional temporary lighting.
3. 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.
4. 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 DEPARTMENT's personnel or electronic equipment, including offices, lunch rooms, locker rooms, toilet rooms, and rooms containing computers, microprocessors, and control equipment, between 65 degrees F and 80 degrees F with relative humidity less than 75 percent.
3. 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 supplementary conditions for the associated Work and/or the Supplier's recommended temperature range for storage, application, or installation, as appropriate.
4. Provide temporary ventilation sufficient to prevent accumulation in construction areas and areas occupied by DEPARTMENT of hazardous and nuisance levels or concentrations of dust and particulates, mist, fumes or vapors, odors, and gases, associated with construction.

5. Provide temporary enclosures and partitions required to maintain required temperature and humidity.
 6. 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, meters if not provided by DEPARTMENT of existing waterline, backflow preventers, pressure regulators, and other appurtenances. 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.
 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.
 - b. CONTRACTOR may use existing hose bibbs for short-term wash-downs and intermittent use of water for work areas in the existing building. Obtain consent of ENGINEER and DEPARTMENT if connections to existing hose bibbs and similar existing connections will be used for more than one day at a time.
 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 necessary.
 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.
 4. Provide temporary fire protection for ENGINEER's field office in accordance with Section 01 52 11, ENGINEER's Field Office.
- G. Staging Areas:
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 6-mil poly liner sealed, watertight liner to prevent contaminated runoff. Remove the liners when the staging area is no longer needed and dispose off-site.
4. All staging areas shall be constructed to prevent the spread of any contamination to the surrounding soils, surfaces, and/or groundwater.
5. 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 site.
6. 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.
7. The CONTRACTOR shall decontaminate staging areas on concrete pads as directed by the ENGINEER.
8. Clean soil staging areas: Can be located outside the exclusion zone over non-remedial areas, as applicable, erosion controls shall be maintained at the perimeter of piles. Long-term storage of piles may require additional stabilization measures, as directed by the ENGINEER or required in the supplementary conditions.
9. Materials staging area: provide and maintain material staging areas as needed in locations indicated on the CONTRACTOR's work site layout, or as approved by the ENGINEER.

H. Temporary (Work Zone) Fencing:

1. Work Zone Fencing, unless otherwise detailed in the supplementary conditions, provide a temporary, secure 4-foot high, high strength polyethylene orange plastic fence around the operations and work areas to control access. Fence posts shall be a minimum of 5- 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 supplementary conditions, shall consist of temporary or driven post fence panels a minimum of 6-feet in height. Privacy screening shall be provided

I. Water Control:

1. Comply with procedures outlined in the NYSDEC Stormwater Management Design Manual.

J. 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.
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.

K. Traffic Control:

1. The CONTRACTOR shall maintain all on-site temporary roads necessary for performance of the Work. Temporary access roads will be repaired as necessary to insure unimpeded daily operations. This may include at a minimum, routine grading and repairs to areas subject to settling resulting from site-related traffic.
2. Park vehicles in areas designated and approved in the Work Plan.
3. Keep the designated parking areas clear of dirt and debris resulting from the work.

L. 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.

M. 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.
- N. 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 Health and Safety 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 exclusion zone.
 - 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. If the Leq levels are not maintained the 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 make structurally, mechanically, and electrically sound throughout.
- 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 provide 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 utility DEPARTMENT s 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 work day 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.

+ + END OF SECTION + +

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 Times commence 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 bituminous paving, concrete, crushed stone, or other material approved by ENGINEER. Parking area shall be suitably drained and free of standing water during wet weather.
2. Provide sidewalk or walkway, not less than four feet wide, of bituminous pavement, concrete, 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.

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 75 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:
 - 1) Private telephone service for ENGINEER's sole use, including payment of installation, monthly, and service costs.
 - 2) Provide two telephone lines as follows: one for phone Each line shall have separate telephone number assigned by the telephone service provider.
 - 3) Pay for unlimited local and domestic long distance service for duration of the Project.
 - 4) As approved by the ENGINEER, mobile devices may replace Land Service Lines. Portable Bluetooth conferencing capabilities shall be provided to facilitate group conferencing.
 - b. Cellular Telephones and Service: ENGINEER will provide cellular telephones and service for ENGINEER's employees assigned to the field office, as approved by the ENGINEER, may substitute land lines. Portable Bluetooth conferencing capabilities shall be furnished to the CONTRACTOR to facilitate
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. Two new or used (in good condition) folding tables each eight feet long by 2.5 feet wide.

5. Two new or used (in good condition) folding tables each four feet long by 2.5 feet wide.
6. Plan rack(s) to hold not less than eight sets of the Drawings.
7. Two 4-drawer file cabinets.
8. One 2-door storage cabinet.
9. Shelving or bookcase with a total of 12 feet of shelf length and not less than 12 inches deep.
10. Four polyethylene waste baskets, each with capacity of not less than seven gallons.
11. Suitable doormat at each exterior ingress/egress door.
12. Two cork tack-boards, each 2.5 feet by three feet, with thumbtacks.
13. 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.
14. 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.
15. 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.
16. 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.
- 17. 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.
- 18. Two electric clocks.
- 19. One electric coffee maker, with ten-cup capacity or larger.
- 20. Bottled water with electric cooler dispenser for five-gallon bottles, with cup dispenser.
- 21. Telephone System:
 - a. Telephone System Features:
 - 1) Provide one cordless telephone with hands-free speaker.
 - 2) Telephone shall have speed dialing with minimum of 20 programmable numbers, volume control, mute, redial, and hold button.
 - b. Provide one digital telephone answering machine.
- 22. 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.
23. 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 on 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 + +

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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 six (6) protective helmets ('hard hats') for use by visitors to the Site.

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 DEPARTMENT and emergency vehicles.
 - 2. Temporary roads and parking areas shall be designed and maintained by CONTRACTOR and shall be fully passable to 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.

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 state department of transportation in the area of the Project.

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.
 - 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.
 - 5. Place protective construction mats in areas of cultural resources as shown on the Contract Drawings.

- 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 or facility manager, and no requirements are indicated, comply with the standard specifications of the state department of transportation in the area of the Project

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 temporary 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.

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 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 3 copies of the all site entrance/exit log 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 or 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 or barriers are breached or temporarily removed for the Project, provide and maintain temporary security fencing equal to existing, unless otherwise

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.
 - e. A log of all security incidents shall be maintained and furnished to the ENGINEER upon request.
2. 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.
3. 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.
4. 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. 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.

++ END OF SECTION++

SECTION 01 58 00 ATTACHMENT FOLLOWS

SECTION 01 58 00 ATTACHMENT

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'

1

1

4'

2"	 NEW YORK STATE OF OPPORTUNITY.	Department of Environmental Conservation	Logo (use eps or jpg file) Green Text (See Key) White Background	
6"				
3"				
4"	STATE SUPERFUND PROGRAM			Green Text (See Key)
2"				
4"	C&D Power System (C&D Batteries)			Blue Text (See Key)
2"				
4"	Site No. 336001			Blue Text (See Key)
3"				
3"	New York State Department of Environmental Conservation			Green Text (See Key)
2"				
3"	Governor Kathy Hochul			Black Text (See Key)
4"				
4"	For More Information: derweb@dec.ny.gov			Blue Text (See Ke
2"				

Color Key for Text

Green Text = Pantone 350C or CMYK 80/43/83/42
 Blue Text = Pantone 288C or CMYK 100/87/27/19
 Black Text = Pantone Black 6 C or CMYK 100/61/32/96

++ END OF SECTION ATTACHMENT++

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 prosecution 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. Deliver anchor system materials, including anchor bolts to be embedded in concrete or masonry, in ample time to avoid delaying the Work.

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 ++

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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 stairs.
5. Handrails and railings.
6. Grating.
7. Checker plate.
8. Metal access hatches.
9. Castings.
10. Fiberglass items.
11. Rigid electrical conduit, except PVC-coated conduit.
12. 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 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.
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, offsite storage location.
 - 8) Work performed, including field quality control and testing.
 - 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 for 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 will be provided for all control points.
 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 will be signed and sealed by the professional 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 Surface Structures:
1. Upon completion of foundation walls and major site improvements, 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 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.
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:

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 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 community of any work activities that will generate nuisances 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 regulation noise 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 a project
3. discuss the community's concerns 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 and respond respectfully to a complaint 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 sub-contractors shall be trained to follow nuisance management practices. Nuisance management issues shall be integrated into H&S “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
 7. 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.
 8. Some examples of alternatives that are less disturbing include:
 - a. ‘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.
 - b. ‘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.
 - c. 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.
 - 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 site’ 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 builder/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.
14. 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.

15. 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.
16. 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, 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:
 8. 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 4 feet.
 9. All trucks entering and leaving the Site will adhere to the posted speed limit, which shall be no more than 8 miles per hour (mph).
 10. All trucks shall adhere to the established tarping policy.
 11. 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.
 12. In order to keep roadways clean and free of accumulation, the Contractor will coordinate with the Town of Islip 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.
 13. 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.).
 14. All trucks are to take the most efficient and direct route to the disposal facility as possible.
 15. Spraying dusty wastes with water as they are unloaded.
 16. 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 1-2 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 3 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 V111, 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, Article 13.9:
1. Prior to requesting final inspection, CONTRACTOR 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 accordance with Contract Section VIII Article 13, Payments to Contractor.
 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® G706TM, "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® G706ATM, "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>						
6. All Claims are resolved	<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
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>						
11. Manufacturer warranties and software license(s) furnished	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
12. Instruction and training of operations and maintenance personnel is complete and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
records of training submitted						
<i>Remarks:</i>						
13. MBE/WBE/DBE compliance report(s) submitted (when applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
14. All field engineering submittals, including survey data, furnished	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
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"/>		
<i>Remarks:</i>						
16. All record documents submitted to and accepted by Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
17. Contractor is fully demobilized from Site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
18. All Site restoration is complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
19. Final cleaning of all work areas is complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
20. Lien waivers or affidavits of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Item No./Description	Completed/Date	In Progress	Not Started	Not Applicable	Target Date	Responsible Entity/Person
payment obtained from Subcontractors and Suppliers						
<i>Remarks:</i>						
21. Evidence of Contractor liability insurance furnished for correction period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						
22. All other required Contract closeout documents obtained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<i>Remarks:</i>						

**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 ++

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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, 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.
 - 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:
 - 1) “[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, City of Rome, Oneida County, New York, Remedial Construction Project – Former Rome Cable 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. 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 ++

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SECTION 01 89 29

GREEN REMEDIATION PRACTICES

PART 1 - GENERAL

1.1. SUMMARY

- A. Work includes, practices related to reducing waste generation; energy usage; emissions including greenhouse gases (GHGs), nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter and hazardous air pollutants (HAPs); water usage; and land and ecosystem disturbance.
- B. The CONTRACTOR shall implement practices in the performance of the requirements of the Work to maximize sustainability, reduce energy and water usage, promote carbon neutrality, promote industrial materials reuse and recycling, and protect and preserve natural resources.
- C. The CONTRACTOR shall utilize concepts and techniques presented in the New York State Department of Environmental Conservation – (NYSDEC) Program Policy DER-31/Green Remediation, August 11, 2010 (revised January 20, 2011).
- 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 (i.e., 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, CONTRACTOR shall consider inclusion of the following provisions:
 - 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, 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 usage 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 5 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. 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:
 - 1) https://clu-in.org/greenremediation/docs/GR_Fact_Sheet_SI&EM.pdf.
 - b. Excavation and surface restoration:
 - 1) https://clu-in.org/greenremediation/docs/GR_Quick_Ref_FS_exc_rest.pdf
 - c. Soil vapor extraction and air sparging technologies:
 - 1) https://clu-in.org/greenremediation/docs/GR_factsheet_SVE_AS_032410.pdf.
 - d. Pump and treat technologies:
 - 1) https://clu-in.org/greenremediation/docs/GR_Fact_Sheet_P&T_12-31-2009.pdf.
 - e. Bioremediation:

- 1) https://clu-in.org/greenremediation/docs/GR_factsheet_biorem_32410.pdf.
- f. In situ thermal technologies:
 - 1) https://clu-in.org/greenremediation/docs/GR_factsheet_IST.pdf.
- g. Landfill cover systems and associated energy production:
 - 1) https://clu-in.org/greenremediation/docs/GR_factsheet_landfill_covers_and_energy.pdf.
- h. Materials and waste management:
 - 1) https://clu-in.org/greenremediation/docs/GR%20BMP%20fact%20sheet_materials&waste.pdf.
2. Consider USEPA climate resiliency fact sheets related to:
 - a. Sediment cleanups:
 - 1) https://www.epa.gov/sites/default/files/2019-12/documents/cr_sediment_sites_fact_sheet_update.pdf.
 - b. Containment remedies:
 - 1) https://www.epa.gov/sites/default/files/2019-12/documents/cr_containment_fact_sheet_2019_update.pdf.
 - c. Groundwater treatment remedies:
 - 1) https://www.epa.gov/sites/default/files/2019-12/documents/cr_groundwater_systems_fact_sheet_2019_update.pdf.
- D. ITRC Green and Sustainable Remediation, A Practical Framework:
 1. <https://connect.itreweb.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=8e842294-64ce-4e56-a80b-cd3dc1aa4af3>.
- E. ASTM – E2893-16e1: Standard Guide for Greener Cleanups:
 1. <https://www.astm.org/e2893-16e01.html>.
- F. 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.
- G. EPA Energy Smart Resources Guide:
 1. https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NRMRL&dirEntryId=190014.
- H. Sustainable Remediation Forum (SURF):
 1. <https://www.sustainableremediation.org/>.
- I. 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/>.

- J. 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. Use the Electronic Product Environmental Assessment Tool (EPEAT) to find electronic products with reduced impacts on the environment.
 8. 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 considered. 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:
 - 1) Sustainable sites.
 - 2) Water efficiency.
 - 3) Energy and atmosphere.
 - 4) Materials and resources.
 - 5) Indoor environmental quality.
 - 6) Innovation in operations.
 9. 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 onsite, and the beneficial reuse of sediments.
 10. 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 the CONTRACTOR'S Application for Payment.
 3. Consistent with NYSDEC's Part 248 Annual Emission Reporting requirements, CONTRACTOR is required to report annual emission for those vehicles used under 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://www.dec.ny.gov/chemical/118127.html>.
 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 Section X 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; and

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 Application 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, where appropriate and as approved by the DEPARTMENT, 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, to the extent practicable:

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.
- c. Sequence work to minimize double-handling (e.g., direct loading 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 for trailer power and lighting when possible. 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. Contract shall not use or cause to be used scarce, irreplaceable and endangered resources.
- j. Reduce impact to land and ecosystems.
- k. Reuse treated wastewater for non-potable uses on site such as sanitary facilities, dust control additives, decontamination. 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. Identify onsite or nearby sources of backfill material such as crushed concrete.
- o. Incorporate green requirements into cleanup and supporting service procurements.
- p. Choose service providers with local offices, to minimize the distance of worker commutes and machinery transport.
- q. 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 eliminating 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 onsite or nearby sources of topsoil, to avoid long-distance transport of clean soil. Options may include onsite 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 long-term 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 groundwater extraction and treatment plant operations.
 - s. Optimize pump-and-treat 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. 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.
 - f. Retain native, noninvasive plants for later replanting.

+ + END OF SECTION + +

SECTION 01 89 29 ATTACHMENT FOLLOWS



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		
• Other:		
• Other:		
• Other:		
• Other:		
• Other:		
• Other:		
• Other:		
• Other:		
Total Wastes Generated On-Site		
• Remedy Generated Waste		
• Contractor Generated Waste		
• Other:		
• Other:		
• Other:		
• Other:		
• Other:		
• Other:		
• Other:		

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

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:		

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.

	Current Reporting Period (Miles)	Total to Date (Miles)
Off-site mobile fuel combustion		
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.

	Current Reporting Period (Hours)	Total to Date (Hours)
On-site diesel excavation/construction equipment usage		
Other on-site processes generating emissions		
Other:		

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:		

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:		

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		

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:

Descriptions of green remediation programs reported above (Attach additional sheet if needed)

Recycled and Bio-Based Content in Imported Products and Materials:

Solid Waste Disposal and Diversion:

Energy Use:

Water Use:

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

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SECTION 34 78 13

PORTABLE TRUCK SCALES

PART 1 - GENERAL

1.1. DESCRIPTION

- A. Scope:
1. CONTRACTOR shall provide all labor, materials, equipment and incidentals as shown, specified and required to furnish and install and operate a minimum of one portable truck scale.
 2. Included are necessary foundation, weigh deck, load cells, control panel, anchorage systems and all appurtenances.
 3. CONTRACTOR shall obtain necessary weights and measures certifications and operate scale with a certified weigh master.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 74 19 - Construction Waste Management and Disposal

1.3. 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)

1.4. 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.

1.5. SUBMITTALS

- A. Action Submittals: Submit the following:
1. Product Data:
 - a. Manufacturer's literature, illustrations, specifications and engineering data.
 2. Shop Drawings:
 - a. Drawings showing fabrication methods, assembly, installation and wiring diagrams.
 - b. 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.

1.6. PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the Project 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 Project 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 (Minimum) |
| 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

Supplemental Specifications

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SECTION 00 65 36

WARRANTY OF CONSTRUCTION

PART 1 - GENERAL

1.1. SCOPE

- A. This section covers the requirements to ensure conformance and quality of the Work.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work

1.3. NON-CONFORMANCE

- A. The CONTRACTOR shall repair or replace at his own expense any failure to conform or any defect. In addition, the CONTRACTOR shall remedy at his own expense any damage to property, when that damage is the result of the CONTRACTOR's failure to conform to contract requirements or any such defect of equipment, material, workmanship, or design.
- B. The CONTRACTOR shall also restore any work damaged by the CONTRACTOR in fulfilling the terms and conditions of this section. The CONTRACTOR's warranty with respect to work repaired or replaced hereunder shall run for one year from the date of such repair or replacement.

1.4. ENFORCEMENT

- A. In addition to the other rights and terms provided by this section, all CONTRACTOR's, manufacturers', and suppliers' warranties expressed or implied with respect to any work and materials shall, at the direction of the DEPARTMENT, be enforced by the CONTRACTOR for the benefit of the DEPARTMENT. The CONTRACTOR shall obtain any warranties which the subcontractors, manufacturers, or suppliers would give in normal commercial practice.

PART 2 - PRODUCT (NOT USED)

PART 3 - EXECUTION (NOT USED)

++ END OF SECTION ++

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SECTION 01 11 13

SUMMARY OF WORK

PART 1 - GENERAL

1.1. SCOPE

- A. This specification section provides a general description only and shall not be construed as a complete description of the work to be performed.
- B. The means, methods, procedures, and techniques to be used by the CONTRACTOR are the responsibility of the CONTRACTOR, and shall be developed by the CONTRACTOR to meet the intent of these Contract Documents.
- C. The CONTRACTOR shall furnish all labor, materials, supplies and equipment to construct and fully complete the work as shown, or specified in the Contract Documents or as directed by the DEPARTMENT.
- D. All facilities shall be maintained in neat, clean, and good working order. Failure to maintain the facilities in neat, clean, and good working order shall be cause for the DEPARTMENT to withhold payment until necessary improvements are made.
- E. All work permits for construction-related activities will be the responsibility of the CONTRACTOR.
- F. All work shall be done in accordance with applicable federal, state and local regulations. Any other applicable regulations not explicitly included in these Specifications shall be adhered to in conducting the work. The CONTRACTOR shall be responsible for contacting and informing the proper Federal, State and local agencies (coordinated through the DEPARTMENT/ENGINEER) of the nature and timing of work on site, for off-site hauling activities, and for securing all necessary and applicable permits required to construct the work covered by this contract. The Health and Safety Plan (HASP), Sampling and Analysis Plan (SAP), Work Plan, Transportation Plan and other required plans which are to be prepared by the CONTRACTOR, are subject to the DEPARTMENT/ENGINEER's review and approval. If any regulation, the above referenced plans, and/or contract documents have contradicting requirements, then the most stringent requirement shall apply as determined by the DEPARTMENT and/or ENGINEER.
- G. The CONTRACTOR shall pay NYS Prevailing Wage Rates for work performed. A copy of the current Prevailing Wage Rates is attached as Section XII of these Contract Documents. The NYS Department of Labor (NYSDOL) has assigned the PRC number 2021004634 to the project.

1.2. ACCESS TO SITE

- A. CONTRACTOR shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. The CONTRACTOR shall limit use of Project site to work in areas indicated. The CONTRACTOR shall not disturb the Project site beyond areas in which the Work is indicated. The CONTRACTOR shall confine construction operations to those depicted on the Contract Drawings.
- C. CONTRACTOR's vehicles shall utilize only the roads and highways that are shown in the CONTRACTOR's approved Transportation Plan. CONTRACTOR's vehicles shall utilize only these roads when under the weight restrictions. Local traffic limitations must be evaluated and considered.
- D. Work areas occur adjacent to residential properties. The CONTRACTOR shall ensure that construction activities and/or CONTRACTOR equipment does not impede, or otherwise interfere with, residents' existing access to the roads, traffic lanes, properties, driveways, etc.
- E. Work areas occur adjacent to areas of cultural resources. The CONTRACTOR shall ensure that construction activities and/or CONTRACTOR equipment does not extend on to, or cause damage to the areas of cultural resources unless specifically called out on the contract drawing.
- F. Damage to offsite adjacent properties due to construction activities shall be repaired and replaced in kind by the CONTRACTOR at CONTRACTOR's own expense.
- G. The CONTRACTOR shall protect completed work areas and repair damage to completed areas (if caused by the CONTRACTOR's operations) at CONTRACTOR's own expense.

1.3. SUBMITTALS

- A. The CONTRACTOR shall submit Project Work Plan that details the CONTRACTOR's operations and shall include all activities that will relate to the various phases of the Work subject to the approval of the ENGINEER. The Work Plan must detail erosion and sediment control methods and surface water management procedures, which will be implemented by the CONTRACTOR throughout each phase of the work. The following items shall be included in the Project Work Plan:
 - 1. Hazardous Materials Management Plan
 - 2. Dust Control Plan
 - 3. Quality Assurance/Quality Control Plan
 - 4. Sampling and Quality Control Project Plan
 - 5. Erosion and Sediment Control Plan
 - 6. Survey Work Plan
 - 7. Nuisance Controls and Management Plan
 - 8. Transportation and Disposal Plan

9. Traffic Control Plan
10. Sampling and Analysis Plan
11. Quality Assurance Project Plan
12. Excavation Work Plan
13. Rodent/Pest Control Program Plan
14. Site Restoration Plan
15. Dewatering Plan
16. Contact Water Treatment Plan
17. Temporary Bypass Pumping Plan
18. Utility Protection, Relocation, and Abandonment Plan

PART 2 - MATERIALS

2.1. GENERAL

- A. All equipment supplied shall be in good working condition and clean.
- B. Materials and equipment shall be adequate in capacity for the required usage, shall not create unsafe conditions, and shall meet requirements of applicable codes and standards and the approval of the ENGINEER.

PART 3 - EXECUTION

3.1. SUMMARY OF PROPOSED WORK

- A. Main Work Items: The following is a list of the main work items required of the CONTRACTOR by the Contract Documents.
 1. The CONTRACTOR shall maintain an acceptable air monitoring program as part of the Site Specific Health and Safety Plan in accordance with Section 01 35 29 - Contractor's Health and Safety Plan and Section 44 10 00 – Community and Monitoring of the Contract Documents in accordance with federal and state guidelines including Occupational Safety and Health Administration (OSHA), National Institute for Occupational Safety & Health (NIOSH) and NYSDOL regulations.
 2. Temporary Facilities and Utilities: DEPARTMENT's/ENGINEER's and CONTRACTOR's field offices, security and communication operations, decontamination facilities, support, contamination reduction, and exclusion zones, telephone, electricity, water, and sanitation.
 3. Installation of temporary perimeter security fence.
 4. Establishment of stormwater pollution prevention controls, including erosion and sediment controls throughout the contract period.
 5. Conducting an initial walk-over of the site with the ENGINEER and the DEPARTMENT to identify objects, areas of cultural resources, etc. to be protected during the project.

6. Clearing and grubbing in areas of temporary access roads or marsh mats for access to the excavation area.
7. Installation of temporary access roads, establishment of stockpiling and staging areas, contact water treatment, and decontamination pad. Temporary construction mats/protective padding is required for protection of wetlands and cultural resources.
8. Grouting and capping of inlet pipes discharging into the lagoon.
9. Stabilize partially collapsed building wall adjacent to the lagoon to facilitate shallow soil excavation.
10. Work associated with Tributary D-1-7 (off-site) including:
 - a. Swartwout road culvert removal and replacement (CONTRACTOR delegated design).
 - b. Installation of the stream bypass system (CONTRACTOR delegated design).
 - c. Excavation, management, and transport of the stream sediment to the site staging areas.
 - d. Placement of the stream sediment in the Lagoon upon ex-situ stabilization of the stream sediments.
 - e. Backfill and restoration of stream bed and wetland areas as specified and shown on the drawings.
 - f. Removal of the stream bypass system.
11. Work associated with the upland (on-site) features including:
 - a. Excavation, ESS, and offsite disposal of lagoon soils with polychlorinated biphenyl (PCB) concentrations greater than 50 parts per million (ppm). Concrete shall be segregated and crushed for inclusion into the ISS monolith.
 - b. In-situ solidification of the lagoon soils as shown on the Drawings.
 - c. Excavation of shallow soils as shown on the Drawings and confirmation sampling, as specified.
 - d. Clean-out of the sump in the shed.
 - e. Decommissioning of the vault (removal of the concrete slab, pipes, and metal grating; grout inlet pipes), cleaning, confirmation wipe testing and backfill with specified aggregate.
 - f. Placement of shallow pre-treated soils into the lagoon as shown on the drawings.
 - g. Transport and disposal of surplus non-hazardous soil to an approved TSDF.
12. Restoration of the site proper including installation of a cap over the lagoon disposal area, crushed stone surfaces where shown on the Drawings.
13. Removal of all temporary access roads, temporary construction mats, fencing, sediment and erosion control, and temporary facilities. Restoration of all areas impacted by contractor use .
14. Conduct one-year maintenance of all plantings.

B. Sequence and Progress of Work

1. All work shall be completed in accordance with the duration executed under the Section VI – Agreement and in accordance with the CONTRACTOR’s proposed schedule.
2. The sequence of work shall be proposed by the CONTRACTOR to suit CONTRACTOR’s operations, subject to the approval of the DEPARTMENT and ENGINEER.

++ END OF SECTION ++

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SECTION 01 13 00

SITE CONDITIONS

PART 1 - GENERAL

1.1. SCOPE

- A. This section presents a summary of environmental data collected from investigations at the site. The information herein is provided for general information only. The CONTRACTOR shall make their own determination of the potential hazards at the Project site from the information herein and from other available information, as appropriate.

1.2. SITE DESCRIPTION

- A. Site Location: The C&D Power Systems (C&D Batteries) site is located in the Hamlet of Huguenot, in the Town of Deerpark, Orange County, New York. The site is located approximately four miles northeast of the City of Port Jervis. The Site is zoned for commercial use with surrounding parcels used for residential and commercial uses. The site is located within the Neversink River Valley and is bordered by Route 209 to the west and by a tributary to the Neversink River (designated as Tributary D-1-7) to the east. The approximately 17.3-acre parcel is currently unoccupied.
- B. Site Description: The Site features an approximately 3-acre industrial building formerly used for manufacturing of batteries. A portion of the building's exterior wall near the former wastewater treatment lagoon has collapsed and some concrete masonry blocks lie on the ground and/or are loosely connected to the remainder of the structure. The former wastewater treatment lagoon, measuring approximately 175 feet in diameter and 15 feet in depth, is located to the northeast of the site building. This lagoon formerly discharged to the Tributary D-1-7 that runs along the east side of the Site. The ground surface is relatively horizontal with an elevation range from approximately 470 to 474 feet North American Vertical Datum of 1988 (NAVD88) over most of the Site, aside from where elevations drop-off toward the Tributary to elevation 440 feet NAVD88 at the rear of the property. The ground water table is approximately 20 to 34 feet below ground surface where ground surface elevations range from approximately 470 to 474 feet NAVD88 and flows to the southeast towards Tributary D-1-7. The Site features culturally sensitive areas near the Tributary D-1-7 as indicated on the Contract Drawings. Cultural resources areas shall be protected in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), the New York State Environmental Quality Review Act (SEQRA), and Section 14.09 of the New York State Historic Preservation Act (NYSHPA).

1.3. SUMMARY OF SITE CONTAMINATION

- A. The primary contaminants of concern in the tributary are polychlorinated biphenyls (PCBs), lead, and cadmium.

- B. The primary contaminants of concern in the lagoon are PCBs, lead, cadmium, barium, and fluoride.
- C. Soils outside of the lagoon are contaminated with lead.
- D. The sediments in the vault area and hole inside the shed building at the Project site are contaminated with lead, cadmium, and PCBs.
- E. Chromium and lead are the primary contaminants of the material within the drums.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION 01 14 00

MISCELLANEOUS WORK RESTRICTIONS

PART 1 - GENERAL

1.1. SCOPE

- A. This section identifies restrictions to the use of the site not addressed elsewhere in the Contract Documents.

1.2. CONTRACTOR'S USE OF PREMISES

- A. The CONTRACTOR shall confine all operations, including the storage of materials, to the designated areas of the Project Site as shown in the Drawings.
- B. All materials delivered to site will be stored within the limits of disturbance or in any designated Staging Area approved by the ENGINEER.
- C. No excavated materials shall be stored in vehicles or stockpiled outside of the limits of disturbance.
- D. Excavated materials stored past working hours shall be covered with poly sheeting and secured.
- E. The CONTRACTOR's use of the premises shall be limited to the Work being performed under the Contract Documents.
- F. The CONTRACTOR shall be responsible for the security and safety of his/her equipment and facilities.

1.3. WORK HOURS

- A. Normal Work Hours shall be from no earlier than 7:00 A.M. to no later than 5:00 P.M., Monday through Friday. The CONTRACTOR shall request approval from ENGINEER if work hours need to change.
- B. Work hours established by any ordinance, Law, or Regulation, and that are more restrictive, shall supersede the requirements of this Specifications Section.
- C. The CONTRACTOR shall conduct all Work when there is adequate light so that the Work can be conducted safely and the ENGINEER can effectively observe the Work, or the CONTRACTOR shall furnish adequate lighting as defined by OSHA regulation.
- D. The CONTRACTOR may conduct regular equipment maintenance during hours outside of the Normal Work Hours defined in this Section, with prior approval from the ENGINEER. Emergency repairs of equipment outside of Normal Work Hours may be performed without

such notice. However, the CONTRACTOR shall verbally notify the ENGINEER prior to such emergency maintenance.

- E. CONTRACTOR personnel shall not work on the Project Site alone.
- F. Any variation from Normal Work Hours or work on Saturdays, Sundays or Holidays shall be subject to approval by the Department and ENGINEER and shall conform to the requirements of the NYS Department of Labor (NYSDOL). Any request for change must be made to the ENGINEER and the Department as soon as possible, and shall not be permitted until subsequently approved by the NYSDOL.

1.4. PROTECTION OF EXISTING UTILITIES

- A. The CONTRACTOR shall contact and cooperate with utility companies to locate all utilities (including pipelines, cables, power poles, guy wires, and other structures) on the Project Site prior to beginning the Work.
- B. The CONTRACTOR shall comply with the requirements of City, County, and State utility protection Laws or Regulations.
- C. All utilities shall be protected from damage during construction, unless otherwise indicated to be removed or abandoned. If damaged, the utilities shall be repaired as required by the utility's owner at the CONTRACTOR's expense.
- D. If a utility is encountered that is not shown on the Contract Drawings or otherwise made known to the CONTRACTOR prior to beginning the Work the CONTRACTOR shall promptly take necessary steps to protect the utility from damage, and shall give written notice to the ENGINEER.

1.5. PROTECTION OF THE WORK AND EXISTING STRUCTURES

- A. The CONTRACTOR shall comply with the requirements of City, County, and State protection Laws or Regulations.
- B. The CONTRACTOR shall take adequate photographs and video of surrounding structures and features, including buildings, roadways, fences, monitoring and recovery wells, piezometers, and utility lines, prior to starting the work to provide a basis for existing conditions. Include documentation of any apparent damage which existed prior to construction.
- C. All existing surface facilities, including but not limited to, parking lots, driveways, sidewalks, fencing, guard rails, posts, cables, signs, poles, markers, stone walls, and curbs which are temporarily removed or disturbed to facilitate the performance of the work shall be replaced and restored to their original condition at the CONTRACTOR's expense.
- D. The CONTRACTOR shall be responsible for all expenses for direct or indirect damage caused by his work to any structure. The CONTRACTOR shall repair immediately all damage caused by his work, to the satisfaction of the Engineer.

- E. In order to prevent damage, injury or loss, the CONTRACTOR shall perform the following activities:
1. Store apparatus, materials, supplies, and equipment in an orderly, safe manner that will not unduly interfere with the progress of the work or the work of any other SUBCONTRACTOR. The CONTRACTOR will be permitted use of the Site for storage of equipment and materials at their own risk. The DEPARTMENT, ENGINEER and site occupants will not be responsible for damage or theft of equipment or materials that are stored at the Site.
 2. Provide suitable storage facilities in accordance with manufacturers' recommendations for all materials which could be subject to damage by exposure to weather, theft, and breakage or otherwise.
 3. Clean up frequently all refuse, rubbish, scrap materials, and debris caused by operations, so that the area of the work shall present a safe, orderly and workmanlike appearance at all times.
 4. Provide barricades and fences around openings, excavations, and other hazardous areas in accordance with applicable requirements.
 5. Prevent migration of dust, refuse, and any other materials used or generated during the Work from the area of Work to the adjacent sidewalks, roadways, and storm sewer inlets using appropriate measures including covering of storm sewer inlets and/or using dust control measures
 6. Housekeeping is important. Failure to comply with these provisions is sufficient cause for the ENGINEER to stop work until they are met. Any costs incurred due to this stoppage shall be borne by the SUBCONTRACTOR.
 7. Provide demarcation, exclusion fencing and/or protective matting to protect all identified cultural resources. Detail to be presented in the CONTRACTOR's Work Plan as approved by the ENGINEER.
- F. Following completion of the work, damages to roads, curbs, adjacent property/infrastructure, pavement areas, monuments, overhead utilities, subsurface utilities, or other property caused by the CONTRACTOR shall be repaired immediately and to the satisfaction of the ENGINEER and/or the pertinent utility company or property owner. No additional payment will be made to the CONTRACTOR for these repairs.
- G. The CONTRACTOR shall immediately notify the ENGINEER of any and all claims and complaints arising as a result of the Work. The CONTRACTOR shall provide assistance to the Department and/or the ENGINEER, as required, to resolve all claims and complaints.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

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SECTION 01 14 19

USE OF SITE

PART 1 - GENERAL

1.1. SCOPE

A. Description:

1. This Section includes requirements for use of the Project 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 Project 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 Project Site and other areas.

1.2. RELATED SECTIONS

- A. Section 01 55 13 – Access Roads and Parking Areas

1.3. USE OF PREMISES

- A. Limit use of premises at the Project Site to work areas shown or indicated on the Contract Drawings. Do not disturb portions of the Project Site beyond areas of the Work.
1. Access to Site, Access Roads, and Parking Areas: Refer Section 01 55 13.
- B. Use of Existing Buildings and Structures: Obtain DEPARTMENT's written permission for each proposed use of existing buildings and structures.
- 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++

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SECTION 01 31 13

PROJECT COORDINATION

PART 1 - GENERAL

1.1. SCOPE

- A. This section covers the requirements for coordination of the work with subcontractors, adjacent property owners, Agencies, ENGINEER, and Utilities.
- B. The CONTRACTOR shall provide 2 weeks advance notice of all site activities to the ENGINEER throughout the project duration.

1.2. GENERAL

- A. The CONTRACTOR shall coordinate their work with all entities associated with or affected by this Contract in every way required to assure satisfactory, expeditious completion of the Project within the Contract Time.
- B. The CONTRACTOR shall coordinate fully all subcontractors, manufacturers, fabricators, suppliers, distributors, installers, testing agencies, and all others whose services, materials or equipment are required to assure completion of the Work to the satisfaction of the ENGINEER.
- C. The CONTRACTOR shall review progress schedules and installation procedures which may affect the Work and shall coordinate the installation of all such work with the ENGINEER.
- D. Wherever utilities are encountered, shown, or anticipated, and may be in any way interfered with, the CONTRACTOR shall keep the applicable utility company or municipal agency fully informed in advance. The CONTRACTOR shall cooperate with the utility company or municipal agency in the protection, removal, relocation, and replacement of such structures and facilities.

