MOVE YOUR ENVIRONMENT FORWARD

SCOPE OF WORK – WORK PLAN

Lawrence Aviation Industries
Sheep Pasture Road
Port Jefferson Station, Brookhaven, NY 11776

DEC Site ID #152016

Prepared For:

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7012

Contract #D009808, Work Assignment No. 27

Prepared By:

HRP Associates, Inc.
1 Fairchild Square, Suite 110
Clifton Park, NY 12065

HRP #: DEC1027.OM

Issued On: July 8, 2024

TABLE OF CONTENTS

Figures

Table

Appendices

GENERAL INFORMATION

Project/Site Information:
Lawrence Aviation Industries
Sheep Pasture Road
Brookhaven, NY 11776

Consultant Information:
HRP Associates, Inc.
1 Fairchild Square, Suite 110
Clifton Park, NY 12065
Phone: 518-877-7101
Fax: 518-877-8561
E-mail: derek.roy@hrpassociates.com
Project Number: DEC1027.OM

Client Information:
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233

Report Date: July 8, 2024

Report Author: Chris Parrotta
Christopher Parrotta, EIT
Project Consultant

Project Engineer: Thomas Battles
Thomas Battles, PE, Principal
Engineering Practice Leader

Project Manager: Derek R. Roy
Derek Roy, PG
Project Manager

1.0 INTRODUCTION

HRP Associates, Inc. (HRP) was tasked by the New York State Department of Environmental Conservation (NYSDEC) under Work Assignment Number (No.) D009808-27 to plan and oversee the work at the Lawrence Aviation Industries Site (No. 152016) in Port Jefferson Station, Brookhaven, New York (**Figure 1**). This Work Plan (referred to as "Work Plan") has been prepared to facilitate the demolition and/or capping of the remaining pits and basements, former sanitary systems, and underground storage tanks (USTs) onsite.

This Work plan includes the demolition, abandonment, excavation, disposal, and capping of remaining onsite structures. Structure identifications vary within the reports appended to this Work Plan, and are summarized on **Table 1** as follows:

TABLE 1
Summary of Structure Identifications

Structure Identifier	Structure ID	Location	*Approx. Depth to Bottom (ft)	*Approx. Feet of Water
Machinery Pits	P-1	Former Electro-melt Facility	30	10
	P-7/8	Former Building 10	6	3
	P-10		6	5
	P-33	Former Building F	30	10
Cesspools	CESS-1	South of Electro-Melt	20	3
	CESS-1A (Septic Tank)		3 (to top of tank)	undetermined
	CESS-2	West of Bldg 30	20	Dry
	CESS-2A (Septic Tank)		3 (to top of tank)	undetermined
	CESS-2 abandoned		undetermined	undetermined
	CESS-5	South of Bldg 10	22	3
	CESS-3	East of Bldg 10	22	Dry
	CESS-3A		20	Dry
	CESS-3B (septic tank)		7	2
	CESS-4	West of Bldg F	12	6
	CESS-4B		12	6
	CESS-6	North of Bldg G	24	Dry
	CESS-7A (septic tank)	South of Building F	10	2
	CESS-7		22	Dry
	CESS-7B		22	undetermined
	CESS-7C		22	undetermined
	CESS (abandoned)	Southeast of Industrial Waste Storage Bldg	N/A	N/A

TABLE 1 Summary of Structure Identifications				
Structure Identifier	**Structure ID**	**Location**	***Approx. Depth to Bottom (ft)**	***Approx. Feet of Water**
Dry Wells	DW-1	Adjacent to west of Recharge Basin	undetermined	undetermined
	DW-1A		undetermined	undetermined
	DW-2A (Tank)	Southwest of Old Motor Pool	4 (to top of tank)	undetermined
	DW-2		undetermined	undetermined
	DW-2B		undetermined	undetermined
	DW-2C		undetermined	undetermined
	DW-3	SW of Bldg F	10'?	undetermined
	DW-4	East of Bldg F	10'?	undetermined
	DW-5	North of Bldg G	undetermined	Dry
	DW-6	Garage Bldg	undetermined	Dry
	DW-7	Administrative Bldg	undetermined	Dry
	DW-8	W of Bldg F	undetermined	Dry
USTs	UST-1	West of former electro melt facility	N/A	N/A
	UST-2	North of Former Bldg F	N/A	N/A
Test Pits	CESS-8	Southwest of Bldg F	undetermined	undetermined
	CESS-8a		undetermined	undetermined
	CESS-8b		undetermined	undetermined
	CESS-9a (former UNKa)	North of Bldg F	undetermined	undetermined
	CESS-9b (former UNKb)		undetermined	undetermined
	CESS-10	Former Administrative Bldg	undetermined	undetermined
	CESS-10a	Former Administrative Bldg	undetermined	undetermined

*Field measurements were collected for the depth to bottom and depth of water during previous site assessments, therefore depths to the bottom of each structure and water level may vary at the time of structure abandonment.

See Contract Drawings (**Appendix A**) for specific structure locations identified for abandonment.

This document provides a scope of work (SOW), site drawings, and health and safety requirements associated with the Work plan.

1.1 Site Description and Background Information

The Lawrence Aviation Industries Site (#152016), located at Sheep Pasture Road, Port Jefferson Station, Brookhaven, New York (**Figure 1**) is the focus of this Work plan. This property is approximately 126 acres in size, with approximately 36 acres as the industrial area according to the NYSDEC Site Briefing Report. Site operations were reported to have ceased in 2004 when Lawrence

Aviation shut down production, and the property is inactive. The property is identified as Tax Parcel ID0200-159.00-02.00-019.000; with the current listed as Suffolk County Land Bank Holdings, LLC (SCLB Holdings LLC). The Site is currently zoned as commercial, under construction, and surrounding properties in the area are primarily residential, with commercial and recreation & open space.

Industrial manufacturing operations were performed on the Site by Lawrence Aviation Industries from as least 1959 until 2004. Waste generated from the operations included fluorides, sludges, caustic acids and halogenated solvents. These wastes were disposed of in several onsite areas including lagoons and cesspools. These improper storage and disposal activities of hazardous wastes lead to the site being officially added to the National Priorities List (Superfund list) in 2003. Today, remediation at the site is protective, with the primary concerns being chlorinated solvents in groundwater.

Between October 2023 and February 2024 site demolition activities were performed and all site structures that were slated for demolition were removed, including all remaining transformers, machinery, and associated waste which were removed and disposed of and/or recycled offsite. Additionally, as part of demolition activities, the pits and sumps housing machinery were properly drained of fluids, trash removed, cleaned, and were abandoned in place by breaking up the bottom of each pit to allow for water infiltration and were backfilled to grade with recycled concrete aggregate (RCA).

Limited equipment capabilities and/or signs of oily contamination during building demolition activities resulted in leaving four machine pits and two USTs to be abandoned under this SOW, in addition to former Site sanitary systems. Therefore, only the former building foundations, the four machine pits, former sanitary systems, and two USTs remain and are slated for abandonment under this Work Plan.

As part of the Town of Brookhaven Building demolition permit, all site sanitary systems, cesspools and dry wells are to be properly sampled and abandoned in accordance with Suffolk County Department of Health Services Standard Operating Procedures (SOP) 9-95. A copy of SOP 9-95 is included in **Appendix B**.

The structures requiring excavation, removal and/or abandonment are outlined on **Table 1**.

2.0 WORK PLAN BUILDING CHARACTERIZATION

The following activities were performed to evaluate existing onsite conditions and survey the Site and building in support of this Work Plan:

2.1 Land Survey

A topographic survey was completed by Municipal Land Survey, P.C. on October 21, 2021, to survey the Lawrence Aviation Industries' existing conditions. Survey data was incorporated into the Contract Drawings provided in **Appendix A**.

2.2 Utility Disconnection

Prior to the commencement of the 2023-2024 demolition activities, utilities on the Site were disconnected from their respective supply lines. On July 14, 2023, the existing natural gas main was physically disconnected, and on July 20, 2023, the existing water services were physically disconnected (**Appendix C**).

2.3 Building Demolition

Between October 25, 2023, and February 23, 2024, all the former Site industrial buildings were demolished via wet demolition methods, leaving only the building slabs. Demolition debris was sorted by media type and transported offsite for disposal or recycling and is briefly summarized below. As noted in **Section 1.1**, due to limited equipment capabilities and/or signs of oily contamination resulted in leaving four machine pits to be abandoned under this SOW, including former sanitary systems, dry wells, and two non-petroleum USTs that were identified during demolition activities.

2.3.1 Concrete Removal

Concrete debris was separated from the construction debris and stockpiled onsite. The concrete was processed to extract steel reinforcement from the concrete and crushed into 5-inch minus material. The processed concrete was then repurposed onsite as fill material and was used to fill former machine pits and slope building slabs to existing grade. Additional fill was imported as necessary to complete this phase of work.

2.3.2 Asbestos Removal

Asbestos debris was stockpiled and subsequently transported offsite to designated locations for safe disposal. All asbestos contaminated debris transported offsite were appropriately lined, tarped, and securely covered for transportation.

2.3.3 Metal Removal

Metal debris was sorted out of the demolition material and stockpiled and steel beams and other large metal structures were cut into smaller pieces before being transported offsite for recycling.

Machinery still present onsite was drained of all oil and lubricants before being disassembled. Machinery was torched to remove brackets that held them in place and to separate the machinery components into moveable pieces. The machinery parts were then lifted onto flatbeds or other capable transportation for offsite recycling.

2.3.4 Drum and Oily Waste Removal

During the demolition oily waste was collected and disposed of on the site. Machinery and Electrical transformers were drained onsite and all fluids were collected in 55-gallon drums. A total of 39 drums of PCB oil, hydraulics, and oils labeled and stored in the existing Industrial Waste Storage Building to be transported and disposed of offsite.

2.3.5 Propane Aboveground Storage Tank Removal

On January 30, 2024, three propane aboveground storage tanks (ASTs) were off gassed. After being safely off gassed the propane ASTs were disconnected from existing piping and removed from site for recycling and/or reuse.

3.0 SITE WORK

The following is a description of the tasks associated with the Work Plan. Full details shall be referenced within the Contract Drawings included as **Appendix A** and the Specification Package included as **Appendix D**.

3.1 Site Safety

The contractor is solely responsible and liable for the health and safety of all onsite personnel and any offsite community that may potentially become impacted thus, the contractor shall prepare and maintain a site-specific health and safety plan (HASP). The site-specific HASP will be submitted to the Project engineer for review and comment, and construction activities shall not commence until the site-specific HASP has been reviewed. All construction activities are to be conducted in accordance with the site-specific HASP to avoid:

a. injuries to employees, Subcontractors, and other persons at or near the Site,
b. exposures to health hazards above occupational limits established by Laws or Regulations as applicable,
c. exposure of the public or site personal to air contaminants above levels established by Laws or Regulations as applicable,
d. significant increase in concentrations of contaminations in the surrounding soil, water, or sediment,
e. and violations of Laws or Regulations as applicable.

3.2 Site Preparation

It is the contractor's responsibility to arrange (including obtain required permits and approvals), pay for, provide, and maintain all necessary temporary utilities and temporary facilities required for the Project.

The contractor shall install and maintain erosion and sedimentation (E&S) control measures, such as material stockpiles. Onsite stockpiles shall be underlain with six-millimeter polyethylene, covered with 10-millimeter polyethylene sheeting (sandbagged as necessary), and stockpile perimeter surrounded by haybales. Two types of stockpiles will exist onsite: 1) crushed concrete stockpile, and 2) waste stockpile. The controls shall be inspected on a weekly basis and after each runoff event and installed in accordance with **Appendix A** and **Appendix D**.

The necessary clearing and grubbing to prepare for the activities shall be completed as part of the site preparation. Contractor clearing and grubbing activities includes correspondence with Call Dig Safely New York 811, clearing and grubbing as required for access to site and execution of work as directed by the engineer, and the proper disposal of materials in general compliance with American National Standards Institute.

Additional to clearing and grubbing, the contractor shall utilize private utility specialists as required to identify, map, and physically mark utilities within the construction area prior to completing activities. Affected utility companies shall be notified prior to the commencement of construction activities.

3.3 Community Air Monitoring Plan

Groundwater and Environmental Services, Inc. (GES) will develop and implement a Project specific Community Air Monitoring Plan (CAMP). The CAMP will require real-time monitoring of particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress during remedial activities at the site. The Contractor shall adhere to the CAMP at all times.

3.4 Machine Pit Abandonment Activities

Structure abandonment will be completed by the selected contractor, and GES and HRP will provide dedicated onsite construction oversight. The work will consist of 1) removing the designated concrete sections from pit 7/8, 2) capping the lower sub-basements of pits 1 and 33 with a concrete slurry mix, 3) install RCA material to backfill pits 1, 7/8, 10, and 33 to grade. Additionally, the contractor shall break up the bottom of pit-10 prior to backfilling, and shall break up or crack the upper concrete sections of pits 1 and 33 prior to backfilling to allow for water infiltration through the remaining building slab; details are included in **Appendix A**.

Demolition waste material will be transported to the appropriate truck, roll-off, or stockpile. All waste materials will be appropriately stockpiled or transported, and properly disposed of. This includes obtaining the necessary permits and licenses, completing any required characterization, and all associated costs of the disposal facility.

The contractor shall install chain link fencing around the various pits throughout the site. Fencing shall consist of six-foot construction fence, two-inch wire mesh, top and bottom rail supported on sand bagged temporary legs. Fencing shall be installed in accordance with **Appendix A.**

During all construction activities, the contractor is to protect and maintain all wells found within the construction site. The Contractor shall submit a Protection Procedure Plan for review. Existing wells are displayed in the Well Location Map included as **Figure 2.** Additionally, all work will be completed in a manner to minimize or mitigate exposure to dust, nuisance odors, and potentially harmful vapors.

The Contractor shall furnish all labor, materials, tools, transportation, and equipment necessary to remove and dispose of material and associated equipment. This includes obtaining the necessary permits and licenses, completing any characterization from the disposal facility, and all associated

costs. The location of the pits is displayed in **Appendix A**, and removal details are included in **Appendix D**.

3.4.1 Sanitary System Closure

Cesspool closure will be completed by the NYSDEC call-out contractor, and GES will provide dedicated onsite construction oversight. The work will consist of removing contaminated sediment and liquids from the cesspools as required. The contractor is responsible for cleaning the cesspools in accordance with Suffolk County Department of Health Services Article 12 SOP NO.9-95 (**Appendix C**). Once cesspools have been deemed clean by HRP and Suffolk County Department of Health, the cesspools will be backfilled with certified clean fill, in accordance with the requirements as outlined in the NYSDEC Division of Environmental Remediation - Technical Guidance for Site Investigation and Remediation (DER-10), to existing grade; details are included in **Appendix D**.

3.4.2 Dry Well Closure

Closure of the site dry wells will be completed by the NYSDEC call-out contractor, and GES will provide dedicated onsite construction oversight. The work will consist of removing contaminated sediment and liquids from the dry wells as required. The contractor is responsible for cleaning the dry wells in accordance with Suffolk County Department of Health Services Article 12 SOP NO.9-95 (**Appendix C**). Once dry wells have been deemed clean by HRP and Suffolk County Department of Health, the dry wells will be backfilled with certified clean fill, in accordance with the requirements as outlined in DER-10, to existing grade; details are included in **Appendix D**.

3.4.3 Disposal of Cesspool and Dry Well Waste

Waste that is removed from the cesspools and dry wells shall be handled in accordance with NYSDEC Distributed Energy Resources (DER)-10. The Contractor will be responsible for supplying the equipment and materials necessary for the proper handling and storage of the waste, such as Department of Transportation (DOT) approved 55-gallon drums, roll-off containers and/or holding tanks. All containers will be labeled and stored properly.

Soil and wastewater shall be handled and disposed of in accordance with NYSDEC DER-10. If offsite disposal of the waste is required, it will be disposed of or treated according to applicable local, state, and federal regulations.

Material that is visually stained, creates high PID measurements, or exhibits strong odors shall be sampled and analyzed by HRP to ensure chemical compatibility with other materials in a common storage/disposal area if staining is present. Additionally, waste which is stored/disposed onsite in bulk (not in containers) shall be monitored for volatile emissions and for fugitive dust emissions. Monitoring instruments available at the Site as determined by the site-specific HASP may generally be sufficient. If any action level specified in the HASP is exceeded, corrective actions such as interim cover, placement in containers, etc., shall be implemented promptly.

3.4.4 Closure of Underground Storage Tanks

Two non-petroleum USTs were identified adjacent to the cooling towers of the former Electro-Melt and former Titanium buildings during building demolition will be excavated and disposed of offsite in conformance with NYSDEC and Suffolk County Department of Health Services regulations.

3.4.5 Site Restoration

Following all demolition and disposal activities, the contractor shall stabilize and restore disturbed areas to existing conditions. Once all disturbed areas have been restored, and the site has been inspected and approved by the owner and/or the owner's representative, all temporary erosion and sediment control measures will be removed. To maintain site safety following all activities, the temporary fencing installed around the various pits shall remain.

3.5 Summary Report

Following completion of construction, HRP will complete a report that includes a description of the activities completed in accordance with this SOW. Additionally, the report will provide a summary of waste streams, quantity of material removed and disposal facilities, restoration actions, analytical data, and any changes or deviations from this SOW. The contractor shall provide HRP with all supporting documentation and manifest for the completed work.

3.6 Roles and Responsibilities

<u>New York State Department of Environmental Conservation</u>

The NYSDEC is responsible for the administration of the Work Plan and coordination with GES. NYSDEC will receive and review daily reports from GES's onsite Construction Inspector, coordinating review and changes to the design/SOW with all parties, and coordinate access to the site and adjacent properties.

<u>HRP Associates, Inc.</u>

HRP will provide dedicated full-time onsite construction oversight and engineering support during the work and reporting field results to the NYSDEC Project Manager, Payson Long. HRP will:

- Review plans, specifications, and submittals from the contractor.
- Host regular progress/pre-construction meetings and provide minutes to NYSDEC and the demolition contractor for review and concurrence.
- Provide full-time inspection services during the work plan construction.
- Monitor the contractor's performance and handling of hazardous materials during the work.