1.3. SUBMITTALS

- A. A complete list of proposed subcontractors (including waste disposal facilities) identifying name, address, telephone number, contact, type of work to be subcontracted, dollar amount, and M/WBE status.
- B. The location of equipment, trailers, decontamination pads, stockpiles, construction materials, water storage tanks, haul routes, etc.

1.4. SUBCONTRACTORS

- A. The CONTRACTOR shall be solely responsible for the coordination of schedules for any and all of their subcontractors. The ENGINEER shall be afforded sufficient review time for all schedules and the CONTRACTOR shall coordinate all time schedules to be used for construction.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION 01 51 00

TEMPORARY STREAM BYPASS SYSTEM

PART 1 - GENERAL

1.1. SCOPE

- A. The CONTRACTOR shall install and maintain a temporary stream bypass system for the purpose of diverting the existing flow around the work area for the duration of the project. An active or passive bypass system may be proposed by the CONTRACTOR.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work

1.3. REQUIREMENTS

- A. Plans for the proposed bypass system shall be submitted at least two weeks prior to commencement of start-up operations.
- B. The temporary bypass pumping system, if required, shall comply with all local, state, and federal permits.
- C. Prevent disturbance to all identified areas of cultural resources in accordance with the Contract Documents and the CONTRACTOR's Work Plan as approved by the ENGINEER.
- D. The CONTRACTOR shall ensure continuous operation of the bypass system throughout the duration of the project as directed by the ENGINEER. For active systems, include auxiliary pump(s) to provide redundant capacity in the event of failure of primary pump(s).

1.4. SUBMITTALS

- A. The CONTRACTOR shall submit the following:
 - 1. Temporary Stream Bypass Plan as a part of the CONTRACTOR's overall Work Plan. The Plan shall be included in the Project Work Plan as described in Specifications Section 01 11 13.

1.5. TEMPORARY STREAM BYPASS PLAN REQUIREMENTS

- A. The Temporary Stream Bypass Plan shall provide a complete description of the proposed operations, a list and thorough description of required equipment and material, contingency plans and actions, a description of system operations addressing the relationship to the Work Plan elements of excavation and backfill operations.
- B. This plan shall include:
 - 1. Conceptual design of the Temporary Bypass System

2. Alignment/footprint of Temporary Bypass System components,
3. Means and methods for protecting any cultural resource areas to be crossed,
4. Headwater and backwater dam design stamped by a professional engineer licensed in the state of New York which includes size, material, capacity, method of installation, and location of headwater and backwater dams,
5. Number, size, material, location, and method of installation of piping,
6. Number, size, material, method of installation and location of installation of discharge,
7. Calculations of static lift, friction losses, and flow velocity (pump curves showing pump operating range shall be submitted if an active bypass system is proposed);
8. Detailed design of the downstream temporary discharge point that comply with New York State Standards and Specifications for Erosion and Sediment Control (Blue Book) and SPDES standards (latest versions),
9. Design plans and computation for access to bypass locations indicated on the Contract Drawings,
10. Calculations for selection of bypass pipe size,
11. Schedule for installation of and maintenance of bypass lines,
12. Plan indicating selected location of bypass line locations,
13. For proposed active systems:
 - a. Staging areas for pumps,
 - b. Bypass pump sizes, capacity, number of each site to be on site and power requirements,
 - c. Standby power generator size, location,
 - d. Method of noise control for each pump and/or generator,
14. CONTRACTOR's plan for providing continuous (24-hour) monitoring of the temporary bypass operation as well as the monitoring persons' qualifications,
15. Any temporary pipe supports and anchoring required,
16. Emergency plan for adverse weather and flooding for various phases of the work which includes plans for how the CONTRACTOR will address flow events above and beyond the required design peak flow,
17. Emergency plan for system/component failure for various phases of the work which includes plans for how the CONTRACTOR will repair/replace affected system component(s),
18. Schedule for installation, operation, maintenance, and removal of the temporary bypass system.

1.6. PROJECT REQUIREMENTS

- A. Demonstrate, or employ the services of a SUBCONTRACTOR, who can demonstrate that they specialize in the design and operation of temporary stream bypass systems.
- B. The CONTRACTOR shall have adequate standby equipment available and ready for immediate operation and use in the event of an emergency or breakdown. For an active bypass system, one standby pump for each size pump utilized shall be installed at the mainline flow bypassing locations, ready for use in the event of primary pump failure for active systems.

- C. Bypass system shall be capable of bypassing the flow around the work area and of releasing any amount of flow up to full available flow into the work area as necessary for satisfactory performances of work.
- D. The CONTRACTOR shall make all arrangements for operating the stream bypass system during the time when the tributary is not subject to excavation/dredging or blockage for any reason.

PART 2 - PRODUCTS

2.1. GENERAL

- A. The CONTRACTOR is responsible for selection of specific equipment and materials to be used to implement the stream diversion activities.

2.2. TEMPORARY STREAM BYPASS SYSTEM

- A. The CONTRACTOR shall provide, install, operate, and maintain the Temporary Stream Bypass System.
- B. The Temporary Stream Bypass System shall include headwater and backwater dams, piping, and auxiliary dams. Any active systems shall also include pumping station, diversion pumps, instrumentation and controls, and auxiliary pumps.
- C. Headwater/Backwater Dams:
 - 1. The CONTRACTOR shall provide all equipment and materials to install and maintain the headwater and backwater as shown on the Contract Drawings and in accordance with the CONTRACTOR Work Plan, including any temporary facilities needed to facilitate construction of all cofferdams.
 - 2. Headwater and backwater dams shall join to banks with watertight connections.
- D. Discharge Point – The CONTRACTOR shall discharge the water through an aboveground pipe to the Tributary and at a discharge point at the location shown on the Contract Drawing.
- E. Pumping Stations for Active Systems – The CONTRACTOR shall install pumping stations to provide a stable base for the diversion pumps, containment areas, pump intake structures, and power hookups.
- F. Diversion Pumps and Piping for Active Systems:
 - 1. The CONTRACTOR shall provide, install, operate, and maintain diversion pumps and piping to divert Stream flow from around the headwater dam to the backwater dam, as shown on the Contract Drawings.
 - 2. The CONTRACTOR is responsible for providing power necessary for Diversion pumping.

3. The CONTRACTOR shall provide, install, maintain, and operate auxiliary pumps and piping or hoses to ensure continuous bypass system operation in event of failure of primary pump(s).
 4. Each pump shall be set in an enclosure to contain leaks of fuel, oils, or other substances. The enclosure shall be capable of containing 1.5 times total fuel capacity of pump. Enclosures and pumps shall be carefully placed so as to avoid damaging the enclosure. Enclosures shall be monitored and maintained for duration of Project.
 5. Diversion pump and piping design inputs:
 - a. Peak flow in the stream following 5-year flood event is estimated to be 20.9 cubic feet per second (CFS) (USGS Stream Stats).
 - b. The CONTRACTOR shall provide and maintain diversion pumping and piping for peak flow event.
- G. An active Temporary Bypass Pumping System Pumping Station shall include sufficient standby pumping capacity (minimum of one additional pump to maintain minimum required flow rates when system pumps require off-line repair or maintenance).
- H. The CONTRACTOR shall provide pumps necessary to collect water from between the upstream and downstream dams for active pumping systems.
- I. The CONTRACTOR shall excavate any sumps as necessary in the stream to facilitate pumping stream water for active pumping systems.
- J. The CONTRACTOR shall operate all equipment and pumps in a manner that noise levels are within the limits presented in local ordinances for active pumping systems.
- K. Instrumentation and Controls for Active Pumping Systems:
 1. The CONTRACTOR shall provide instrumentation and controls as required to operate the Temporary Bypass Pumping System as specified in this Section.
 2. Pump failure must provide an audible alarm and must provide an autodial alarm unless 24-hour supervision is provided.
- L. Auxiliary Headwater/Backwater Dams:
 1. The CONTRACTOR shall provide sandbags or other effective auxiliary dams required to divert clean stream water which flows under or around the upstream and downstream dams away from excavation areas and to locations where auxiliary pumps are installed.
- M. Auxiliary Pumps and Piping or Hoses for Active Pumping Systems:
 1. The CONTRACTOR shall provide, install, maintain, and operate auxiliary pumps and piping or hoses to pump clean stream water which flows under or around the upstream and downstream dams back to the stream, either upstream or downstream of the berms.
 2. The CONTRACTOR shall provide, install, maintain, and operate auxiliary pumps and piping or hoses to ensure continuous bypass system operation in event of primary pump(s) failure.

3. The CONTRACTOR shall ensure that clean water does not come into contact with Impacted Materials.

PART 3 - EXECUTION

3.1. INSTALLATION

- A. Temporary Stream Bypass System piping must be leak tested and the system fully operational prior to any excavation.
- B. Confirm that all equipment and materials are compatible as a system.
- C. Prevent disturbance to all identified areas of cultural resources in accordance with the Contract Documents and the CONTRACTOR's Work Plan as approved by the ENGINEER.

3.2. SYSTEM OPERATION AND MAINTENANCE

- A. The CONTRACTOR shall operate and maintain the Temporary Stream Bypass System at its design capacity during the period when stream diversion is required.
- B. The system shall operate 24 hours per day except as approved by the ENGINEER.
- C. The CONTRACTOR shall operate the system effectively in order to provide a dry excavation area following procedures specified in the approved Work Plan, submitted as specified in Specifications Section 01 33 00 – Submittal Procedures.
- D. The CONTRACTOR is responsible for implementing the Temporary Stream Bypass System in coordination with the CONTRACTOR's phasing of the Work. Stream diversion shall only be conducted as necessary for construction.
- E. The CONTRACTOR shall make reasonable efforts, in consultation with the ENGINEER, to modify operation procedures based on field conditions, if necessary, to meet performance requirements of the system.
- F. Damage to existing facilities or new work resulting from the failure of the CONTRACTOR to maintain the work areas in a dry condition shall be repaired by the CONTRACTOR, as directed by the ENGINEER at no additional expense to the DEPARTMENT.
- G. During periods of potential heavy precipitation or flooding, the CONTRACTOR shall implement the provisions of the Emergency Plan included as part of the Temporary Stream Bypass Plan.
- H. The CONTRACTOR shall monitor weather forecast daily and shall be prepared to stabilize disturbed areas in advance of the weather event that would result in overtopping the diversion system.

- I. Surface water that does not come into contact with open excavations/sediment handling is not considered impacted and shall not require treatment. Every effort must be made to prevent surface water from coming into contact with open excavations/sediment handling. If surface water does come into contact with open excavations/sediment handling, it shall be treated at the on-site construction water treatment facility at no additional cost to the DEPARTMENT.
- J. Best Management Practices (BMPs) shall be deployed to minimize turbidity.
- K. The CONTRACTOR shall not restrict or close off the natural flow of water in such a way that ponding, or flooding will occur, and shall at all times prevent flooding of public and private property. All damages resulting from flooding, restriction of flows, shall be the sole responsibility of the CONTRACTOR, and shall be repaired by the CONTRACTOR at no additional expense to the DEPARTMENT.

3.3. SYSTEM DEMOBILIZATION

- A. Water shall not be permitted to flow into or through excavations in which work is under way or has been partially completed. Water flow through work areas that have not been fully stabilized shall be minimized to prevent erosion and sedimentation. Erosion or other damage to partially stabilized work areas shall be repaired by the CONTRACTOR at no additional expense to the DEPARTMENT.
- B. The CONTRACTOR is responsible for decontamination (if necessary) and demobilization of all Temporary Stream Bypass System components as part of the Work.
- C. Upon completion of the Work, the CONTRACTOR shall remove temporary construction and shall perform necessary earthwork and grading to restore the disturbed areas to their original condition or to such other conditions as indicated on the Contract Drawings, Technical Specifications, and/or as directed by the ENGINEER.

+++END OF SECTION+++

SECTION 01 55 26

MAINTENANCE AND PROTECTION OF TRAFFIC

PART 1 - GENERAL

1.1. SCOPE

- A. The CONTRACTOR shall maintain and protect on-site traffic and minimize affects to the public traffic during the construction activities.
- B. The CONTRACTOR shall be aware that the project is located in a rural area.
- C. The CONTRACTOR shall take measures necessary to eliminate congestion of the project area with construction vehicles.
- D. Parking of employees of the CONTRACTOR or other personnel will not be permitted on private roads.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 35 29 – Contractor’s Health and Safety Plan

1.3. SUBMITTALS

- A. Transportation Plan: The CONTRACTOR shall submit a Transportation Plan to the ENGINEER prior to the start of Work for review. This plan shall include:
 - 1. Type, size, condition, and average daily number of vehicles to be used.
 - 2. Travel routes and time and weight restrictions.
 - 3. Decontamination methods for vehicles, equipment, and containers (see Section 01 35 29).
 - 4. Emergency response plans (see Section 01 35 29).
 - 5. A list of all shippers and their federal and state transporter ID numbers.
- B. Traffic Control Plan: Incorporate the anticipated impacts of traffic controls into the Work Plan (Plan) for various work areas. The Plan shall include, but not be limited to:
 - 1. Access roads for project traffic to the Work area.
 - 2. Estimated daily project traffic flows for the Work.
 - 3. CONTRACTOR’s proposed methods and materials for maintaining and protecting the onsite traffic during the construction activities.
 - 4. Furnish the name of the individual in direct employ of the CONTRACTOR who is to be responsible for the installation of maintenance of the traffic control for the Project. If the installation and maintenance are to be accomplished by a CONTRACTOR, consent shall be required of the ENGINEER at the time of the pre-

construction conference. This shall not relieve the CONTRACTOR of the foregoing requirement for a responsible individual in their direct employ.

- C. The Plans shall be included in the Project Work Plan as described in Section 01 11 13.

PART 2 - PRODUCTS

2.1. TRAFFIC CONTROL DEVICES

- A. All equipment following items, if used during the construction of Project, shall conform to New York State Department of Transportation (NYSDOT) Section 619-2 and Manual on Uniform Traffic Control Devices (MUTCD) requirements:
 1. Flashing barricade lights
 2. Construction and maintenance signs
 3. Channelizing devices
 4. Arrow boards
 5. Barricades
 6. Traffic Cones

2.2. MISCELLANEOUS EQUIPMENT

- A. Other items which include orange safety vests, flags or signs for flagmen, and communication devices, shall be standard and adequate for their intended function, and shall be in accordance with the NYSDOT-MUTCD where applicable.

PART 3 - EXECUTION

3.1. GENERAL

- A. The unlimited access of emergency vehicles (fire apparatus, ambulances, etc.) shall take priority over all other vehicles and/or work or other operations.
- B. Construction shall be conducted in a manner that ensures a minimum on-site traffic delay. Before work is started, the CONTRACTOR shall arrange with the DEPARTMENT for a primary means of access and a sequence or procedure for use of site access points. Other points of site access may be used only after obtaining the DEPARTMENT's written permission.
- C. Public streets, walks, or adjacent occupied or used facilities will not be closed or obstructed without permission from authorities sharing jurisdiction. Alternative routes around closed or obstructed traffic ways shall be provided.
- D. CONTRACTOR shall ensure that trucks transporting the materials to and from the site comply with all state and local weight and speed limitations.

- E. Trucks and other vehicles shall not idle for more than 3 minutes, and shall conform to the local requirements for vehicle idling.
- F. In order to minimize undue congestion to local roads, truck traffic shall be limited to the hours of approved by the local municipality.

3.2. TRAFFIC CONTROLS

- A. Provide a sufficient number of flagmen in areas where construction equipment is operating in potential conflict with public traffic either on-site or off-site, regardless of volume of traffic or the sight distance. Flagmen shall wear orange caps or hats and vests and direct traffic in conformance with Town of Deerpark, Orange County, and NYSDOT specifications.
- B. Protect workers and provide for safe and convenient public travel by furnishing, erecting, and maintaining all signs, signals, markings, traffic cones, barricades, warning lights, flaggers, and other control devices required for the type of operation being performed.

3.3. INGRESS AND EGRESS

- A. The CONTRACTOR shall provide and maintain, at all times, safe and adequate ingress and egress to and from intersecting streets at existing or new access points, consistent with the work.

3.4. DELINEATION AND GUIDING DEVICES

- A. The CONTRACTOR shall furnish, erect, move and remove delineation and guiding devices as required.

3.5. SIGNS

- A. All existing street signs, delineators, and their supports within the Contract limits shall be maintained for the duration of the Contract by the CONTRACTOR.
- B. The CONTRACTOR, with prior written approval of the ENGINEER, may remove existing signs, markers and delineators, and their supports that interfere with their construction operations. The CONTRACTOR will then store, protect, clean, and immediately replace them as directed in a location approved by the ENGINEER.

3.6. CONSTRUCTION SIGNS

- A. The CONTRACTOR shall furnish and erect, move and remove signs as directed by the ENGINEER.

3.7. ACCESS TO FIRE HYDRANTS AND FIRE ALARM BOXES

- A. Free access shall be maintained to every fire hydrant, fire alarm box, and standpipe connection. No obstruction will be allowed at any time within 15 feet of any fire hydrant.

- B. Where materials are placed in the vicinity of a fire hydrant or a fire alarm box, and to such height as to prevent the same from being readily seen, the position of such hydrant or fire alarm box shall be indicated by suitable signals, both day and night.

3.8. PARKING

- A. Parking areas shall be designated and regulated to ensure free entry to and egress from the site.

++END OF SECTION++

SECTION 01 57 13

EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1. SCOPE

- A. The CONTRACTOR shall prepare and implement a site-specific Soil Erosion and Sediment Control (SESC) Plan meeting the requirements of the DEPARTMENT's "SPDES General Permit for Stormwater Discharges from Construction Activities GP-0-20-001".
- B. The CONTRACTOR shall establish temporary and permanent run-on, run-off, erosion, slope protection and sediment controls and maintain the features as necessary in compliance with the site-specific Erosion and Sediment Control Plan.
- C. As required, the CONTRACTOR shall furnish, install, maintain, and remove (following establishment of permanent stabilization) all erosion and sediment control measures required to achieve the objectives of the site-specific Erosion and Sediment Control Plan, including the permanent and temporary erosion and sediment control measures as directed by the ENGINEER and as applicable and necessary, for all areas within the project limits and affected areas outside the project.
- D. The CONTRACTOR is responsible for preventing migration of sediment into drainage inlets, catch basins, Tributary and adjacent properties during construction. The performance of CONTRACTOR's sedimentation controls is subject to approval by the ENGINEER.
- E. The ENGINEER will inspect the project site weekly to document the CONTRACTOR's compliance with the requirements of the approved Erosion and Sediment Control Plan. If greater than 5 acres are disturbed, the project site shall be inspected two times per week. The CONTRACTOR shall remedy any deficiencies noted in such inspections.

1.2. SUBMITTALS

- A. CONTRACTOR's Erosion and Sediment Control Plan: The CONTRACTOR shall submit an Erosion and Sediment Control Plan for the ENGINEER's approval. The Plan shall substantively comply with NYSDEC General Permit 0-20-001, "SPDES General Permit for Stormwater Discharges from Construction Activity" and apply the requirements of the State guidelines to the CONTRACTOR's proposed means and methods. Specific information shall be provided, such as (but not limited to):
 - 1. Specific products to be used.
 - 2. Specific locations and alignments of silt fencing, diversion swales, straw bales, erosion control blankets, construction entrances, and other proposed features.
 - 3. A sequence of construction operations to minimize the area of open soil exposed at any one time.

4. Compliance Information: the Signed Certification Statement and Identity of “Trained CONTRACTOR”.

1.3. ENVIRONMENTAL REQUIREMENTS

- A. The CONTRACTOR shall take care when using hydrants or other significant water sources to ensure that any spillage is adequately controlled and directed towards a lawful outlet or stored for disposal.
- B. If using a hydrant, CONTRACTOR shall comply with all relevant fire district rules or ordinances regarding hydrant use, including obtaining permits for use, metering, water removal after use if required during cold seasons, etc.

PART 2 - PRODUCTS

2.1. GENERAL

- A. All products shall, at a minimum, comply with the requirements of New York State Standards for Soil Erosion and Sediment Control (latest version).

PART 3 - EXECUTION

3.1. SESC IMPLEMENTATION

- A. The CONTRACTOR shall implement, at a minimum, the measures necessary to achieve the objectives of GP-0-20-001, including, but not limited to:
 1. Silt fence along the perimeter of the work area prior to initial site disturbance.
 2. Storm drain inlet protection.
 3. Temporary stabilization of exposed areas and staged materials (as needed), no more than three days after exposing or stockpiling soils
 4. Annual rye mixed with permanent vegetation to promote rapid stabilization.
 5. Heavy straw mulch over newly seeded areas.
 6. Temporary poly sheeting cover secured over all stockpiles.
- B. The CONTRACTOR shall respond to any maintenance or additional work directed by ENGINEER and/or DEPARTMENT within 24 hours of notification.
- C. The CONTRACTOR shall be responsible for correcting any damage done by inadequate or ill-managed SESC measures. The repairs shall comply with all local regulations, Contract Drawings, and Technical Specifications.
- D. The SESC measures shall be maintained until completion of the Work unless otherwise directed by ENGINEER.

- E. After final completion of the project and when authorized by the ENGINEER, all SESC measures shall be removed and disposed off-site by the CONTRACTOR at a disposal facility approved by ENGINEER.

3.2. INSPECTION

- A. On a weekly basis, following a significant weather event (0.5 inches of rain or more within 24 hours), or at any evidence of failure of any SESC measure, the CONTRACTOR's inspector shall inspect all SESC measures for compliance with the approved site-specific Erosion and Sediment Control Plan.
- B. The CONTRACTOR shall repair and maintain the approved SESC measures in good working order until completion of the Work.

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SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1. SCOPE

- A. This section includes procedures for transportation and off-site disposal or recycling of wastes.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of the Work
- B. Section 01 45 29.13 – Testing Laboratory Services Furnished by CONTRACTOR
- C. Section 02 61 13 – Excavation and Handling of Contaminated Materials
- D. Section 31 32 14 – Ex-Situ Soil Stabilization

1.3. REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.
 - 1. U.S. Code of Federal Regulations (CFR)
 - a. 40 CFR 262 1993 Standards Applicable to Generators of Hazardous Waste.
 - b. 40 CFR 761 Polychlorinated Biphenyls (PCBs), Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
 - 2. State of New York Codes, Rules, and Regulations (NYCRR)
 - a. 6 NYCRR Part 371 Identification and Listing of Hazardous Wastes.
 - b. NYCRR Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters, and Facilities.
 - c. 6 NYCRR Part 375 Environmental Remediation Programs
- B. For this site, Environmental Protection Agency (EPA) Hazardous Waste Generator I.D. information is as follows:

EPA I.D.	Number NYD064337298
Installation Name	NYSDEC - ID #336001
Installation Address	430 US Rt 209 Huguenot, NY 12746

1.4. SUBMITTALS

- A. Treatment Storage or Disposal Facility (TSDF) information, including name, address, contact, and permit information.
- B. Waste profiles generated by the CONTRACTOR.

- C. Recycling facility information, including name, address, contact, and permit information.
- D. Written confirmation from TSDF of acceptance of waste prior to shipment offsite.
- E. Submit a Transportation Plan as a part of the CONTRACTOR's general Work Plan.
- F. Valid New York State 6NYCRR Part 364 Waste Transporter Permit and USEPA transporter identification numbers.
- G. Submit the following as part of the project record documents:
 - 1. Analytical characterization results as specified in 02 24 23 – Sampling and Analysis.
 - 2. Signed waste profile information submitted to disposal facility and letter indicating acceptability of the waste.
 - 3. Signed bills of lading for salvaged or recycled materials.
- H. Certified weight tickets, manifests, bills of lading, etc. for all waste streams disposed off-site.
- I. Legible scans of all completed manifests and bills of lading, in Portable Document Format (PDF).

1.5. TRANSPORTATION PLAN REQUIREMENTS

- A. The Transportation Plan shall include at a minimum:
 - 1. Type, condition, and average daily number of vehicles to be used.
 - 2. Travel routes and time and weight restrictions.
 - 3. Decontamination methods for vehicles, equipment, and containers.
 - 4. Emergency response plans.
 - 5. A list of all shippers and their federal and state transporter ID numbers.
 - 6. Proposed method of measurement (i.e., certified scale location and on-site scale).

1.6. PERMITS AND REGULATIONS

- A. Comply with all municipal, county, state, and federal regulations regarding transportation of hazardous, non-hazardous, or recyclable materials. These include, but are not limited to:
 - 1. Trucks used for transportation of material for disposal off site shall be permitted pursuant to 6 NYCRR Part 364.
 - 2. Vehicle operator possession of a commercial driver's license with hazardous materials endorsement (if applicable).
 - 3. Registration of vehicle as a hazardous waste carrier (if applicable).
 - 4. Utilization of shipping papers or hazardous waste manifests (40 CFR 262 and 6 NYCRR Part 372).
 - 5. Proper marking and placarding of vehicles in accordance with 49 CFR 172.
 - 6. Placement of emergency response procedures and emergency telephone numbers in vehicle, and operator familiarity with emergency response procedures.
 - 7. Compliance with load, height, and weight regulations.
 - 8. Compliance with requirements associated with EPA Hazardous Waste Generator I.D. number.

1.7. DISPOSAL FACILITIES

- A. Hazardous and Non-Hazardous Waste
 - 1. Facilities must have valid federal/state permits appropriate for the waste being disposed. Permits must be valid during the entire project period.
 - 2. Facilities must be in good legal standing with no significant violations, corrective actions, or other environmental conditions that could affect satisfactory operation.
 - 3. The disposal facility must comply with policies adopted by DEPARTMENT, or with applicable regulations.

- B. Recycling/Salvage Facilities
 - 1. Facilities must have valid federal/state permits appropriate for the waste being disposed. Permits must be valid during the entire project period.
 - 2. Facilities must be in good legal standing with no significant violations, corrective actions, or other environmental conditions that could affect satisfactory operation.
 - 3. The facility must comply with policies adopted by the DEPARTMENT and with applicable regulations.
 - 4. CONTRACTOR shall recycle railroad lines in accordance with all railroad and state requirements, including:
 - a. Statement from the railroad company and/or property owner that the railroad materials removed from the site have been released for recycling by the CONTRACTOR.

1.8. SPECIAL PROJECT PROCEDURES

- A. CONTRACTOR shall be responsible for all special use taxes for in-state and out-of-state waste disposal or recycling, including but not limited to host municipality fees and special district user or local taxes.

PART 2 - PRODUCTS

2.1. MATERIALS AND EQUIPMENT

- A. Equipment supplied shall be in good repair and good working condition. Equipment and machinery delivered to the site, including haul trucks, that have visible oil and hydraulic fluid leaks will not be allowed on site.

- B. Trucks used for transportation of hazardous materials for off-site disposal shall be watertight and permitted pursuant to 6 NYCRR Part 364. Plastic sheeting, solid tarpaulin or other means shall be used to cover each vehicle transporting materials off-site.

- C. Provide an on-site certified scale, that is sufficient to handle the size and expected volume of trucks. The scale must be certified by the Albany County Office of Weights and Measures (Consumer Affairs) (518-447-7581). Provide the County notice 10 business days prior to calibration for inspector to witness and certify.

PART 3 - EXECUTION

3.1. VEHICLE LOADING AND DECONTAMINATION

A. General

1. Vehicles leaking materials or dripping liquids in any amount will not be permitted to leave the site. CONTRACTOR shall amend or dry soils as necessary to ensure vehicles do not leak.
2. All waste materials, debris, and contaminated materials shall be completely covered with a solid tarpaulin, or otherwise completely enclosed to protect material from precipitation and prevent loss of material or dust during transportation. Mesh covers or mesh tarpaulins will not be allowed. Cover shall be appropriately secured before the vehicle leaves the decontamination station.

3.2. MEASUREMENT

- A. Upon entering and leaving the site, each transport vehicle shall be weighed on the project scale to determine tare and loaded weights, respectively. ENGINEER will observe the process to determine the amount of material being removed from the site.
- B. A printed ticket with the time, date, vehicle number, and tare weight and a separate ticket with the same information except with total vehicle weight and net weight of material being transported for disposal shall be obtained. A copy of both tickets shall be given directly to ENGINEER as they are produced.
- C. Measured gross weight of the vehicle or calculated net weight of material outside the certified capacity of the scale or beyond the rated capacity of the vehicle will not be accepted by ENGINEER and CONTRACTOR shall not allow such a load to exit the site.

3.3. MANIFESTING

- A. The CONTRACTOR shall generate and complete all pre-printed manifest forms and bills of lading required for DEPARTMENT for proper transportation and disposal of all materials.
- B. The CONTRACTOR shall comply with 40 CFR 262 in completion and submittal of the Hazardous Waste Manifests. The Hazardous Waste Manifests for the transportation and disposal of waste removed from the site shall include all information in accordance with 49 CFR 172.101.
- C. DEPARTMENT or ENGINEER will sign the special waste or hazardous waste manifest for DEPARTMENT, which is the generator.
- D. Place on the manifest all information and data required by both the waste generator and transporter.
- E. CONTRACTOR is responsible for proper distribution of manifests and bills of lading.

3.4. TRANSPORTATION

- A. CONTRACTOR shall be responsible for all actions to remediate spills in transit.
- B. Prior to shipment of hazardous wastes off the project area, CONTRACTOR shall confirm by written communication from the designated transporter(s) that they are authorized to deliver the manifested waste to the designated TSDF or other receiving facility.
- C. CONTRACTOR shall be responsible for obtaining permits and authorizations necessary to use the selected shipping routes. Comply with restrictions imposed by local governmental agencies regarding use of the routes.
- D. Materials shall be transported only at the times and by the routes indicated in the approved Transportation Plan. Drivers deviating from the approved route or otherwise not complying with Transportation Plan requirements will not be allowed to return to the project site.

3.5. REPORTING

- A. Manifests
 - 1. The completed Hazardous Waste Manifests shall be submitted by CONTRACTOR to ENGINEER with a copy to be forwarded to DEPARTMENT. The CONTRACTOR shall provide a legible scan to the ENGINEER in PDF.
- B. Certificates of Disposal
 - 1. For waste materials not considered hazardous waste, provide certificates of disposal from a properly permitted disposal facility, as accepted by the DEPARTMENT. Provide Certificates of Disposal for all waste streams shipped off site.
 - 2. The Certificates of Disposal shall be submitted to ENGINEER within 30 calendar days of the shipment of wastes off site.
- C. Bill of Lading
 - 1. Items and materials that have been recycled or salvaged shall only require a signed bill of lading or receipt of materials and quantity received.
- D. Weight tickets must be obtained from the disposal facility and submitted to ENGINEER prior to payment after disposal. Disposal facility weight tickets will be used to compare vehicle weights leaving the site and arriving at the disposal facilities. Pending review of the tickets, discrepancies will require follow-up as determined by DEPARTMENT. CONTRACTOR is ultimately responsible for paying for discrepancies.

++END OF SECTION++

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SECTION 02 21 13

SURVEY

PART 1 - GENERAL

1.1. SCOPE

- A. This section describes the performance of survey work associated with the project which include:
1. Surveys for payment purposes including but not limited to;
 - a. Pre- and post-construction topographic
 - b. Characterization sampling location map
 - c. Pre-construction and Post-construction facility mobilization and demobilization sampling locations for CONTRACTOR operations such as;
 - 1) Decontamination facilities
 - 2) Support zones
 - 3) Stockpile areas
 - 4) Contact water staging and treatment areas
 2. Survey limits of excavations, utility closures, and other physical features where work was performed or that remains at the site.
 3. Survey limits to provide mark out of all identified cultural resources. Detail to be presented in the CONTRACTOR's Work Plan as approved by the ENGINEER.
- B. HORIZONTAL AND VERTICAL CONTROL
1. Reference horizontal and vertical control points to the permanent site control monuments, as provided by the surveyor, to an accuracy of one part in ten thousand.
 2. Provide grade and offset stakes to control the location and depth of excavation, fill, and restoration work. Survey the location and elevation of all excavation and fill limits.
- C. TOPOGRAPHIC SURVEY MAP
1. The surveyor shall develop a base map at a scale of 1 inch = 40 feet, maximum with 1-foot elevation contours upon which the surveyor shall plot the required survey information for each required submittal.
 2. Mapping shall conform to the National Map Accuracy Specifications and shall bear the seal of a licensed professional land surveyor registered in New York. Map shall contain a title block with the name, address, and the seal and signature of the registered surveyor. As-Built drawings shall include labeled contour lines, property line locations, horizontal grid systems, cross-sections and details modified to show As-Built conditions, details and cross-sections not on original drawings, and any field changes of elevations, dimensions, and details.
 3. New and existing contour information shall be combined on the survey. All initial contour information in the electronic file replaced by new work shall be deleted in the final submission.

4. Indicate locations of physical features on the site including: utilities, roadways, culverts, manholes, utility poles, fences, gates, drainage ditches, monitoring wells, piezometers, leachate pipes, tanks, benchmarks and other significant items.
5. The survey will contain a written description of the metes and bounds limits for adjoining properties for Environmental Easement purposes. A draft example of the easement language to be included will be provided to the surveyor by the ENGINEER/DEPARTMENT.
6. Indicate on a separate drawing: excavation limits and sampling points.

D. COORDINATE LIST

1. Compute the coordinates of each surveyed point on the New York State Plane Coordinate System East Zone using the 1983 North American Datum (NAD83). The elevations shall be on the North American Vertical Datum of 1988 (NAVD88).

E. SITE CONTROL

1. For the purposes of this project, site controls have been provided as shown on the drawings. If any previously established control points are disturbed, they shall be restored by the CONTRACTOR. Restoration of the site controls shall meet the following requirements:
2. Site control monuments shall be of similar type and size as original. Site control monument elevations shall be referenced to a 1983 North American Vertical Datum (NAVD88) 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 shall be reviewed by the ENGINEER for acceptability.

F. SURVEY NOTES

1. The CONTRACTOR shall record all field work in a clear, legible, and complete manner. The Field Notes shall contain a complete description of the nature and location of the new and existing points. The record shall also include a sketch of the point locations and the monument witness points.

G. PRE-EXISTING CONDITION DOCUMENTATION

1. The CONTRACTOR shall perform a digital photograph and digital video record of all work areas prior to construction. Surface features, road conditions, vegetation details, residence properties, and adjacent areas shall be thoroughly documented, and that documentation shall be provided to the ENGINEER prior to construction for acceptance as .jpg, and .wav files on CD-ROM.

1.2. SUBMITTALS

- A. The credentials of the surveyors performing the project survey work. Survey work shall be performed by or under the review of a New York State Licensed Land Surveyor (LLS).
- B. The submittals described below are minimum requirements for surveying. Additional surveys needed to document quantities for payment will also be performed as part of the surveying requirements.

1. Photographic Documentation
 - a. Photograph and video record (in high definition) all pre-construction site conditions, including; adjacent residences, commercial and recreational properties, front lawns, foliage, driveways, sewer grates, slope soils, surface and above grade utilities, appurtenances, guardrails, and trees.
 - b. Document completed work areas and pre-existing site conditions.
2. Drawings
 - a. Initial Topographic Map
 - 1) Provide a topographic map of site property and surrounding properties in the limits of work, excavation limits, restoration limits, roads around the site to be heavily traveled by the CONTRACTOR, and utilities prior to site disturbance. Show surveyed information in a state plane coordinate list. One-foot contours and a 1-inch to 40-foot scale are required.
 - 2) Temporary Site Benchmark locations with horizontal and vertical control and coordinates are provided on the Contract Drawings.
 - b. Survey information of critical remedial features and locations
 - 1) Locate physical features (below grade or above grade) that have been uncovered or that remain at the site. These shall become part of the final As-Built drawings of the remediation. Items to be surveyed include, but are not limited to are former pits, capped areas, vaults, trenches, utilities, remedial areas, sampling locations, foundations, fences, excavations, subgrade, finished grading, and restoration areas.
 - c. Post Excavation Survey
 - 1) Upon completion of excavation the CONTRACTOR shall provide a post excavation survey.
 - 2) The CONTRACTOR shall submit quantity estimates and back-up survey data and calculations to support review of contract quantities by the ENGINEER prior to payment for this item.
 - 3) Location of all confirmation or documentation sample points.
 - d. Post ISS Survey
 - 1) Upon completion of ISS the CONTRACTOR shall provide a post ISS survey.
 - 2) The CONTRACTOR shall submit quantity estimates and back-up survey data and calculations to support review of contract quantities by the ENGINEER prior to payment for this item.
 - 3) Location of all ISS core sample points.
 - e. Post ESS Survey
 - 1) Upon completion of ESS the CONTRACTOR shall provide a post ESS survey.
 - 2) The CONTRACTOR shall submit quantity estimates and back-up survey data and calculations to support review of contract quantities by the ENGINEER prior to payment for this item.
 - f. Final Survey
 - 1) Upon completion of the final backfill of materials, grading and restoration of all disturbed surfaces, the CONTRACTOR shall provide a final survey.