<u>Groundwater and Environmental Services, Inc.</u>

GES will provide dedicated full-time onsite construction oversight and engineering during the Work Plan, and reporting to NYSDEC Project Manager, Payson Long. GES will:

- Develop a Community Air Monitoring Plan.
- Monitor emissions and fugitive dust during demolition.
- Provide full-time inspection services during the Project duration.
- Monitor the contractor's performance and handling of hazardous materials during the work.
- Review plans, specifications, and submittals from the contractor.

Contractor

Work Plan implementation will be completed by the contractor, which is currently under contract to NYSDEC. The SOW for the contractor will include:

- Complete pre and post structural assessments on surrounding properties; this will include recommendations and/or restrictions on work to minimize the impact on neighboring properties.
- Providing all labor, equipment, materials, and permits necessary to execute the SOW
- Preparation of a construction entrance and implementation of all required site logistics such as truck routing, safety zones, and decontamination pads prior to commencement of work
- Attending a pre-construction meeting, daily health and safety meetings, periodic coordination meetings, and a post-construction meeting
- Containerizing, transporting (including providing and preparing manifests, bills-of-lading, etc.), and disposing of waste streams in accordance with all applicable federal, state, and local laws. Waste stream characterization, including materials identification of waste streams generated from the structure demolition. The contractor shall submit waste profiles for each sampled and identified waste stream to GES and indicate the proposed disposal facility the waste will be transported
- Development of a Work Plan presenting Means and Methods, Transportation and Disposal Plan, Health and Safety Plan, and Traffic Control Plan
- Develop a Nuisance Control Plan
- Develop a well protection plan
- Clearing and grubbing, as necessary
- Protection for offsite existing structures/utilities including vibration monitoring
- Securing site and site preparation including safety protection of personnel and general public (2018 – International Building Code Ch. 33) (International Code Council 2017)
- Installing fencing around the various structures during the work
- Backfilling of the various pits and coordination with NYSDEC for the dewatering of the pits
- Site restoration
- Decontamination of all equipment and vehicles prior to leaving site, as necessary

3.7 Permitting Plan/Permits

The contractor will be required to obtain any work permits required to complete the scope of activities. The contractor is responsible for payment and procurement for all permits and complying with all applicable local, state, and federal regulations. The following is a list of applicable permitting items that may be necessary prior to commencement of work.

- All relevant permits from the Town of Brookhaven or Hamlet of Port Jefferson Station
- Solid and hazardous waste management/transport permits
- All relevant permits from the Suffolk County Department of Health Services

4.0 PROJECT CONTACTS

The following personnel identified on **Table 2** have been identified for this project to fulfill requirements, roles, and responsibilities listed in **Section 3.4**.

TABLE 2

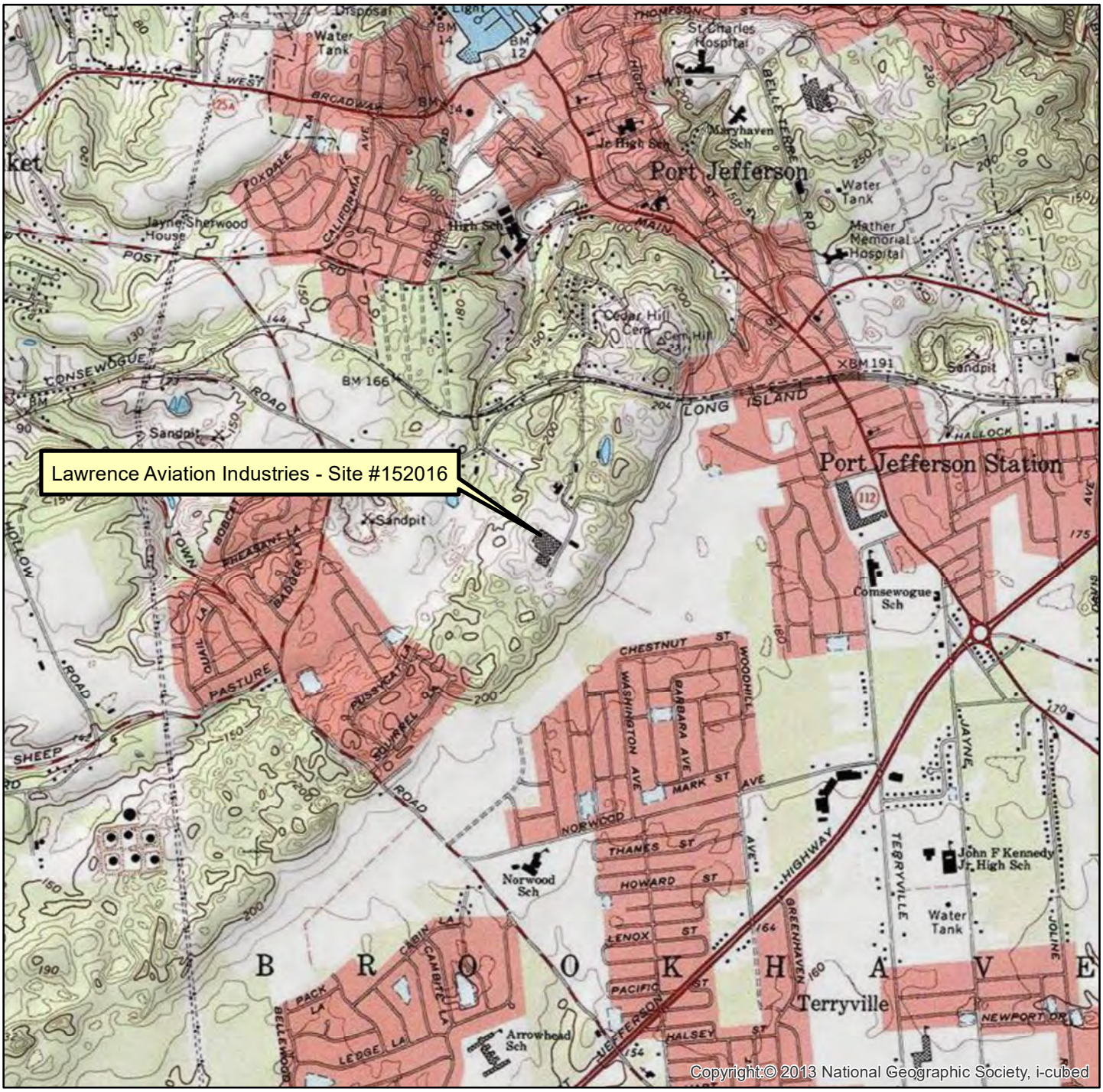
Name	Project Role	Company	Phone	Email
Payson Long	DEC Site Project Manager	NYSDEC Central Office (Albany)	518-402-9651	payson.long@dec.ny.gov
Jim Redfield	Building Department Inspector	Village of Port Jefferson Building Department	631-473-4744, ext. 319	jredfield@vportjeff.com
Mark Viseckas	Senior Building Department Inspector	Village of Port Jefferson Building Department	631-473-4744, ext. 214	No email listed
Mark Sergott	Environmental and Exposure Evaluation	New York State Department of Health	518-402-7860	mark.sergott@health.ny.gov
Janet Gremli	Principal Public Health Sanitarian	Suffolk County	631-854-2513	Janet.gremli@suffolkcountyny.gov
Scott McDonald	GES Project Manager	Groundwater and Environmental Services, Inc.	800-220-3069, ext. 4066	SMcDonald@GESonline.com
Derek Roy	HRP Project Manager	HRP Associates, Inc.	860-674-9570 Ext. 1169	Derek.Roy@hrpassociates.com
Mark Wright	HRP Contract Manager	HRP Associates, Inc.	518-877-7101 Ext. 1415	Mark.Wright@hrpassociates.com
Thomas Battles	HRP Engineering Practice Leader	HRP Associates, Inc.	860-674-9570 Ext. 1142	Thomas.Battles@hrpassociates.com

5.0 REFERENCES

New York State Department of Environmental Conservation Division of Environmental Remediation Site Briefing Report, December 24, 2021

HRP Associates, Inc., Scope of Work – Demolition Package, Lawrence Aviation Industries, 100 Sheep Pasture Road, Port Jefferson Station, NY. April 2023.