- 2) The status of the survey and title search is provided to the CONTRACTOR in draft. Upon completion of the restoration work the survey shall be finalized for submission to the ENGINEER by the CONTRACTOR.
 - 3) The CONTRACTOR shall submit quantity estimates and back-up survey data and calculations to support review of contract quantities by the ENGINEER prior to payment for this item. Final location and elevation of all construction areas, including vegetation.
 - 4) Location of all confirmation or documentation sample points.
3. Post Construction Records
- a. JPG files for all digital photographs and MPEG or WAV files for high definition video on compact disc.
 - b. Most current version of AutoCAD and Adobe Acrobat 9.0 or higher compatible electronic files of all surveys (provide data in acceptable electronic format).
 - c. Field Data
 - 1) Submit the original final survey book (hard bound) upon completion of each phase of survey work. Include all field notes, notations, and descriptions used and compiled during the field survey. Photocopies or carbon copies are not acceptable.
 - d. Coordinate List
 - 1) Final coordinate list in New York State Plane coordinates of all survey points with specific coordinates and elevations (provide data in .txt, .xls, or .csv format via acceptable electronic media.
 - e. Quantity Calculations
 - 1) All calculations required supporting the requests for CONTRACTOR Application Payments (CAPs) and verifications of volumes, areas, and lengths involved.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1. GENERAL

- A. The following surveys must be conducted during the Project and will form the basis of measurement for payment of most cubic yard, linear foot, and square foot pay items:
 1. An initial site survey to establish and verify existing site conditions, permanent or fixed structures and general physical features to properly lay out the work as shown on the Contract Drawings.
 2. Spot elevations and locations shall be established and surveyed as necessary to ensure that work is installed to the grades shown on the Drawings, including spot elevations of any drainage structures.
 3. Following soil/waste excavations, the limits shall be surveyed to document the volumes of material that have been removed, as a base survey for measurement of materials.
 4. Following completion of ISS, the limits shall be surveyed to document the volumes of material that have been solidified, as a base survey for measurement of materials.

5. Following completion of the ESS, the limits shall be surveyed to document the volumes of material that have been stabilized, as a base survey for measurement of materials.
 6. The final grading of the site areas.
- B. All work in this section shall be performed by a licensed professional land surveyor registered to practice in the State of New York.

++END OF SECTION++

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SECTION 02 24 23

SAMPLING AND ANALYSIS

PART 1 - GENERAL

1.1. SCOPE

- A. This section discusses the performance of sample collection, preservation, handling, transport, analytical results reporting, quality control and validation of analytical results.
- B. The CONTRACTOR shall provide all equipment and materials deemed necessary to collect the specified samples.
- C. Confirmation samples shall be collected in-situ upon completion of excavation. Category B deliverables and Electronic Data Documents (EDDs) shall be provided to the ENGINEER within 10 business days from sample collection.
- D. Imported fill and topsoil samples shall be collected and the results shall be provided to the ENGINEER within 5 business days after sample collection and prior to delivery on-site. Category B deliverables and EDDs shall be provided to the ENGINEER within 10 business days from sample collection.
- E. The CONTRACTOR shall collect and analyze samples after treatment for comparison to Section 02 24 23 Attachment A – State Pollutant Discharge Elimination System (SPDES) Permit Program Requirements.
 - 1. Dewatering fluids or contact water shall be handled in accordance with Section 44 00 05 – Dewatering and Contact Water Treatment.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 44 00 05 – Dewatering and Contact Water Treatment
- C. Section 44 10 00 – Community Air Monitoring

1.3. SUBMITTALS

- A. Analytical Laboratory Credentials
- B. Analytical Results and EDDs in NYSDEC EQuIS Version 5.6.4, or latest version, that may be required as a result of permit(s), or CONTRACTOR work plan requirements. The CONTRACTOR shall upload all generated data to the DEPARTMENT's EQuIS Database.
- C. CONTRACTOR's Site-Specific Sampling and Analysis Plan (SAP) containing:
 - 1. A chart and/or map indicating the approximate number of samples to be collected and the matrices of each, including anticipated QA/QC samples.

2. Procedures for sample collection.
 3. Description of sampling equipment and maintenance procedures for equipment.
 4. Procedures for decontamination of sampling equipment.
 5. Describe all site-specific sample collection techniques and establish a naming convention for the samples for consistency.
 6. Sample handling, labeling and regulatory compliance procedures for shipping.
 7. Training requirements for environmental sampling for new employees and refresher training requirements for current employees.
- D. CONTRACTOR's Site-Specific Quality Assurance Project Plan (QAPP) containing:
1. Project Scope and data quality objectives for the site.
 2. Organizational chart, including a designated QA Officer (QAO). Copies of resumes for project personnel.
 3. Site map indicating sample locations.
 4. 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.
 5. Specific limits of concern for each analyte for each matrix to be sampled.
 6. The matrix specific method detection limit that must be obtained for each of the analytes and matrices listed.
 7. The analytical laboratory to be used and evidence of their certification for all subcategories of solid and hazardous waste and non-potable water under the NYSDOH Environmental Laboratory Approval Program (ELAP).
 8. Criteria for laboratory selection and audits.
 9. Criteria for field sampling audits.
 10. Record maintenance and archive methods.
 11. Review and checking procedures for the sampling plan and the analytical results reporting.
 12. Analytical data reporting requirements, including EDD.
 13. Data validation procedures and reporting.
- E. Data Validator's Credentials for Data Usability Summary Reports (DUSRs).
- F. DUSRs.
- G. Pretreatment application and acceptance for the State Pollutant Discharge Elimination System (SPDES) Permit Program, County of Albany, New York.
- H. Batch analysis reports prior to any discharge of collected CONTRACTOR contact water to area surface waters. Category B deliverables and EDDs shall be provided to the ENGINEER within 10 business days from sample collection.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1. GENERAL

- A. Samples shall be collected in accordance with the CONTRACTOR's approved Site-Specific SAP and QAPP.
 - 1. The ENGINEER shall approve the sample location prior to, and be present during, sampling.
- B. Sampling and analytical methods and procedures for confirmatory/documentation sampling shall be detailed in accordance with the CONTRACTOR's approved Site-Specific SAP and QAPP.
- C. The ENGINEER will require an electronic copy of analytical results, including QA/QC results within one business day (24 hours) upon laboratory receipt of samples. The Analytical Services Protocol (ASP) Category B reporting and deliverable package, in PDF, shall be supplied within ten business days of sample collection.
- D. If sampling results are not within acceptable QA/QC ranges (as stated in the CONTRACTOR's QAPP), the CONTRACTOR shall collect and analyze an additional sample(s) at the location(s) of the sample(s) not meeting QA/QC requirements. A maximum of one business day (24 hours) turnaround time is required on any additional sampling required. Additional samples shall be at CONTRACTOR's cost.
- E. DUSRs shall be prepared by an independent third party data validator hired by the CONTRACTOR. Guidance for the development of DUSRs is shown in Section 02 24 23 Attachment B – Guidance for Development of Data Usability Summary Reports.
- F. The ENGINEER will review the CONTRACTOR's submittal of the report and Analytical Data Deliverable package. If sampling data quality is found not to meet QA/QC requirements as stated in the CONTRACTOR's QAPP after this review, the CONTRACTOR shall be responsible for all costs to secure sampling data quality even if initial results indicated that the data met all QA/QC requirements.

3.2. METHODS

- A. All analyses shall be performed in accordance with the most current edition of the United States Environmental Protection Agency (USEPA) approved methodologies for soil and groundwater.
- B. Analytical parameters are presented on the attached Table 02 24 23-1.
- C. Reporting Limits: All samples shall be analyzed to a reporting limit at or below the applicable standard, criteria or guidance values.

3.3. QA/QC SAMPLES

- A. QA/QC samples shall be collected by matrix at the frequency of 5% of the total number of samples collected.
- B. Additional QA/QC samples requirements shall be as follows:
 - 1. Trip blanks are not required for soil samples.

3.4. VALIDATION

- A. Data validation will be performed by an independent third party data validator hired by the CONTRACTOR. Determining whether a sample meets criteria can be made prior to completion of data validation.

3.5. TURNAROUND TIMES

- A. Turnaround time shall be as shown on the Table 02 24 23-1 below.
- B. Turnaround time is defined as the time between the validated time of sample receipt (VTSR) by the laboratory and the date the analytical results are received by the ENGINEER.
- C. Samples shall be received at the laboratory within 24 hours of collection.

++END OF SECTION++

SECTION 02 24 23 ATTACHMENTS (FOLLOW)

**TABLE 02 24 23-1
SAMPLING SUMMARY**

Sample Description	Specification Section	Matrix	Parameters	Turnaround Time	Frequency	Anticipated No. of Samples
Imported Fill Characterization	31 23 23	Soil	VOCs, SVOCs, Metals, Pesticides, PCBs, Hexavalent Chromium, Cyanide, Silvex, PFAS	TBDC ¹	1 per 500 CY	11
Confirmation Sample (Upland)	02 61 13	Soil	PCBs, cadmium and lead	24 hours	1 bottom sample per 30 ft grid and 1 sidewall sample per 30 linear feet of excavation sidewall	442 Total
Chip Sample	01 11 13	Concrete or other porous media	PCBs	TBDC ¹	1	1
Wipe Sample	01 11 13	Steel pipes or other non-porous media	PCBs	TBDC ¹	1 per remediation area	1
Pre and Post Construction Staging Areas and Access Roads	31 14 13.16 02 51 29	Soil	PCB, cadmium and Lead	TBDC ¹	Note 3	Note 3

Sample Description	Specification Section	Matrix	Parameters	Turnaround Time	Frequency	Anticipated No. of Samples
ESS Disposal	31 23 14	Treated Soils for Off-Site Disposal	TCLP Metals (Lead and Cadmium)	TBDC ¹	As required by the TSDF and applicable regulations	TBDC ¹
ESS Performance	31 23 14	Treated soils remaining on-site	Total and SPLP Metals (Lead and Cadmium)	TBDC ¹ approved by the Department prior to placement	1 every 250 CY for the first 1,000 CY, followed by 1 every 500 CY or 1 per day thereafter, whichever is greater	TBDC ¹
Non-Hazardous Material/Soil/Debris Disposal Characterization	01 74 19	Waste/Debris	As required by the approved disposal facility and applicable regulations; Total and TCLP Lead and Cadmium	TBDC ¹	As required by the TSDF and applicable regulations	As required by the TSDF and applicable regulations
Hazardous Material/Soil/Debris Disposal Characterization	01 74 19	Waste/Debris	As required by the approved disposal facility and applicable regulations; Total and TCLP Lead and Cadmium	TBDC ¹	As required by the TSDF and applicable regulations	As required by the TSDF and applicable regulations

Sample Description	Specification Section	Matrix	Parameters	Turnaround Time	Frequency	Anticipated No. of Samples
Treated Construction Water Discharge (SPDES compliance)	44 00 05	Water	Per SPDES equivalency permit requirements	TBDC ¹	Weekly to support continuous discharge and/or batch release (up to 72,000 GPD allowed), performance batch testing of 20,000 gallons (influent and effluent)	To be determined in field.

NOTES:

1. TBDC = to be determined by CONTRACTOR and approved by the ENGINEER.
2. TSDF = Treatment, Storage, and Disposal Facility
3. Preconstruction sampling of paved areas is not required; however, the Department reserves the right to request post construction sampling if paved areas underlying staging pads are breached through performance of the work or spills and/or visual impacts are observed along temporary access roads. Pre-construction sampling of subgrade, access roads is at the discretion of the contractor, corrective actions as necessary shall be covered under Demobilization scope of work

SECTION 02 24 23 ATTACHMENT A
STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) PERMIT
PROGRAM REQUIREMENTS

EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

OUTFALL	DISCHARGE TYPE	LATITUDE/ LONGITUDE	RECEIVING WATER and CLASS	EFFECTIVE	EXPIRING
001	Treated Remediation Wastewater	41° 25' 2.89" N 74° 37' 34" W	Trib. to Neversink River, Class C(T)	4/18/2023	5/31/2025

The discharges from the treatment facility shall be limited and monitored by the operator as specified below:

Outfall and Parameters	CAS No.	Monthly Avg. Limits	Daily Max Limits	Units	Minimum Monitoring Requirements		FN
					Measurement Frequency	Sample Type	
Outfall 001							
Flow	NA	Monitor	72000	GPD	Continuous	Recorder	
pH	NA	-	6.0 - 9.0	SU	Monthly	Grab	1
Temperature	NA	Monitor	Monitor	Deg C	Monthly	Grab	1
Total Suspended Solids	NA	20	40	mg/L	Monthly	Grab	1
Total Dissolved Solids	NA	Monitor	Monitor	mg/L	Monthly	Grab	1
Barium	7440-39-3	Monitor	Monitor	ug/L	Monthly	Grab	1
Cadmium, Total	7440-43-9	Monitor	1.7	ug/L	Monthly	Grab	1
Chromium, Total	7440-47-3	Monitor	Monitor	ug/L	Monthly	Grab	1
Fluoride	16984-84-8	Monitor	1500	ug/L	Monthly	Grab	1
Lead, Total	7439-92-1	Monitor	2.4	ug/L	Monthly	Grab	1
Vanadium	7440-62-2	Monitor	22	ug/L	Monthly	Grab	1
Zinc, Total	7440-66-6	Monitor	62	ug/L	Monthly	Grab	1
PCB, sum	Multiple	Monitor	0.20	ug/L	Monthly	Grab	1,2,3,4

Footnotes:

1. The measurement frequency of parameters listed on this page shall be Monthly following a period of 12 (twelve) consecutive weekly sampling events showing no exceedances of the stated discharge limitations. If discharge limitation of any parameter listed on this page exceeds the stated limit, the measurement frequency for all parameters listed on this page shall again be weekly, until a period of four consecutive sampling events showing no exceedances at which point monthly monitoring may resume.
2. Discharge limit is set at the Practical Quantitation Limit (PQL). The actual standard or guidance value concentration is below this limit. Analysis of this parameter shall be conducted using the most stringent USEPA approved method in accordance with 40 CFR 136.



Site Name: C&D Power Systems

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3. PCBs:

- a. The treatment plant operator must monitor this discharge for PCBs using USEPA laboratory method 608. The laboratory must make all reasonable attempts to achieve a Minimum Detection Level (MDL) of 0.065 µg/l.
- b. 0.065 µg/l is the discharge goal. The treatment plant operator shall report all values above the MDL (0.065 µg/l per Aroclor). If the level of any Aroclor is above 0.065 µg/l, the treatment must evaluate the treatment system and identify the cause of the detectable level of PCBs in the discharge.
- c. If the Department determines that effluent monitoring results above can be prevented by implementation of additional measures as proposed by the treatment plant operator in footnote 3.b above, and approved by the Department, the treatment plant operator shall implement such additional measures.

4. Applies to the sum of these substances.

Additional Conditions:

1. Discharge is not authorized until such time as an engineering submission showing the method of treatment is approved by the Department. The discharge rate may not exceed the effective or design treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to:

Lisa Gorton
Division of Environmental Remediation
NYSDEC, 625 Broadway, Albany, New York 12233- 7015,
Tel: 518-402- 9574

With a copy sent to:

Regional Water Engineer, Region 3
100 Hillside Avenue, Suite 1W, White Plains, New York, 10603-2860
Phone: (914) 428-2505

2. Samples and measurements, to comply with the monitoring requirements specified above, must be taken from the effluent side of the final treatment unit prior to discharge to the receiving water body unless otherwise noted above.
3. Only site generated wastewater is authorized for treatment and discharge.
4. 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.
5. Both concentration (mg/l or µg/l) and mass loadings (lbs/day) must be reported to the Department for all parameters except flow and pH.

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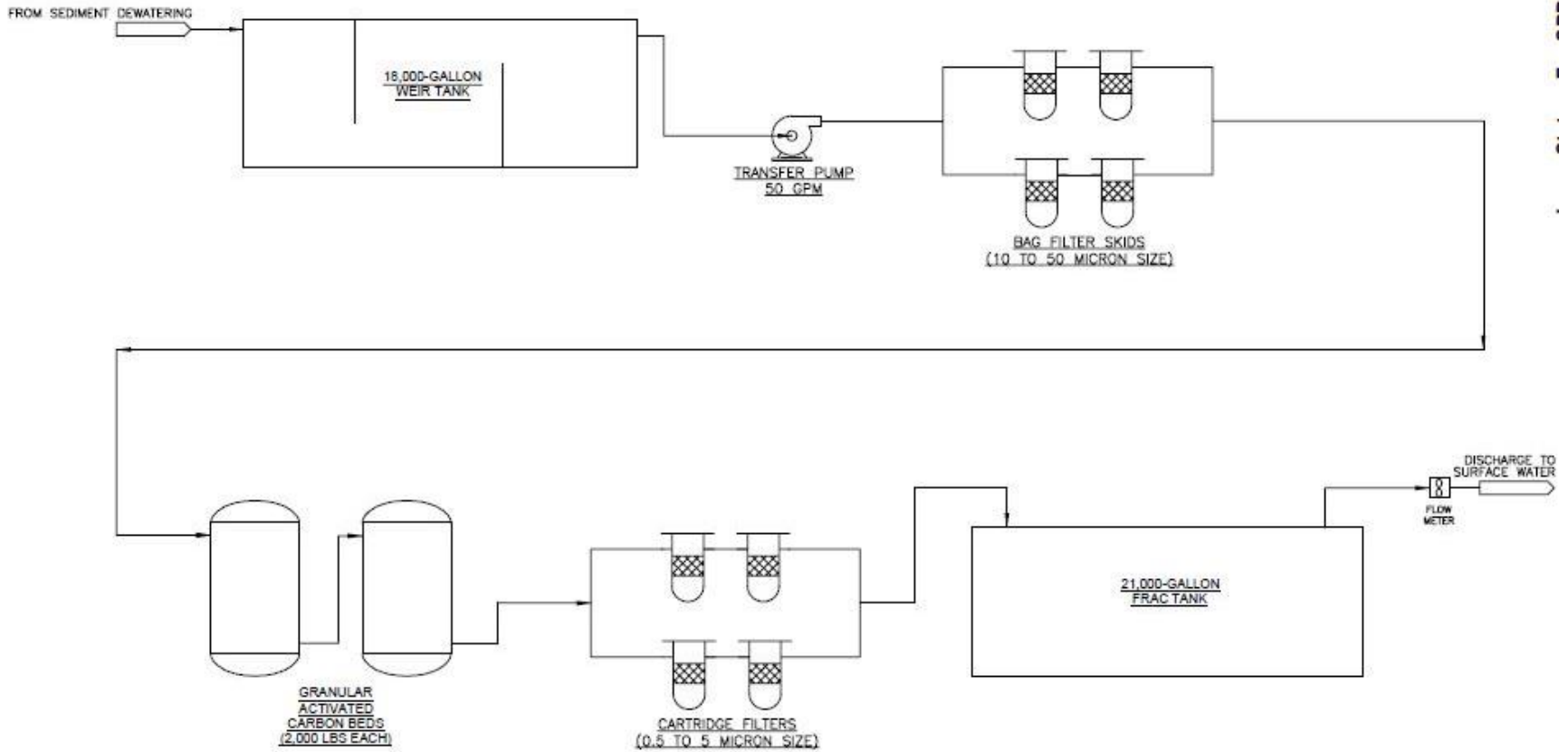
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6. Any use of corrosion/scale inhibitors, biocidal-type compounds, or other water treatment chemicals used in the treatment process must be approved by the department prior to use.
7. This discharge and administration of this discharge must comply with the substantive requirements of 6NYCRR Part 750.



Department of
Environmental
Conservation

MONITORING LOCATIONS



SECTION 02 24 23 ATTACHMENT B

GUIDANCE FOR THE DEVELOPMENT OF DATA USABILITY SUMMARY REPORTS (DUSRS)

PART 1 - GENERAL

1.1. BACKGROUND

- A. The Data Usability Summary Report (DUSR) provides a thorough evaluation of analytical data with the primary objective to determine whether or not the data, as presented, meets the site/project specific criteria for data quality and data use.
 - 1. The development of the DUSR must be carried out by an experienced environmental scientist, such as the project Quality Assurance Officer, who is fully capable of conducting a full data validation. The DUSR is developed from:
 - a. New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP) for Category B Deliverables;
 - b. A United States Environmental Protection Agency (USEPA), Region 2 validation guidance documents.
 - 2. The DUSR and the data deliverables package will be reviewed by qualified DEC staff. In most cases, it is expected that this review will result in agreement or with only minor differences that can be easily reconciled. If data validation is found to be necessary (e.g. pending litigation) this can be carried out at a later date on the same data package used for the development of the DUSR.

1.2. PERSONNEL REQUIREMENTS

- A. The Environmental Scientist preparing the DUSR must hold a bachelor's degree in a relevant natural or physical science or field of engineering and must submit a resume to the DER documenting experience in environmental sampling, analysis and data validation.

1.3. PREPARATION OF A DUSR

- A. The DUSR is developed by reviewing and evaluating the analytical data package. During the course of this review the questions applicable to the analysis being reviewed must be asked and answered in the affirmative.
 - 1. Is the data package complete as defined under the requirements for the NYSDEC ASP Category B deliverables?
 - 2. Have all holding times been met?
 - 3. Do all the QC data; blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?
 - 4. Have all of the data been generated using established and agreed upon analytical protocols?
 - 5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?
 - 6. Have the correct data qualifiers been used? They are:

7. All data qualifiers consistent with the current NYSDEC ASP or latest revisions.
8. Any Quality Control exceedances must be specifically noted in the DUSR and the corresponding QC summary sheet from the data package should be attached to the DUSR?

1.4. DOCUMENTING THE VALIDATION PROCESS IN THE DUSR

- A. Once the data package has been reviewed and the above questions asked and answered, the DUSR proceeds to describe the samples and the analytical parameters.
 1. Data deficiencies, analytical protocol deviations and quality control problems are identified and their effect on the data is discussed.
 2. The DUSR shall also include recommendations on resampling/reanalysis.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

+++END OF ATTACHMENT++

SECTION 02 51 29

DECONTAMINATION STATION

PART 1 - GENERAL

1.1. SCOPE

- A. The CONTRACTOR shall design, provide and operate decontamination station(s) as described. The decontamination station(s) shall be used to clean all vehicles leaving the site. The location(s) of decontamination stations shall be included in the CONTRACTOR's excavation work plan and shall be approved by the ENGINEER.

1.2. RELATED SECTIONS

- A. Section 44 00 05 – Dewatering and Contact Water Treatment

1.3. DECONTAMINATION STATION

- A. The CONTRACTOR shall provide an area(s) for decontamination. The decontamination area(s) shall be a properly graded area that allows no material to leave the containment area. The CONTRACTOR shall be able to pump the decontaminated wash water to a portable truck or tank for future treatment, if necessary. The CONTRACTOR may use a mobile decontamination pad or multiple pads as required to facilitate the work across the site. The CONTRACTOR shall maintain orange snow fencing around the perimeter of the decontamination pad(s).
- B. The CONTRACTOR shall sample the decontamination pad(s) area prior to construction.
- C. A high pressure wash system shall be provided in the equipment decontamination pad and shall provide a minimum pressure of 150 psi and a 0.5 gallons per minute flow and a nominal temperature of 180°F. Wash units for equipment decontamination shall be self-contained, portable high pressure water and detergent induction units.
- D. Wash water from the equipment decontamination shall drain into a sump. The water shall be pumped from the sump to the onsite treatment system and treated according to Section 44 00 05 – Dewatering and Contact Water Treatment.
- E. The CONTRACTOR shall be responsible for the provision of an adequately equipped decontamination area(s) which shall meet the following requirements:
 - 1. Adequate dimensions to contain wash water and debris from the largest sized vehicles to be utilized in this Contract. All vehicles and construction equipment leaving the Exclusion Zone shall be decontaminated.
 - 2. Curb or berm the perimeter and provide splash guards.
 - 3. An impermeable membrane, 20 mil HDPE membrane or approved equal, required to prevent seepage into the ground.
 - 4. Washed stone designed to promote drainage during decontamination activities. Grading sufficient to convey wash water away from the decon pad area to the sump.

5. Sumps, pumps, pumping facilities, and temporary storage facilities to be adequate for anticipated use.
 6. Temporary storage facility may be mobile tankers or suitable fixed tanks. Fixed tanks shall be located within a secondary containment area capable of containing 100% of the tank capacity, or 110% of the largest tank where the secondary containment area holds more than one tank. The secondary containment barrier shall have a permeability of not more than 1.0×10^{-7} cm/sec.
 7. All facilities to be at minimum 5 feet clear of the Contamination Reduction Zone boundary.
 8. The decontamination area shall be located at the exit of the Exclusion Zone.
 9. There shall be side wall panels, six feet high minimum, on two sides to prevent overspray.
- F. The CONTRACTOR shall clean the decontamination area after daily use.
- G. The CONTRACTOR shall regularly containerize, characterize, stage, and transport all generated decontamination water and sediments off-site for treatment and disposal at a licensed and permitted facility.
- H. No trucking of soils on public right of way. All spilled or tracked soils will require immediate cleanup or corrective action.
- I. Upon completion of the work, the CONTRACTOR will decontaminate, remove, and properly dispose of, all decontamination station(s) utilized by the CONTRACTOR and shall do all necessary earthwork and grading to restore the areas disturbed to their original condition or to other improved condition as directed by the ENGINEER.

1.4. SUBMITTALS

- A. Shop drawings of the decontamination pad shall be submitted to the ENGINEER for approval

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

++ END OF SECTION ++

SECTION 02 61 13

EXCAVATION AND HANDLING OF CONTAMINATED MATERIAL

PART 1 - GENERAL

1.1. SCOPE

- A. Excavate on-site contaminated material as indicated on the Contract Drawings.
- B. Vacuum-excavate contaminated material from the sump in the shed and the vault as indicated on the Contract Drawings.
- C. Manage, dewater, and amend excavated contaminated materials to prepare them for stockpiling and disposal as detailed in Specification Section 31 32 14.
- D. Sample batched/stockpiled soils for TSDF compliance (waste characterization).
- E. Dispose excavated contaminated material as detailed in the Drawings and Specification Section 01 74 19 - Construction Waste Management and Disposal.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 14 00 – Miscellaneous Work Restrictions
- C. Section 01 76 50 – Nuisance Controls Management and Corrective Measures
- D. Section 02 24 23 – Sampling and Analysis
- E. 31 32 14 – Ex-Situ Stabilization
- F. Section 44 10 00 – Community Air Monitoring

1.3. SUBMITTALS

- A. Excavation Work Plan: The CONTRACTOR shall submit to the ENGINEER a plan that details the CONTRACTOR's operations and shall include all activities that relate to the excavation.
- B. The plan shall also address (but is not limited to) the following requirements:
 - 1. The proposed equipment.
 - 2. Locations of stockpiles, temporary access roads, traffic patterns and other planned features.
 - 3. How excavation, staging, disposal, sampling and backfill will be coordinated. Describe and/or illustrate the planned sequence for excavation activities. Provide

estimates of the maximum quantity of material to be temporarily stockpiled during each phase of the excavation.

4. The Plan shall be included in the Project Work Plan as described in Section 01 11 13.
5. Provide demarcation, exclusion fencing and/or protective matting to protect all identified cultural resources. Detail to be presented in the CONTRACTOR's Work Plan as approved by the ENGINEER.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1. GENERAL

- A. All equipment supplied shall be in good repair and good working condition. Equipment and machinery shall not be delivered to the site with visible oil or hydraulic fluid leaks.
- B. Equipment used for the excavation of contaminated material shall be decontaminated prior to backfill of clean material.
- C. Excavation shall be performed in a manner that prevents migration of contaminants from one area to another.
- D. The CONTRACTOR shall conduct excavation operations to provide continuous drainage and minimal water accumulation, and shall direct surface water away from the excavation areas.
- E. Excavation of contaminated materials and waste shall not be conducted during periods of precipitation, unless directed by the ENGINEER.
- F. The excavation and disposal or relocation of soil may result in odors requiring adjustments to the CONTRACTOR's methods of construction. The CONTRACTOR shall anticipate odor problems and shall provide control measures as needed to reduce odors quickly.
- G. The CONTRACTOR shall notify the ENGINEER of unexpected subsurface conditions, and discontinue work in the area until notified to resume work.
- H. All paved areas and other surficial structures shall be protected.
- I. Provide demarcation, exclusion fencing and/or protective temporary construction matting to protect all identified cultural resources. Detail to be presented in the CONTRACTOR's Work Plan as approved by the ENGINEER.
- J. The CONTRACTOR shall minimize the area of excavation to be left open at any time.
- K. Sufficient and suitable barricades, warning lights, flood lights, signs, etc. to protect life and property shall be installed and maintained at all times until the excavation has been

backfilled and graded to a safe and satisfactory condition. At a minimum, work zones shall be delineated using high visibility polyethylene fencing at least four feet in height.

- L. Excavated soil shall be disposed as detailed in the Drawings and Specification Section 01 74 19 - Construction Waste Management and Disposal.

3.2. EXCAVATION SEQUENCING AND CONFIRMATION SAMPLING

- A. The CONTRACTOR shall be responsible for all sampling and analyses as may be required for confirmation sampling under this Contract. All sampling shall be conducted with the ENGINEER present.
- B. The CONTRACTOR shall not demobilize the excavation equipment until all sample results have been reviewed and accepted by the ENGINEER.

3.3. QUALITY CONTROL

- A. The CONTRACTOR shall reduce the potential for cross-contamination of uncontaminated areas with contaminated soils by properly decontaminating all equipment prior to moving out of a contaminated area.

3.4. LOADING

- A. The CONTRACTOR shall not load material into the vehicles when it is raining.

++END OF SECTION++

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SECTION 03 34 00

CONTROLLED LOW STRENGTH MATERIAL

PART 1 - GENERAL

1.1. SCOPE

A. This section includes the controlled low strength material that will be used to abandon subsurface piping as indicated on the Contract Drawings.

1.2. RELATED SECTIONS

A. Section 01 11 13 – Summary of Work

B. Section 01 74 19 – Construction Waste Management and Disposal

C. Section 02 61 13 – Excavation and Handling of Contaminated Material

1.3. REFERENCES

A. Except as shown or specified otherwise, the Work of this Section shall conform to the requirements of Specifications for Structural Concrete for Buildings ACI 301-16 of the American Concrete Institute.

1.4. DEFINITIONS (AMENDMENTS TO ACI 301, CHAPTER 1):

A. Controlled Low Strength Material (CLSM) Fill can also be called by different names including but not limited to: Flowable Fill, Controlled Density Fill, Flowable Fly Ash and Fly Ash Slurry.

1.5. SUBMITTALS

A. Submittals Package: Submit product data for design mix and materials for CLSM specified below at the same time as a package.

B. Product Data:

1. CLSM design mix with name and location of batching plant.
2. Portland Cement: Brand and manufacturer's name.
3. Fly Ash: Name and location of source, and DOT test numbers.
4. Air entraining Admixture: Brand and manufacturer's name.
5. Water reducing Admixture: Brand and manufacturer's name.

C. Quality Control Submittals:

1. Certificates: Affidavit required under Quality Assurance Article.

D. Placement procedures, including means to eliminate air pockets, trapped materials, and to document complete filling of all piping.

1.6. QUALITY ASSURANCE

A. Furnish and place a CLSM as directed by the ENGINEER. Provide CLSM containing cement and water. At the CONTRACTOR's option, it may contain fly ash, aggregate, or chemical admixtures in any proportions such that the final product will meet the strength and flow consistency requirements included in this specification.

B. CLSM batching plant shall be currently approved as a concrete supplier by the New York State Department of Transportation and shall have a minimum of 1 year experience in the production of similar products.

C. Fly ash supplier shall be currently approved as a fly ash supplier by the New York State Department of Transportation.

D. Source Quality Control: The ENGINEER reserves the right to inspect and approve the following items, at his own discretion, either with his own forces or with a designated inspection agency:

1. Batching and mixing facilities and equipment.
2. Sources of materials.

E. Affidavit from materials supplier.

1.7. STORAGE

A. Store materials so as to insure the preservation of their quality and fitness for the Work. Materials, even though accepted prior to storage, are subject to inspection and shall meet the requirements of the Contract before their use in the Work.

PART 2 - PRODUCTS

2.1. MATERIALS (AMENDMENTS TO ACI 301, CHAPTER 2):

A. Cement: ASTM C 150, Type I or II Portland cement.

B. Water: Potable.

C. ACI 301, Section 4,2,1,2 - Aggregates:

1. The aggregate for CLSM shall meet the requirement of ASTM C 33, except 100% passing the 3/4" sieve and a maximum of 20% passing the No. 200 sieve.

D. Fly Ash: ASTM C 618, including Table 1A (except for footnote A), Class F except that loss on ignition shall not exceed 4.0 percent.

E. Chemical Admixtures:

1. Darafill by W. R. Grace and Co., 62 Whittemore Avenue, Cambridge, MA 02140, (617) 876-1400, www.graceconstruction.com.
2. Eucon Easy Fill by the Euclid Chemical Company, 19218 Redwood Road, Cleveland, OH 44110, (800) 321-7628, www.euclidchemical.com.
3. MasterCell 25 by Master Builders Technologies, 23700 Chagrin Boulevard, Cleveland, Ohio 44122-5554, (800) 628-9990, www.masterbuilders.com.
4. Sika Lightcrete Powder, Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071, (201) 933-8800, www.sikaconstruction.com.

2.2. CLSM MIXTURE

A. CLSM, Hand Tool Excavatable: Provide mix with compressive strength of 100 psi or less when measured 28 days from placement. Minimum air content at time of placement shall be 20%.

B. In the absence of one year strength data, the cementitious content shall be a minimum of 150 lbs./cy, the minimum air content shall be 20%, and fresh unit weight shall be a maximum of 115 lbs./ft³, except where specified.

PART 3 - EXECUTION

3.1. EXAMINATION AND PREPARATION

A. The CONTRACTOR shall fill piping with CLSM as shown on the Contract Drawings.

B. Examine conditions of substrates and other conditions under which work is to be performed and notify the State, in writing, of circumstances detrimental to the proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

C. Do not deposit CLSM in water.

D. Hardened CLSM, forms, and earth which will be in contact with fresh CLSM shall be free from frost at the time of CLSM placement.

++END OF SECTION++

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SECTION 31 11 00

SITE CLEARING

PART 1 - GENERAL

1.1. SCOPE

- A. The CONTRACTOR shall furnish all labor, materials, equipment and incidentals required to perform all clearing tasks as shown on the Contract Drawings and specified herein.
- B. Clearing shall be performed as specified in this section.

1.2. RELATED SECTIONS

- A. Section 33 00 00 – Project, Relocation, and Abandonment of Existing Utilities

1.3. GENERAL

- A. Limits of clearing shall be within the excavation limits shown on the Contract Drawings, and in any additional areas as directed by the ENGINEER.
- B. The CONTRACTOR shall dispose of above-ground vegetation at an approved off-site disposal facility.
- C. Burning will not be permitted.
- D. Provide demarcation, exclusion fencing and/or protective matting to protect all identified cultural resources. Detail to be presented in the CONTRACTOR's Work Plan as approved by the ENGINEER.

1.4. SUBMITTALS

- A. Waste management procedures for clearing wastes generated, shall be submitted as part of the CONTRACTOR's Transportation and Disposal Plan.

PART 2 - PRODUCTS

2.1. TREE PRUNING COMPOUND

- A. Tree pruning compound: waterproof, antiseptic, elastic and free of kerosene, creosote and other substances harmful to plants.

PART 3 - EXECUTION

3.1. EXAMINATION

- A. Existing Conditions: The existence and location of underground and above ground utilities indicated as existing are not guaranteed. Before beginning clearing operations, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

3.2. PREPARATION

- A. Protection of Existing Facilities and Site Features
 1. The CONTRACTOR shall keep roads and sidewalks free of dirt and debris at all times.
 2. The CONTRACTOR shall protect land resources, utility lines and poles, underground utilities and other existing facilities at all time during clearing work. Protection of these resources shall be in accordance with Section 33 00 00 Protection, Relocation and Abandonment of Existing Utilities.
 3. The CONTRACTOR shall immediately notify the ENGINEER of any damage to or an encounter with an unknown existing utility, or any damage to any known utility.
 4. Protection of trees and other vegetation directed by the ENGINEER to remain shall be maintained until all work in the vicinity has been completed. The CONTRACTOR shall not operate heavy equipment or stockpile materials within the root protection zone of existing trees.
 5. When work is completed, all dead and downed trees shall be removed and chipped.
 6. The CONTRACTOR shall restrict construction activities to those areas within the limits of construction designated on the Contract Drawings AND within public rights-of-way. Adjacent properties and improvements thereon, public or private, which become damaged by construction operations, shall be promptly restored to their original condition, to the full satisfaction of the property owner.
 7. Provide demarcation, exclusion fencing and/or protective matting to protect all identified cultural resources. Detail to be presented in the CONTRACTOR's Work Plan as approved by the ENGINEER.