FIGURES



N

0 1,000 2,000 4,000 6,000 8,000

Feet

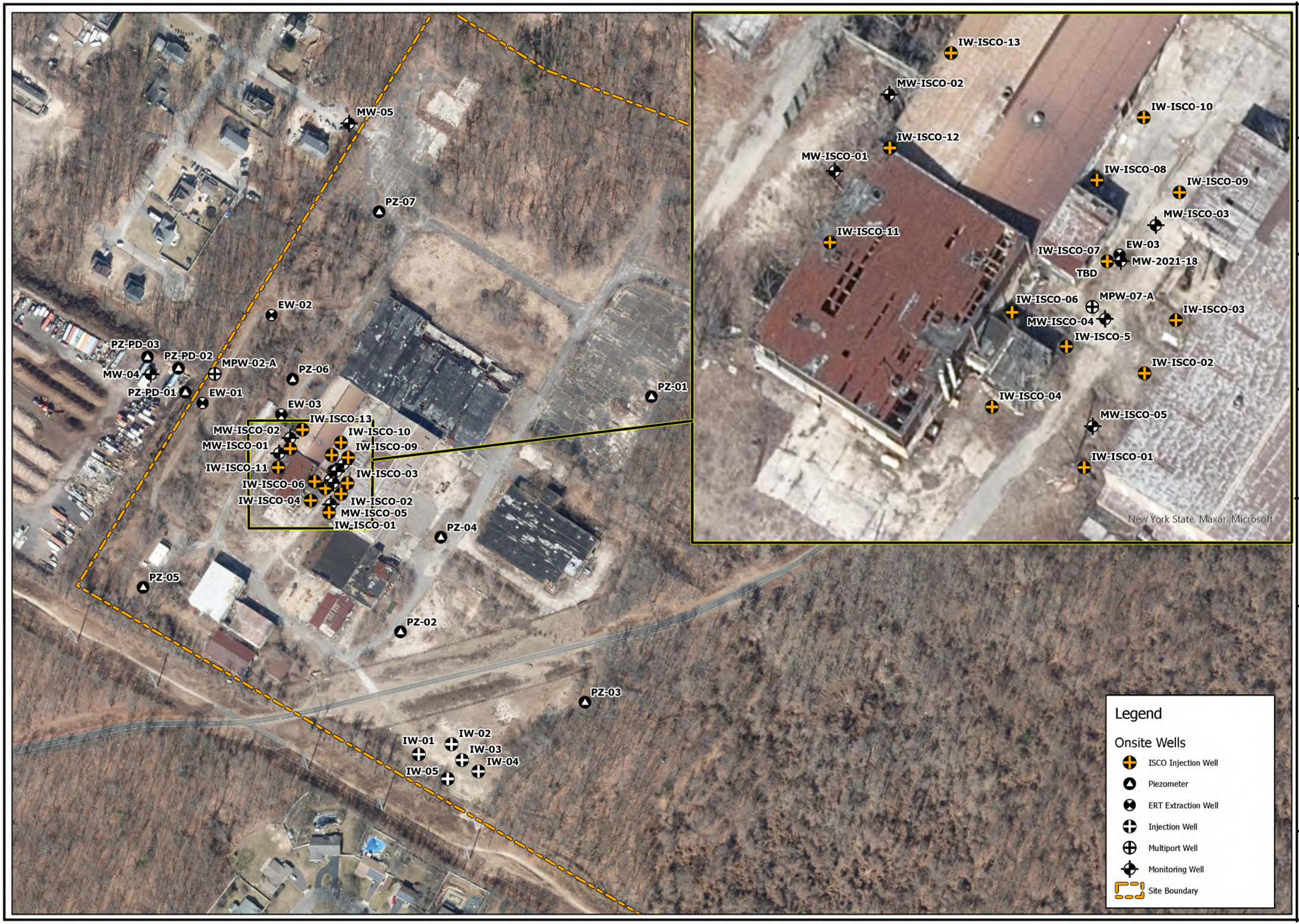
1 inch = 2,000 feet

USGS Quadrangle Information
Quad ID: o40073h1
Name: Port Jefferson
Date Pub: 1967

Figure 1
Site Location
100 Sheep Pasture Road,
Port Jefferson Station, Brookhaven, NY
HRP #DEC1027.OM
Scale 1" = 2,000'

MOVE YOUR ENVIRONMENT FORWARD
ONE FAIRCHILD SQUARE
SUITE 110
CLIFTON PARK, NY 12065
(518) 877-7101
HRPASSOCIATES.COM

Path: S:\Data\NYDEC - NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION\BROOKHAVEN\SHEEP PASTURE ROAD, PORT JEFFERSON STATION, NY 11776\DEC1027OM\GIS\Site Location Map\Figure 1 - Site Location.mxd



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HRP
MOVE YOUR ENVIRONMENT FORWARD
ONE FAIRCHILD SQUARE
SUITE 110
CLIFTON PARK, NY 12065
(518) 877-7101
HRPASSOCIATES.COM

North

0 100 200 Feet

Revisions						
No.						
Date						

Designed By:	Drawn By:	Reviewed By:
CMS	CMS	JRK

Issue Date:	Project No:	Sheet Size:
05/10/2022	DEC1027.OM	11x17

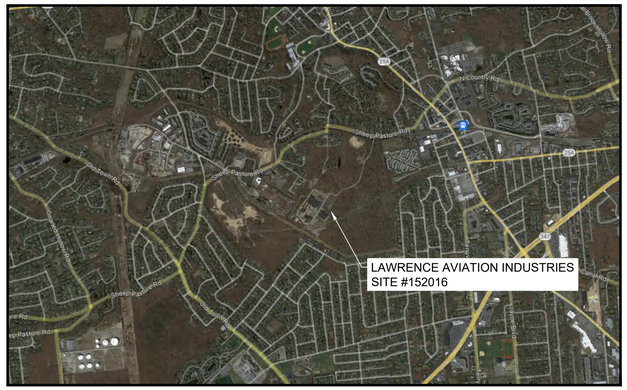
Onsite Wells

Lawrence Aviation Industries
SITE NO. 125016
Sheep Pasture Road
Port Jefferson, New York

FIGURE NO.

2

APPENDIX A
Contract Drawings



SITE LOCATION MAP
SCALE: 1" = 2000'

JUNE 2024

GENERAL NOTES

1. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE ENGINEER.
2. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING, PRIOR TO BIDDING, THE LOCATIONS OF ALL UTILITIES AND SHALL BE RESPONSIBLE FOR ALL DAMAGE TO SAID UTILITIES. THE CONTRACTOR SHALL CONTACT "DIG SAFELY" (1-800-272-4480), AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ACTIVITIES WITH INDIVIDUAL UTILITY COMPANIES.
3. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT PROPER STORM DRAINAGE IS MAINTAINED THROUGHOUT CONSTRUCTION.
4. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AS OUTLINED HEREIN. INSPECTION AND MAINTENANCE SHALL BE CARRIED OUT THROUGHOUT THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS ARE STABILIZED WITH VEGETATION OR PAVING. THE MINIMUM INSPECTION PERIOD SHALL BE WEEKLY AND AFTER MAJOR STORMS.
5. DEMOLITION ACTIVITIES SHALL CONFORM TO APPLICABLE SECTIONS OF THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION: DIVISION OF ENVIRONMENTAL REMEDIATION STANDARD SPECIFICATIONS, AS AMENDED.
6. CONTRACTOR TO ENSURE ALL APPLICABLE PERMITS ARE SECURED PRIOR TO INITIATING WORK.

LAWRENCE AVIATION INDUSTRIES
SITE #152016

100 SHEEP PASTURE ROAD
PORT JEFFERSON, NEW YORK

HRP PROJECT NO. DEC1027.OM

Prepared By:

HRP
MOVE YOUR ENVIRONMENT FORWARD
ONE FAIRCHILD SQUARE
SUITE 110
CLIFTON PARK, NY 12065
(518) 877-7101
HRPASSOCIATES.COM

Prepared For:

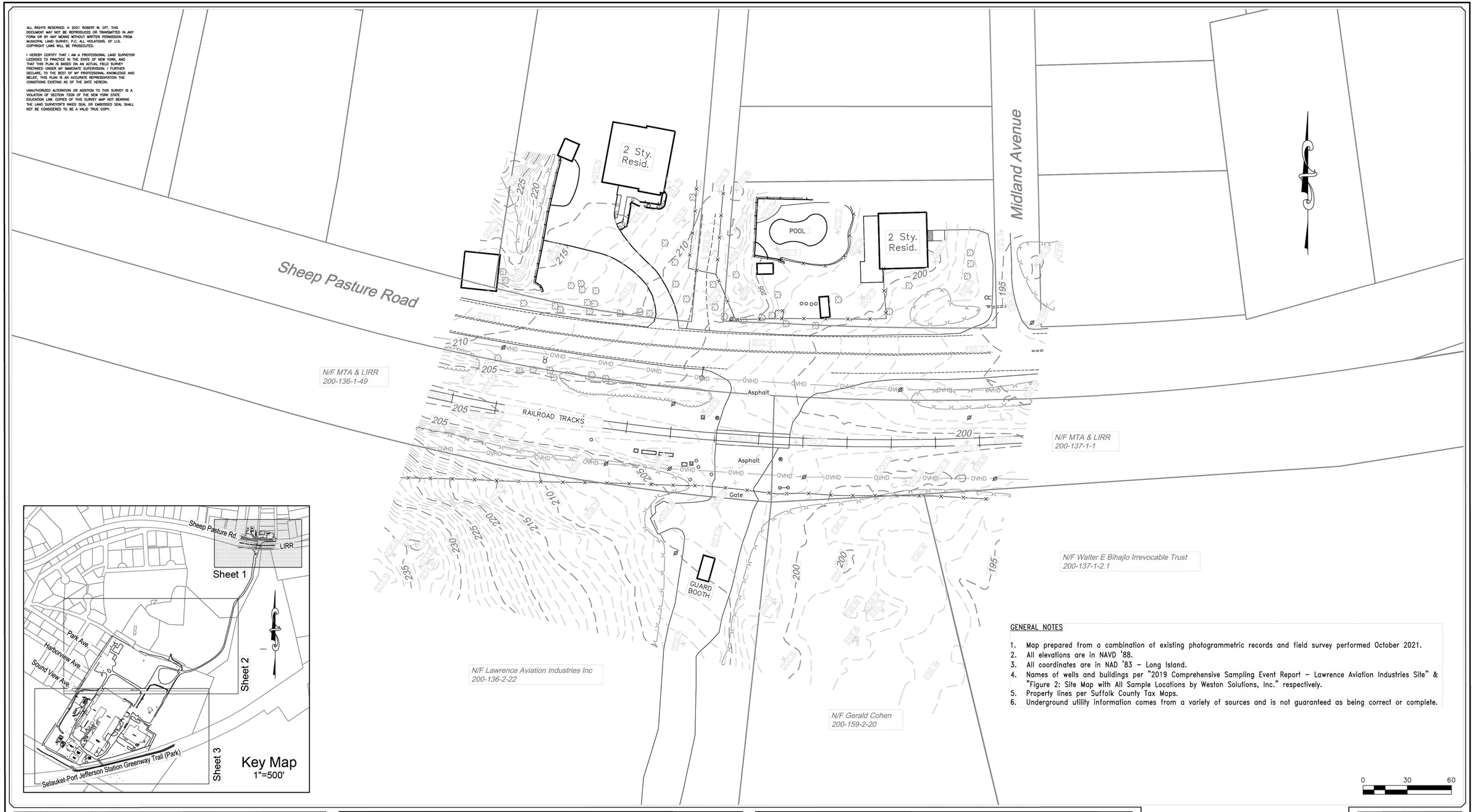
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
625 BROADWAY
ALBANY, NY 12233