3.3. CLEARING

- A. Clearing: Removal of above-grade trees, stumps, shrubs, brush, down timber, rotten wood, rubbish, any other vegetation, concrete, pipe and objectionable material resting on or protruding through the ground.
- B. The CONTRACTOR shall top and limb trees prior to felling.
- C. Stumps shall be cut off flush with ground surface.
- D. The CONTRACTOR shall conduct clearing in a manner that prevents, to the extent possible, soil or soil-like material from being collected with cleared material.
- E. Trees and brush may be chipped and stockpiled for reuse on site for planting and mulching.

- F. Stumps, roots, root balls, and other subsurface vegetation in contaminated areas shall be handled in the same manner as contaminated soils or sediments. If additional excavation is required in contaminated areas, stumps, roots, root balls, and other subsurface vegetation in contaminated areas shall be excavated or ground to the final depth of excavation.
- G. Clearing operations shall be conducted in a manner to prevent falling trees from damaging existing features such as the perimeter fence. Damage outside these limits caused by the CONTRACTOR's operations shall be corrected at the CONTRACTOR's expense.
- H. Cleared vegetation shall not be used in backfills or structural embankments.

+END OF SECTION++

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SECTION 31 14 13.16

SOIL STOCKPILING

PART 1 - GENERAL

1.1. SCOPE

- A. Transport, place, and construct sediment handling areas as indicated on the Contract Drawings.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 74 19 - Construction Waste Management and Disposal
- C. Section 02 24 23 – Sampling and Analysis
- D. Section 02 61 13 – Excavation and Handling of Contaminated Material
- E. Section 44 10 00 – Community Air Monitoring

1.3. SUBMITTALS

- A. The CONTRACTOR shall submit sediment handling area locations in the Excavation Work Plan as described in Section 02 61 13.
- B. Supplier's information for Amendment Material.
- C. Geomembrane manufacturer's information.

PART 2 - PRODUCTS

2.1. STOCKPILE MATERIALS

- A. Stockpile bottom liners shall have a minimum thickness of 20 mils and shall be constructed of polyethylene sheeting or other impermeable geomembrane (poly) that is resistant to weathering and degradation due to contact with impacted materials for the duration of the work. Stockpile liners shall be furnished with prefabricated shop-welded seams, and dimensions maximized to provide the largest manageable sheet.
- B. Stockpile covers shall have a minimum thickness of 10 mils and shall be constructed of polyethylene sheeting or other impermeable geomembrane (poly) that is resistant to weathering and degradation due to contact with impacted materials for the duration of the work

- C. Stockpile covers shall be of sufficient length and width to cover each stockpile with no more than two sheets.
- D. Stockpile covers and liners shall be free of holes or tears.
- E. The CONTRACTOR shall furnish weights of sufficient quantity and weight to hold the stockpile cover in position.

PART 3 - EXECUTION

3.1. STOCKPILING - GENERAL

- A. All stockpiles containing impacted material shall be constructed within the Facility property as shown on the Contract Drawings. No stockpiles may be constructed in any other location without approval of the ENGINEER.
- B. The CONTRACTOR shall coordinate stockpiling and loading work concurrently with the loading and excavation work. The CONTRACTOR shall determine the need for stockpiles of impacted material based on the Work sequencing and required loading truck rates.
- C. The CONTRACTOR shall be responsible for constructing all stockpiles, furnishing all waste containers, and for the inspection, maintenance, modification and repair of stockpiles and waste containers required for the Work.

3.2. NON-TSCA STOCKPILE CONSTRUCTION

- A. The CONTRACTOR shall remove hard stones and other debris from the stockpile footprint and provide a smooth surface to protect the bottom liner from puncture and tearing under the anticipated loading. Contractor shall anchor the liner as required to prevent displacement. Contractor shall install a perimeter berm around the stockpile and slope the liner to a sump for drainage.
- B. Stockpile shall not exceed 14 feet in height. Side slopes shall not exceed a slope of 1 horizontal to 1 vertical (1H:1V).
- C. Stockpiles shall be located no closer than 50 feet to the site perimeter.
- D. Install stockpile cover in a manner that minimizes wrinkles. Overlap adjacent poly panels a minimum of 4 feet.
- E. The CONTRACTOR shall provide run-on controls to divert storm water away from stockpiles. Contractor shall collect accumulated leachate from lined stockpile areas and manage the water as necessary for discharge to on-site treatment system as directed by the ENGINEER.

3.3. TSCA STOCKPILE CONSTRUCTION

- A. The CONTRACTOR shall remove hard stones and other debris from the stockpile footprint and provide a smooth surface to protect the bottom liner from puncture and tearing under the anticipated loading. Contractor shall anchor the liner as required to prevent displacement. Contractor shall install a perimeter berm using concrete bin blocks around the stockpile and slope the liner to a sump for drainage.
- B. Stockpile shall not exceed 15 feet in height. Side slopes shall not exceed a slope of 1 horizontal to 1 vertical (1H:1V).
- C. Stockpiles shall be located no closer than 50 feet to the site perimeter.
- D. Install stockpile cover in a manner that minimizes wrinkles. Overlap adjacent poly panels a minimum of 4 feet.
- E. The CONTRACTOR shall provide run-on controls to divert storm water away from stockpiles. Contractor shall collect accumulated leachate from lined stockpile areas and manage the water as necessary for discharge to on-site treatment system as directed by the ENGINEER.

3.4. STOCKPILE MANAGEMENT

- A. The CONTRACTOR shall place and anchor stockpile covers to prevent impacted materials from becoming airborne. Ballast shall be placed along all edges and overlaps no greater than 10 feet apart.
- B. The CONTRACTOR shall minimize vehicular traffic on the cover and liner.
- C. The CONTRACTOR shall protect the cover and liner from damage.
- D. The CONTRACTOR shall inspect temporary stockpiles daily.

++ END OF SECTION ++

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SECTION 31 23 23

BACKFILL

PART 1 - GENERAL

1.1. SCOPE

- A. Perform all backfilling operations as specified in this section. Backfilling is described as the placement and compaction of geotextile, fill materials, topsoil, and stone installed on approved subgrades.
 - 1. Select backfill operations include establishing subgrades and final grades.
- B. Furnish all personnel, equipment, tools, materials, and services needed to perform all backfilling operations, specified herein and as shown on the Contract Documents.
- C. The CONTRACTOR, for imported materials, is responsible for supplying and stockpiling clean, suitable backfill materials that comply with 6NYCRR Part 375-6.7(d) and providing/obtaining necessary approvals for import as required by DER-10 (including collection and laboratory analysis of samples where required).
- D. Stockpiled materials shall be segregated and protected from all off and on-site sources of contamination. Maintain Quality Control throughout the supply chain and submit Composite Samples in compliance with Section 02 24 23 – Table 1 – Sample Collection Requirements Table prior to placement.
- E. The CONTRACTOR is responsible for protecting all partially and fully completed Work.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 45 29.13 – Testing Laboratory Services Furnished by Contractor
- C. Section 03 34 00 – Controlled Low Strength Material
- D. Section 31 32 13 – Ex-Situ Soil Stabilization
- E. Section 32 30 00 – Site Restoration

1.3. SUBMITTALS

- A. As part of the Work Plan Submittal, provide details relative to the backfilling operations. The Backfill Plan shall include a list of proposed compaction equipment, material types, and proposed backfill sources with a schedule for pre-qualification for fill. Information will be subject to review and acceptance by the ENGINEER.

- B. All sources shall be pre-qualified with approval by the ENGINEER two weeks prior to planned placement with imported materials. The CONTRACTOR shall submit the following supplier qualifications:
1. A statement from the material supplier indicating the imported backfill source location and that the materials meet the requirements of NYSDEC DER-10.
 2. The name and location of each proposed source of common backfill, topsoil, and stone.
 3. Name and location of an approved source and the NYSDOT Source Number.
 4. Certification from suppliers that all fill materials, topsoil, and stone to be supplied for use on this project shall meet the requirements of this section, and that the materials are free from chemical contamination. Certification shall be received and approved by the ENGINEER prior to delivery of fill materials to the Site. Where required by DER-10 based on gradation of the material, material submittals shall also include appropriate laboratory analytical reports as further detailed in this specification.
- C. CONTRACTOR shall provide testing services in conformance with Section 01 45 29.13, and Section 02 24 23 Table 1.
1. The CONTRACTOR shall collect and submit a representative sample of all backfill materials to an independent Testing Laboratory. The Independent Testing Laboratory(ies) must be certified under the NYSDOH Environmental Laboratory Approval Program (ELAP) (for soil chemistry analyses).
 2. CONTRACTOR shall submit analytical reports for all backfill materials which include:
 - a. The ENGINEER will use the lesser of commercial or protection of groundwater Restricted Soil Cleanup Objectives, according to 6NYCRR Part 375-6.8(b), as the basis for acceptance of the fill materials for use in on-site areas.
 - b. The ENGINEER will use protection of groundwater Unrestricted Soil Cleanup Objectives, according to 6NYCRR Part 375-6.8(b), as the basis for acceptance of the fill materials for use in off-site areas.
 - c. Sampling and analysis results for each fill material in accordance with the analytical and sample frequency requirements of DER-10 Table 5.4(e)10, and a minimum of one sample from each borrow source.
 3. The CONTRACTOR shall analyze each backfill material for Per- and Polyfluoroalkyl Substances (PFAS) by USEPA Method 537, modified.
 - a. Gradation results for each specified material from the chosen source and supplier.
 - b. Liquid and plastic limit of the fill materials, except stone/granular soils.
 - c. The moisture density curve for each source of fill material.
 - d. Compaction testing results, including field density measurements.
 - e. Proof that the topsoil meets the Specifications in Section 2.4 below.

- D. Copies of all compaction test reports for each of the following backfill materials shall be submitted to the ENGINEER after placement and compaction and prior to placement of additional material.
 - 1. Common Fill
 - 2. Subbase

1.4. QUALITY ASSURANCE

- A. Final grading of each material must be verified by a NYS licensed surveyor and agreed to by the ENGINEER.
- B. Sampling of materials to be brought to the site are to be done in accordance with Section 01 45 29.13 and Section 02 24 23.
- C. Sampling and testing of imported backfill material products as specified.

PART 2 - PRODUCTS

2.1. STREAM BACKFILL

- A. Stream Backfill shall be well-graded granular material, obtained from approved natural deposits and unprocessed except for the removal of unacceptable material and stones larger than the maximum size permitted. It shall be substantially free from loam and other organic matter, clay, and other fine or harmful substances. Stream backfill shall meet the following gradation:
 - 1. Small cobble 30-35%
 - 2. Course and fine gravel 30-35%
 - 3. Fine to coarse sand 30-35%
- B. pH (6.5 to 7.5)
- C. An organic carbon content of 4 – 12% (7 to 21 percent organic matter) on a dry weight basis.
- D. Any material containing vegetative or organic matter, such as peat, organic silt, sod, ice, snow, or other deleterious material is not acceptable. Material that contains large voids when placed, which will allow migration of the overlying and surrounding materials and soil is also not acceptable.
- E. Stream Backfill shall be additionally tested beyond the requirement of Section 1.3(C) as needed to demonstrate the material meets NYSDEC Division of Fish, Wildlife and Marine Resources Class A Freshwater Sediment Guidance Values, and be collected in accordance with Section 02 24 23, Table 02 24 23-1.

2.2. COMMON FILL

- A. Common fill shall be well-graded granular material, obtained from approved natural deposits and unprocessed except for the removal of unacceptable material and stones larger than the maximum size permitted. It shall be substantially free from loam and other organic matter, clay, and other fine or harmful substances. Common fill shall meet the following gradation:

- 1. Gradation:

Sieve	Percent Passing by Weight
2-inch	100
No. 40	0-70
No. 200	0-15

- B. Any material containing vegetative or organic matter, such as peat, organic silt, sod, ice, snow, or other deleterious material is not acceptable. Material that contains large voids when placed, which will allow migration of the overlying and surrounding materials and soil is also not acceptable.
- C. Common fill shall be tested and meet the minimal criteria of 6NYCRR Part 375-6.7(d) and be collected in accordance with Section 02 24 23, Table 02 24 23-1.

2.3. CRUSHED CONCRETE

- A. Crushed concrete shall consist of concrete removed from on-site excavations, sized, and crushed to a maximum dimension in any direction of 3 inches.

2.4. AMMENDED FILL SEDIMENTS AND SHALLOW SURFACE SOILS

- A. This section applies to shallow subsurface soils and sediments that will be amended and pre-treated for placement in the lagoon as ISS cover under the cap.
- B. Materials must meet SPLP requirements as specified in Section 31 32 14 – Ex-Situ Soil Stabilization.

2.5. SUBBASE

- A. Subbase shall meet the material requirements of NYSDOT Specification 304.11 Type 1.
- B. The subbase shall meet the minimal criteria specified in 6NYCRR Part 375-6.7(d) and be collected in accordance with Section 02 24 23, Table 02 24 23-1.
- C. Subbase will meet the following criteria:

- 1. Gradation:

Sieve Size Designation	Percent Passing by Weight
3-inch	100
2-inch	90-100
¼-inch	30-65
No. 4	5-40
No. 200	0-10

2. Magnesium Sulfate Soundness Loss after four cycles of 20 percent or less.
3. Plasticity Index of 5.0 or less of material passing the ¼ inch sieve.
4. Not more than 30 percent by weight of material retained on a ½ inch sieve are flat or elongated. A flat or elongated particle is defined as having a greatest dimension more than three times its least dimension.

2.6. CRUSHED STONE COVER

A. Crushed stone cover shall meet material requirements of NYSDOT Specification 304.12 Type 2.

B. Crushed Stone Cover will meet the following criteria:

1. Gradation:

Sieve Size Designation	Percent Passing by Weight
2-inch	100
¼-inch	25-60
No. 4	5-40
No. 200	0-10

2. Magnesium Sulfate Soundness Loss after four cycles of 20 percent or less.
3. Plasticity Index of 5.0 or less of material passing the ¼ inch sieve.

C. Not more than 30 percent by weight of material retained on a ½ inch sieve are flat or elongated. A flat or elongated particle is defined as having a greatest dimension more than three times its least dimension.

2.7. TOPSOIL

A. Topsoil shall meet the material requirements of NYSDOT Specification 713-01 Topsoil.

B. The topsoil shall meet the minimal criteria specified in 6NYCRR Part 375-6.7(d) and be collected in accordance with Section 02 24 23, Table 02 24 23-1.

C. Fertile, friable, natural loam, surface soil, capable of sustaining vigorous plant growth, free of any admixture of subsoil, clods of hard earth, plants or roots, sticks or other extraneous material harmful to plant growth. Topsoil will meet the following criteria:

1. Gradation:

Sieve Size Designation	Percent Passing by Weight
1.5-inch	100
1-inch	85-100
¼-inch	65-75
No. 200	Less than 20

2. Clay content of material passing No. 200 sieve not greater than 15 percent, as determined by hydrometer tests.
3. pH 5.0 to pH 7.6 (pH may be amended to meet these limits)
4. Organic content shall not be less than 3 percent or more than 8 percent, as determined by ignition loss (may be amended to meet this requirement).
5. Free of pests and pest larvae.

6. Soluble salt content not greater than 500 ppm.

2.8. GEOTEXTILE NONWOVEN FABRIC

- A. The geotextile material shall be Mirafi 180N manufactured by TC Mirafi of Pendergrass, Georgia, Geotex 861 manufactured by Synthetic Industries of Chickamauga, Georgia, or ENGINEER approved equal. Test results from any sampled roll in the lot, when tested in accordance with ASTM D4759, shall meet or exceed the values listed in Table 1:

TABLE 1 AVERAGE ROLL VALUE RANGES FOR GEOTEXTILE FABRICS			
PROPERTIES	TEST METHOD	UNIT(s)	AVERAGE ROLL VALUE RANGES
Fabric Weight	ASTM D5261	oz./yd ¹	8-8.2
Thickness	ASTM D5199	mils	90
Grab Strength	ASTM D4632	lbs.	205-220
Grab Elongation	ASTM D4632	%	50
Static (CBR) Puncture Strength	ASTM D6241	Lbs.	≥ 500
Permittivity	ASTM D4491	Sec ⁻¹	1.2-1.5
Coef. of Permeability	ASTM D4491	Cm/sec	0.21-0.38
Apparent Opening Size (AOS)	ASTM D4751	US Std. Sieve	80
Flow Rate	ASTM D4491	Gpm/ft.	95-110
UV Resistance	ASTM D4355	%	70
Trapezoidal Tear Strength	ASTM D4533	lbs.	80-95

Notes: 1. Value is percent of minimum grab tensile after conditioning.

- B. The “Non-Woven Geotextile for Demarcation Layer” shall be Mirafi Orange Delineation Nonwoven Geotextile for Visual Barrier, Soil Separation and Drainage 180N/O manufactured by TC Mirafi of Pendergrass, Georgia, Geotex 861 manufactured by Synthetic Industries of Chickamauga, Georgia, or ENGINEER approved equal. Test results from any sampled roll in the lot, when tested in accordance with ASTM D4759, shall meet or exceed the values listed in Table 1.

PART 3 - EXECUTION

3.1. GENERAL PLACEMENT REQUIREMENTS FOR COMMON BACKFILL MATERIALS

- A. The ENGINEER will approve each excavation or area as final before the CONTRACTOR is allowed to place backfill.

- B. Materials may be stockpiled on-site in a controlled area. Adequately cover the stockpiled fill materials to prevent rain or wind erosion.
- C. Material on-site stockpiling shall be coordinated with ongoing site operations.
- D. Following excavation, smoothly grade and compact the exposed subgrade.
- E. Place backfill in designated areas to final grades matching finished elevations shown on the Contract Drawings, unless otherwise indicated or directed by the ENGINEER.

3.2. PLACING FILL

- A. Control and replacement of any loss of fill due to erosion shall be the responsibility of CONTRACTOR.
- B. Fill material may be stockpiled on-site in a location approved by the ENGINEER.
- C. A demarcation barrier/layer shall be placed as depicted on the Drawings to provide a visual delineation between the imported clean fill cap and re-graded historic/alternative imported fill.
- D. All backfill shall be placed in uniform lifts not exceeding 12 inches and compacted to a minimum of 95 percent Standard Proctor as determined by ASTM D698 for imported material.
- E. Re-used on-site material shall be compacted with a minimum of three passes of a vibratory compactor or other approved equivalent. The Contractor shall obtain approval of lift compaction from the Engineer prior to installing subsequent lifts.
- F. Backfill shall be placed at a moisture content adequate to allow effective compaction.
- G. The Contractor shall minimize voids during placement.
- H. Topsoil shall be placed in a six-inch loose lift and compacted lightly to create a smooth surface. Over-compacted topsoil shall be loosened and re-rolled to a smooth surface.
- I. Tolerance for placement – Backfill shall be placed within a tolerance of plus or minus 0.1 foot from the locations, elevations, and grades shown on the Drawings

3.3. GRADING

- A. The surface of excavations and subgrades shall be finished to a smooth and compact surface in accordance with the materials, lines, elevations, and cross sections or elevations shown in the Contract Drawings, or as directed by the ENGINEER. The degree of finish for graded areas shall be within plus or minus one (1) inch of the grades and elevations indicated in the Contract Drawings. Settlement or washing that occurs in graded, topsoiled, or backfilled areas prior to acceptance of the Work shall be repaired and grades re-established to the required elevations and slopes.

- B. During construction, excavations shall be kept shaped and drained. The finished subgrade shall not be disturbed by traffic or other operation and shall be protected and maintained by the CONTRACTOR in a satisfactory condition. The storage or stockpiling of materials on the finished subgrades will not be permitted.

3.4. MAINTENANCE:

- A. Contractor shall protect newly graded areas from traffic and erosion. The Work shall be sequenced to minimize disturbance of completed areas.
- B. Where completed areas are disturbed by subsequent project operations or adverse weather, the Contractor shall fill and reshape eroded areas until acceptance of the Work. Stabilized/restored areas disturbed by the Contractor shall be repaired and restabilized at the Contractor's expense.

+ + END OF SECTION + +

SECTION 31 32 13

IN-SITU SOLIDIFICATION

PART 1 - GENERAL

1.1. SCOPE:

- A. Section Includes:
 - 1. In Situ Solidification of PCB and PCB/metals impacted soil within the lagoon area.
 - 2. Ex-Situ Stabilization of excavation soils from the non-TSCA excavation/removal areas for placement into the on-site disposal area, located within the lagoon excavation footprint.
- B. The Contractor shall provide all designs, submittals, equipment, materials, and manpower to complete the In Situ Solidification (ISS), also to include Ex-Situ Stabilization (ESS) of the excavated soils from the non-TSCA excavations as specified in Section 31 32 14 – Ex-Situ Stabilization and as shown on the Drawings.
- C. An auger mix or an excavator-based (bucket mix) system specifically designed for environmental remediation shall be used. The bucket mix system must be capable of in-situ treatment of target soils to full required depth. Treatment depths are shown on the Drawings. Either an excavator bucket or rotary mixing tool approach may be used for this project.
- D. The ISS/ESS of impacted Site soils is a performance based contract item. The CONTRACTOR's responsibility for soils targeted for ISS treatment includes excavation, managing (to include handling, amending/dewatering for stable on-site disposal, stockpiling, erosion and odor control, and loading) of the ISS/ESS soils (below the Maximum Top of ISS/ESS mass). Appropriate measures to provide the designed Maximum Top of ISS Mass as shown on the Drawings for ISS Treatment shall be included in the CONTRACTOR's price for ISS treatment of soils.
- E. Prior to full scale treatment of impacted soils on the site the CONTRACTOR shall conduct a Field Demonstration of the proposed ISS mix design(s) as described in this section.

1.2. RELATED SECTIONS:

- A. Section 01 45 29.13 - Testing Laboratory Services Furnished by CONTRACTOR
- B. Section 02 21 13 – Survey
- C. Section 31 09 13 – Geotechnical Instrumentation and Monitoring
- D. Section 31 23 14 – Ex-Situ Stabilization
- E. Section 31 23 23 – Backfill

F. Section 40 71 13 – Field Instruments

1.3. REFERENCES:

- A. KEMRON _ C&D Systems Solidification Study Treatability Study Final Report, April 23, 2021.
- B. American Society for Testing and Materials (ASTM)
 - 1. C 150: Standard Specification for Portland Cement.
 - 2. D 5084: Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter.
 - 3. D 1633: Standard Test Method for Compressive Strength of Molded Soil Cement Cylinders.
 - 4. ASTM C150 Standard Specification for Portland Cement
 - 5. ASTM C989-99 Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
- C. American Petroleum Institute (API):
 - 1. 13-A: Specification for Bentonite.
 - 2. 13 B-1: Viscosity and Density.

1.4. DEFINITIONS:

- A. The following definitions are used in this section:
 - 1. Grout - The mixture of reagents and water that shall be injected into the impacted soil.
 - 2. Grout Reagent (ISS Reagent) – Type I/II Portland Cement, Hydrogel Bentonite, Ground Granulated Blast-Furnace Slag (GGBFS) Cement, Enviroblend CS or other material approved by the ENGINEER for solidifying impacted soils.
 - 3. Homogeneous Mixture – A uniform, unvarying, and consistent blend of impacted soil, grout, and liquids, free from NAPL blebs and free from pockets of unmixed materials and free liquids.
 - 4. ISS Design Elevations:
 - a. Maximum Top of ISS/ESS Mass – the maximum elevation to which solidified soil may remain following solidification as shown on the Drawings.
 - b. ISS Base/ISS Main/ISS Boundary (Bottom Elevation for ISS Treatment) – the elevation(s) of the bottom of ISS treatment as shown on the Drawings.
 - 5. ISS Platform/Work Platform – the graded surface of stable soil on which the ISS mixing equipment shall operate.
 - 6. Obstruction – subsurface manmade or natural object that impedes mixing advancement.
 - 7. Overlap Ratio – the ratio between the overlap distance between adjacent ISS cells and the width of the ISS cell.
 - 8. ISS Area – The portion of the Site requiring ISS treatment of soils.
 - 9. Limits of ISS Treatment – The outer or extreme horizontal edge of the ISS Area.

10. ISS Spoil/Swell – the excess material resulting from addition of reagent to the in situ soils, typically a mixture of soil and reagent that “returns” to the top of the cell. ISS Swell and ISS Spoil are used interchangeably in this and other sections.
11. ISS Swell/Spoils Management Excavation – the removal of soils and/or ISS Spoil which remain at an elevation above the Maximum Top of ISS Mass shown in the Drawings. This excavation will encompass the volume of material, required to ensure that at the completion of ISS treatment the top of ISS monolith is consistent with the elevations defined in the Drawings. (Further detail on ISS Swell/Spoils management is provided in section 3.05A below.)
12. ISS Mixer Refusal – a condition that occurs during mixing when the mixing apparatus can no longer be advanced either due to obstruction or soil geotechnical properties, defined as less than 6 inches of penetration over a 10-minute period. CONTRACTOR shall communicate Refusal conditions.
13. Mixing Energy – A measure of the mixing effort for each ISS cell expressed as the number of mixing cycles (i.e., excavator passes, mixer head passes) per ISS cell.
14. Bottom of Cell Elevation – The depth to which the ISS cell was installed as measured to the highest/shallowest point along the bottom surface of the cell.
15. ISS Standby Time – Time in which CONTRACTOR cannot effectively mix soils, measured in hours or days, as approved by the ENGINEER. ISS Standby Time shall not begin until CONTRACTOR has actively worked for 30 minutes to remove any encountered obstruction. This 30 minute period shall not begin until “ISS Mixer Refusal” condition has been confirmed by ENGINEER observation of 10 minutes of mixing with less than 6 inches of advancement. ISS Standby time shall be per ISS mixing rig. ISS Standby time shall not be applicable during remixing of soils due to non-conformance with the performance criteria as defined in section 1.08 below.

1.5. QUALIFICATIONS:

- A. The CONTRACTOR or ISS SUBCONTRACTOR shall have completed at least 3 ISS remediation projects of similar size and scope.
- B. The CONTRACTOR’s or ISS SUBCONTRACTOR’s Project Manager/Superintendent shall have a minimum of 5 years of experience with ISS projects of similar scope, with a minimum of 2 of those years in the role of project Manager/Superintendent.
- C. The CONTRACTOR’s other Key Personnel shall have a minimum of 2 years of experience with ISS projects of similar scope. Other Key Personnel include equipment operators, batch plant operator, ISS rig operator, supervisory Engineering staff, and technical staff involved with the ISS system operation.
- D. Qualifications for SUBCONTRACTOR and SUBCONTRACTOR’s Key Personnel shall be included in the Work Plan submitted in the CONTRACTOR’s bid package.

1.6. SUBMITTALS:

- A. All submittals shall be completed and submitted in accordance with Section 01 33 00 - Submittal Procedures.

- B. The CONTRACTOR shall submit a Work Plan with their bid. At a minimum, the Work Plan shall include:
1. Description and specifications of ISS system, equipment, and processes, including available torque and available down-force applied at mixer tip (if auger or cutter head mixing is used).
 2. ISS Layout Drawing showing the configuration and layout of the ISS system. (The layout of the Batch Plant (ISS System) on Drawing C-02 is conceptual. The CONTRACTOR may propose their own layout based on available equipment.
 3. Proposed mixer size(s) and configuration.
 4. Site map showing the proposed layout and pattern, including overlap ratio between adjacent cells, of the individual ISS cells.
 5. Methods for determining and verifying the coordinates, elevations and depths of the ISS cell limits.
 6. Tables showing installation depth, northing and easting, reference vertical and horizontal datum, affective and actual treatment volume, required reagent quantities and cell limits for each ISS treatment cell.
 7. Estimated production rate for solidification in terms of number of cells and cubic yards per day.
 8. Proposed ISS reagents and design mix proportions.
 9. Sample calculation for theoretical ISS cell indicating required grout quantities.
 10. Methods of controlling and mitigating exhaust, dust, and odor emissions and noise levels generated from the ISS equipment.
 11. Methods for transporting, storing, protecting, and handling reagents, including controls and mitigation for dust and noise.
 12. Detailed description and procedures for preparing reagent batch mixes, including methods to prepare and measure reagents to verify and document proper reagent mix proportions.
 13. Detailed descriptions and procedures for controlling, measuring, monitoring, and documenting the injection of ISS reagents into the ground during each mixing pass.
 14. Detailed descriptions and procedures for monitoring and documenting mixing energy, mixing time, number of passes, and grout addition rates to verify that proper mixing energy is provided throughout the entire volume of the ISS cell and that the resulting ISS cell will be homogeneous.
 15. Detailed description of a field test (Demonstration Test) to demonstrate that the proposed equipment and methods can successfully construct ISS cells to the specified depths and can create a homogeneous mixture of soil and grout meeting specified performance criteria.
 16. Total estimated quantity of water and solidification reagents required for the Work. Required water minimum flow rate and pressure. Proposed water source.
 17. Detailed solidification procedures and sequencing.
 18. Equipment and methods for breaking existing ISS mass into sizes practical for in-situ re-solidification.
 19. Associated dewatering procedures.
 20. Contact water management, treatment and disposal procedures.
 21. Stormwater run-on controls, management and discharge procedures.

22. Detailed descriptions and procedures for CONTRACTORs approach to the ISS swell/spoils management.
 23. Estimated schedule for completion of the Work.
 24. Wash out and grout disposal facilities and practices.
 25. Procedures and materials for freeze protection of the grout pumping/ISS equipment to include flushing procedures to ensure “antifreeze agent” does not become mixed into grout and ISS treated soils.
 26. Any proposed deviations from the Specifications and Drawings.
 27. Spill control measures.
 28. Erosion control measures.
 29. Quality Control sampling methods, standard operating procedures, personnel, and equipment.
 30. Resumes for key personnel assigned to conduct the Work, including the ISS SUBCONTRACTOR Project Manager and Project Superintendent, ISS rig operator, other equipment operators, reagent plant operators, supervisory engineering staff, and other technical staff.
 31. Equipment manufacturer’s specifications and description.
 32. Method to manage/remove subsurface obstructions encountered during the ISS process.
- C. CONTRACTOR shall identify in the Work Plan and maintain sufficient redundant or backup equipment/spare parts to minimize delays attributable to equipment failures. The CONTRACTOR shall include a failure modes and effects analysis and determine systems or components that are likely to fail or require routine maintenance in the course of normal operation for this project. This analysis should determine credible failure modes or maintenance activities, which, if occurred, would result in the inability to measure parameters critical to the performance of the work, or result in significant delays in the work.
- D. CONTRACTOR shall supply detailed configuration and design drawings and plans for Ex-Situ Stabilization (ESS) of the excavated soils from the non-TSCA excavations as portions of the ISS monolith at least two weeks prior to starting the ISS work. These shall include any changes in the reagent mix design, detailed mixing procedures, any variations to the performance criteria and treatment volumes for ESS portions of the ISS monolith.
- E. CONTRACTOR shall provide (electronically, on a form acceptable to ENGINEER) a daily ISS report summarizing daily ISS activities including daily totals and running totals for volume of soil mixed and reagents used. CONTRACTOR shall attach daily grout mixing forms as required by Section 3. ISS daily reports shall be submitted daily no later than 10:00 am the following day and shall include at a minimum the following information:
1. Date and Project Identification.
 2. ISS equipment used; mixer size(s)
 3. Equipment problems/failures/maintenance that affected ISS efforts
 4. List of cells solidified. Running total of number of cells solidified.
 5. Volume of soil solidified that day and as a running total.
 6. ISS Cell Log for each cell solidified. Logs shall include:
 - a. Cell Identification.

- b. Date that work was performed.
 - c. Design and actual bottom elevation of ISS cell.
 - d. Cell (neat) volume (cy).
 - e. Volume of grout injected into the cell (gallons)
 - f. Calculation of grout reagents used, including solids (lbs) and water (gallons).
 - g. Start and finish time.
 - h. Number of mixing passes.
 - i. Mixing energy.
 - j. Mixing time/rate.
 - k. Mixer size and type.
 - l. Any unforeseen Site conditions or equipment problems that affected solidification efforts.
 - m. Any modifications or deviations from the Specifications and Drawings or the Work Plan.
 - n. Any unforeseen Site conditions or equipment problems that affected solidification efforts.
 - o. Obstructions encountered. Notes on the appearance of the mixed material.
 - p. Depth, location, type, and number of quality assurance/quality control (QA/QC) samples collected.
 - q. ISS Standby Time realized as approved by the ENGINEER.
- 7. Quantities of grout reagents received and offloaded including total weight received versus stored.
 - 8. A survey data summary including Northing(s), Easting(s) and as-built top and bottom elevations provided for each cell completed. This will include rendered CADD “surface” files as well as point files (in a format acceptable to ENGINEER) for the installed cells.
 - 9. Any modifications to project schedule.
 - 10. Spoils handling/management and quantities disposed offsite.
 - 11. Any unforeseen project or site conditions that affected solidification efforts.
 - 12. Any modifications or deviations from the Contract Documents or the Work Plan.
- F. CONTRACTOR shall provide a Final ISS Job Summary containing, at a minimum, the following information:
- 1. Quantities of grout reagents delivered to the site and used during the project with backup in the form of certified weigh receipts, bills of lading, flow meter records, or equivalent.
 - 2. Any modifications to the project execution plan.
 - 3. Spoil disposal/handling methods and quantities managed and disposed offsite.
 - 4. Any unforeseen Site conditions or equipment problems that affected solidification efforts.
 - 5. Any modifications to or deviations from the Contract Documents.
 - 6. As-built survey drawings of the lateral extent and top and bottom elevations of the ISS cells and all QA/QC sampling locations. Identify any cells re-solidified during construction. Show locations and identification of all ISS cells on a plan. Provide generated CADD “surfaces” for top and bottom of ISS monolith.
 - 7. Results of all QA/QC test data.
 - 8. Summary of ISS Standby Time realized.

- G. CONTRACTOR shall submit a Mix Design in accordance with the requirements of this specification.

1.7. MIX DESIGN:

- A. The CONTRACTOR shall provide a mix design that specifies the proportions and quantities of reagents and water.
 - 1. The CONTRACTOR is responsible for reviewing the availability geotechnical data to determine the necessary parameters for mix design. Geotechnical data is provided in the PDI Report.
 - 2. The ENGINEER has conducted a treatability study with impacted site soils using varying percentages of Portland Cement (PC), Granulated Blast Furnace Slag (GBFS), Enviroblend CS and Bentonite as reagents. The results of the treatability study are included in the Limited Site Data Document (LSDD). The treatability study results are provided for information purposes only.
 - 3. The Treatability Study indicates that the soils at this site can be successfully solidified/stabilized to meet specified performance criteria using varying combinations of Portland Cement, GBFS, and Enviroblend CS or Bentonite.
 - 4. The solidified soil shall have a SPLP leachability result of less than the NYSDEC Class GA groundwater standards for site related constituents as demonstrated by the treatability study.
 - 5. The CONTRACTOR shall determine the appropriate mix design using the available Treatability Study and QA/QC data as guides. The CONTRACTOR shall be responsible for the effectiveness of the solidified soils in meeting the performance specifications in this section. All treated soils that do not meet the performance criteria of Hydraulic Conductivity, Unconfined Compressive Strength (UCS) and section 1.8 below shall be retreated at no additional cost to the DEPARTMENT.
 - 6. The CONTRACTOR may, at their option and own expense, perform additional bench studies to establish the design mix. The CONTRACTOR may also propose alternative solidification reagents not considered in the ENGINEER's Treatability Study, subject to approval by the DEPARTMENT. The DEPARTMENT can provide representative soil samples for treatability testing.
 - 7. The CONTRACTOR shall bear all costs associated with changes in the mix design and/or construction means and methods needed to achieve the performance criteria, including, but not limited to, sample collection and bench testing.
- B. The water to dry reagent ratio shall be kept as low as practicable so as to minimize generation of ISS spoils.
- C. Based on the results of performance testing of the solidified soil during the course of the work, the CONTRACTOR may elect to modify the solidification mixture proportions, with the approval of the ENGINEER. CONTRACTOR shall not modify the reagent mix proportions without prior written approval from the ENGINEER.
- D. CONTRACTOR shall calculate (on a form acceptable to the ENGINEER) the minimum reagent proportions as follows:

1. Calculate the volume of soil being treated based on the total depth of the impacted soil.
2. Calculate the weight of soil being treated based on the previously calculated volume, using an appropriate unit weight for the soil being solidified.
3. Water and reagent addition shall be in accordance with the mix design.