SHEET INDEX

SHEET	TITLE / DESCRIPTION	CREATED	REVISED
	TITLE	06/26/2024	
1 OF 3	TOPOGRAPHIC SURVEY	10/21/2021	
2 OF 3	TOPOGRAPHIC SURVEY	10/21/2021	
3 OF 3	TOPOGRAPHIC SURVEY	10/21/2021	
C1.0	SITE PLAN	06/26/2024	
C2.0	DETAILS	06/26/2024	

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR LICENSED TO PRACTICE IN THE STATE OF NEW YORK, AND THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY PREPARED UNDER MY IMMEDIATE SUPERVISION. I FURTHER DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF, THIS PLAN IS AN ACCURATE REPRESENTATION THE CONDITIONS EXISTING AS OF THE DATE HEREON.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S INKED SEAL OR EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID TRUE COPY.



GENERAL NOTES

1. Map prepared from a combination of existing photogrammetric records and field survey performed October 2021.
2. All elevations are in NAVD '88.
3. All coordinates are in NAD '83 – Long Island.
4. Names of wells and buildings per "2019 Comprehensive Sampling Event Report – Lawrence Aviation Industries Site" & "Figure 2: Site Map with All Sample Locations by Weston Solutions, Inc." respectively.
5. Property lines per Suffolk County Tax Maps.
6. Underground utility information comes from a variety of sources and is not guaranteed as being correct or complete.

No.	Date	Revisions

MUNICIPAL LAND SURVEY, P.C.
10 SYLVIA LANE
MIDDLE ISLAND NEW YORK, 11953
(631) 345-2658

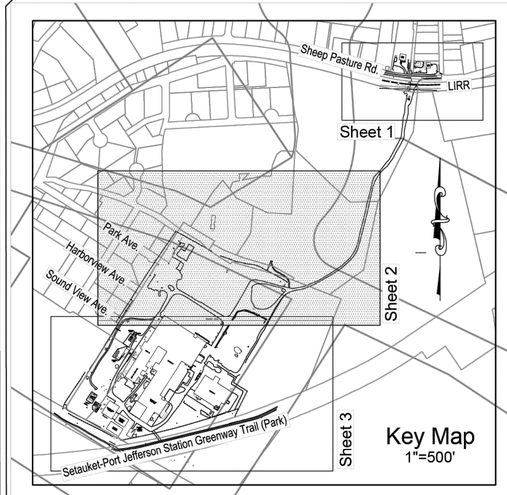
Topographic Survey
Lawrence Aviation Site – North Entrance
Port Jefferson, New York

Robert W. Ott L.S.

Proj. No. 21056
Dwg. No. 1/3
Scale : 1"= 30'
Date : 10/21/21

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR LICENSED TO PRACTICE IN THE STATE OF NEW YORK, AND THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY PREPARED UNDER MY IMMEDIATE SUPERVISION. I FURTHER DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF, THIS PLAN IS AN ACCURATE REPRESENTATION THE CONDITIONS EXISTING AS OF THE DATE HEREON.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S INKED SEAL OR EMBOSSED SEAL SHALL NOT BE CONSIDERED TO BE A VALID TRUE COPY.



N/F Maurice A Flannery
200-159-2-21

N/F 2384 Belmont Ave LLC
200-159-2-8.2

N/F 2384 Belmont Ave LLC
200-159-2-8.3

N/F Lawrence Aviation Industries Inc
200-159-2-22

N/F H Pac Construction Corp
200-159-2-9

N/F Peter Sambaziotis
200-159-2-12

Park Avenue

N/F Park Ave 26 One LLC
200-159-2-23.1

Harborview Avenue

N/F Peter Sambaziotis
200-159-2-17

N/F H Pac Construction Corp
200-159-2-18.2

Sound View Avenue

N/F Michele Donofrio
200-159-1-9

N/F 2384 Belmont Ave LLC
200-159-2-8.2

N/F Lawrence Foundation
200-159-2-9.1

N/F Lawrence Aviation Industries Inc
200-159-1-26

N/F Gerald Cohen
200-159-2-20

ASPHALT (POOR CONDITION)
SINKHOLE (DOMED, BRICK STRUCTURE BELOW)
CONCRETE
ROCKS
Asphalt
Match Line
Match Line
See Sheet 3

0 60 120

GENERAL NOTES

1. Map prepared from a combination of existing photogrammetric records and field survey performed October 2021.
2. All elevations are in NAVD '88.
3. All coordinates are in NAD '83 – Long Island.
4. Names of wells and buildings per "2019 Comprehensive Sampling Event Report – Lawrence Aviation Industries Site" & "Figure 2: Site Map with All Sample Locations by Weston Solutions, Inc." respectively.
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No.	Date	Revisions

MUNICIPAL LAND SURVEY, P.C.
10 SYLVIA LANE
MIDDLE ISLAND NEW YORK, 11953
(631) 345-2658

Topographic Survey
Lawrence Aviation Site
Port Jefferson, New York

Robert W. Ott L.S.

Proj. No. 21056
Dwg. No. 2/3
Scale : 1"= 60'
Date : 10/21/21

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR LICENSED TO PRACTICE IN THE STATE OF NEW YORK, AND THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY PREPARED UNDER MY IMMEDIATE SUPERVISION. I FURTHER DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF, THIS PLAN IS AN ACCURATE REPRESENTATION THE CONDITIONS EXISTING AS OF THE DATE HEREON.

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GENERAL NOTES

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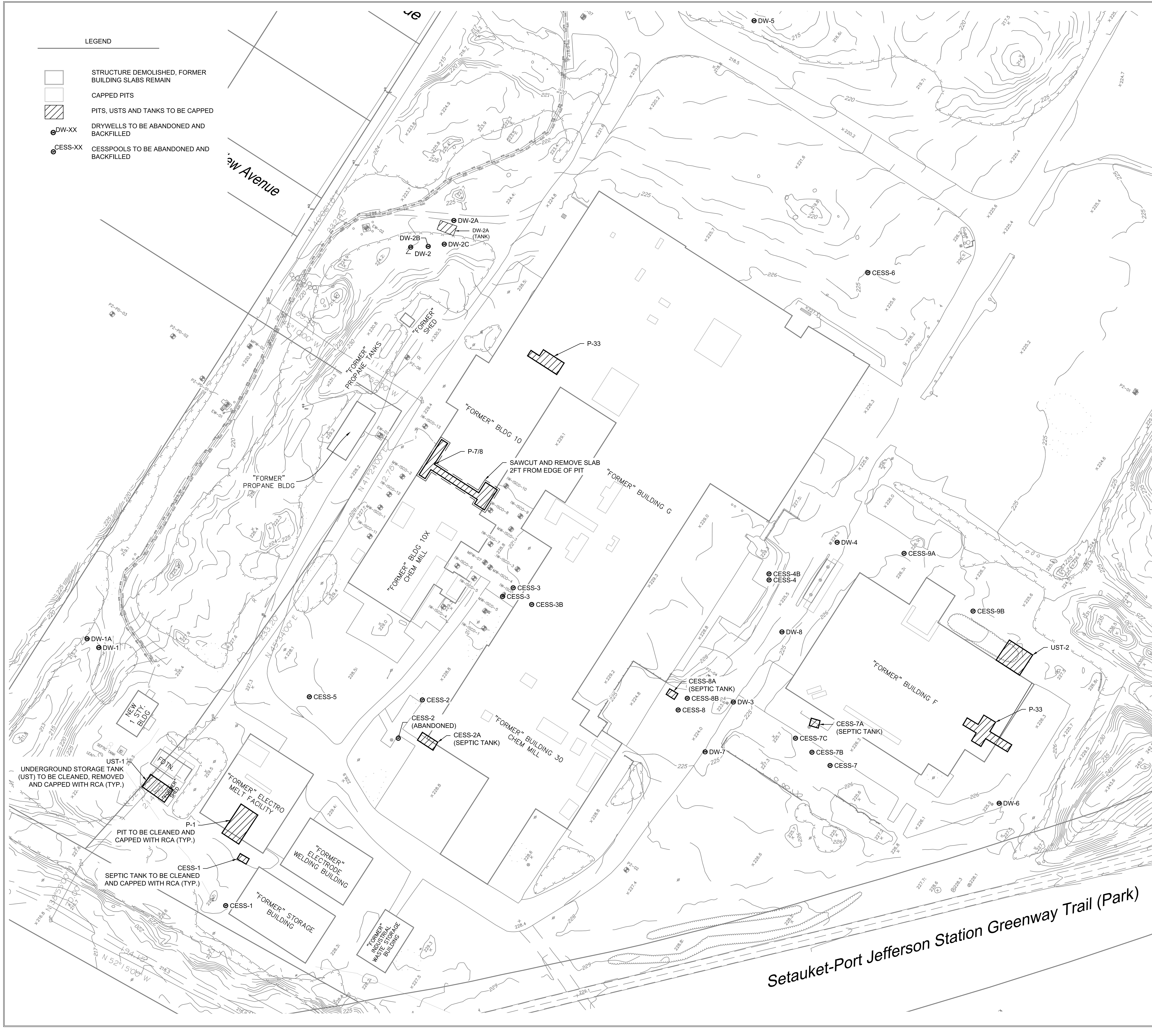
No.	Date	Revisions

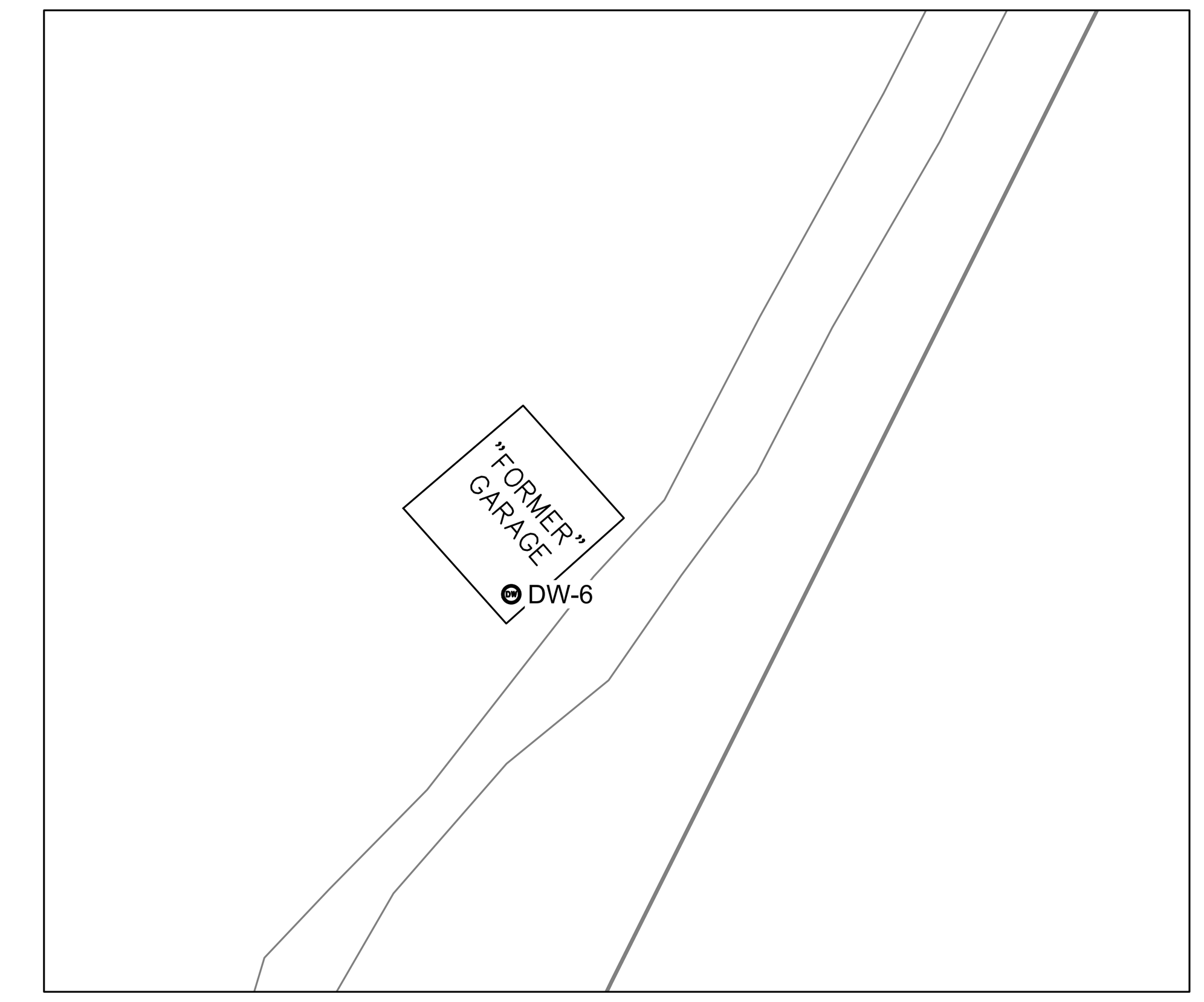
MUNICIPAL LAND SURVEY, P.C.
10 SYLVIA LANE
MIDDLE ISLAND NEW YORK, 11953
(631) 345-2658

Topographic Survey
Lawrence Aviation Site
Port Jefferson, New York

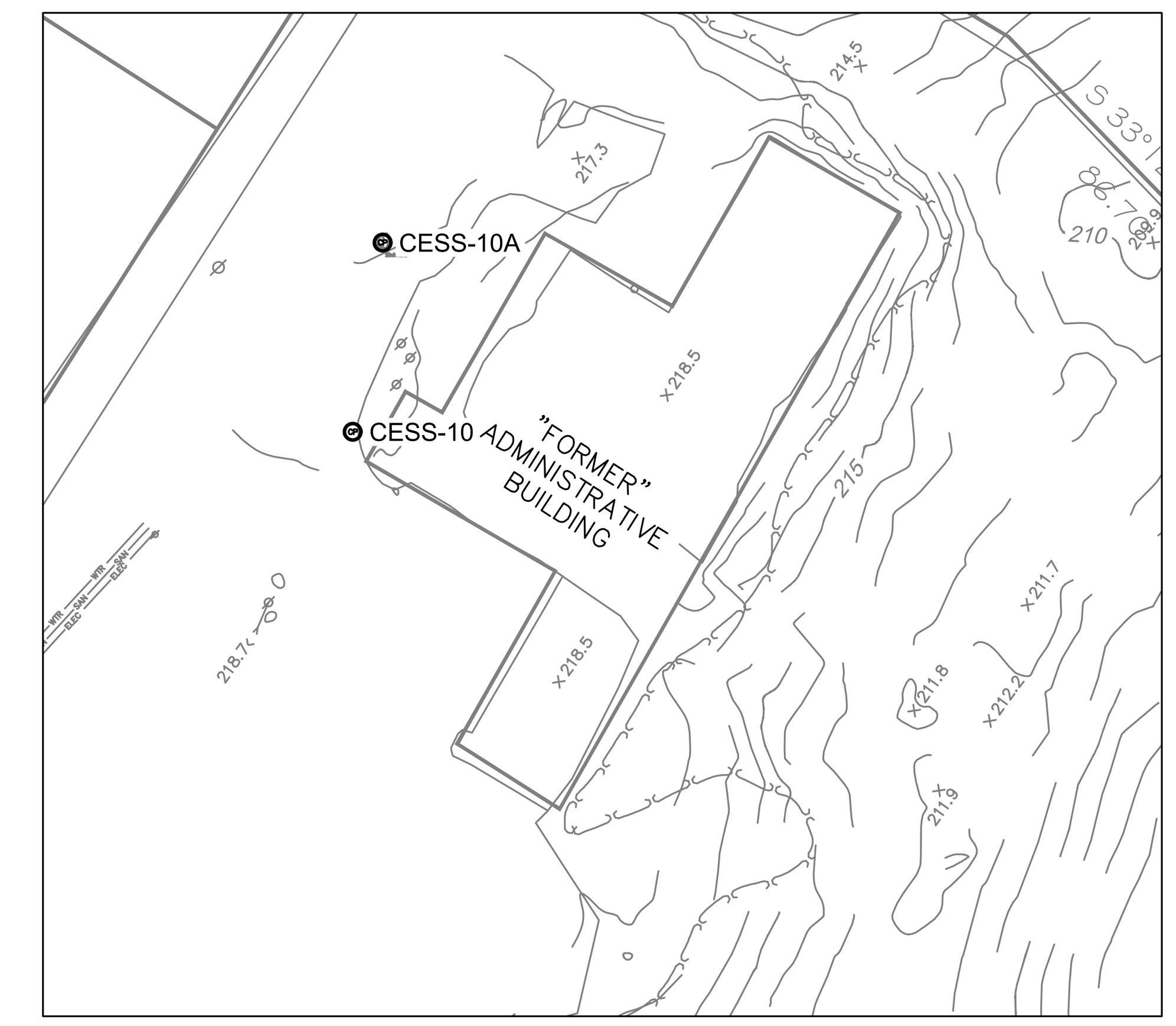
Robert W. Ott L.S.