1.8. PERFORMANCE CRITERIA:

- A. The solidified soil (i.e., soils treated by ISS) shall have permeability less than or equal to 1×10^{-6} cm/s as determined by ASTM D 5084 Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter, latest edition. This criterion represents an upper bound value, and all performance test results shall meet this criterion without exception.
- B. The solidified soil shall have an Unconfined Compressive Strength (UCS) greater than 50 psi after 28 days as determined by ASTM D 1633. The 50 psi criterion represents a lower bound value, and all performance test UCS strength test results shall meet or exceed 50 psi without exception.
- C. The solidified soil shall have no free liquid present, as observed along the break surface of the UCS test specimens.
- D. The CONTRACTOR shall, under the ENGINEER's direction, retrieve samples of mixed soil within one hour of mixing. The ENGINEER will produce and test Quality Assurance (QA) cylinders to confirm that the performance criteria are met.
- E. Passes or cells shall be laid out in a manner to solidify the entire area and provide an overlap between adjacent cells so that no soil within the specified horizontal and vertical limits of solidification is left untreated.
- F. The proposed limits for TSCA-level PCB excavation and offsite disposal and the ISS Platform elevation are shown on the Drawings. The bottom elevations of ISS treatment beneath the TSCA-level PCB excavation are shown in the Drawings. The limits of ESS shall be determined by the CONTRACTOR in their Work Plan. CONTRACTOR shall not deviate from the elevations shown by greater than 0.5 feet without written authorization by the ENGINEER.
- G. CONTRACTOR shall ensure that the reagents are added and mixed uniformly throughout the pass or cell and that adequate and consistent mixing energy is applied to result in a uniform and homogeneous mixture, meeting the performance requirements listed in this section.
- H. Samples will provide a homogeneous mixture, based on the following criteria:
 1. Reagent and soil are thoroughly intermixed in the cell, with uniform and consistent color, soil gradation, moisture content, and consistency.
 2. There are no unmixed soil clumps greater than 3 inches in maximum dimension.
 3. Cells that do not meet these criteria shall be immediately addressed by the CONTRACTOR.

- I. In compliance with direction from the DEPARTMENT, following ISS mixing of impacted soils visual verification of proper solidification shall take place via core drilling of treated soils. Visual verification of proper solidification shall be by collection of core samples of ISS treated soils after no less than 7 days of curing time.
 1. Core sample collection shall be via HQ wire-line core barrel, or similar method, with diamond drill bit. Cores will be collected at a maximum interval of five feet. If less than 60% of the core material is recovered from any of the 5 foot coring runs, one new core must be drilled adjacent to the previous location. If the recovery from the adjacent borehole continues to be less than 60%, the location may be abandoned.
 2. CONTRACTOR shall provide DEPARTMENT-required visual verification. The ENGINEER oversee the collection of these samples and provide documentation of results.
 3. Coring implementation shall be as follows:
 - a. One borehole shall be completed for every 5,000 square feet of ISS Treatment area, but not less than two core holes per treatment area.
 - b. To allow for adequate curing of the ISS material, the coring shall be conducted no earlier than seven days after the application of ISS.
 - c. To allow early coring information to be incorporated in adjusting ISS operations, the first coring location shall be completed when the ISS treatment project is no more than 25 percent complete.
 - d. Core boreholes shall be biased towards areas with the greatest soil contamination, areas where contamination is in direct contact with bedrock surface, and/or locations where difficulties in the ISS process were encountered.
 - e. Core boreholes shall be placed in locations where individual treatment cells or cells overlap, to the extent possible.
 - f. Cores shall be archived following coring activities and may be discarded upon approval of the Final Engineering report.
 4. Performance Evaluations – Core Samples and related equipment will be visually inspected for the following criteria, and the results recorded:
 - a. Non-mechanical induced cracking;
 - b. Percent recovery.
 5. Corrective Actions
 - a. If the ISS installation is deemed unsatisfactory after collaborative evaluation of the coring program, measures will be put in-place to address the deficiencies and ensure that the remedy is protective of human health and the environment. Such measures may include:
 - 1) Additional coring of the concerned area for further evaluation;
 - 2) Repair, remixing, or isolation of the concerned area using jet grouting or other suitable method;
 - 3) Excavation and disposal of the concerned area.
 6. Core Abandonment
 - a. When a core has been drilled from the top to the bottom elevation of the targeted ISS treatment zone, and samples collected, it will be considered complete. Following completion of each coring location, the borings will be filled with grout.

- J. CONTRACTOR shall minimize the amount of spoils generated by the ISS processes, while still meeting the performance standard.

1.9. ISS EQUIPMENT:

- A. The ISS equipment shall be of sufficient size and capacity to solidify the soil to the depths indicated on the Drawings within the proposed ISS schedule and meeting the requirements of this specification. The CONTRACTOR shall provide an excavator capable of reaching to the total depth of solidification for obstruction removal during ISS activities. The excavator shall be available at all times during the ISS process. The equipment used shall be specified in the Work Plan and approved by the ENGINEER.
- B. The grout mixing system shall be capable of precisely proportioning the mix reagents and thoroughly blending and mixing them into a homogeneous grout of uniform consistency. It shall be capable of continuously batching and mixing the grout in sufficient quantity without interruption due to inadequate batching, mechanical limitations, or volume limitations. Where used, automatic metering systems shall be calibrated in the presence of the ENGINEER prior to the beginning of grout injection and any additional times required by the ENGINEER. All automatic metering systems shall also have a manual backup method for verifying quantities. Properly calibrated volumetric containers and scales necessary for proper calibration of the mixing equipment shall be provided by the CONTRACTOR. Batch type mixers may be used, subject to provisions of an accurate means of proportioning the individual grout constituents and shall be able to allow for uninterrupted injection. Batch plants which require slowing or stopping of the injection procedure while mixing additional batches are not acceptable.
- C. The ISS CONTRACTOR shall be prepared to mobilize alternative/additional ISS equipment, if necessary, to complete the ISS work as indicated and specified at no additional cost to THE DEPARTMENT.

PART 2 - MATERIALS

2.1. SOLIDIFICATION WATER:

- A. Water shall be fresh, clean, potable, and free of soil, acid, salt, alkali, sewage or phosphates.
- B. CONTRACTOR shall provide a means of measuring water for batch mixing. The measuring devices shall measure totalized and instantaneous flows. Measuring Devices shall be calibrated to within $\pm 2\%$ to accurately measure the water for each batch. CONTRACTOR shall provide documentation for the calibration. Measuring devices shall be recalibrated per the manufacturer's recommendations and monthly during the work.
- C. CONTRACTOR shall provide and maintain all pipes and hoses used to connect the grout mixing plant to the water supply.

- D. If water for ISS is stored on the site, storage containers shall be free of any waste materials, debris, and other items that may be deleterious to the execution of the solidification processes.

2.2. GROUT REAGENTS:

- A. The CONTRACTOR will provide Type I/II Portland Cement, bentonite, GBFS, Enviroblend CS or other solidifying/stabilizing reagent only as approved by the ENGINEER for the solidification work.
- B. The CONTRACTOR shall control all dust during offloading, storage, transportation, mixing, and use of reagents.
- C. Reagents:
 - 1. Portland Cement – Type I/II Portland Cement Meeting the requirements of ASTM C150.
 - 2. Bentonite - Powdered bentonite meeting the requirements of API 13-A, Section 9 with a yield of 90 barrels of centipoise slurry per ton.
 - 3. EnviroBlend CS[®] – Magnesia-based heavy metal stabilization reagent manufactured exclusively by Premier Magnesia, LLC
 - 4. Granulated Blast-Furnace Slag (GGBFS) Cement – Grade 100 GBFS, meeting the requirements of ASTM C989, at a minimum.
- D. CONTRACTOR shall coordinate the delivery of all reagents to the site.
- E. CONTRACTOR shall maintain strict dust control when offloading and handling dry bulk materials and shall meet all particulate control limitations set forth in the perimeter air monitoring plan.
- F. CONTRACTOR shall, at all times, maintain an adequate quantity of solidification grout materials so that the work is completed without delay. Any delays or costs associated with inadequate supply of grout materials at the Site shall be the responsibility of the CONTRACTOR.
- G. Containers and locations for materials storage shall be protected from precipitation, moisture, and other potential deleterious events.
- H. Containers for reagent storage shall be properly labeled per the supplier's requirements and CONTRACTOR shall maintain material safety data sheets for the reagents onsite at all times.
- I. The CONTRACTOR shall provide measuring equipment that is capable of measuring reagent quantities within a tolerance of +/- 2% by weight.
- J. Grout additives such as thinners, retarders, accelerators, etc. shall not be used without prior written approval from the ENGINEER.

PART 3 - EXECUTION

3.1. GROUT PREPARATION:

- A. CONTRACTOR shall complete a form to calculate the needed quantities of grout and grout reagents for each cell. Calculated and actual quantities shall be provided including:
 - 1. Cell Identification,
 - 2. Grout Unit Weight (lbs/cubic foot)(mud balance),
 - 3. Volume and weight of water added (Gal.)(lbs),
 - 4. Weight of Grout reagents (lbs).
- B. CONTRACTOR shall add the calculated quantities of reagent, as determined by the CONTRACTOR's mix design.
- C. CONTRACTOR shall thoroughly mix the water and reagent mixture until it is a consistent and homogenous grout mixture.
- D. CONTRACTOR shall pump or deliver the reagent mixture from the mixing plant to the ISS equipment at an adequate pressure and flow rate for the solidification process.
- E. CONTRACTOR shall verify that the grout volume and density meet the Performance Standards in this Specification. Grout shall be metered with a calibrated turbine flow meter properly sized for surrounding piping, or equivalent, modified for grout flow, that has the ability to display or record rate (gpm) and total (gal) injected into each cell.
- F. Processed grout that reaches a temperature of more than 80 °F or is held for greater than 1 hour prior to use shall be discarded at the CONTRACTOR's expense.
- G. The ENGINEER may periodically visually inspect each batch of mixed grout to ensure that the grout has been sufficiently mixed.

3.2. COORDINATION OF WORK:

- A. CONTRACTOR shall coordinate ISS activities with excavation, dewatering, sampling, backfilling, and other Work as necessary.
- B. CONTRACTOR shall not backfill or cover any Work areas without prior approval from the ENGINEER.
- C. Protect structures, underground utilities, and other construction from damage caused by ISS operations.

3.3. FIELD DEMONSTRATION:

- A. Prior to full scale operations, a Field Demonstration shall be conducted by the CONTRACTOR in accordance with the accepted WORK PLAN.

- B. At least two grout cells, for each proposed grout mix, shall be constructed to the specified depth using the grout mix proposed by the CONTRACTOR in the Work Plan. Field Demonstration cells shall be internal cells.
- C. At least 3 samples of treated soil shall be obtained from each ISS cell for laboratory QA testing, one near the top of cell, one near the middle and one near the bottom. Samples shall be collected by the CONTRACTOR within one hour of cell installation. Samples will be analyzed separately for UCS, hydraulic conductivity (K), and presence of free liquids. Samples will also be visually inspected for homogeneity. Full scale ISS treatment shall not begin until performance testing results (i.e. 7-day, early strength) show that the proposed mix(es) will meet the performance requirements.
- D. Expose the ISS cell to the depth of the water table. Measure cell geometry and visually inspect for homogeneity.
- E. Obtain continuous core sample, after a minimum of 7 days of curing time, from the center and mid-radius point of one ISS cell, from each proposed mix using sonic core drilling techniques or other methods approved by the ENGINEER. The intent is to allow visual inspection of the solidified material to verify that adequate mixing energy is being provided to create a homogeneous mixture of soil and grout materials as detailed in section 1.09 above.

3.4. SOLIDIFICATION/STABILIZATION:

- A. CONTRACTOR shall provide all personnel, equipment, and materials required to conduct the Work identified on the Drawings and in these specifications.
- B. Solidification shall be conducted to the vertical and horizontal extents shown in the Drawings.
- C. Prior to beginning solidification in a given area, CONTRACTOR shall establish the ISS Work Platform.
- D. The CONTRACTOR shall perform surveying to document and confirm the Maximum Top of ISS Mass. CONTRACTOR is responsible for maintaining the Maximum Top of ISS/ESS Mass as shown on the Drawings unless otherwise directed by the ENGINEER.
- E. The CONTRACTOR shall note any variance for Maximum Top of ISS Mass and adjust grout mix accordingly.
- F. In the event that the mixing tool meets an obstruction, the CONTRACTOR shall notify the ENGINEER who will evaluate the following potential actions to be taken:
 - 1. ENGINEER may direct CONTRACTOR to excavate in an attempt to remove the Obstruction.
 - 2. The CONTRACTOR may choose to treat the remainder of the cell depth with alternative measures, i.e., jet grouting, at no additional charge to THE DEPARTMENT.

3. The Obstruction may be deemed unmovable (refusal) and no further action is required. The cell is complete at that depth.
 4. The ENGINEER alone will make the determination when Refusal is reached and whether ISS cell is considered complete.
- G. The ENGINEER shall be notified immediately if an unanticipated obstruction is encountered.
- H. Dewatering shall be conducted to the extent necessary to complete the Work and to minimize effects of saturation of the treated soils. No more than two (2) inches of water will be allowed to pool on top of soils that have been mixed with grout in the previous week (7 calendar days). CONTRACTOR shall not handle mixed soils or ISS spoils that have more than 2 inches of water pooled on top of them except to grade for drainage.
- I. Grout addition shall be at the prescribed proportions of the mix design in accordance with the CONTRACTOR's WORK PLAN and as calculated on the CONTRACTOR's forms.
- J. CONTRACTOR shall mix grout with impacted soil until it is a homogeneous mixture of soil and grout from the ISS Platform to the required treatment elevation as shown on the Drawings.
- K. Mixer shall be surfaced periodically to remove soil clods from the mixer surfaces for reprocessing within the cell to ensure a homogenous mixture is achieved. Clumped or packed soils removed from the ISS mixer shall not be deposited into completed uncured cells.
- L. CONTRACTOR shall complete a minimum of three mixing passes of the entire cell once bottom elevation of ISS treatment is reached for each cell.

3.5. SPOIL MANAGEMENT:

- A. The CONTRACTOR shall remove or re-grade spoil as necessary to avoid exceedance of the design Maximum Top of ISS/ESS Mass.
1. The CONTRACTOR shall manage spoils so that they do not accumulate in the working area and above cells yet to be mixed. The CONTRACTOR shall prevent spoil from previously mixed cells from being incorporated into subsequently mixed cells.
 2. The CONTRACTOR shall place excavated spoils in a temporary stockpile for reuse or removal and disposal.
 3. CONTRACTOR may regrade excavated spoils on-site within the following vertical limitations: Spoils must be placed above the water table and at least four feet below final lagoon cap elevation.

3.6. QUALITY ASSURANCE AND QUALITY CONTROL:

- A. The CONTRACTOR shall collect a sample of the mixed grout for density verification testing according to API Method RP 13-B1 at a frequency of every third batch mixed or at the direction of the ENGINEER.

- B. ISS Cell sampling:
1. The CONTRACTOR is responsible for collecting wet samples for quality assurance/quality control testing in accordance with the latest revision of the NYSDEC In-Situ solidification QA/QC guidance document. The ENGINEER is responsible for the testing of the collected samples.
 2. Sampling Timing. Sampling of the treated soil will occur within 1 hour of mixing while it is still wet and pliable.
 3. Sampling Tool. CONTRACTOR shall collect samples as directed by the ENGINEER using a sampling tool capable of taking discrete samples from mixed material. Sampler shall be a hydraulically or similarly powered sampler capable of being fully opened and closed from the ground level. Sampler must be capable of retrieving a discrete sample from the Bottom of ISS elevations.
 4. The ENGINEER may instruct the CONTRACTOR to collect samples using the on-site excavator periodically in lieu of using the Sampling Tool. The collection method will be at the sole discretion of the ENGINEER.
 5. Quality Control Testing: The ENGINEER will test QA samples at their discretion. Samples will be analyzed for UCS, hydraulic conductivity (K), and presence of free liquids. Samples will also be visually inspected for homogeneity.
 - a. At a minimum, one bulk sample of newly solidified soil shall be tested for every 250 cubic yards of ISS for the first 1,000 cubic yards of treated soil and one sample per every 500 cubic yards of ISS or one per day thereafter, whichever is greater.
- C. CONTRACTOR's sampling equipment must be maintained in close proximity to the area being actively solidified. Sampling equipment must be kept in good repair and CONTRACTOR shall maintain backup or redundant sampler and power supply on site for the duration of the project. CONTRACTOR shall be able to initiate sampling activities within 20 minutes of request by the ENGINEER.
- D. The ENGINEER will determine whether the CONTRACTOR's ISS operations meet specified Performance Standards.
- E. The boundary points of each cell shall be located by the CONTRACTOR using survey equipment approved by the ENGINEER. Utilization of measuring tapes, cables, or triangulation for location of cell boundary points will not be acceptable.
- F. Positioning system
1. The Contractor shall employ a suitable method to locate and control mixing and position that may include a range of electronic positioning systems.
 2. The horizontal accuracy of the mixer position shall be +1 foot.
 3. The vertical accuracy of mixer position shall be 0.33 foot.
 4. Real Time Kinematic (RTK) GPS or equivalent is required. Differential DGPS is required at a minimum.
- G. Mixing Tolerances:
1. Horizontal accuracy of the mixing position shall be plus 1 foot.

2. Vertical accuracy of the mixing position shall be plus 0.0 foot and minus 0.66 foot from the design elevation.

H. ISS cells shall be installed to the elevations provided in the Drawings. Bottom Elevation for ISS Treatment shall be provided by the CONTRACTOR in their WORK PLAN. These elevations will be approved by the ENGINEER prior to beginning the Work.

I. The ENGINEER may require additional sampling based on the QC and QA test results.

3.7. REPROCESSING – TREATED CELLS:

A. The CONTRACTOR shall reprocess at CONTRACTOR's expense the cell(s) at the direction of the ENGINEER if the QC or QA samples do not meet the requirements of the performance standards.

B. If the sample fails visual inspection due to insufficient mixing, the CONTRACTOR shall reprocess the cell from which such sample was collected. Reprocessing shall be completed immediately at the CONTRACTOR's expense.

C. If the sample does not meet the requirements for the unconfined compressive strength, or permeability, CONTRACTOR shall at CONTRACTOR's expense reprocess the cell(s) at the direction of the ENGINEER.

D. If the sample fails the visual inspection for slurry-soil mix composition due to cobble and rock content, the CONTRACTOR shall remove cobbles and rock from the cell to bring the cell composition within design requirements.

E. ISS Standby Time is not applicable during Reprocessing.

++END OF SECTION++

SECTION 31 32 14

EX-SITU SOIL STABILIZATION

PART 1 - GENERAL

1.1. SCOPE:

- A. Section Includes:
 - 1. Ex-Situ Stabilization of excavated soils from non-TSCA excavation/removal areas for placement into the on-site disposal area, located within the lagoon excavation footprint.
 - 2. Ex-Situ Stabilization of excavation soils from non-TSCA excavation/removal areas that are unable to fit into the lagoon in preparation for off-site disposal.
 - 3. Ex-Situ Stabilization of TSCA (greater than 50 ppm PCBs) excavation soils from the Lagoon excavation area in preparation for off-site disposal.
- B. The Contractor shall provide all designs, submittals, equipment, materials, and manpower to complete the Ex-Situ Stabilization (ESS) of the excavated soils from the excavations as specified in this section and as shown on the Drawings.
- C. A pug mill or bulk mixing method (using an excavator or front-end loader bucket) shall be used. The pug mill system must be capable of treatment of target soils or CONTRACTOR shall remove particle sizes that will not transit the pug mill in preparation for treatment. Larger particles shall be blended back into the soil matrix prior to disposal or placement as backfill.
- D. The CONTRACTOR's responsibility for soils targeted for ESS treatment includes managing excavated sediments and soils, amending/dewatering, stockpiling, mixing, loading, transport, and off-site site disposal or backfill and compaction.
- E. Prior to full scale treatment of impacted soils on the site the CONTRACTOR shall conduct a Field Demonstration of the proposed ESS mix design(s) as described in this section.

1.2. RELATED SECTIONS:

- A. Section 01 45 29.13 – Testing Laboratory Services Furnished by CONTRACTOR
- B. Section 02 21 13 – Survey
- C. Section 02 61 33 – Excavation and Handling of Contaminated Material
- D. Section 31 23 23 – Backfill
- E. Section 31 32 13 – In-situ Solidification

1.3. REFERENCES:

- A. KEMRON _ C&D Systems Solidification Study Treatability Study Final Report, April 23, 2021.
- B. URSUS Remediation Testing & Technologies, LLC Treatability Study Report, December 21, 2021

1.4. DEFINITIONS:

- A. The following definitions are used in this section:
 - 1. Grout - The mixture of reagents and water that shall be injected into the impacted soil.
 - 2. ESS Reagent – Enviroblend CS or other material approved by the ENGINEER for stabilizing impacted soils.
 - 3. Homogeneous Mixture – A uniform, unvarying, and consistent blend of impacted soil, reagent, and liquids (if needed), free from pockets of unmixed materials and free liquids.
 - 4. ESS Design Elevations:
 - a. Maximum Top of ISS/ESS Mass – the maximum elevation to which stabilized and or solidified soil may remain following stabilization as shown on the Drawings.
 - 5. ESS Backfill Area – The portion of the Site where ESS treated soils shall be placed and compacted.

1.5. QUALIFICATIONS:

- A. The CONTRACTOR or ESS SUBCONTRACTOR shall have completed at least 3 ESS remediation projects of similar size and scope.
- B. The CONTRACTOR’s or ESS SUBCONTRACTOR’s Project Manager/Superintendent shall have a minimum of 5 years of experience with ESS projects of similar scope, with a minimum of 2 of those years in the role of project Manager/Superintendent.
- C. Qualifications for SUBCONTRACTOR and SUBCONTRACTOR’s Key Personnel shall be included in the Work Plan submitted in the CONTRACTOR’s bid package.

1.6. SUBMITTALS:

- A. All submittals shall be completed and submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. The CONTRACTOR shall submit a Work Plan with their bid. At a minimum, the Work Plan shall include:
 - 1. Description and specifications of ESS system, equipment, and processes.
 - 2. Proposed mixer size(s) and configuration.
 - 3. Estimated production rate for stabilization in terms of number of batches and cubic yards per day.

4. Proposed ESS reagents and design mix proportions.
 5. Proposed amendments, if any, for soils to meet paint filter test prior to offsite disposal. The CONTRACTOR shall furnish non-pozzolanic amendments for soils which have been stabilized for Lead and Cadmium leachability which do not pass the paint filter test prior to shipping for off-site disposal, i.e. wood chips or super-absorbent polymer.
 6. ESS Backfill Layout Drawing showing the configuration and layout of the ESS treated batch placement as backfill within the lagoon.
 7. Sample calculation for theoretical ESS batch indicating required reagent quantities.
 8. Methods of controlling and mitigating exhaust, dust, and odor emissions and noise levels generated from the ESS equipment.
 9. Methods for transporting, storing, protecting, and handling reagents, including controls and mitigation for dust and noise.
 10. Detailed description and procedures for preparing reagent batch mixes, including methods to prepare and measure reagents and pre-treated soils to verify and document proper reagent mix proportions.
 11. Detailed description of a field test (Demonstration Test) to demonstrate that the proposed equipment and methods can successfully mix ESS batches to create a homogeneous mixture of soil and reagent meeting specified performance criteria.
 12. Total estimated quantity of stabilization reagents required for the Work.
 13. Contact water management, treatment and disposal procedures.
 14. Stormwater run-on controls, management and discharge procedures.
 15. Estimated schedule for completion of the Work.
 16. Any proposed deviations from the Specifications and Drawings.
 17. Spill control measures.
 18. Erosion control measures.
 19. Quality Control sampling methods, standard operating procedures, personnel, and equipment.
 20. Resumes for key personnel assigned to conduct the Work, including the ESS SUBCONTRACTOR Project Manager and Project Superintendent, and other technical staff.
 21. Any specialty equipment manufacturer's specifications and description.
- C. CONTRACTOR shall identify in the Work Plan and maintain sufficient redundant or backup equipment/spare parts to minimize delays attributable to equipment failures. The CONTRACTOR shall include a failure modes and effects analysis and determine systems or components that are likely to fail or require routine maintenance in the course of normal operation for this project. This analysis should determine credible failure modes or maintenance activities, which, if occurred, would result in the inability to measure parameters critical to the performance of the work, or result in significant delays in the work.
- D. CONTRACTOR shall supply detailed configuration and design drawings and plans for ESS of the excavated soils as portions of the lagoon area backfill or for preparation for disposal at least two weeks prior to starting the ESS work. These shall include any changes in the reagent mix design, detailed mixing procedures, any variations to the performance criteria and treatment volumes for ESS Work.

- E. CONTRACTOR shall provide (electronically, on a form acceptable to ENGINEER) a daily ESS report summarizing daily ESS activities including daily totals and running totals for volume of soil mixed and reagents used. ESS daily reports shall be submitted daily no later than 10:00 am the following day and shall include at a minimum the following information:
1. Date and Project Identification.
 2. ESS equipment used; mixer size(s)
 3. Equipment problems/failures/maintenance that affected ESS efforts
 4. List of batches treated. Running total of number of batches treated.
 5. Volume of soil stabilized that day and as a running total.
 6. ESS Batch Log for each batch stabilized. Logs shall include:
 - a. Batch Identification.
 - b. Date that work was performed.
 - c. Location (Northings, Eastings and elevations) of excavation where the batch soils were excavated.
 - d. Batch (net) volume (cy).
 - e. Weight of reagent mixed into the batch (pounds).
 - f. Start and finish time.
 - g. Mixer size and type.
 - h. Any unforeseen Site conditions or equipment problems that affected stabilization efforts.
 - i. Any modifications or deviations from the Specifications and Drawings or the Work Plan.
 - j. Any unforeseen Site conditions or equipment problems that affected stabilization efforts.
 - k. Complications encountered. Notes on the appearance of the mixed material.
 - l. Type, and number of quality assurance/quality control (QA/QC) samples collected.
 7. Quantities of reagents received and offloaded including total weight received versus stored.
 8. A survey data summary including Northing(s), Easting(s) and as-built top and bottom elevations provided for each batch placed as backfill. This will include rendered CADD "surface" files as well as point files (in a format acceptable to ENGINEER) for the installed batches.
 9. Any modifications to project schedule.
 10. Any unforeseen project or site conditions that affected stabilization efforts.
 11. Any modifications or deviations from the Contract Documents or the Work Plan.
- F. CONTRACTOR shall provide a Final ESS Job Summary containing, at a minimum, the following information:
1. Quantities of reagents delivered to the site and used during the project with backup in the form of certified weigh receipts, bills of lading, or equivalent.
 2. Any modifications to the project execution plan.
 3. Any unforeseen Site conditions or equipment problems that affected stabilization efforts.
 4. Any modifications to or deviations from the Contract Documents.
 5. As-built survey drawings of the lateral extent and top and bottom elevations of the ESS fill soils and all QA/QC sampling results. Identify any batches re-stabilized

during construction. Provide generated CADD “surfaces” for top and bottom of ESS backfill.

6. Results of all QA/QC test data.

G. CONTRACTOR shall submit a Mix Design in accordance with the requirements of this specification

H. CONTRACTOR shall submit confirmation/waste characterization sampling data to confirm stabilized soils meet TSDF disposal requirements.

1.7. MIX DESIGN:

A. The CONTRACTOR shall provide a mix design that specifies the proportions and quantities of reagents.

1. The CONTRACTOR is responsible for reviewing the availability geotechnical data to determine the necessary parameters for mix design. Geotechnical data is provided in the PDI Report, the Design Drawings, and elsewhere throughout the Contract Documents.

2. Tributary Sediment

a. The ENGINEER has conducted a treatability study with impacted sediment using varying percentages of Enviroblend CS as a reagent. The results of the treatability study are included in the Limited Site Data Document (LSDD). The treatability study results are provided for information purposes only.

b. The Treatability Study indicates that the sediments at this site can be successfully stabilized to meet specified performance criteria using varying percentages of Enviroblend CS.

3. On-Site and Off-Site Soils

a. The ENGINEER has conducted a treatability study with impacted site soils using varying percentages of Portland Cement (PC), Granulated Blast Furnace Slag (GBFS), Enviroblend CS and Bentonite as reagents. The results of the treatability study are included in the Limited Site Data Document (LSDD). The treatability study results are provided for information purposes only.

b. The Treatability Study indicates that the soils at this site can be successfully stabilized to meet specified performance criteria using varying combinations of Portland Cement, GBFS, and Enviroblend CS or Bentonite. Stabilization is intended to only require Enviroblend CS at an amendment rate of 3% by bulk wet weight of soils.

4. The CONTRACTOR may, at their option and own expense, perform additional bench studies to establish the design mix. The CONTRACTOR may also propose alternative stabilization reagents not considered in the ENGINEER’s Treatability Study and follow-up sediment stabilization treatability testing, subject to approval by THE DEPARTMENT.

5. The CONTRACTOR shall bear all costs associated with changes in the mix design and/or construction means and methods needed to achieve the performance criteria, including, but not limited to, sample collection and bench testing.

6. On-Site Disposal into the Lagoon

- a. The CONTRACTOR shall determine the appropriate batch size for mixing and mixing procedures. The CONTRACTOR shall be responsible for the effectiveness of the stabilized soils in meeting the performance specifications in this section. All treated soils that do not meet the performance criteria of leachability via Synthetic Precipitation Leaching Procedure (SPLP) (U.S. EPA Method 1312; U.S. Environmental Protection Agency, 1986; 1994 update) and section 1.8 below shall be retreated at no additional cost to the DEPARTMENT.
- 7. Off-Site Disposal
 - a. The CONTRACTOR shall determine the appropriate batch size for mixing and mixing procedures. The CONTRACTOR shall be responsible for the effectiveness of the stabilized soils in meeting the performance specifications in this section. All treated soils that do not meet the performance criteria of leachability via Toxicity Characteristic Leaching Procedure (TCLP) (U.S. EPA Method 1311; U.S. Environmental Protection Agency, 1992) shall be retreated at no additional cost to the DEPARTMENT.
- B. Based on the results of performance testing of the stabilized soil/sediment during the course of the work, the CONTRACTOR may elect to modify the stabilization mixture proportions, with the approval of the ENGINEER. CONTRACTOR shall not modify the reagent mix proportions without prior written approval from the ENGINEER.
- C. CONTRACTOR shall calculate (on a form acceptable to the ENGINEER) the minimum reagent proportions as follows:
 - 1. Calculate the volume of soil being treated based on the CONTRACTOR's work plan details for each excavation area and for batch size selection.
 - 2. Calculate the weight of soil being treated based on the previously calculated volume, using an appropriate unit weight for the soil being solidified.
 - 3. Reagent addition shall be in accordance with the mix design.

1.8. PERFORMANCE CRITERIA:

- A. The stabilized soil (i.e., soils treated by ESS) for on-site disposal into the lagoon shall have a SPLP leachability result of less than the NYSDEC Class GA groundwater standards for site related constituents.
- B. The stabilized soil (i.e., soils treated by ESS) for off-site disposal shall have a TCLP leachability result of less than RCRA Toxicity Characteristic thresholds in 6NYCRR Part 371 as required for disposal.
- C. The CONTRACTOR shall, under the ENGINEER's observation, retrieve samples of mixed soil within twenty-four hours of mixing. The CONTRACTOR will prepare and ship samples to the selected analytical laboratory for TCLP or SPLP testing as applicable for the disposal method.
- D. CONTRACTOR shall ensure that the reagents are added and mixed uniformly throughout the batch and that adequate and consistent mixing energy is applied to result in a uniform and homogeneous mixture, meeting the performance requirements listed in this section.

- E. Samples will provide a homogeneous mixture, based on the following criteria:
 - 1. Reagent and soil are thoroughly intermixed in the batch, with uniform and consistent color, soil gradation, moisture content, and consistency.
 - 2. There are no unmixed soil clumps greater than 3 inches in maximum dimension.
 - 3. Batches that do not meet these criteria shall be immediately addressed by the CONTRACTOR.

1.9. ESS EQUIPMENT:

- A. The ESS equipment shall be of sufficient size and capacity to solidify the soil to the depths indicated on the Drawings within the proposed ESS schedule and meeting the requirements of this specification. The CONTRACTOR shall provide an excavator capable of reaching to the total depth of stabilization for obstruction removal during ESS activities. The excavator shall be available at all times during the ESS process. The equipment used shall be specified in the Work Plan and approved by the ENGINEER.
- B. The grout mixing system shall be capable of precisely proportioning the mix reagents and thoroughly blending and mixing them into a homogeneous grout of uniform consistency. It shall be capable of continuously batching and mixing the grout in sufficient quantity without interruption due to inadequate batching, mechanical limitations, or volume limitations. Where used, automatic metering systems shall be calibrated in the presence of the ENGINEER prior to the beginning of grout injection and any additional times required by the ENGINEER. All automatic metering systems shall also have a manual backup method for verifying quantities. Properly calibrated volumetric containers and scales necessary for proper calibration of the mixing equipment shall be provided by the CONTRACTOR. Batch type mixers may be used, subject to provisions of an accurate means of proportioning the individual grout constituents and shall be able to allow for uninterrupted injection. Batch plants which require slowing or stopping of the injection procedure while mixing additional batches are not acceptable.
- C. The ESS CONTRACTOR shall be prepared to mobilize alternative/additional ESS equipment, if necessary, to complete the ESS work as indicated and specified at no additional cost to the DEPARTMENT.

PART 2 - MATERIALS

2.1. STABILIZATION REAGENTS:

- A. The CONTRACTOR will provide Enviroblend CS or other stabilizing reagent only as approved by the ENGINEER for the stabilization work.
- B. The CONTRACTOR shall control all dust during offloading, storage, transportation, mixing, and use of reagents.
- C. Reagents:
 - 1. EnviroBlend CS® – Magnesia-based heavy metal stabilization reagent manufactured exclusively by Premier Magnesia, LLC

- D. CONTRACTOR shall coordinate the delivery of all reagents to the site.
- E. CONTRACTOR shall maintain strict dust control when offloading and handling dry bulk materials and shall meet all particulate control limitations set forth in the perimeter air monitoring plan.
- F. CONTRACTOR shall, at all times, maintain an adequate quantity of stabilization materials so that the work is completed without delay. Any delays or costs associated with inadequate supply of grout materials at the Site shall be the responsibility of the CONTRACTOR.
- G. Containers and locations for materials storage shall be protected from precipitation, moisture, and other potential deleterious events.
- H. Containers for reagent storage shall be properly labeled per the supplier's requirements and CONTRACTOR shall maintain material safety data sheets for the reagents onsite at all times.
- I. The CONTRACTOR shall provide measuring equipment that is capable of measuring reagent quantities within a tolerance of +/- 2% by weight.
- J. Reagent additives such as thinners, retarders, accelerators, etc. shall not be used without prior written approval from the ENGINEER.

PART 3 - EXECUTION

3.1. COORDINATION OF WORK:

- A. CONTRACTOR shall coordinate ESS activities with excavation, dewatering, sampling, backfilling, and other Work as necessary.
- B. CONTRACTOR shall not backfill or cover any Work areas without prior approval from the ENGINEER.
- C. Protect structures, underground utilities, cultural resources, and other construction from damage caused by ESS operations.

3.2. FIELD DEMONSTRATION:

- A. Prior to full scale operations, a Field Demonstration shall be conducted by the CONTRACTOR in accordance with the accepted WORK PLAN.
- B. At least two stabilization batches, for each proposed reagent mix, shall be blended using the reagent mix proposed by the CONTRACTOR in the Work Plan.
- C. At least 1 composite sample of treated soil shall be obtained from each ESS batch for laboratory QA testing. Samples shall be collected by the CONTRACTOR within one hour of batch mix completion. Samples will also be visually inspected for homogeneity. Full

scale ESS treatment shall not begin until performance testing results (i.e., Total TCLP Lead and Cadmium results for off-site disposal or Total and SPLP Lead and Cadmium results for on-site disposal into the lagoon) show that the proposed mix(es) will meet the performance requirements.