Proj. No. 21056
Dwg. No. 3/3
Scale : 1"= 60'
Date : 10/21/21





FORMER GARAGE LOCATED ON THE NORTHEAST CORNER OF THE PROPERTY OFF OF SHEEP PASTURE ROAD



FORMER ADMINISTRATIVE BUILDING LOCATED ON THE NORTHWEST CORNER OF THE PROPERTY OFF OF PARK AVENUE

GENERAL NOTES:

1. NOT ALL UTILITIES MAY BE SHOWN. ALL UTILITIES AND STRUCTURES MUST BE VERIFIED BY CONTRACTOR.
2. ALL WELLS WITHIN THE CONSTRUCTION SITE ARE TO BE PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION ACTIVITIES.
3. SITE TO BE CLEARED AND GRUBBED AS NECESSARY TO PERFORM THE WORK.

SUGGESTED CONSTRUCTION SEQUENCE

4. INSTALL STOCKPILE/STAGING AREAS IN ACCORDANCE WITH SHEETS C2.0.
5. INSTALL FENCING IN ACCORDANCE WITH SHEET C2.0.
6. FOLLOWING COORDINATION WITH NYSDEC TO DEWATER AND CLEAN THE VARIOUS PITS, CONTRACTOR SHALL BACKFILL THE PITS, CESS POOLS, DRYWELLS AND USTS TO EXISTING GRADE.
7. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND TEMPORARY FENCING AFTER ALL AREAS HAVE BEEN WELL ESTABLISHED AND THE SITE HAS BEEN INSPECTED AND APPROVED BY THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

HRP
MOVE YOUR ENVIRONMENT FORWARD
ONE FAIRCHILD SQUARE
SUITE 110
CLIFTON PARK, NY 12065
(518) 877-7101
HRPASSOCIATES.COM

NORTH

0 25' 50'

REVISIONS

NO.	DATE	DESCRIPTION

DESIGNED: CVP	SCALE: 1" = 50'
DRAWN: CVP	ISSUE DATE: 06/26/2024
REVIEWED: DR	PROJECT NUMBER: DEC1027.OM
APPROVED: TRB	SHEET SIZE: 24"x36"

P.E. SEAL

LAWRENCE AVIATION INDUSTRIES

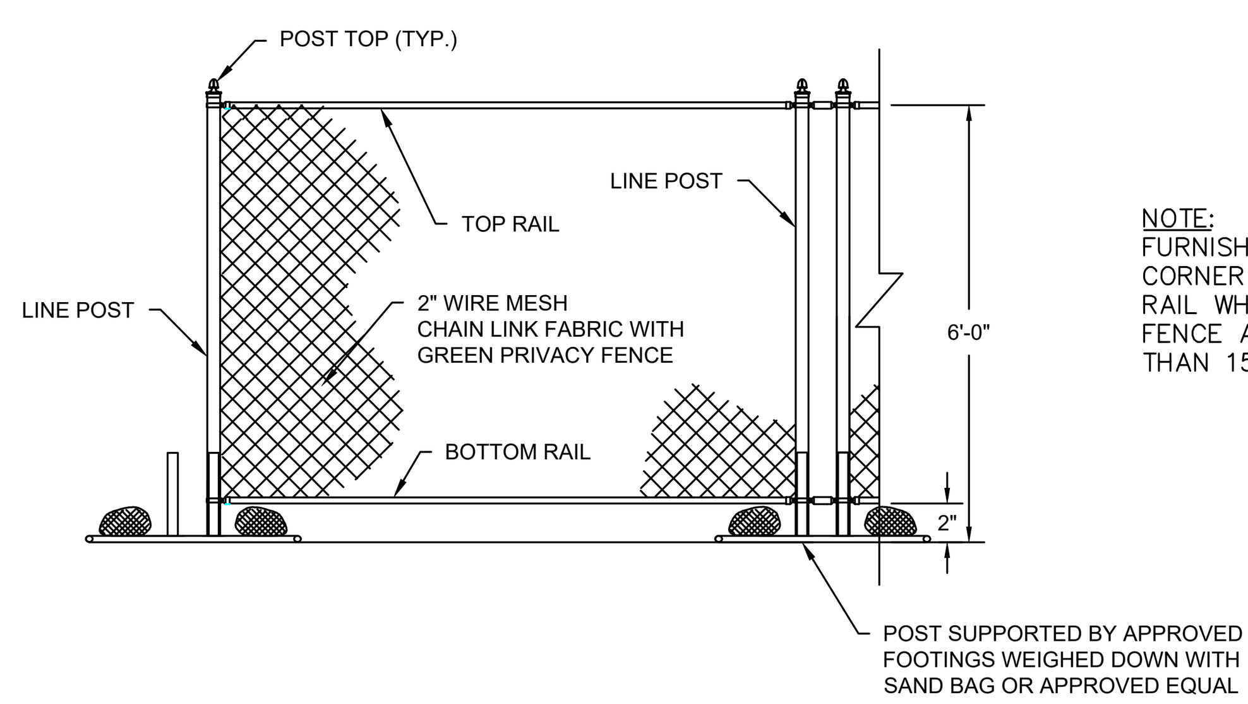
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

100 SHEEP PASTURE ROAD
PORT JEFFERSON, NEW YORK

SITE PLAN

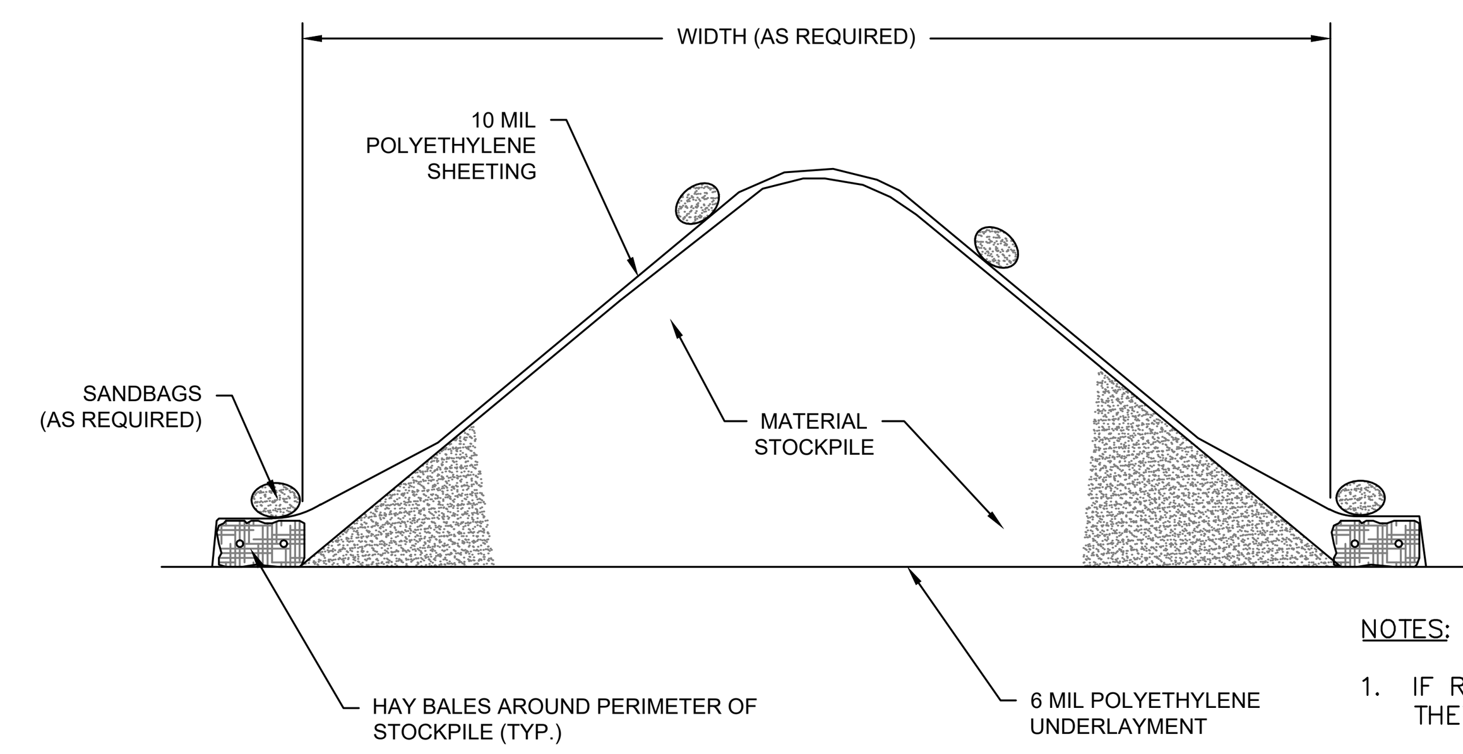
SHEET NO.

C1.0



NOTE:
FURNISH AND INSTALL A CORNER POST AND BRACE RAIL WHERE THE CHANGE IN FENCE ALIGNMENT IS GREATER THAN 15°.

6' TEMPORARY CONSTRUCTION FENCE
NOT TO SCALE



NOTES:

1. IF ROLLOFFS ARE UTILIZED FOR MATERIAL STOCKPILING, THEY SHALL BE SURROUNDED BY HAY BALES.
2. ADDITIONAL CRUSHING OPERATION ACTIVITIES SHALL BE SURROUNDED BY HAY BALES.