3.3. STABILIZATION:

- A. CONTRACTOR shall provide all personnel, equipment, and materials required to conduct the Work identified on the Drawings and in these specifications.
- B. Stabilization shall be conducted on all soils prior to use as backfill within the lagoon and all soils prior to off-site disposal.
- C. Dewatering shall be conducted to the extent necessary to complete the Work and to minimize effects of saturation of the treated soils. No more than two (2) inches of water will be allowed to pool on top of soils that have been mixed with reagents in the previous week (7 calendar days). CONTRACTOR shall not handle mixed soils or ESS-treated soils that have more than 2 inches of water pooled on top of them except to grade for drainage.
- D. Reagent addition shall be at the prescribed proportions of the mix design in accordance with the CONTRACTOR's WORK PLAN and as calculated on the CONTRACTOR's forms.
- E. CONTRACTOR shall mix reagent with impacted soil until it is a homogeneous mixture.
- F. Mixer shall be inspected periodically to remove soil clods from the mixer surfaces for reprocessing within the batch to ensure a homogenous mixture is achieved.

3.4. QUALITY ASSURANCE AND QUALITY CONTROL:

- A. ESS Batch sampling:
 - 1. The CONTRACTOR is responsible for collecting and testing of the collected samples.
 - 2. Sampling Timing. Sampling of the treated soil will occur within 1 hour of mixing.
 - 3. Quality Control Testing: The CONTRACTOR will test QC samples at their discretion. Samples will be analyzed for Lead and Cadmium leachability. Samples will also be visually inspected for homogeneity.
 - a. At a minimum, one bulk sample of newly stabilized soil shall be tested for every 250 cubic yards of ESS for the first 1,000 cubic yards of treated soil and one sample per every 500 cubic yards of ESS or one per day thereafter, whichever is greater.
- B. The ENGINEER will determine whether the CONTRACTOR's ESS operations meet specified Performance Standards.
- C. The ENGINEER may require additional sampling based on the QC and QA test results.

3.5. REPROCESSING – TREATED BATCHES:

- A. The CONTRACTOR shall reprocess at CONTRACTOR's expense the batch(es) at the direction of the ENGINEER if the QC or QA samples do not meet the requirements of the performance standards.
- B. If the sample fails visual inspection due to insufficient mixing, the CONTRACTOR shall reprocess the batch from which such sample was collected. Reprocessing shall be completed immediately at the CONTRACTOR's expense.

++END OF SECTION++

SECTION 32 13 13

ASPHALTIC CONCRETE PAVING

PART 1 - GENERAL

1.1. DESCRIPTION

- A. Asphaltic concrete paving; wearing, binder or base course.
- B. This section applies to areas of the site that will require replacement of asphalt or patching during Site Restoration (Section 32 30 00).
 - 1. For small areas (less than 10 SF), CONTRACTOR shall patch holes using wearing or top course material matching grades with existing material.
 - 2. For large areas (greater than 10 SF), CONTRACTOR shall place a 3 inch binder coarse and a 1 inch wearing or top coarse. Adequate coarse aggregate shall be provided under binder coarse to match line and grade of existing pavement.
 - 3. For areas in excess of 500 SF where paving must be replaced in its entirety due to failure, CONTRACTOR shall submit a paving plan to ENGINEER for review prior to the commencement of work.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 45 29.13 – Testing Laboratory Services Furnished by Contractor
- C. Section 03 34 00 – Controlled Low Strength Material
- D. Section 32 30 00 – Site Restoration

1.3. REFERENCES

- A. AI MS-2 - Mix Design Methods, 2014 or latest revision.
- B. AASHTO Hot-Mix Asphalt Paving Manual, 2nd Edition.
- C. ASTM D242 – Standard Specification for Mineral Filler for Bituminous Paving Mixtures, latest revision.
- D. ASTM D546 – Standard Test Method for Sieve Analysis of Mineral Filler for Bituminous Paving Mixtures, latest revision.
- E. NYSDOT Standard Specifications Sections 203-3.12, 304, 403, 702, 703, and 705
- F. ASTM D2950-14 - Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.

1.4. SUBMITTALS

- A. Supplier
 - 1. Submit name of asphalt supplier to be used on the project prior to placement of any asphalt on the project.
- B. Product and Design Data
 - 1. Submit asphalt mix design for each asphalt type to be used.
 - 2. Submit manufacturer's information on each product used.
 - a. Geotextile
 - b. Stone Sub-Base
 - c. Tack Coat
 - d. Joint Adhesive
 - e. Asphaltic Binder
 - f. Asphaltic Top
- C. Testing Firm
 - 1. Submit name of testing firm to be performing tests on asphalt pavement.
 - 2. Nuclear Density Gauge Operator Certification
 - 3. Nuclear Density Gauge Compaction Data

1.5. QUALITY ASSURANCE

- A. Obtain materials from the same supplier throughout the duration of the project.
- B. Do not alter from mix design requirements.

1.6. DELIVERY, STORAGE AND HANDLING

- A. All containers must be cleaned of all foreign materials prior to loading.
- B. Lightly lubricate the inside surface of the container with a thin oil or soap solution before loading asphalt.
- C. Deliver asphalt in sealed, metal containers covered with suitable material to protect the asphalt from the elements.

1.7. ENVIRONMENTAL REQUIREMENTS

- A. Do not place asphalt when base surface temperature is less than 45 degrees F, or if surface is wet or frozen.
- B. Do not place asphalt when precipitation is occurring.

PART 2 - PRODUCTS

2.1. MATERIALS

- A. Geotextile
 - 1. Mirafi FW 500 or ENGINEER approved equal.
- B. Stone Sub-base
 - 1. NYSDOT Section 304 Type 2 Sub-Base.
- C. Tack Coat
 - 1. NYSDOT Section 407 Asphalt Emulsion
- D. Joint Adhesive
 - 1. Pavement Joint Adhesive, Crafcoc Inc., Chandler , AZ;
 - 2. Cold-Applied Rubberized-Asphalt Sealer #158, W.R. Meadows Inc., Hampshire, IL; ENGINEER approved equal.
- E. Asphaltic Binder
 - 1. NYSDOT Section 403 Type 3 Binder.
- F. Asphaltic Top
 - 1. NYSDOT Section 403 Type 7 Top Coarse.

2.2. ACCESSORIES

- A. Wheel Lubricant
 - 1. Oil-water mixture containing maximum 10 percent lubricating oil.

2.3. SOURCE QUALITY CONTROL

- A. Obtain asphalt materials from same source throughout the project.
- B. Provide asphalt in accordance with the approved mix design for each type of asphalt.

PART 3 - EXECUTION

3.1. EXAMINATION

- A. Verify existing conditions and substrate.
- B. Verify that compacted substrate is dry and ready to receive work of this section.
- C. Verify that all castings are properly installed and are at the correct elevations.

3.2. INSTALLATION AND COMPACTION

- A. Install geotextile on substrate.

- B. Install NYSDOT Type 2 stone sub-base in accordance with NYSDOT Section 304.
 - 1. Verify that the gradients and final elevations of the sub-base are correct.
 - 2. Verify that sub-base is compacted to 95% of the maximum proctor in accordance with NYSDOT Section 203-3.12.
- C. Apply joint adhesive in accordance with manufacturer instructions.
 - 1. Joints to be sealed must be dry and cleaned of dust, dirt, or any foreign material.
 - 2. Clean joints with compressed air immediately prior to application.
- D. Apply first tack coat between the sub-base and binder course in accordance with NYSDOT Section 407.
- E. Install asphaltic binder in accordance with NYSDOT Section 401-3.01 through 401-3.15. Maintain asphalt temperature between 250- and 325-degrees F during placement.
- F. Apply second tack coat between the binder coarse and top in accordance with NYSDOT Section 407.
- G. Place asphaltic top within 24 hours of applying tack coat.
- H. Place asphalt to compacted thicknesses as identified on Contract Drawings.
 - 1. If a multiple course pavement is to be used, place top course within 24 hours of placing bottom course.
 - 2. If more than 24 hours elapse, a tack coat will be required to be placed over the entire surface of the bottom course prior to any additional paving.
- I. Utilize the vibratory device on the paver at all times.
- J. Compact pavement by rolling.
 - 1. Do not displace or extrude pavement from position.
 - 2. Hand compact in areas inaccessible to rolling equipment.
- K. Compact pavement to a minimum of 94% of the maximum density.
- L. Develop rolling with consecutive passes to achieve even and smooth finish, without roller marks.

3.3. TOLERANCES

- A. Maximum Variation from Flatness: 1/4 inch measured with 10-foot straight edge.
- B. Maximum Variation from Scheduled Compacted Thickness: 1/8 inch.
- C. Maximum Variation from True Elevation: 1/4 inch.

3.4. FIELD QUALITY CONTROL

- A. Provide an asphalt thermometer for determining the asphalt temperature during
 - 1. paving operations.

2. Frequency of Tests: One test for every 1,000 square feet of each pavement course.

B. Field Compaction Testing

1. Contractor shall perform nuclear density testing on the asphalt in accordance with ASTM D2950-14.

2. Frequency of Tests: One test for every 1,000 square feet of each pavement course.

3.5. PROTECTION

A. Immediately after placement, protect pavement from mechanical injury until project is accepted by the ENGINEER.

++ END OF SECTION ++

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SECTION 32 30 00

SITE RESTORATION

PART 1 - GENERAL

1.1. SCOPE

- A. The CONTRACTOR shall furnish all labor, equipment, and materials required to restore all types of surfaces and features disturbed, damaged or destroyed during the performance of the work under or as a result of the operations of the Contract, as specified herein and as shown on the drawings. These surfaces and features may include but are not limited to, grass areas and other landscaping, vaults, roadways, driveways, sidewalks, curbs, gutters, culverts, fencing, and gates. The CONTRACTOR shall also furnish all labor, equipment, and materials, required to perform initial/final grading, install temporary pavement as needed, and remove the temporary utilities and controls required by the Contract. All of the surface restorations specified herein may not necessarily apply to the actual work to be performed; however, the CONTRACTOR shall comply with all specifications that are applicable to the work to be performed.
- B. The quality of materials and the performance of work used in the restoration shall produce a surface or feature equal to or better than the condition of each before the work began. All work and materials must conform to the requirements of the appropriate agency or municipality with prior approval.
- C. The replacement of surfaces at any time, as scheduled or as directed, shall not relieve the CONTRACTOR of responsibility to repair damages resulting from settlement or other failures.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 74 19 – Construction Waste Management and Disposal
- C. Section 02 21 13 – Survey
- D. Section 31 23 23 – Backfill
- E. Section 32 13 13 – Asphaltic Concrete Paving
- F. Section 32 31 00 – Fencing
- G. Section 32 93 01 – Plants

1.3. REFERENCES

- A. Materials and procedures shall be in accordance with the latest revisions of the New York State Department of Transportation (NYSDOT) Standard Specifications, except where more stringent requirements have been specified herein.

1.4. SUBMITTALS

- A. The CONTRACTOR shall submit to the ENGINEER for review and approval a Site Restoration Plan as a part of the CONTRACTOR'S general Project Work Plan (as described in Section 01 11 13 – Summary of Work) that follows the existing Restoration Plan and Restoration Plan sheets, and reflects expected work limits. The Site Restoration Plan will include the following:
 - 1. Description and boundaries of the areas to be restored (graded, topsoiled, and seeded), areas that were cleared and grubbed, temporary roadway surfaces requiring restoration, and fencing and gates to be re-installed or installed to close site boundaries.
 - 2. List of materials and quantities to be used, such as topsoil, fertilizers, mulch, water, and seed for restoration of soil areas, asphalt, concrete, flowable fill, backfill, and fencing.
- B. The CONTRACTOR shall submit to the ENGINEER a schedule of restoration operations for review and approval.
- C. Seed Mix: The CONTRACTOR shall submit the following for review and approval by the ENGINEER:
 - 1. The name and location of each proposed source of seed mix.
 - 2. Certification from suppliers that all seed and plant to be supplied for use on this project shall meet the requirements of this section.
 - 3. A guaranteed analysis of the seed mix.
 - 4. Certification tests from each lot of seed are consistent with the lot label in accordance with the New York State Agriculture and Marketing Law.
- D. Asphalt Roadways: The CONTRACTOR shall submit to the ENGINEER for review and approval items required by Section 32 13 13 – Asphaltic Concrete Paving.
- E. Fencing and Gates: The CONTRACTOR shall submit to the ENGINEER for review and approval items required by Section 32 31 00 – Fencing.
- F. The Contractor shall submit to the ENGINEER for review and approval a summary of the site restoration construction and maintenance quantities that includes details of the completed work, the amount of materials utilized, and the areas where materials were installed.

PART 2 - PRODUCTS

2.1. SEED MIX

- A. Seed mix shall be as shown in Attachment A located at the end of this section.
- B. Fertilizer shall be granular type, slow-release 10-10-10, Nitrogen-Phosphorus-Potassium Ratio. Rake fertilizer into the top 4” – 6” of topsoil at a rate of 10 pounds per 1,000 SF of topsoil.

2.2. RIPRAP LINED SWALE

- A. Stone Filling (Fine) shall be placed in the riprap lined swale as shown on the Contract Drawings.
 - 1. NYSDOT Section 620.02 Stone Filling (Fine).
- B. Bedding Material, Type 1 shall be placed in the riprap lined swale as shown on the Contract Drawings.
 - 1. NYSDOT Section 620.0801 Bedding Material, Type 1.

2.3. ASPHALT ROADWAYS

- A. Refer to Section 32 13 13 – Asphaltic Concrete Paving for product requirements.

2.4. FENCING AND GATES

- A. Refer to Section 32 31 00 – Fencing for product requirements.

PART 3 - EXECUTION

3.1. GENERAL

- A. Leave the site clean at substantial completion of the Work. Unless otherwise authorized in writing by the ENGINEER, restore all property affected by the CONTRACTOR not designated for alteration by the Contract Documents to its original condition.
- B. Backfill all excavated and restored areas as detailed in Section 31 23 23 – Backfill.
- C. Reconnect and restore the stormwater pipe connection to the manhole at the tributary crossing.
- D. Re-establish any vegetation, swales or other surfaces damaged or removed to facilitate construction. Vegetation removed will be replaced in-kind unless otherwise specified by the ENGINEER.
- E. Select seed that conforms to all required regulations and requirements and perform all seeding in accordance with this section. The CONTRACTOR shall seed all required areas using a low pressure true ax or similar device at the rate dictated in the restoration plan.

1. The products shall be delivered in unopened containers bearing the guaranteed analysis of the mix.
- F. Remove temporary control systems, such as silt fence, silt barriers, truck wheel washes, refill holes from sumps and pipe trenches, and patch asphalt. Diversion berms used in construction of the truck wash, stockpile areas, and storm water management system around stockpile areas shall be removed to allow free drainage of stormwater.
- G. Pressure wash paved surfaces along truck traffic routes, in former locations of containment systems. Capture and treat runoff in accordance with Section 01 74 19 - Construction Waste Management and Disposal.
- H. Repair areas of asphalt pavement damaged during the Work following cleaning to return the site to pre-work conditions.
- I. Dispose of material generated during site cleaning, including but not limited to decontamination fluids and chemicals, sweeping, power washing fluids, sediment, construction debris and other waste materials, off-site in accordance with federal, state, and local regulations at the CONTRACTOR's expense.
- J. Remove temporary facilities, tools, construction equipment and machinery, and surplus materials from the site. Temporary utility services provided or arranged for by the CONTRACTOR shall be terminated in accordance with the procedures and policies of the utility purveyor.
- K. Remove temporary protections of cultural resources; ensure that soils are not disturbed in these areas.
- L. Remove all waste materials, rubbish, and debris resulting from the Work from the site and dispose of in accordance with local, state and federal regulations at the completion of the Work.
- M. Leave the site clean, and in neat, orderly condition, and to the ENGINEER's satisfaction.
- N. The CONTRACTOR shall clean and decontaminate all concrete surfaces that are left in place at the conclusion of the Work in accordance with Specification 01 74 19. All decontamination water to be treated through onsite treatment system.
- O. The CONTRACTOR shall backfill and cover all concrete floor openings as shown in the Contract Drawings.

3.2. PREPARATION FOR ASPHALTIC CONCRETE PAVEMENT

- A. Prior to placing the permanent asphalt pavement, all service boxes, manhole frames and covers and similar structures within the area shall be adjusted to the established grade and cross-section.

- B. The edges of existing asphalt pavement shall be cut a minimum of one foot beyond the excavation or disturbed base whichever is greater.
 - 1. All cuts shall be parallel or perpendicular to the centerline of the street/road.

3.3. ASPHALTIC CONCRETE PAVEMENT

- A. The permanent asphalt pavement replacement for streets, driveways and parking area surfaces shall be replaced with bituminous materials of the same depth and kind as the existing unless otherwise specified. Refer to Section 32 13 13 – Asphaltic Concrete Pavement for additional execution requirements.

3.4. STONE OR GRAVEL PAVEMENT

- A. All pavement and other areas surfaced with stone or gravel shall be replaced with material to match the existing surface unless otherwise specified.
 - 1. The depth of the stone or gravel shall be at least equal to the existing.
 - 2. After compaction the surface shall conform to the slope and grade of the area being replaced.

3.5. LAWNS AND IMPROVED AREAS

- A. The CONTRACTOR shall amend existing topsoil and seed in accordance with the requirements of this section.
- B. Seed shall be applied evenly to the areas and at the rates indicated in the Restoration Plan, mixed with fertilizer. Straw mulch or approved alternate shall be applied over seeding.
- C. When required to obtain germination, the seeded areas shall be watered in such a manner as to thoroughly wet soil, but prevent washing out of the seed.
- D. Any washout or damage which occurs shall be regraded and reseeded until a good sod is established.
- E. The CONTRACTOR shall maintain the newly seeded areas, including regrading, reseeded, watering and mowing, in good condition.
- F. INSPECTION
 - 1. ENGINEER will examine the subgrade, observe the conditions under which the Work is to be performed, and notify CONTRACTOR of unsatisfactory conditions. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to ENGINEER. Only limited areas may need topsoil for restorations as directed by the ENGINEER.
- G. TOPSOIL INSTALLATION AND AMENDMENT
 - 1. The CONTRACTOR shall obtain ENGINEER's approval that subgrade backfilling activities are complete. In areas above the water level of the stream:
 - a. In areas where the ground surface is subgrade backfilling,
 - 1) Eliminate uneven areas and low spots in subsoil.

- 2) Provide topsoil material to the location of placement as directed by the ENGINEER.
 - 3) Allow topsoil to dry at the source prior to transportation, or as otherwise approved by the ENGINEER.
 - 4) Scarify subgrade to a depth of 2 inches where topsoil is designated for placement. Scarify in areas where equipment has compacted subsoil.
- b. In areas where the surface is of naturally occurring soil with no existing vegetation or extremely disturbed vegetation, apply amendments as follows:
- 1) For every 100 square yards, amended to a depth of 6 inches:
 - a) Peat Moss: 7-1/2 cu ft bale or 15 bushels (loose measure).
 - b) Fertilizer: 1 pound
 - 2) Amendments must be incorporated evenly via a tiller in the presence of the ENGINEER, and the tilled soil. Additional topsoil will only be added where required by the Engineer. The presented ground surface shall be raked to an even surface prior to application of prescribed seed and/or plantings.
- c. In areas where the surface is of naturally occurring soil with existing vegetation, no amendments should be added, and the soil surface should not be disturbed.
2. Do not spread topsoil while in a frozen condition or when moisture content is so great that excessive compaction will occur nor when so dry that dust will form in the air or that clods will not break readily.
 3. Do not compact topsoil.
 4. After the topsoil is spread, remove all large, stiff clods, rocks, roots or other foreign matter over 1.5-inches.
 5. Manipulate topsoil to attain a properly graded and positively drained surface.
 6. Grade topsoil areas to smooth, even surface with loose, uniform, fine texture.
 7. Rake and remove ridges and fill all depressions, ruts, low spots or unsuitable areas which result after settlement. Final soil surface must not be compacted or glazed.
 8. Coordinate and install vegetation in accordance with this section.

3.6. FENCES AND GATES

- A. Refer to Section 32 31 00 – Fencing for execution requirements.

3.7. OTHER TYPES OF RESTORATION

- A. Culverts destroyed or removed as a result of the construction operations shall be replaced in like size and material and shall be replaced at the original location and grade. When there is minor damage to a culvert and with the consent of the ENGINEER, a repair may be undertaken, if satisfactory results can be obtained.
- B. The stormwater pipe connection to the manhole shall be replaced in like size and material and shall be replaced at the original location and grade.
- C. Should brick pavements be encountered in the work, the restoration shall be as set forth in the Special Provisions or as directed.

- D. The CONTRACTOR shall restore the existing stone retaining wall should it be damaged during the work.

3.8. MAINTENANCE

- A. The finished products of restoration shall be maintained in an acceptable condition for and during a period of five years following the date of Substantial Completion or other such date as set forth elsewhere in the Contract Documents, whichever is longer.

++ END OF SECTION ++

SECTION 32 30 00 ATTACHMENT FOLLOW

SECTION 32 30 00 ATTACHMENT

RIPARIAN BUFFER (ERNMX-178) SEED MIXTURE

% of Mix	Botanical Name	Common Name
20.00 %	<i>Elymus virginicus</i> , PA Ecotype	Virginia Wildrye, PA Ecotype
20.00 %	<i>Panicum clandestinum</i> , Tioga	Deertongue, Tioga
18.00 %	<i>Andropogon gerardii</i> , 'Southlow'-MI Ecotype	Big Bluestem, 'Southlow'-MI Ecotype
10.00 %	<i>Panicum virgatum</i> , 'Shelter'	Switchgrass, 'Shelter'
3.00 %	<i>Rudbeckia hirta</i>	Blackeyed Susan
3.00 %	<i>Verbena hastata</i> , PA Ecotype	Blue Vervain, PA Ecotype
2.40 %	<i>Asclepias incarnata</i> , PA Ecotype	Swamp Milkweed, PA Ecotype
1.50 %	<i>Zizia aurea</i> , PA Ecotype	Golden Alexanders, PA Ecotype
0.80 %	<i>Aster novae-angliae</i> , PA Ecotype	New England Aster, PA Ecotype
0.70 %	<i>Aster puniceus</i> , PA Ecotype	Purplestem Aster, PA Ecotype
0.50 %	<i>Monarda fistulosa</i> , Fort Indiantown Gap-PA Ecotype	Wild Bergamot, Fort Indiantown Gap-PA Ecotype
0.30 %	<i>Helenium autumnale</i> , PA Ecotype	Common Sneezeweed, PA Ecotype

FACW WETLAND MEADOW MIX (ERNMX-122) SEED MIXTURE

% of Mix	Botanical Name	Common Name
23.20 %	Carex vulpinoidea, PA Ecotype	Fox Sedge, PA Ecotype
22.00 %	Carex lurida, PA Ecotype	Lurid Sedge, PA Ecotype
20.00 %	Elymus virginicus, PA Ecotype	Virginia Wildrye, PA Ecotype
14.00 %	Carex scoparia, PA Ecotype	Blunt Broom Sedge, PA Ecotype
3.00 %	Verbena hastata, PA Ecotype	Blue Vervain, PA Ecotype
2.00 %	Asclepias incarnata, PA Ecotype	Swamp Milkweed, PA Ecotype
2.00 %	Carex intumescens, PA Ecotype	Star Sedge, PA Ecotype
2.00 %	Zizia aurea, PA Ecotype	Golden Alexanders, PA Ecotype
1.00 %	Aster novae-angliae, PA Ecotype	New England Aster, PA Ecotype
1.00 %	Verbena urticifolia, PA Ecotype	White Vervain, PA Ecotype
0.70 %	Solidago rugosa, PA Ecotype	Wrinkleleaf Goldenrod, PA Ecotype
0.50 %	Aster puniceus, PA Ecotype	Purplestem Aster, PA Ecotype
0.50 %	Bidens cernua, PA Ecotype	Nodding Bur Marigold, PA Ecotype
0.50 %	Lobelia siphilitica, PA Ecotype	Great Blue Lobelia, PA Ecotype
0.50 %	Mimulus ringens, PA Ecotype	Square Stemmed Monkeyflower, PA Ecotype
0.40 %	Eupatorium perfoliatum, PA Ecotype	Boneset, PA Ecotype
0.30 %	Helenium autumnale, PA Ecotype	Common Sneezeweed, PA Ecotype
0.30 %	Scirpus cyperinus, PA Ecotype	Woolgrass, PA Ecotype
0.10 %	Alisma subcordatum, PA Ecotype	Mud Plantain, PA Ecotype

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SECTION 32 31 00

FENCING

PART 1 - GENERAL

1.1. SCOPE

A. Summary

1. The Facility site perimeter fence system shall remain intact for site security purposes and shall be maintained and improved as necessary by the CONTRACTOR during the construction phase of this project. Additional fencing shall be installed by the Contractor where sections of fence line are missing or damaged.
2. Provide all labor, materials, equipment and incidentals as directed by the ENGINEER to furnish and install fencing.

B. Existing Fence Repair

1. CONTRACTOR shall clear vegetation and debris along, and/or intertwined with, the fence line to facilitate fencing repairs, as necessary.
2. CONTRACTOR shall use salvaged fencing materials to repair gaps/holes along fence line to provide a competent and secure barrier.

C. Substitutions

1. The CONTRACTOR, at no expense to the DEPARTMENT, may substitute new fencing materials as specified in this section.

1.2. RELATED SECTIONS

A. Section 01 11 13 – Summary of Work

B. Section 02 21 13 – Survey

C. Section 31 23 23 – Backfill

D. Section 32 30 00 – Site Restoration

1.3. REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1. American Society for Testing and Materials (ASTM)
 - a. ASTM A 53 Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
 - b. ASTM A 153 Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
 - c. ASTM A 392 Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric
 - d. ASTM F 567 Standard Practice for Installation of Chain-Link Fence

- e. Federal Specification RR-F-191 (latest revision), Fencing, Wire and Post, Metal (Chain-Link Fence Fabric)

1.4. QUALITY ASSURANCE

- A. Erector Qualifications: Erector must be a firm experienced in the erection of fencing of the type specified.
- B. Source Quality Control: Provide each type of fence and gate as a complete unit produced by a single manufacturer, including necessary erection accessories, fittings and fastenings.

1.5. SUBMITTALS

- A. Shop Drawings: Submit for approval the following:
 - 1. Plan layout and details illustrating fence height, location and sizes of posts, rails, braces, gates, footings, operators, hardware list and erection procedures.
 - 2. Copies of manufacturer's technical data test reports on physical properties, and installation instructions for steel fences and gates.

1.6. PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Delivery of Materials: Deliver material in manufacturer's original packaging with all tags and labels intact and legible.
- B. Handling of Materials: Handle and store material in such manner as to avoid damage.

PART 2 - PRODUCTS

2.1. GENERAL

- A. Pipe sizes specified are commercial pipe sizes.
- B. Tube sizes specified are nominal outside dimension.
- C. Roll-formed section sizes are the nominal outside dimensions.
- D. Finish for Framework and Appurtenances: Furnish the following finishes for steel framework and appurtenances:
 - 1. Galvanized finish with minimum weights of zinc as follows:
 - a. Pipe: ASTM A 53, Schedule 40, 1.8 ounce zinc per square foot.
 - b. Hardware and Accessories: ASTM A 153, zinc weight per Table I, Federal Specification RR-F- 191 (latest revision).

2.2. NEW FABRIC

- A. Furnish chain link fabric as follows:
 - 1. One-piece fabric widths, for fence heights up to 12 feet.
 - a. No. 9 gauge wires.

- b. Gauge of wire specified shall be wire gauge without any additional coatings.
- 2. 2-inch mesh.
- 3. Top selvages twisted and barbed, and bottom selvage knuckled for fabric over 72 inches high.
- 4. Galvanized finish with not less than 2.0 ounces zinc per square foot complying with ASTM A 392, Class II.
- 5. Galvanized finish with not less than 1.2 ounces zinc per square foot, complying with ASTM A 392, Class I.
- 6. Galvanized finish with not less than 0.20 ounces zinc per square foot complying with ASTM A 392.

2.3. NEW POSTS, RAILS, AND BRACES

- A. End, Corner, and Pull Posts: Furnish end, corner, and pull posts of the minimum sizes and weights as follows:
 - 1. Over 6 feet fabric height:
 - a. 2.375 inches OD pipe weighing 3.65 pounds per linear foot.
- B. Line Posts: Furnish line posts of the minimum sizes and weights as follows. Space posts 10 feet on centers maximum, unless otherwise shown.
 - 1. Up to 6 feet fabric height:
 - a. 1.90 inches OD pipe weighing 2.72 pounds per linear foot.
 - b. Over 6 feet fabric height:
 - c. 2.375 inches OD pipe weighing 3.65 pounds per linear foot.
- C. Top Rail: Furnish top rails, unless otherwise shown, of the following:
 - 1. 1.660 inch OD pipe weighing 1.35 pounds per linear foot.
 - 2. Furnish in manufacturer's longest lengths, with expansion type couplings, approximately 6 inches long, for each joint. Provide means for attaching the top rail securely to each gate, corner, pull, and end post.
- D. Post Tops: Pressed steel, wrought iron, or malleable iron, designed as a weathertight closure cap, for tubular posts. Furnish one cap for each post unless equal protection is afforded by combination post top cap and barbed wire supporting arm, where barbed wire is required.
 - 1. Furnish caps with openings to permit through passage of the top rail.
- E. Stretcher Bars: One piece lengths equal to full height of fabric, with a minimum cross-section of 3/16 inch by 3/4 inch. Provide one stretcher bar for each end post, and 2 for each corner and pull post, except where fabric is integrally woven into the post.
- F. Stretcher Bar Bands: Steel, galvanized, 0.078 to 0.108 inches thick depending on post diameter, spaced not over 15 inches on center to secure stretcher bars to end, corner, pull, and gate posts.
 - 1. Bands may also be used with special fittings for securing rails to end, corner, pull and gate posts.

2.4. MISCELLANEOUS MATERIALS AND ACCESSORIES

- A. Wire Ties: For tying fabric to line posts, use 9 gauge wire ties spaced 12 inches on center. For tying fabric to rails and braces, use 9 gauge wire ties spaced 24 inches on center. For tying fabric to tension wire, use 11 gauge hog rings spaced 24 inches on center. Finish of ties to match fabric finish.
 - 1. Manufacturer's standard procedure will be accepted if of equal strength and durability.

PART 3 - EXECUTION

3.1. INSPECTION

- A. CONTRACTOR and his installer must examine the conditions under which the fence is to be installed and notify ENGINEER in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to ENGINEER.

3.2. SEQUENCE

- A. Perimeter fence maintenance, installation and/or erection shall be completed before remedial activities are begun.
- B. Maintain the perimeter fence during all remedial activities for purposes of security and to restrict site entry.
- C. Upon completion of remedial activities remove fencing, posts, gates, and ancillary support items not included in final site restoration.

3.3. INSTALLATION

- A. Install framework, fabric and accessories in accordance with ASTM F 567.
- B. Top Rails: Run rail continuously through post caps or extension arms, bending to radius for curved runs. Provide expansion couplings as recommended by fencing manufacturer.
- C. Brace Assemblies: Install braces so posts are plumb when diagonal rod is under proper tension.
- D. Fabric: Leave approximately 2 inches between finish grade and bottom selvage, except where bottom of fabric extends into concrete. Pull fabric taut and tie to posts, rails, and tension wires. Install fabric on security side of fence, and anchor to framework so that fabric remains in tension after pulling force is released.
- E. Fabric shall be repaired by weaving in a replacement (salvaged) section of fabric or by installing replacement (salvaged) tension bars and brackets.

- F. No wire ties (metal or plastic) will be permitted in the repair of the fencing fabric.
- G. Repair coatings damaged in the shop or during field erection by recoating with manufacturer's recommended repair compound, applied per manufacturer's direction.
- H. Stretcher Bars: Thread through or clamp to fabric 4 inches on center, and secure to posts with metal bands spaced 15 inches on center.
- I. Tie Wires: Use U-shaped wires conforming to diameter of pipe. Clasp pipe and fabric firmly with ends twisted at least 2 full turns. Bend ends of wire to minimize hazard to persons or clothing.
- 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.

3.4. ADJUSTMENT AND CLEANING

- A. Adjust all fencing and leave in good working condition.
- B. Repair or replace broken or bent components as directed by the ENGINEER.
- C. Protect fencing from construction traffic.

+ + END OF SECTION + +

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SECTION 32 93 01

PLANTS

PART 1 - GENERAL

1.1. SCOPE

- A. The CONTRACTOR shall furnish all labor, equipment, and materials required to meet the Restoration Plan, and to restore any existing or planted woody flora disturbed, damaged or destroyed during the performance of the work under or as a result of the operations of the Contract, as specified herein and as shown on the drawings. These features may include but are not limited to, shrubs and trees.
- B. The quality of materials and the performance of work used in the restoration shall produce a feature equal to or better than the condition of each before the work began.
- C. All plantings to be accomplished in accordance with directions provided on drawings.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 74 19 – Construction Waste Management and Disposal
- C. Section 02 21 13 – Survey
- D. Section 31 23 23 – Backfill
- E. Section 32 13 13 – Asphaltic Concrete Paving
- F. Section 32 31 00 – Fencing

1.3. REFERENCES

- A. Plant Nomenclature: Conform to the latest edition of “Standardized Plant Names” as adopted by the American Joint Committee of Horticultural Nomenclature.
- B. Size and Grading Standards: Conform to the current edition of “American Standard for Nursery Stock” - Sponsor - the American Association of Nurserymen Inc., unless otherwise specified.

1.4. SUBMITTALS

- A. List of Plants: Before plant material is shipped to the project site, submit a complete itemized list of all plants including the source of supply. Substitutions must be approved by the ENGINEER prior to arrival on site.

- B. Product Data: Furnish the following with each planting material delivery.
 - 1. Invoice indicating sizes and variety of plant material.
 - 2. Certificates of inspection required by State and Federal agencies.
 - 3. Labels for each plant or bundles of plants indicating name and size.
- C. Quality Control Submittals:
 - 1. Worker's Qualifications Data: Names and addresses of 5 similar projects that the Contractor or Subcontractor has worked on during the past 2 years.

1.5. QUALITY ASSURANCE

- A. Worker's Qualifications: The persons performing the planting and their supervisor shall be personally experienced in the planting and caring of plant material and shall have been regularly employed by a company engaged in the planting and caring of plant material for a minimum of 2 years.
- B. Caliper trees to be planted of caliper up to 4 inches must have stem diameter confirmed at a point 6 inches above ground prior to arrival on site. Caliper trees over 4 inches in caliper must be measured 12 inches above ground, or above visible root flare.
- C. Do not use woody plant material from regions south of latitude 39 degrees unless such material has been lined out in nurseries located north of latitude 39 degrees for at least 2 growing seasons.

1.6. DELIVERY, STORAGE AND HANDLING

- A. Notify the ENGINEER 48 hours in advance of delivery of plant material.
- B. During transport and storage, Contractor will protect plants against climatic and mechanical injuries. Root balls will be wetted on a daily basis.
- C. Deliver fertilizer in manufacturer's standard sized bags showing weight, analysis, and manufacturer's name. Store under a waterproof cover or in a dry place as designated by the ENGINEER.

1.7. PROJECT CONDITIONS

- A. Water will be furnished by the State from existing facilities as directed. Furnish hoses and connections required to adequately water plants.

1.8. SCHEDULING

- A. Plant deciduous, woody plants between October 1 and May 15, whenever temperature is above 32 degrees F and soil is in workable condition, unless otherwise approved in writing.
- B. Plant evergreens between August 15 and September 15 or during April or May before start of new growth.

1.9. PLANTING GUARANTEE

- A. The guarantee shall extend for a period of one year from the date of physical completion. Physical completion for the Work of this Section is the date or dates when all the planting operations, or seasonal portions of the planting operations, or replacement planting operations have been completed and are accepted by the ENGINEER. During this period, seasonal inspections will be held by the ENGINEER. Plantings or seeding that has been found to be dead or in poor condition will be replaced by the contractor at no additional cost to the project.

PART 2 - PRODUCTS

2.1. PLANTS

- A. Shrubs and Trees:
 - 1. Nursery grown stock unless otherwise indicated in the itemized plant list.
 - 2. Acclimated plants true to genus and species.
 - 3. Well-developed root and branch systems. Do not prune branches before delivery.
 - 4. Free of disease, insect eggs, bark abrasions, and/or structural defect.
 - 5. Buds intact and reasonably closed at time of planting.
 - 6. Either containerized or balled and burlapped from soil which will hold a natural ball. Root ball will have good integrity with a well-developed root system, without excessive loose material. Manufactured balls are unacceptable.
 - 7. Conform to size indicated or larger, or within the minimum maximum size when so indicated. Larger plants cut back to specified dimensions will not be accepted.
- B. Trees:
 - 1. Single erect leader from ground to top, except where specified a surrounded with a uniform crown of evenly arranged branches.
 - 2. Free from frost cracks, broken bark, dead or broken branches, or serious mechanical or structural defect.
 - 3. Transplanted, or root pruned 360 degrees at least once during the previous 3 years.

2.2. PLANTING SOIL

- A. Use existing soil to backfill planting pits, amended as follows: The top eight inches of backfill around each planting shall be amended with:
 - 1. 3 oz. of dry formulation mycorrhizal inoculant, such as Mycor Tree Save Transplant
 - 2. 3 oz fertilizer
 - 3. 0.25 cu ft peat moss
- B. Backfill soils should be backfilled to existing grade

2.3. FERTILIZER

- A. Bonemeal: Commercial, steamed finely ground material containing not less than 1.0 percent nitrogen and 11 percent phosphoric acid.
- B. Commercial Fertilizer (10-6-4): Slow-release fertilizer, containing not less than 10 percent nitrogen, 6 percent available phosphoric acid and 4 percent water soluble potash.

2.4. MULCH

- A. Peat Moss: Finely granulated material, passing a 1/2 inch sieve, free of sticks, woody roots, stones and other objectionable material, and of such physical condition that it can be readily incorporated with the topsoil. Furnish material conforming to the following criteria:
 - 1. pH value: 3.0 to 5.0.
 - 2. Moisture: Not less than 25 percent nor more than 50 percent.
 - 3. Organic Material: Not less than 47 percent (90 percent dry basis).
- B. Wood Chips: Hardwood or softwood chips produced by a standard wood chipping machine, free of leaves, young green growth, wood shavings, sawdust, or any foreign material. Chips shall not exceed 3 inches in greatest dimension.

2.5. MISCELLANEOUS MATERIALS

- A. Stakes, Deadmen and Guy Stakes: Sound, durable White or Red Cedar, or other approved wood, free of insect or fungus infestation.
- B. Guy Wire or Cable: No. 12 galvanized iron wire or cable.
- C. Tree Wrapping: 4-inch-wide strips of jute burlap or waterproof paper 30-30-30 Krinklecraft by Eaton Brothers Corp., P.O. Box 60, Hamburg, NY 14075, (800) 433-3244.
- D. Protective Hose: 2-ply garden hose cut to required lengths to protect tree trunk's from damage by wires.
- E. Tree Wound Paint: Antiseptic, waterproof, adhesive, elastic tree wound paint containing no kerosene, coal tar, creosote, or other material harmful to cambium or living tissue.

PART 3 - EXECUTION

3.1. INSPECTION

- A. Plants to be approved at the nursery by ENGINEER prior to being shipped to the site. ENGINEER will inspect plants upon delivery to site and issue written approval.
- B. Do not plant any plant material until after inspection and approval in writing of plant shipments. Secure written approval of any substitutions before planting. Remove rejected material from planting areas.

3.2. PREPARATION

- A. Planting Layout:
 - 1. Stake out tree locations and planting areas.
 - 2. Obtain layout approval from the ENGINEER prior to excavations of plant pits and beds.
- B. Plant Pit Dimensions: Minimum width 12 inches, measured at the ground surface. Bottom of the pit should be firmed soil to prevent settling of plantings.
 - 1. Balled and Burlapped Plants:
 - a. Pit Depth: Not to exceed the ball depth.
 - b. Pit Width: Measured at the ground surface, 3 times the width of the ball or as indicated.
 - 2. Container Grown Plants: 2 times the diameter of the container measured at the ground surface.
 - 3. Ground Cover Beds: Excavate entire bed to a depth of 4 inches.
- C. Excavation: Excavate pits to the dimensions specified. The exposed pit soil surface must be broken up using tools in order to remove any glazing. Unless otherwise directed, excavated material should be used for backfill as described in Section 3.3.

3.3. PLANTING

- A. Setting Plants:
 - 1. Backfill pits with amended backfill, per Section 2.2, firm to the level upon which plants were previously growing. Set plants plumb. Plant budded or grafted plants 2 inches below bud or graft line. Complete backfilling with planting soil and settle continually with water.
 - 2. Balled Plants: Remove any wire basket around the ball. Set plants in position and backfill 1/3 depth of ball. Cut ties and remove burlap from top and adjust to eliminate air pockets. Excess soil should be used to create a raised saucer at the limits of the planting pit. Complete backfill and settle with water.
 - 3. Bare-root Plants: Set plant in position and place planting soil around roots settling with water. Use care to avoid bruising or breaking roots when firming soil. Prune bruised or broken roots.
- B. Wrapping: Wrap deciduous trees within 4 days after planting from the ground line to the height of the second branches. Wrap in a single layer wound spirally starting from base and overlapping 1-1/2 inches. Secure wrapping in place by use of approved staples or other approved methods and materials.
- C. Staking: Set tree stakes into solid ground below bottom of plant before backfilling. Place stakes at the outer edge of the roots or ball in line with the prevailing wind at a 10-degree angle from the tree trunk.
- D. Mulching:
 - 1. Spread mulch over finished surface of each plant, plant bed and hedge trench in either of the following amounts:

- a. Wood Chips: 3 inches.
 - b. Shredded Wood: 2 inches.
- 2. Water plants thoroughly after mulching.

- E. Pruning: Prune immediately after planting using sharp tools approved by the ENGINEER. Pruning should remove only dead, diseased, or broken branches, or to train the habit for long-term growth and stability.

- F. Guying: Guy deciduous trees 4 inches and over in caliber; trees over 6 feet high with 3 or more stems; and evergreens 6 feet or over in height, with 3 guys immediately after planting. Attach guys to stakes and trees as indicated. Connect multi-stem trees with protected connecting wires maintaining each stems relationship to one another.

- G. Establishment of Planting: Maintain plantings immediately following planting operations and continue throughout the guarantee period. Establishment of plantings shall consist of keeping plants in healthy, growing conditions by watering, weeding, cultivating, pruning, spraying, tightening of guys, remulching and by any other necessary operations of establishment. Water all plants at least once a week between April 1 and October 31 with approximately 5 gallons per square yard (1 inch layer of water) per watering unless otherwise directed. Provide additional watering during periods of dry weather when required or when directed. Treat plants with good horticultural preventative or remedial measures to control insects, diseases, or rodents.

3.4. INSPECTIONS AND REPLACEMENTS

- A. The following inspections apply only to this Section;
 - 1. Physical Completion Inspection and Replacements: Notify the ENGINEER in writing at least ten days prior to requested date of physical completion inspection. Remove and replace dead, unhealthy or badly impaired plants according to the original specification, if so directed. Replace plants during the next planting season if this inspection is not within a planting season.
 - 2. End of Guarantee Inspection and Replacements: Remove stakes, guy wires and tree wrapping at the end of the one-year guarantee period unless otherwise directed. Remove and replace dead, unhealthy or impaired plants according to original specification, as directed. Replace plantings during the next planting season if the end of guarantee period is not within a planting season.

+ + END OF SECTION + +

SECTION 33 00 00

PROTECTION, RELOCATION, AND ABANDONMENT OF EXISTING UTILITIES

PART 1 - GENERAL

1.1. SCOPE

- A. The work specified in this Section consists of the labor, equipment, tools, materials, and services needed to provide complete protection of all existing utilities and other related facilities during construction operations. Work in this Section includes:
 - 1. Location of Utilities
 - 2. Notification of Owners and Authorities
 - 3. Coordination and Preparation
 - 4. Protection of Utilities
 - 5. Relocation of Utilities
 - 6. Abandonment of Utilities
 - 7. Restoration of Property Markers

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 14 19 – Use of Site
- C. Section 02 21 13 – Survey
- D. Section 03 34 00 - Controlled Low Strength Material

1.3. SUBMITTALS

- A. Utility Protection, Relocation, and Abandonment Plan
 - 1. The CONTRACTOR shall provide details of its proposed approach to the Work specific in this Section, including but not limited to:
 - a. cleaning of pipes to be filled
 - b. support for utilities to be protected or relocated
 - c. verification of complete filling

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1. LOCATION OF UTILITIES

- A. Prior to construction, the CONTRACTOR shall verify location of existing underground and aboveground utilities near or adjacent to project by performing the following:

1. Consult with owners of utilities and adjacent property owners and arrange for field stake-out or other markings to show locations.
 2. Perform exploratory excavation at key junctures and other critical points to aid in ascertaining locations
 3. The CONTRACTOR shall contact Dig Safely New York – 811 and notify all affected or potentially affected utility companies, agencies, authorities, property owner(s), and the ENGINEER at least 72 hours (or as directed) prior to the commencement of intrusive activities and shall comply with the requirements of all of these entities. Proof of such notification shall be filed with the ENGINEER. Utilities shall be protected in the manner prescribed by the utility company.
- B. Immediately report to the ENGINEER, if possible, changes in work are required because of suspected interferences with existing utilities.
- C. If the location of an existing underground utility is uncertain, apply careful excavation and probing techniques during construction to locate and avoid damage to same.

3.2. NOTIFICATION OF OWNERS AND AUTHORITIES

- A. Prior to construction, the CONTRACTOR shall notify owners of existing utilities and related facilities, including local police and fire departments, of general scope, nature and planned progress schedule of the Work.
- B. When existing utilities, such as sewer, water, gas, telephone, communication, or electric power, are damaged or disturbed during construction, the affected owners, DEPARTMENT, and the ENGINEER shall be immediately notified.
- C. The CONTRACTOR shall notify police and fire departments, including affected owners, immediately if hazardous conditions are created or have the potential for occurring, as a result of damage to existing utilities or as a result of other activities at project site.

3.3. COORDINATION AND PREPARATION

- A. The CONTRACTOR shall coordinate with all utility owners and comply with all construction requirements of utility owners.
- B. Interference with roads, streets, walks, and other facilities during the performance of utility-related work will be minimized. The CONTRACTOR will not close or obstruct facilities without permission from the Owner and the DEPARTMENT.

3.4. PROTECTION OF FACILITIES

- A. The CONTRACTOR shall plan and conduct construction operations so that operation of existing utilities near or adjacent to the Work, including electric, telephone, sewer, water, gas or drainage utilities, are sustained.

- B. Existing utilities and related facilities will be protected from damage or movement through installation of adequate support systems and use of proper equipment, including application of careful excavation and backfilling techniques in sensitive areas.
- C. Existing utilities and other facilities damaged by the CONTRACTOR shall be promptly repaired as directed by, and to the satisfaction of the utility company.
- D. When aboveground visible structures such as poles, wires, cables, fences, signs or other structures constitute an unavoidable interference, the CONTRACTOR will notify the ENGINEER and owner regarding temporary removal and later restoration of the interfering item. The CONTRACTOR will arrange with the ENGINEER and owner to remove and later restore the interfering item to the satisfaction of the Owner, subject to approval of the Owner, or allow the Owner to perform such work with his own forces.

3.5. RELOCATION OF FACILITIES

- A. Uncovering, supporting, and sustaining utilities or other structures before removal or before and after realignment or change shall be the CONTRACTOR's responsibility as part of the Work of this Contract.

3.6. ABANDONMENT OF UTILITIES

- A. The CONTRACTOR shall fill subsurface piping adjacent to the lagoon with controlled low strength material (flowable fill) as detailed in the DRAWINGS, see Specifications Section 03 34 00.

++ END OF SECTION ++

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SECTION 33 11 53

MONITORING WELLS

PART 1 - GENERAL

1.1. SCOPE

- A. This section includes:
 - 1. The procedures for installing new monitoring wells as shown on the Contract Drawings and if existing wells are damaged during completion of the Work.
 - 2. The procedures for decommissioning existing wells as shown on the Contract Drawings and if existing wells are damaged during completion of the Work.
 - 3. Repairs and grade adjustments to existing wells if damaged as a result of remedial activities, final grading, etc.
 - 4. New locks, keyed alike, and well labeling for all monitoring wells.

- B. Survey of new and existing wells and inclinometer casings by a New York State Licensed Land Surveyor shall be completed in New York State Plane coordinates (horizontal and vertical) in accordance with Section 02 21 13 – Survey.

1.2. REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.
 - 1. National Water Well Associations
 - a. NWWA-EPA "Handbook of Suggested Practices for the Design and Installation of Groundwater Monitoring Wells"
 - 2. Codes, Rules, and Regulations of the State of New York
 - a. 6 NYCRR Part 360 Solid Waste Management Facilities
 - 3. New York State Department of Environmental Conservation
 - a. CP-43 Monitoring Well Decommissioning Procedure, November 2009, or latest revision
 - 4. American Society for Testing and Materials (ASTM)
 - a. ASTM D5092 – Standard Practice for Design and Installation of Groundwater Monitoring Wells

1.3. RELATED SECTIONS

- A. Section 02 21 13 – Survey

- B. Section 44 00 05 – Dewatering and Contact Water Treatment

1.4. SUBMITTALS

- A. Records
 - 1. Submit the following:

- a. Provide a well installation plan as a part of the CONTRACTOR's general Work Plan prior to installation.
- b. Provide a well decommissioning plan as a part of the CONTRACTOR's general Work Plan prior to decommissioning.
- c. Provide a well decommissioning report as part of the CONTRACTOR'S closeout documents at the end of the Project.
- d. Shop Drawings for well identification tags
- e. Surveyed monitoring well locations and elevations.

PART 2 - PRODUCTS

2.1. MATERIALS

- A. Risers (inner casings):
 1. 2-inch internal diameter (ID), schedule 40, threaded, flush-joint, PVC pipe.
 2. The top of the PVC casing shall be equipped with a vented slip cap (for stickup wells) or lockable expansion cap (for flush-mount wells).
 3. Casing shall arrive on site clean and in factory cartons.
- B. Screen sections:
 1. Manufactured slotted well screens with slot size of 0.010 inch (10-slot), 5 feet or 10 feet in length and equipped with threaded bottom plugs.
 2. Screens shall arrive on site clean and in factory cartons.
- C. Sand Filter Pack:
 1. Consisting of washed silica sand with a uniformity coefficient of less than 2.5 and a grain-size distribution such that no more than 2% passes the No. 60 sieve.
- D. Finer-Grained (choke) Sand Pack:
 1. Consisting of washed silica sand with a uniformity coefficient of less than 2.5 and a grain-size distribution such that no more than 100% passing the No. 30 sieve and less than 2% passing the No. 200 sieve.
- E. Bentonite:
 1. Powdered, premium-grade sodium montmorillonite conforming to applicable standards set forth in API-13 A with a minimum barrel yield of 90 barrels/ton.
 2. Pellets, (Hole Plug or equivalent)
- F. Cement:
 1. Portland cement in accordance with ASTM C 150, Type I or III.
- G. Locks:
 1. New plastic-coated, weather-resistant locks with O-ring seals around shackle and 3-inch-long shackle.
 2. Locks for new and existing wells shall be American Lock Company Weatherbuilt Plus Series 72WCC or approved equal. All new and existing wells shall be provided

similar locks and shall be keyed alike. All keys shall become the property of the DEPARTMENT upon Substantial Completion.

H. Identification Tags:

1. New stainless steel or aluminum identification tags shall be provided at each new and existing monitoring well. The letters shall be no less than 0.2-inch in height and shall be either stamped or engraved into the tag. The identification tags shall include the following information:
 - a. Monitoring well identification number
 - 1) New well example: GMW-21-1, -2, -3

I. Protective Steel Casing (Stickup Wells):

1. A new 4-inch diameter (minimum) protective steel casing shall be installed at the wells outside of the paved area, as shown in Contract Drawings.

J. Protective Steel Casing (Flush Mount Wells):

1. A new 8-inch diameter (nominal) by 12-inch deep H-20 rated cover shall be installed at the wells within paved areas, as shown in Contract Drawings.

2.2. MIXES

A. Cement/Bentonite Grout:

1. Water, cement, and bentonite mixed as follows:
 - a. 6 to 8 gallons of water
 - b. 94 pounds of cement
 - c. 3.5 to 4 pounds of bentonite

PART 3 - EXECUTION

3.1. GENERAL

- A. Monitoring Wells requiring decommissioning shall be in accordance with NYSDEC CP-43 Groundwater Monitoring Well Decommissioning Policy using the method specified in Section 3.5 of this Part.
- B. New monitoring wells shall be installed at the location(s) as directed by the ENGINEER in accordance with the procedures outlined in this specification. Wells shall be constructed in a single augured borehole and shall be replaced in kind. After installation of the well and surface seal is complete, each well shall be developed in accordance with the procedures outlined in this section.
- C. The horizontal location and elevation of the well (ground surface, top of casing, and top of riser) must also be surveyed in accordance with Section 02 21 13.
- D. For stickup wells a protective steel casing will be topped with lockable Royer (or Equal) aluminum well cap, as shown in the Contract Drawings

1. Steel casing shall be surrounded by a 3 feet diameter by 6 inch deep concrete slab with an additional 6-inch drainage pad above grade as directed by the ENGINEER.
- E. For flush mount wells, a new 8-inch diameter 12-inch deep H-20 rated cover shall be installed.
- F. New aluminum or stainless-steel well identification tags shall be installed on the interior cover of each new and pre-existing on-site and off-site monitoring well.
- G. Decommissioning of monitoring wells shall be completed prior to the CONTRACTOR's general mobilization to the site
- H. Installation of new monitoring wells shall be completed after completion of the lagoon restoration.

3.2. PREPARATION

- A. Protection
 1. Protect existing monitoring wells to remain.
 2. If integrity of wells to remain is compromised (casing becomes bent or loose or grout cracks) as a result of CONTRACTOR's operations, the wells shall be repaired or properly decommissioned and replaced in kind, at no additional cost to the DEPARTMENT.
- B. Equipment and Material Preparation and Cleanup
 1. All drilling equipment such as augers, casing, bits, and sampling equipment that may come in contact with subsurface materials shall be steam cleaned before being brought onto the site.
 2. The drilling and sampling equipment shall be steam cleaned before leaving the Project Site in accordance with the provisions included in the CONTRACTOR's approved Work Plan/HASP.
 3. Decontamination of equipment between setup and well decommissioning and well installation.
 4. Drilling fluids, decontamination water including development waters, shall be containerized and disposed offsite, or treated via the Contact Water Treatment System.

3.3. INSTALLATION

- A. General
 1. The work shall be carried out in accordance with the references in Article 1.2 of this Section.
 2. Provide new locks for all monitoring wells, as shown in the Limited Site Data Document.
 3. All locks shall be keyed alike.
 4. Provide four sets of keys.
 5. Provide and install steel protective casing and locking caps.
 6. Provide and install identification tags at all onsite and offsite well locations.

B. Overburden Monitoring Wells

1. New replacement overburden monitoring wells shall be installed in 4¼-inch I.D. hollow-stem auger (HSA) drilled boreholes or other approved methods and shall be screened entirely within overburden materials.
2. Install a 2-inch diameter well screen and casing to appropriate depth and height for stickup or flush mount well.
3. The sand pack shall be introduced gradually inside the augers and shall fill the annular space between the screen and borehole adjacent to the screen, extending 1.5-feet above the screen. Augers will be removed gradually during sand emplacement to prevent formation collapse.
4. Provide up to 1-foot of finer-grained sand (Morie Grade 00, or Equal) choke directly on top of sand pack.
5. Prevent collapse of the native formation materials against the well casing or screen.
6. Frequent and precise measurements shall be provided to ensure the proper placement of all materials.
7. Add up to 2-feet of bentonite chip/pellet seal. Hydrate for a minimum of 1 hour.
8. Provide cement/bentonite grout above the bentonite seal to 4 feet of ground surface. No organic polymer additives are permitted.
9. The grout shall be mixed with a mud pump to a consistency acceptable to the ENGINEER.
10. The grout material shall be introduced via a tremie pipe lowered to just above the top of the bentonite layer if greater than 10-feet deep or if formation collapse may occur. As the grout material is pumped into the borehole, the tremie pipe shall be removed, and the augers withdrawn.
11. Remove augers upon completion of grouting.
12. Provide an outer watertight protective steel casing concreted in place around the PVC riser pipe. If the top of the cement/bentonite grout is above 4-feet deep, then concrete shall be poured while the grout is wet.
13. For stickup wells the top of the steel casing shall extend approximately 3-feet above the finished grade and 2 inches above the top of the PVC well casing. Three feet of steel casing shall be below ground.
14. For stickup wells the monitoring well shall have a vented cap and locking cover. Flush mount wells will have a non-vented expansion plug.
15. All monitoring wells at the site (newly installed and existing monitoring wells) should be keyed alike (new wells shall have locks provided alike to the existing locks).
16. The concrete collar shall be sloped away from the well to divert surface runoff from the well.
17. Permanent well identification markers shall be placed on all monitoring wells at the site.

3.4. NEW MONITORING WELL DEVELOPMENT AND SAMPLING

- A. Allow the wells to set a minimum of 48 hours prior to development.
- B. Wells are to be developed by a combination of surging and over-pumping or other method approved by the ENGINEER.

- C. Develop until a turbidity of 50 nephelometric turbidity units (NTUs), or it has stabilized, and the pH and conductivity of the groundwater removed stabilize (measurements within 10% of each other for a minimum of three consecutive measurements; measurements to be taken every 10 minutes until water clears, every 5 minutes to confirm stabilization of parameters).
- D. A minimum of five well volumes shall be removed.

3.5. WELL DECOMMISSIONING

- A. Well and inclinometer casing decommissioning shall be performed in accordance with New York State Department of Environmental Conservation (NYSDEC) CP-43 - Groundwater Monitoring Well Decommissioning Policy, November 2009, or latest revision. The selected method is grouting in-place followed by pulling the casing.
- B. All components removed during well decommissioning shall be properly characterized and disposed off-site.
- C. Remove to the greatest extent possible the riser and screen sections. The well will be grouted while the riser is removed.
- D. Excavated soils shall be handled the same as drill cuttings, per Section 3.7 of this part.

3.6. WELL MODIFICATION

- A. Existing monitoring wells shall be modified with new locks, keys, tags, and plugs.
- B. Existing monitoring wells in regraded areas shall be modified to conform to the new grades and equipped with new concrete bases, covers, or risers, as directed by the ENGINEER.

3.7. DISPOSAL

- A. The development/purge water shall be handled and treated in accordance with Section 44 00 05 – Dewatering and Contact Water Treatment.
- B. The drill cuttings from well installation and decommissioning shall be contained, sampled, characterized, and sent off-site for disposal with excavated soils of similar characterization (i.e., non-hazardous or hazardous).

++ END OF SECTION ++

SECTION 44 00 05

DEWATERING AND CONTACT WATER TREATMENT

PART 1 - GENERAL

1.1. SCOPE

- A. The CONTRACTOR shall anticipate the need to dewater throughout the construction.
- B. This section includes the requirements for collection, treatment, and discharge of all contact water during the project.
- C. The CONTRACTOR shall coordinate dewatering and contact water treatment operations with the approved Stormwater Pollution Prevention Plan (SWPPP) and Soil Erosion and Sediment Control Plan. All soil and debris generated during excavation and demolition operations shall be thoroughly dewatered prior to transportation.
- D. Dewatering fluids collected shall be treated with an on-site contact water treatment system to meet the requirements of State Pollutant Discharge Elimination System (SPDES) Permit Program, County of Orange, New York.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 74 19 - Construction Waste Management and Disposal
- C. Section 02 24 23 - Sampling and Analysis
- D. Section 02 51 29 – Decontamination Station

1.3. REQUIREMENTS

- A. CONTRACTOR shall be responsible for the payment and procurement for all applicable local and state permits to properly discharge excavation-derived water into the stream after treatment. Completed and approved permits shall be submitted to ENGINEER.
- B. Plans for start-up and performance testing of the treatment system shall be submitted at least two weeks prior to commencement of start-up operations.
- C. Certification by equipment suppliers of proper installation before start-up testing.
- D. Contact Water Collection and Treatment Demonstration Test Report including analytical results.
- E. The CONTRACTOR shall ensure continuous operation of the dewatering and contact water treatment system throughout the duration of the project as directed by the ENGINEER.

1.4. SUBMITTALS

- A. The CONTRACTOR shall submit the following:
 - 1. Dewatering Plan as a part of the CONTRACTOR's overall Work Plan. The Plan shall be included in the Project Work Plan as described in Section 01 11 13.
 - 2. Contact Water Treatment Plan as a part of the Contractor's overall Work Plan. The Plan shall be included in the Project Work Plan as described in Section 01 11 13.
 - 3. Contact Water Treatment System Design with supporting calculations to demonstrate flow rates and performance to achieve surface water discharge requirements in Section 02 24 23.
 - 4. Cleanliness Certificates for Tanks or other equipment rentals associated with the Contact Water Treatment System.
- B. Detailed shop drawing of all Contact Water Collection and Treatment equipment.
- C. SPDES Permit
- D. Operational Submittals
 - 1. Startup Submittals
 - a. Daily logs during startup and testing including, but not limited to;
 - 1) Influent Volumes
 - 2) Approved Discharge Volume and peak flow rate
 - 3) Samples Collected
 - 4) General Observations
 - 5) Equipment Maintenance Logs
 - 6) Corrective Measures
 - b. Biweekly Report during dewatering period
 - c. Analytical results
 - d. Discharge monitoring reports.
- E. Post Completion Submittals
 - 1. Total discharge volume
 - 2. All contact water treatment system analytical results
 - 3. Baseline and post-construction sampling results

1.5. DEWATERING PLAN REQUIREMENTS

- A. The Dewatering Plan shall provide a complete description of the proposed operations, a list and thorough description of required equipment and material, contingency plans and actions, a description of system operations addressing the relationship to the Work Plan elements of, excavation, backfilling, decontamination activities (equipment and debris), sampling and analysis, transport, storage, treatment, and disposal operations.
- B. This plan shall include:
 - 1. Conceptual design of Contact Water Treatment System
 - 2. Dewatering methods,
 - 3. Quantities anticipated by CONTRACTOR,
 - 4. Maximum rates anticipated by CONTRACTOR,

5. Amendments or surfactants to be used,
 6. Water handling methods,
 7. Treatment methods,
 8. Sampling and reporting practices,
 9. Discharge point calculations and details,
 10. Permitting and fees,
 11. Phasing/scheduling of work,
 12. Contingencies,
 13. Flow metering equipment,
 14. Description of decontamination methods utilized prior to removing equipment from the site, and
 15. Method of dewatering soils through use of staging areas or soil amendments.
- C. CONTRACTOR shall anticipate the need for dewatering and calculate the size of the Contact Water Treatment System required and the volume of water to be treated throughout the duration of the project from Notice to Proceed until Substantial Completion. The calculations shall consider the control of run-on and runoff of the work areas, drainage of stockpiles, drainage from decontamination facilities, and groundwater. Include assumptions and calculations used.
- D. Provide flexibility in the plan to handle variations in conditions that will also minimize the quantities of water.

1.6. CONTACT WATER TREATMENT PLAN REQUIREMENTS

- A. In conjunction with the Dewatering Plan, the Contact Water Treatment Plan shall provide a complete description of the proposed Contact Water Treatment System capable of meeting the discharge requirements. The plan shall provide a list and thorough description of the proposed equipment and material including equipment drawings and catalog cut sheets, contingency plans and actions, and a system of operations addressing their relationship to the Work Plan.
- B. The Contact Water Treatment System shall be designed to adequately meet all treatment requirements, expected capacities and shall be sealed by a New York State Professional Engineer.
- C. It is anticipated that the Contact Water Treatment System may consist of:
1. Bag filtration.
 2. Granular activated carbon.
 3. Pumps
 4. Flowmeters,
 5. Frac (Fractionation)-Type Settling/Holding Tanks and,
 6. Lined Containment Berm adequately sized to prevent contamination of underlying soil through spills or system failure.
- D. Shop drawings of dewatering details (i.e., sediment dewatering, pump system, drain construction, contaminant tanks and other equipment necessary to complete the work).

1.7. PROJECT REQUIREMENTS

- A. CONTRACTOR shall provide sufficient dewatering components capable of meeting and maintaining the calculated quantities. Backup components shall be maintained on-site in order to prevent interruption of any work activity. Interruptions in work activity shall be at the expense of CONTRACTOR. Interruptions in work activity or delays in the schedule because of insufficient equipment for handling the amount of anticipated contact water shall be at no additional expense to the DEPARTMENT.
- B. Water that has been in contact with contaminated soils and/or groundwater shall be treated and properly disposed of in compliance with the approved SPDES Permit.
- C. Treated water shall be discharged through an aboveground pipe to the tributary at a temporary pump discharge point. Following contract award, the CONTRACTOR shall provide a detailed design of the temporary pump discharge point that shall meet the latest SPDES standards for approval as part of the Contact Water Treatment design.
- D. All waters encountered or accumulated during site operations shall be considered contaminated and require treatment and proper disposal unless otherwise agreed to in writing by the DEPARTMENT.
- E. Select methods and implement controls that minimize dewatering and water handling during excavation.
- F. CONTRACTOR shall fulfill all sampling, monitoring and reporting requirements of the SPDES Permit.

PART 2 - PRODUCTS (CONTRACTOR DETERMINED)

PART 3 - EXECUTION

3.1. GENERAL

- A. CONTRACTOR shall be responsible for minimizing the generation of contaminated water and for keeping excavations free of standing water.
- B. Perform baseline soil sampling and analysis before treatment system mobilization to establish initial information on if any contaminants of concern are present. The information shall be used to compare post-construction sampling results to identify if any remedial cleanup is required resulting from contamination of support or “clean” areas by the CONTRACTOR from remedial operations.
- C. Control groundwater and run-on surface water within the work area by pumping or other methods to prevent softening of surfaces exposed by excavation.
- D. Use filters on dewatering devices at the point of collection to prevent removal of fines from soil and prevent disruption to the contact water treatment system.

- E. CONTRACTOR shall minimize the need for collection and on-site treatment of contaminated water.
- F. Select a method of dewatering and contact water treatment that complements the CONTRACTOR's overall work plan.

3.2. CONTACT WATER TREATMENT SYSTEM

- A. Contact Water Treatment System shall have the ability to treat the expected type, volume and concentrations of contaminants in the contact water in order to satisfy the generic effluent requirements issued by the DEPARTMENT, or local POTW Permit requirements, or the requirements of another approved disposal facility or option.
- B. The combined treatment/storage system shall have the ability to adequately treat or store the daily expected quantity of contaminated water. Water shall be treated and discharged at a rate sufficient to maintain daily work activity. Work activity shall not be interrupted due to the inability to meet treatment requirements or handle the CONTRACTOR'S calculated quantities.
- C. Contact Water Treatment System shall incorporate a lined, bermed secondary containment system adequately sized for all treatment equipment and piping, including storage tanks, to contain and capture leaks and spills. Clean up of all contamination resulting from leaks and spills will be performed by the CONTRACTOR at no additional cost to DEPARTMENT.
- D. Certify in writing that all treatment equipment has been fully decontaminated prior to mobilization to the project site and will not affect the quality of treated water. The treatment equipment will be determined acceptably "clean" after visual inspection by ENGINEER. Tanks or other equipment rentals for the Contact Water Treatment System must be certified clean by the vendor prior to being brought on site. No visible staining or sheen will be allowed on any treatment equipment. CONTRACTOR shall be responsible for all additional decontamination of the equipment or mobilization of different equipment at no additional cost to DEPARTMENT.

3.3. INSTALLATION

- A. Contact Water Treatment & Dewatering Systems must be leak tested and fully operational prior to any decontamination, excavation or contaminated material transportation operations.
- B. Install all equipment in accordance with manufacturer's instructions and as shown in approved shop drawings.
- C. Confirm that all equipment and materials are compatible as a system.

3.4. CONTACT WATER TREATMENT SYSTEM STARTUP AND DEMONSTRATION

- A. After installation of the Contact Water Treatment System and prior to discharge or disposal, CONTRACTOR shall:
1. Visually inspect all parts of the system. Inspect inside of pipes, tanks, and equipment for debris and foreign objects. Correct any deficiencies found.
 2. Perform rotational checks of all equipment with moving parts (unpowered).
 3. Disconnect motor leads. Using control system sensors to the extent practical, activate sensors and test voltages to ensure control system is operating as intended. If sensors cannot be activated without water, use simulators to mimic sensor signals. Perform repairs as necessary.
 4. Using potable water, fill the system and check all components for leaks. Pressure test, at 25 psi above working pressure of the system, all components and piping for a period of two hours. For the equipment designed to operate at lower pressure, isolate them from the rest of the system and pressure test them at appropriate working pressure. After pressure testing, turn the power on while feeding clean water and check for leaks. Repair any leaks found.
 5. Empty clean water from process equipment.
 6. Connect liquid effluent discharge to the temporary holding tank(s) to be provided by CONTRACTOR. This storage facility shall have sufficient capacity for at least eight hours of full capacity operation.
 7. Startup the system and make adjustment(s) to the system as necessary to maintain smooth operation. Once all necessary adjustments are made, run the system continuously for eight hours. Verify that all valves open and close properly.
 8. During the startup period, system influent and effluent samples will be collected after 20,000 gallons. The effluent should be temporarily stored in a CONTRACTOR-provided storage tanks.
 9. After the samples are collected, shut down the treatment system until confirmed analytical results are received.
 10. The effluent stored during system tests must meet analytical discharge requirements prior to being discharged. CONTRACTOR shall re-treat water collected during the initial start-up period and perform additional sampling to verify discharge requirements are met. CONTRACTOR shall modify treatment system, as necessary and perform additional start-up sampling and analysis at no additional cost to DEPARTMENT until the system is proven to effectively meet discharge criteria under normal operating conditions.
 11. Parameters for operation and maintenance of the dewatering treatment system shall be established during the startup and demonstration.
 12. Provide all required labor, project equipment and materials, tools, construction equipment, transportation, and test equipment for start-up and testing of the treatment system. Demonstration that the systems meet the performance requirements stated in these specifications and that the complete functioning unit meets the required performance objectives shall be the responsibility of CONTRACTOR. Provide all materials to allow the treatment system to operate effectively, including valves, piping, filter media, or other items required to complete the process and utility systems.

13. Provide that all treatment units and associated piping is equipped with sufficient sampling ports to allow sampling to determine the system meets performance criteria. Sampling capability must be included at all pumps.
14. Provide any equipment or operational modifications required for the system to meet the performance criteria.
15. All effluent treated before, during or following start-up may be discharged only upon verification discharge criteria have been met and written acceptance by the DEPARTMENT

- B. During start-up and testing, CONTRACTOR shall prepare and submit daily log reports. A copy of the log shall be submitted to ENGINEER each day. Upon completion, the reports shall be submitted in booklet form showing all field tests to adjust each component and all field tests performed to prove compliance with the specified performance criteria. Daily entries shall include process control procedures, equipment maintenance logs, general observations, and all monitoring activities. These monitoring activities shall include schedule process control monitoring, and performance-verification testing.

3.5. SYSTEM OPERATION AND MAINTENANCE

- A. Operate and maintain treatment system as long as necessary to complete the work.
- B. Treatment Operation Processes:
 1. During normal operation, grab sampling shall be collected from the effluent discharge(s) weekly to support continuous discharge and/or batch release. . Samples will be analyzed for the parameters identified in Section 02 24 23 Attachment A – SPDES Permit Program, County of Orange, New York.
 2. Flow rates and the cumulative total volume of water treated shall be recorded daily. Up to 72,000 GPD discharge is allowed.
 3. Meet the specified sampling frequency and laboratory turnaround time.
 4. Follow the maintenance procedures specified in the manufacturer’s manuals for all equipment.
 5. Replenish all spare parts or supplies with the same types and amounts used.

3.6. REPORTING

- A. A detailed startup and demonstration test report shall be submitted to the DEPARTMENT and ENGINEER prior to initiating bulk influent processing.
- B. Biweekly discharge reports shall be provided to the ENGINEER during the dewatering period. These reports shall include the period covered, quantity of effluent discharged, and all other data required at the frequencies required in the Generic Effluent Criteria Requirements and Monitoring Requirements. Submit reports within two (2) business days of the end of the bi-weekly period being monitored.

3.7. DISPOSAL

- A. Dewatering wastes shall be treated on-site and properly discharged in accordance with Section 02 24 23 Attachment A – SPDES Permit Program, County of Orange, New York. The CONTRACTOR shall be responsible for all permits, fees, and testing requirements.
- B. Dewatering wastes generated as a result of contact water treatment operations, such as spent resins, polymers, bag filters and other operational derived waste required to operate the treatment system shall be disposed of in accordance with Section 01 74 19 – Construction Waste Management and Disposal.
- C. Sampling and analysis of water to be discharged shall be performed in accordance with the approved sampling plan, and shall meet local, state and federal requirements and codes.
- D. The CONTRACTOR shall also be responsible for the proper sampling, transport, and offsite disposal of the residual materials resulting from the operation of the treatment system, such as granular activated carbon, filters, skimmed oil, metals precipitation sludge, and personal protective equipment (PPE).

3.8. SYSTEM DEMOBILIZATION

- A. CONTRACTOR shall properly decontaminate all liquid handling and treatment equipment in accordance with the approved Dewatering Plan prior to demobilizing the equipment from the project site.
- B. Perform post-construction sampling and analysis and compare the analytical results to the baseline sampling data.

+ + END OF SECTION + +

SECTION 44 10 00

COMMUNITY AIR MONITORING

PART 1 - GENERAL

1.1. SCOPE

A. Work Specified

1. The CONTRACTOR shall provide all labor, materials, equipment, services, and incidentals as specified and required to implement a community air monitoring program for total volatile organic compounds (VOCs), particulate matter less than 10 microns in diameter (PM-10), and odors.
2. Community air monitoring for total VOCs, PM-10, and odors shall be performed on a continuous basis during all ground intrusive or dust-generating Work.
3. The objectives of the community air monitoring program include, but are not limited to, the following:
 - a. Monitor and document the average airborne concentrations of total VOCs and PM-10 during the Work at the upwind and downwind perimeter of the Work area.
 - b. Monitor ambient air conditions at the perimeter of the Work area for the
 - c. presence of odors.
 - d. Provide an early warning system, through the use of alarms and notification levels, so that vapor and dust emissions can be controlled on-site at the source before the total VOC and PM-10 action levels are exceeded at the downwind perimeter of the Work area.
 - e. Evaluate the on-going effectiveness of vapor and dust controls, and/or construction techniques to maintain or reduce average airborne concentrations of total VOCs and PM-10 below action levels at the downwind perimeter of the Work area.
 - f. Evaluate the on-going effectiveness of odor, vapor, and dust controls, and/or construction techniques, to mitigate Odor emissions.

B. Definitions

1. Dust-Generating Work: Any Work with the potential to generate dust. Examples of dust-generating Work include, but are not limited to, the following:
 - a. Ground intrusive Work.
 - b. Amending or stabilizing excavated materials for off-site treatment/disposal.
 - c. Crushing/downsizing excavated rock and debris.
 - d. Loading or unloading excavated materials and imported fill materials.
2. Ground Intrusive Work: Any Work performed below the existing level of the ground, or that involves the disturbance of existing earth, regardless of quantity. Examples of ground intrusive Work include, but are not limited to, the following:
 - a. Excavation, trenching, and test pitting, and handling of excavated materials.
 - b. Backfilling.
 - c. Grading.

3. Perimeter of Work Area: The limits of Work, or half the distance to the nearest potential receptor or occupied residential/commercial structure, whichever is less, but in no case less than 20 feet.
4. Work Area: The area where ground intrusive or dust-generating Work is being performed.

1.2. RELATED SECTIONS

- A. Section 01 11 13 – Summary of Work
- B. Section 01 74 19 - Construction Waste Management and Disposal
- C. Section 01 76 50 - Nuisance Controls Management and Corrective Measures

1.3. APPLICABLE CODES, STANDARDS, AND SPECIFICATIONS

- A. New York State Department of Environmental Conservation (Department)
 1. DER-10, Technical Guidance for Site Investigation and Remediation.
 - a. Appendix 1A, New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (provided as an attachment to this Section).
 - b. Appendix 1B, Fugitive Dust and Particulate Monitoring (provided as an attachment to this Section).

1.4. SUBMITTALS

- A. Provide, as a single submittal, the Community Air Monitoring Program (CAMP), containing the following information:
 1. List of CONTRACTOR's air monitoring personnel to be responsible for community air monitoring program and resumes of relevant experience.
 2. The CAMP shall describe the procedures to maintain environmental protection and to monitor and minimize the creation and dispersion of dust, windblown asbestos fibers, vapors, and odor, where not specifically addressed in these specifications. The CAMP shall be prepared in accordance with applicable NYSDEC regulations and industry standards.
 3. The CAMP shall address each major construction activity where environmental concerns are applicable as approved by the ENGINEER.
 4. The CAMP shall identify all possible sources of fugitive dust and organic vapor emissions and shall specify how each of these sources shall be controlled. Such controls shall include site-specific action levels at which additional personal protective equipment will be required or when work will be terminated.
 5. Manufacturer's product data and specifications for the following:
 - a. Environmental enclosures and mounting tripods.
 - b. Monitoring equipment.
 - c. Alarms.
 - d. Accessories.
 - e. Meteorological monitoring system.
 6. Manufacturer's calibration and field quality assurance requirements for monitoring equipment.

7. The CAMP shall provide details regarding how dust, odors, and vapors will be managed during waste management activities.
- B. Weekly community air monitoring reports. In each report, provide the following information for each day community air monitoring was performed:
1. Date.
 2. Brief (two- or three-sentence) description of Work performed and general location of Work at the site.
 3. Daily average concentration of total VOCs and PM-10 at each monitoring location.
 4. Maximum 15-minute average concentration of total VOCs and PM-10 at each monitoring location.
 5. Exceedances (if any) of total VOC and PM-10 action levels at downwind monitoring locations. Provide the following:
 - a. Time, location, and concentration (above background) of exceedance.
 - b. Date and time of verbal and written notifications provided by the CONTRACTOR to the ENGINEER.
 - c. Copy of written notification provided by the CONTRACTOR to the ENGINEER.
 - d. Most likely cause for the exceedance, and corrective actions taken by the CONTRACTOR.
 6. Sketch showing approximate locations of upwind and downwind monitoring locations for total VOCs and PM-10 at the site and predominant wind direction for the day. Note if monitoring locations were adjusted during the day.
 7. Copy of daily log for perimeter checks of the Work area for odors.
 8. Date and time of any odor complaints received from the public.
- C. Raw total VOC, PM-10, and meteorological monitoring data. Provide data on a monthly basis on CD or DVD in format acceptable to the ENGINEER.

1.5. DUST CONTROL

- A. Dust control shall be in accordance with the approved Nuisance Controls and Management Plan developed in accordance with Section 01 76 50.

1.6. ODOR CONTROL

- A. The CONTRACTOR shall take all necessary measures in addition to those required by Federal, State and local laws and regulation and requirements of the Contract Documents to control odors as approved by the ENGINEER.

1.7. NOISE CONTROL

- A. Noise monitoring and action levels shall be as stated and specified in Section 01 76 50.

1.8. QUALITY ASSURANCE

- A. Qualifications

1. CONTRACTOR's Air Monitoring subcontractor: Retain the services of an independent firm experienced in environmental monitoring to implement the community air monitoring program on the CONTRACTOR's behalf. subcontractor field personnel shall have at least five years related experience and shall operate under the supervision of an office-based Certified Industrial Hygienist (CIH). The Air Monitoring subcontractor's responsibilities include, but are not limited to, the following:
 - a. Providing all labor, materials, and equipment as specified or required to implement the community air monitoring program.
 - b. Selecting upwind and downwind monitoring locations for total VOCs and PM10 and installing community air monitoring stations on a daily basis.
 - c. Calibrating community air monitoring equipment on a daily basis, or other frequency recommended by the manufacturer.
 - d. Coordinating equipment maintenance and repairs.
 - e. Monitoring meteorological conditions on a daily basis and adjusting monitoring locations for total VOCs and PM-10 as necessary and appropriate.
 - f. Performing periodic (at least hourly) inspections of community air monitoring equipment to verify that equipment is operating/functioning properly.
 - g. Performing periodic (at least hourly) perimeter checks of the Work area to monitor for odors.
 - h. Removing community air monitoring stations and downloading total VOC and PM-10 data from monitoring equipment at the end of each work day.
 - i. Storing and maintaining total VOC, PM-10, and meteorological data at the site.
 - j. Preparing and submitting weekly community air monitoring reports.
 - k. Notifying the DEPARTMENT, ENGINEER, and CONTRACTOR personnel when total VOC and PM-10 notification or action levels are exceeded at downwind monitoring locations, and when Odors are noted at the perimeter of the Work area.
 - l. Documenting exceedances of total VOC and PM-10 action levels at downwind monitoring locations and providing required documentation to the ENGINEER within 12 hours of the exceedance.
 - m. Documenting odor complaints received from the public.

PART 2 - PRODUCTS

2.1. EQUIPMENT

A. Community Air Monitoring Stations

1. Environmental Enclosures and Mounting Tripods: Provide a portable, weather-tight enclosure and compatible mounting (survey) tripod for each monitoring station. Environmental enclosures shall provide proper operating conditions for monitoring equipment.
2. Monitoring Equipment: Provide the following for each monitoring station:
 - a. Data-logging photoionization detector (PID) with 10.6 eV lamp.

- b. Real-time aerosol monitor meeting the minimum requirements set forth in Appendix 1B of DER-10.
 - c. External battery packs or alternate power source to allow for continuous monitoring and data-logging for a period of not less than 12 hours.
 - d. Provide and maintain on-site spare PIDs and real-time aerosol monitors to allow for uninterrupted monitoring in the event of equipment damage or malfunction.
- 3. Alarms: Provide audible and visual alarms for each monitoring station and means of notifying CONTRACTOR field personnel in real-time (via radio telemetry or similar) if total VOC and PM-10 notification or action levels are exceeded.
 - 4. Accessories: Provide equipment calibration kits, sampling inlets, data management software, and other accessories recommended by the equipment manufacturers for the intended application.
- B. Meteorological Monitoring System: Provide a portable meteorological monitoring system capable of measuring wind speed, wind direction, relative humidity, dry bulb temperature, and barometric pressure, and recording and storing weather data.

PART 3 – EXECUTION

3.1. MONITORING FOR TOTAL VOCS AND PM-10

- A. Community Air Monitoring Stations
 - 1. Installation
 - a. Install community air monitoring stations at the start of each work day before any ground intrusive or dust-generating Work is initiated. Install one location at the upwind perimeter of the Work area and three locations at the downwind perimeter of the Work area (four locations total).
 - b. Select upwind and downwind monitoring locations based on predominant wind direction, and nature and location of Work to be performed. Monitor wind direction throughout the day and adjust community air monitoring locations if wind direction shifts more than 60 degrees from original upwind direction during the day. Document original upwind and downwind monitoring locations each day, and any changes made to monitoring locations during the day.
 - c. Set data-logging interval on monitoring equipment to 15 minutes. Set alarm levels on monitoring equipment to respond to 15-minute average concentrations at or below the total VOC and PM-10 action levels specified in Paragraph 3.02.C of this Section.
 - 2. Protection
 - a. Protect community air monitoring equipment from damage due to construction operations, weather, and vandalism.
 - b. Immediately remove from service, and replace at the CONTRACTOR's expense, damaged or malfunctioning monitoring equipment.
 - 3. Removal

- a. Remove community air monitoring stations at the end of each work day, and only after all ground intrusive or dust-generating Work has been completed for the day.
- b. Download total VOC and PM-10 community air monitoring data from each station at the end of each work day.

B. Notification Levels and Response

1. Notification Levels
 - a. Total VOCs: 3 parts per million (ppm) above background (upwind) concentration for the 15-minute average.
 - b. PM-10: 100 micrograms per cubic meter (ug/m³) above background (upwind) concentration for the 15-minute average, or visible dust observed leaving the Work area.
2. Response: Implement the following if notification levels are exceeded:
 - a. Notify the ENGINEER.
 - b. Continue Work and employ additional odor, vapor, and dust controls to abate emissions.
 - c. Evaluate and, if necessary and appropriate, modify construction techniques.

C. Action Levels and Response

1. Action Levels
 - a. Total VOCs: 5ppm above background (upwind) concentration for the 15-minute average.
 - b. PM-10: 150 ug/m³ above background (upwind) concentration for the 15minute average.
2. Response: Implement the following if action levels are exceeded:
 - a. Stop all Work and immediately notify the ENGINEER. The ENGINEER will notify the DEPARTMENT project manager by telephone or e-mail within two hours of the exceedance.
 - b. Continue monitoring and employ additional odor, vapor, and dust controls to abate emissions.
 - c. Identify the source or cause of the exceedance.
 - d. Evaluate and, if necessary and appropriate, modify construction techniques.
 - e. Work shall not resume until 15-minute average concentrations are below the action levels. If the concentration of total VOCs exceeds 25 ppm above the background (upwind) concentration for the 15-minute average, work shall not resume until authorized by the DEPARTMENT.
 - f. Provide to the ENGINEER, within 12 hours of the exceedance, the following:
 - 1) Total VOC and PM-10 community air monitoring data for upwind and downwind monitoring locations at the time of the exceedance.
 - 2) Source or cause of the exceedance.
 - 3) Corrective actions taken or to be taken in response to the exceedance.
 - g. The CONTRACTOR shall provide written notification to the ENGINEER within 24 hours of the exceedance.
3. Document exceedances of total VOC and PM-10 action levels in weekly community air monitoring reports.

3.2. DATA MANAGEMENT, RECORDKEEPING, AND REPORTING

- A. Store all total VOC, PM-10, and meteorological monitoring data at the Project Site in electronic format, both in a computer database and on CD, DVD or portable USB drive. Maintain data in an organized manner, indexed by date and monitoring location. Data shall be accessible and available for review at any time by the ENGINEER, DEPARTMENT, and NYSDOH.
- B. Maintain electronic or written records of all equipment calibrations, field checks, maintenance, and repairs. Provide records to the ENGINEER upon request.
- C. Maintain daily logs for perimeter checks of the Work area for Odors in an organized manner at the Project Site. Daily logs shall be accessible and available for review at any time by the ENGINEER, DEPARTMENT, and NYSDOH.
- D. Prepare and submit to the ENGINEER, DEPARTMENT, and NYSDOH weekly community air monitoring reports in a format acceptable to the Agencies. Submit reports electronically (by e-mail) by noon every Monday for the previous week's monitoring. Include in each report, at a minimum, the following information for each day community air monitoring was performed:
 - 1. Date.
 - 2. Brief (two- or three-sentence) description of Work performed and general location of Work at the site.
 - 3. Daily average concentration of total VOCs and PM-10 at each monitoring location.
 - 4. Maximum 15-minute average concentration of total VOCs and PM-10 at each monitoring location.
 - 5. Exceedances (if any) of total VOC and PM-10 action levels at downwind monitoring locations. Provide the following:
 - a. Time, location, and concentration (above background) of exceedance.
 - b. Date and time of verbal and written notifications provided by the CONTRACTOR to the ENGINEER.
 - c. Copy of the written notification provided by the CONTRACTOR to the ENGINEER.
 - d. Most likely cause for the exceedance, and corrective actions taken by the CONTRACTOR.
 - 6. Sketch showing approximate locations of upwind and downwind monitoring locations at the site and predominant wind direction for the day. Note if monitoring locations were adjusted during the day.
 - 7. Copy of daily log for perimeter checks of the Work area for Odors.
 - 8. Date and time of any odor complaints received from the public.
- E. Submit to the ENGINEER on a monthly basis all raw total VOC, PM-10, and meteorological monitoring data. Provide data on CD or DVD in format acceptable to the ENGINEER.

3.3. SITE QUALITY CONTROL

- A. Calibrate monitoring equipment on a daily basis, or other frequency recommended by the manufacturer, in accordance with manufacturer's calibration and quality assurance requirements. Document all instrument readings, field reference checks, and calibrations.
- B. Perform periodic (at least hourly) field checks of monitoring equipment to verify that equipment is operating/functioning properly. Document the date, time, and outcome of each field check.
- C. Immediately remove from service, and replace at the CONTRACTOR's expense, damaged or malfunctioning monitoring equipment.
- D. Preventative maintenance and repair of monitoring equipment, if required, shall only be performed by qualified personnel, or authorized representatives of the manufacturer.

+++END OF SECTION+++

SECTION 44 10 00 APPENDICES FOLLOW

APPENDIX 44 10 00-1A

NEW YORK STATE DEPARTMENT OF HEALTH GENERIC COMMUNITY AIR MONITORING PLAN

OVERVIEW

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

A.1 Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

A.2 VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.
4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

A.3 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a

period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.
2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \text{ mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.
3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

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FUGITIVE DUST AND PARTICULATE MONITORING

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.
2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.
3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM-10) with the following minimum performance standards:
 - a. Objects to be measured: Dust, mists or aerosols;
 - b. Measurement Ranges: 0.001 to 400 mg/m^3 (1 to $400,000 \text{ } \mu\text{g/m}^3$);
 - c. Precision (2-sigma) at constant temperature: $\pm 10 \text{ g/m}^3$ for one second averaging; and
 - d. $\pm 1.5 \text{ g/m}^3$ for sixty second averaging;
 - e. Accuracy: $\pm 5\%$ of reading \pm precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 m, g= 2.5, as aerosolized);
 - f. Resolution: 0.1% of reading or 1 g/m^3 , whichever is larger;
 - g. Particle Size Range of Maximum Response: 0.1-10;
 - h. Total Number of Data Points in Memory: 10,000;
 - i. Logged Data: Each data point with average concentration, time/date and data point number
 - j. 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;
 - k. Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
 - l. Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
 - m. Operating Temperature: -10 to 50°C (14 to 122°F);

- n. Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.
4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.
5. The action level will be established at 150 ug/m^3 (15 minutes average). While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m^3 , the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m^3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m^3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.
6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM-10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential-- such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.
7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:
 - a. Applying water on haul roads;
 - b. Wetting equipment and excavation faces;
 - c. Spraying water on buckets during excavation and dumping;
 - d. Hauling materials in properly tarped or watertight containers;
 - e. Restricting vehicle speeds to 10 mph;
 - f. Covering excavated areas and material after excavation activity ceases; and
 - g. Reducing the excavation size and/or number of excavations.
8. Experience has shown that the chance of exceeding the 150 ug/m^3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can

result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

9. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

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SECTION XII

Measurement for Payment

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, 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 necessarily be limited to, compensation for furnishing all supervision, labor, equipment 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 bid price 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, tools, equipment, and incidentals necessary to the completed 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 01 29 73, Schedule of Values.

1.4. SUBMITTALS

- A. Bid Breakdowns/Schedule of Values: Submit in accordance with Section VIII, Article 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

2.1. GENERAL

- A. Under this Contract, the CONTRACTOR shall provide all labor, equipment, 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 or 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, 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
 3. materials and equipment.
 4. All accessories, manuals, and services pertinent to the proper start-up, operation,
 5. 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. sludge and sediment) 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 fill) 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. The weights shall be taken in the presence of a Department representative. When the weight is per ton, trucks shall be weighed prior to loading and after loading. The measured tonnage will be the difference between the prior- and post-loading measured truck weights.

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/Demobilization

1. Measurement and Payment: The bid lump sum price for Bid Item LS-1 – Mobilization/Demobilization shall be the amount paid to the CONTRACTOR to mobilize and demobilize to the Site in accordance with the requirements of the Contract Documents. The CONTRACTOR may invoice for up to 70% of this item upon successful installation of the work and the remaining 30% at substantial completion. Item LS-1 – Mobilization 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, including:
 - 1) Project Plans including: the Work Plan, construction schedule, Health and Safety Plan, Community Air Monitoring Plan, Spill Prevention Control

- and Countermeasures Plan and Storm Water Pollution Prevention Plan as further defined in Section 01 33 00, Submittal Procedures.
- 2) Schedule, Shop Drawings, and Record Drawings as further defined in the Contract Documents.
 - 3) Bonds and Insurances as defined in the Contract Documents.
 - 4) Pre-Construction, Construction Progress and Post-Construction photo documentation as further defined by Section 01 32 33, Photographic Documentation.
 - 5) Pre and Post-Construction sampling of staging areas and access roads as further defined by Section 02 24 23, Sampling and Analysis.
 - 6) Other work not specifically included in other items including: compliance with applicable regulatory requirements; preconstruction and construction period planning; scheduling; submittals; reporting; administration and documentation; quality control; environmental protection and spill control; and, traffic control.
- b. Demobilization of personnel, equipment and submission of all records and documentation as determined by the Department and the Engineer.
 - c. On-site and off-site traffic controls as further defined in Section 01 55 13.

B. Bid Item LS-2 – Site Preparation/Site Facilities

1. Measurement and Payment: The bid lump sum price for Bid Item LS-2 – Site Preparation/Site Facilities shall be the amount paid to the CONTRACTOR for site preparation and site facilities accordance with the requirements of the Contract Documents. The CONTRACTOR may invoice for up to 70% of this item upon successful installation of the work and the remaining 30% at substantial completion. Item LS-2 – Site Preparation/Site Facilities 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, including:
 - 1) Project Signs as defined in Section 01 58 00, Project Identification and Signs.
 - 2) Construction entrances as further defined in the Contract Documents.
 - 3) Decontamination pads as further defined in the Contract Documents.
 - 4) Stockpile and staging areas as further defined in the Contract Documents.
 - 5) Other environmental control measures as further defined in Section 10 35 29, Contractor’s Health and Safety Plan.
 - 6) On-site and off-site Access roads and Parking Areas.
 - 7) Portable Truck Scale as further defined I Section 34 78 13, Portable Truck Scale.
 - 8) Temporary access roads and construction mats as further defined in the Contract Documents.
 - 9) Monitoring well decommissioning as further defined in the Contract Documents.
 - 10) Temporary fencing as further defined in the Contract Documents.
 - 11) Clearing and grubbing as further defined in the Contract Documents.
 - 12) Existing pavement improvement as further defined in the Contract Documents.

- 13) Winterization elements to support continuous operation through adverse and freezing weather conditions including; water treatment, sediment management, soil management, ISS and site restoration.

C. Bid Item LS-3 – Surveys

1. Measurement and Payment: The bid lump sum price for Bid Item BD-LS-3 – Surveys shall be the amount paid to the CONTRACTOR for all personnel, materials, and equipment to provide survey services including the services of a NYS-licensed surveyor, as required during the execution of the Contract and in accordance with Project Specifications and the Contract Drawings. Work shall include, but is not limited to, surveys of: initial topographic mapping, excavation, ISS, ESS, backfill, final topographic mapping and completion of as-built drawings. Payments will be made based on the percent completed as agreed to by ENGINEER of the amount of Bid Item BD-LS-3 – Surveys.

D. Bid Item LS-4 – Dewatering and Contact Water Treatment

1. Measurement and Payment: Bid Item LS-4 – Dewatering and Contact Water Treatment shall be the amount paid to the CONTRACTOR for dewatering and contact water treatment in accordance with the requirements of the Contract Documents. Provide all personnel, materials, and equipment to completely and properly collect, handle, store, and treat contaminated water generated, as required during the execution of the Contract and in accordance with Project Specifications and the Contract Drawings and procure a State Pollutant Discharge Elimination System (SPDES) Permit Equivalent for the discharge. Collection, laboratory analysis and reporting of samples as required for compliance with the SPDES Permit Equivalent shall be included in this item. Collection, laboratory analysis and reporting of pre- and post-construction samples of the soils from the footprint of the Contact Water Treatment Area shall be included in this item. Payments will be made based on the earned value of percent completed as agreed to by ENGINEER of the amount of Bid Item LS-4 – Dewatering and Contact Water Treatment.

E. Bid Item LS-5 – Temporary Stream Bypass System

1. Measurement and Payment: Bid Item LS-5 – Temporary Stream Bypass System shall be the amount paid to the CONTRACTOR for installation, maintenance, and decommissioning of the temporary stream bypass system in accordance with the requirements of the Contract Documents. Provide all personnel, materials, and equipment to install, operate, and remove the active or passive system including dams, bypass piping, pumps (if applicable), and energy reduction at the discharge point as required during the execution of the Contract and in accordance with Project Specifications and the Contract Drawings. Payments will be made based on the earned value of percent completed as agreed to by ENGINEER of the amount of Bid Item LS-5 – Temporary Stream Bypass System.

F. Bid Item LS-6 – Swartwout Road Culvert Replacement

1. Measurement and Payment: Bid Item LS-6 – Swartwout Road Culvert Replacement shall be the amount paid to the CONTRACTOR for delegated design, coordination with the County, securing permit from NYSDEC, and construction of the Swartwout

Road Culvert Replacement. Provide all personnel, materials, and equipment to design and install the culvert replacement and coordinate with the County. Payments will be made based on the earned value percent completed as agreed to by ENGINEER of the amount of Bid Item LS-6 Swartwout Road Culvert Replacement.

G. Bid Item LS-7 – Abandonment of Vault Structure

1. Measurement and Payment: Bid Item LS-7 – Abandonment of Vault Structure shall be the amount paid to the CONTRACTOR for removal of all grates, pipes, and other materials from within the vault structure, cleanout of all soils from within the vault, and backfill of the vault in accordance with the requirements of the Contract Documents. Provide all personnel, materials, and equipment to abandon, clean, and backfill the vault structure in accordance with the Project Specifications and the Contract Drawings. Payments will be made based on the earned value percent completed as agreed to by ENGINEER of the amount of Bid Item LS-7 Abandonment of the Vault Structure.

H. Bid Item LS-8 – Site Restoration

1. Measurement and Payment: The bid lump sum price for Bid Item LS-8 – Site Restoration shall be the amount paid to the CONTRACTOR to restore the Site in accordance with the requirements of the Contract Documents. Item LS-8 – Site Restoration will be made upon the completion of:
 - a. Placement of demarcation geotextile and backfill of all excavation areas, except areas with crushed stone cover (i.e., UP-11), as further defined in the Contract Documents.
 - b. Planting and seeding of areas as further defined in the Contract Documents.
 - c. Installation of the riprap swale as further defined in the Contract Documents.
 - d. Restoration of areas impacted by the work to existing conditions.
 - e. Monitoring well installation.
 - f. Restoration of the sewer line at the Tributary D-1-7 crossing.
2. Payments will be made based on the earned value percent completed as agreed to by ENGINEER of the amount of Bid Item LS-8.

I. Bid Item UP-1 – Health and Safety (Reimbursed on actual operation [Working Day])

1. Payment: The bid unit price for Bid Item UP-1 – Health and Safety shall be the amount paid each working day for the CONTRACTOR to conduct the activities necessary to implement the Health and Safety Plan at the Site in accordance with the requirements of the Contract Documents. Services include, but are not limited to, the maintenance of the site specific health and safety plan and the community air monitoring plan.
2. Measurement for payment: The bid unit price for Bid Item UP-1 – Health and Safety Services will be paid in full for each working day that:
 - a. All of the elements of the CONTRACTOR’s Health and Safety Plan are in place, and
 - b. The CONTRACTOR conducts the activities necessary to fully implement the Health and Safety Plan.
3. The period of potential payment for Bid Item UP-1 – Health and Safety shall begin after the satisfactory establishment of the required exclusion zone or zones and shall

be considered complete when there is no longer an exclusion zone on the Site or at the end of the Contract Time specified in Section VI, Article 6.1, whichever is sooner. A 100 % reduction in the payment for this item will occur for each working day the CONTRACTOR fails to adhere (in the opinion of the Department or the Engineer) to the Health and Safety Plan. There will be one hundred (100) percent reduction in this Bid Item for days where no Work occurs in the exclusion zone. No payment will be made for Saturdays, Sundays and holidays specified in Section XIII if no Work occurs in the exclusion zone.

J. Bid Item UP-2 – Site Services (Reimbursed on a per Calendar Day basis)

1. Payment: The bid unit price for Bid Item UP-2 – Site Services shall be the amount paid each calendar day for the CONTRACTOR to provide or maintain temporary services to the Site in accordance with the requirements of the Contract Documents. These temporary services include:
 - a. Implementing the Project Plan,
 - b. Maintaining an updated construction schedule,
 - c. Maintain site security,
 - d. Maintaining temporary utilities,
 - e. Maintaining sanitary facilities,
 - f. Maintaining and operating field offices and support areas,
 - g. Maintaining project signs,
 - h. Maintaining on-site and off-site traffic controls,
 - i. Maintaining construction entrances,
 - j. Access roads maintenance,
 - k. Fencing and gate maintenance,
 - l. Staging and stockpile area maintenance,
 - m. Disposal of project-related solid waste,
 - n. Maintaining compliance with permit-equivalency requirements,
 - o. Conducting project meetings,
 - p. Maintaining project records,
 - q. Site superintendence,
 - r. Implementing the Spill Prevention Control and Countermeasures Plan,
 - s. Providing other services not specifically listed but required by the Contract Documents.
2. Measurement for payment: The bid unit price for Bid Item Bid Item UP-2 – Site Services will be paid in full for each calendar day that all temporary services are provided by the CONTRACTOR beginning after the completion of mobilization, as defined in Bid Item A-LS-1 and ending at substantial completion or at the end of the Contract Time specified in Section VI Article 6.1, whichever is sooner.

K. Bid Item UP-3 – Excavation and Management of Non-TSCA Soils

1. Payment: Bid Item UP-3 shall be bid unit cost per in-place cubic yard of non-TSCA soils as quantified by survey. Provide all labor, materials, equipment and incidentals necessary to excavate soils and stockpile soils including, but not limited to: excavation, stockpiling, conducting a pilot study to confirm mix design, ex-situ stabilization, conformance sampling and analysis, and placement of soils. Contractor shall assume that excavations will be above the groundwater table. Contractor shall

- assume a 3% Enviroblend amendment by weight to render soils non-hazardous prior to placement.
2. Measurement for payment: The unit price for Bid Item UP-3 – Excavation and Management of Non-TSCA Soils shall be the actual number of in-place cubic yards of excavation as measured by survey of the excavation limits. In accordance with this Section Part 2 (c.), a breakdown of major cost items in the schedule of values shall include materials, labor, equipment and subcontractor costs for; excavation, stabilization, sampling and final placement.
- L. Bid Item UP-4 – Excavation and Management of TSCA Soils (greater than 50 ppm PCBs)
1. Payment: Bid Item UP-4 shall be bid unit cost per in-place cubic yard of TSCA soils as quantified by survey. Provide all labor, materials, equipment and incidentals necessary to excavate soils including, but not limited to: removal, crushing, and stockpiling of concrete debris from within the excavation zone; excavation and stockpiling of soils; stockpile management and conformance sampling and analysis to support TSDF acceptance. Contractor shall assume that excavations will be above the groundwater table, surface contact water shall be managed under LS-4. Crushed concrete will be managed under UP-6. Contractor shall assume a 3% Enviroblend amendment by weight to render soils non-hazardous for RCRA metals.
 2. Measurement for payment: The unit price for Bid Item UP-4 – Excavation and Management of TSCA Soils shall be the actual number of in-place cubic yards of excavation as measured by survey of the excavation limits. In accordance with this Section Part 2 (c.), a breakdown of major cost items in the schedule of values shall include materials, labor, equipment and subcontractor costs for; excavation, stabilization, sampling and final placement.
- M. Bid Item UP-5 – Excavation and Management of Sediment
1. Payment: Bid Item UP-5 shall be bid unit cost per in-place cubic yard of sediment from Tributary D-1-7 as quantified by survey. Provide all labor, materials, equipment and incidentals necessary to manage sediment from in-situ to point of placement including, but not limited to: excavation, amendment, transport and placement in the Lagoon. Management of sediment to point of placement shall include; excavation, amendment of material with Portland Cement or a suitable polymer for water management, transportation to stockpile, stockpile management, amendment of material with Enviroblend to render sediments non-hazardous prior to placement, and placement of stabilized sediments in the Lagoon. Contractor shall assume a 5% Portland Cement by weight or polymer equivalent additive as a basis for bid. Contractor shall assume a 3% Enviroblend amendment by weight to render sediments non-hazardous prior to placement in the Lagoon.
 2. Measurement for payment: The unit price for Bid Item UP-5 – Excavation and Management of Sediment shall be the actual number of in-place cubic yards of excavation as measured by survey of the excavation limits. In accordance with this Section Part 2 (c.), a breakdown of major cost items in the schedule of values shall include materials, labor, equipment and subcontractor costs for: excavation, sediment amendment, sampling and final placement.
- N. Bid Item UP-6 – In-Situ Solidification

1. Payment: Bid Item UP-6 shall be bid unit cost per in-place cubic yard of in-situ solidification (ISS). Provide all personnel, materials, and equipment to; conduct a pilot test to confirm mix design, transport and stockpile amendment material; transport crushed concrete debris into the lagoon for inclusion in the ISS matrix; and ISS to target depths as required during the execution of the Contract and in accordance with Contract Documents. As basis for bid, the Contractor shall assume ISS mix will include 3% Portland Cement, 6% slag, and 2% bentonite, by dry weight.
 2. Measurement for payment: The unit price for Bid Item UP-6 – In-Situ Solidification shall be the actual number of in-place cubic yards of ISS as measured by survey of the excavation limits and top of ISS mass. In accordance with this Section Part 2 (c.), a breakdown of major cost items in the schedule of values shall include materials, labor, equipment and subcontractor costs for; pilot testing and ISS full scale operation.
- O. Bid Item UP-7– Abandonment of Existing Pipes
1. Payment: The bid lump sum price for UP-7 – Abandonment of Existing Pipes shall be the amount paid to the Contractor to complete the specified in accordance with the requirements of the Contract Documents.
 2. Measurement for Payment: The bid unit price for Bid Item UP-7 – Abandonment of Existing Pipes will be paid for each pipe structure abandoned.
- P. Bid Item UP-8– Off-Site Transport and Disposal of Non-Hazardous Waste and Debris
1. Payment: Bid Item UP-8 shall be bid unit cost per ton as quantified by disposal facility weight tickets. Provide all labor, materials, equipment and incidentals necessary to complete the work, but not limited to: loading, transporting and disposal of the material at a permitted facility.
 2. Measurement for payment: The unit price for Bid Item UP-8 – Off-Site Disposal of Non-Hazardous Waste shall be the actual number of tons disposed of as measured by weight ticket at the disposal site. In accordance with this Section Part 2 (c.), a breakdown of major cost items in the schedule of values shall include materials, labor, equipment and subcontractor costs for: transportation and disposal.
- Q. Bid Item UP-9 – Off-Site Transport and Disposal of TSCA Waste (greater than 50 ppm PCBs)
1. Payment: Bid Item UP-9 shall be bid unit cost per ton as quantified by disposal facility weight tickets. Provide all labor, materials, equipment and incidentals necessary to complete the work, but not limited to: loading, transport and disposal of the material at a permitted facility.
 2. Measurement for payment: The unit price for Bid Item UP-9 – Off-Site Disposal of TSCA Waste (greater than 50 ppm PCBs) shall be the actual number of tons disposed of as measured by weight ticket at the disposal site. In accordance with this Section Part 2 (c.), a breakdown of major cost items in the schedule of values shall include materials, labor, equipment and subcontractor costs for: transportation and disposal.
- R. Bid Item UP-10 – Confirmation Sampling
1. Payment: Bid Item UP-10 shall be bid unit cost per each sample and analysis as shown, specified, or ordered by the Engineer. Provide all labor, materials, equipment

and incidentals necessary to complete the work, but not limited to: collection of sample, packaging of sample, transportation of sample, and analysis of samples for the types and quantities specified in the Contract Documents. Confirmation sampling shall be performed to confirm post excavation conditions in accordance with DER-10 guidance, at a frequency of 1 bottom sample per 30 ft grid and 1 sidewall sample per 30 linear feet of excavation sidewall.

2. Measurement for payment: The unit price for Bid Item UP-10 – Confirmation Sampling shall be the actual number of samples as documented by the laboratory chain of custody.

S. Bid Item UP-11 – Crushed Stone Cover

1. Payment: Bid Item UP-11 shall be bid unit cost per square yard of crushed stone cover as quantified by survey. Provide all labor, materials, equipment and incidentals necessary to backfill excavation areas including, but not limited to: analytical testing of source material, furnished backfill, furnish and install demarcation geotextile, place a 12-inch layer of crushed stone backfill, and compact backfill in the pavement excavation areas. Analytical testing shall be in accordance with DER-10 guidance, Table 5.4 (e.) and meet commercial reuse standards. In addition, DER-10, a minimum of (1) sample per source material shall be analyzed for PFAS in accordance with NYSDEC guidance.
2. Measurement for payment: The unit price for Bid Item UP-11 – Crushed Stone Cover shall be the actual in place square yards of crushed stone cover as measured by survey.

T. Bid Item UP 12 – Pavement Cover

1. Payment: Bid Item UP-12 shall be bid unit cost per square yard of pavement cover as quantified by survey. Provide all labor, materials, equipment and incidentals necessary to install pavement cover over excavation areas including, but not limited to: furnish pavement cover material, place pavement cover consisting of 6-inch thick subbase, 4-inch thick binder course, and 2-inch thick top course. Analytical testing shall be in accordance with DER-10 guidance, Table 5.4 (e.) and meet commercial reuse standards. In addition, DER-10, a minimum of (1) sample per source material shall be analyzed for PFAS in accordance with NYSDEC guidance.
2. Measurement for payment: The unit price for Bid Item UP-12 – Pavement Cover shall be the actual in place square yards of crushed stone cover as measured by survey.

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SECTION XIII

Wage Rates and Associated Contract Requirements

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 form 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 12240; 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/public-work-and-prevailing-wage. Reference PRC # 2021004634.