SEDIMENT CONTROL FOR STOCKPILES
NOT TO SCALE

HRP
MOVE YOUR ENVIRONMENT FORWARD
ONE FAIRCHILD SQUARE
SUITE 110
CLIFTON PARK, NY 12065
(518) 877-7101
HRPASSOCIATES.COM

REVISIONS

NO.	DATE	DESCRIPTION

DESIGNED: CVP	SCALE: NTS
DRAWN: CVP	ISSUE DATE: 06/26/2024
REVIEWED: JK	PROJECT NUMBER: DEC1027.OM
APPROVED: TRB	SHEET SIZE: 24"x36"

P.E. SEAL

LAWRENCE AVIATION INDUSTRIES
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
100 SHEEP PASTURE ROAD
PORT JEFFERSON, NEW YORK

DETAILS

SHEET NO.
C2.0

APPENDIX B
Utility Disconnect Letters

nationalgrid

September 18, 2023

NYSDEC
c/o Scott McDonald
6780 Northern Blvd Ste 100
E Syracuse, NY 13057

Email: smcdonald@gesonline.com; pmecinski@gesonline.com

National Grid WO # T102556387 – 100 Sheep Pasture Rd, Pt Jeff Station – Main Retirement

To Whom It May Concern:

This letter is to advise you that the existing natural gas Main at the above location was physically disconnected on July 14, 2023 which also disconnects the service to this structure.

Please advise your contractor that care should be taken not to damage or remove the existing gas valve curb box. This curb box will be used in the future by National Grid to reconnect the gas service line to this property.

By Law, excavators and contractors working in New York City and Nassau and Suffolk Counties must contact New York 811 at least 2 full business days, not including the day of contact, prior to digging by calling 811 or by using the website https://newyork-811.com/.

This confirmation letter of a gas cut-off service line to the subject property does not relieve the excavator of contacting NY 811.

If you have any further questions, kindly contact me at 833-359-0645.

Respectfully,

Christina Bonelli

Christina M. Bonelli
Sr. Supervisor, Central Processing
Gas Customer Connections

SUFFOLK COUNTY WATER AUTHORITY
SCWA

4060 Sunrise Highway, Oakdale, New York 11769-0901

August 2, 2023

Scott McDonald
Sc.McDonald@gesonline.com

RE: 100 Sheep Pasture Rd, Port Jefferson- SCTM# 0200-159.00-02.00-019.000

To Whom It May Concern:

On July 20, 2023, our representative confirmed that the water services were physically disconnected at the above referenced location.

Please advise your contractor that care should be taken not to damage the existing vault and /or curb box, as the cost of any repairs would be billed to the premise and no service initiated until the balance is paid.

Sincerely,

Lisa Cetta
New Construction Manager

LC/lmmo

APPENDIX C

Suffolk County Department of Health Services Article 12 SOP No.9-95

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

STANDARD OPERATING PROCEDURE
FOR THE ADMINISTRATION OF ARTICLE 12
OF THE SUFFOLK COUNTY SANITARY CODE

****

ARTICLE 12 ~~ SOP NO.9-95

****

"PUMPOUT AND SOIL CLEANUP CRITERIA"

Revised August, 2010
Effective January 1, 2011

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
ARTICLE 12 ~~ SOP NO. 9-95
PUMPOUT AND SOIL CLEANUP CRITERIA

****

STATEMENT OF PURPOSE

Article 12 of the Suffolk County Sanitary Code, requires the owner, operator or any other person in possession or control of an industrial facility to report to the Department of Health Services (the Department) any unauthorized discharge, leak or spill of toxic or hazardous material within two hours of knowledge of that discharge, leak or spill. Knowledge of a spill includes information generated during Phase I and Phase II Environmental Assessments, such as results from groundwater and soil sampling. In addition, Article 12 requires the owner, or any other person in possession or control of the source of the discharge, and/or the owner of the property onto which the discharge has occurred, to immediately cease the discharge and to reclaim, recover and dispose of the discharged material and to restore the environment to the condition that existed prior to the discharge.

Since it is not always possible to achieve predischarge conditions, this document was generated to provide guidance when evaluating the potential impact of a discharge on the environment and to provide assistance when determining if, and to what extent, contaminated liquids and/or solids must be removed from sanitary systems, storm drains, or other locations at a facility. It was generated to be applicable to most situations; however, the Department reserves the right to apply additional requirements when warranted by conditions encountered at a particular site.

This document is not meant to represent approval by the Department of any remedial activities, or to represent the Department's determination that a site either does or does not require remediation. All spills, leaks, or discharges of toxic or hazardous materials, as defined by Section 760-1203 of the Sanitary Code, must be reported to the Office of Pollution Control, which will have the sole authority to determine what, if any, cleanup will be required.

When assessing the need for cleanup at a specific site, in addition to the potential for migration of contaminants to groundwater the Department will consider all human health and environmental factors that are available, including the potential for direct exposure via dermal absorption, inhalation or ingestion pathways. The soil cleanup objectives contained in this document do not account for potential soil vapor or soil vapor intrusion impacts. In many cases, site specific cleanup criteria may vary from the values listed in this SOP.

Be advised that, in addition to meeting the Suffolk County Department of Health Services (SCDHS) requirements, the responsible party must meet the requirements of the New York State Department of Environmental Conservation (NYSDEC) and the United States Environmental Protection Agency (USEPA).

CRITERIA

As stated in Articles 7 and 12 Suffolk County Sanitary Code, it is the policy of the County of Suffolk to maintain its water resources as near to their natural condition of purity as reasonably possible. As such, the goal of any remedial action required by this Department is to return the site to predischarge conditions. If this is not possible, at a minimum, the cleanup must ensure reasonable protection for public health and the environment.

Appendices A, B and C contain Action Levels and Cleanup Objectives for Volatile Organic Compounds (VOCs), metals and Semi-Volatile Organic Compounds (Semi-VOCs), respectively. When the concentration of a single contaminant, or a class of contaminants such as total petroleum hydrocarbons, meets, or exceeds, the "Action Level", a cleanup, or other action, is required. Under most conditions, the contaminant concentration in the soil after remediation should not exceed the values indicated in the "Cleanup Objective" column.

Cleanup Objectives for VOCs and Semi-VOCs were established in a manner consistent with the New York State Department of Environmental Conservation's Technical and Administrative Guidance Memorandum, (TAGM) HWR-94-4046. Where measured Soil Partitioning Coefficients (K_{oc}) could be found, they were used. If not, the K_{oc} was calculated based on the compound's Octanol / Water Partitioning Coefficient (K_{ow}). If the K_{ow} was not available, the K_{oc} was estimated based on solubility. Individual VOC and Semi-VOC Cleanup Objectives were capped at a maximum allowable concentration of 100,000 ppb.

Cleanup Objectives for metals have been revised from those listed in the original document to more closely conform to the groundwater protection cleanup objectives contained in 6NYCRR Part 375. Cleanup Objectives for metals assume a 20:1 Dilution Attenuation Factor (DAF), consistent with Part 375. Action Levels for metals assume a DAF of 100.

In order to perform a proper environmental evaluation, the Department may require additional analysis to be performed based on the chemicals stored, or in use, at a site. This may include Total Petroleum Hydrocarbons (TPH), cyanides, phenols, PCBs, pesticides and/or a more extensive list of metals, VOCs and/or Semi-VOCs. Cleanup objectives and action levels for these additional parameters will be established on a case by case basis.

Although TPH analysis is not normally required by this Department, if the analysis is performed on a sample and the TPH concentration is greater than, or equal to, 500 ppm, the Department will require the responsible party to analyze the sample for Semi-VOCs via EPA Method 8270. The results of this analysis will then be compared with the Semi-VOC values listed in Appendix C.

Liquid endpoint samples must be collected if groundwater is encountered during a cleanup operation. If the concentration of VOCs, Semi-VOCs or metals in the sample exceeds 100 times the contaminant's discharge standard, the Department will require a groundwater sample to be collected immediately downgradient of the point of contamination to determine if there has been an impact on the groundwater. If significant groundwater contamination is found, a more extensive groundwater investigation will be required**. The Department reserves the right to require the installation of monitoring well(s) at lower contaminant levels based on the type**

of contaminant encountered and other site specific conditions.

Other factors to be considered when evaluating a site :

In many instances, additional information is available which the Department will utilize when establishing cleanup goals, or action levels, for a specific site. Some factors that are considered when reviewing site specific conditions to decide if cleanup goals should be set higher or lower than the guidance values listed in this document include, but are not be limited to:

Site history -	Past discharge practices, as well as the extent and type of discharge discovered, will be considered.
Type of Contaminant -	Physical and/or chemical characteristics of a contaminant will be considered. For example, the department may require groundwater sampling, and/or a soil vapor investigation to be undertaken, due to high concentrations of tetrachloroethene and/or its breakdown products detected in initial samples even though soil cleanup objectives were met in post remediation samples.
Site location -	Facilities located in water sensitive areas or near drinking water wells may require more stringent cleanup objectives.
Distance to groundwater -	Since this guidance document assumes a 100 fold reduction in contaminant concentrations between the source area and the drinking water supply, if the distance between the contamination and the groundwater is less than three feet, or a drinking water supply well is located nearby, action levels or cleanup goals may be lower than the guidance values listed in this document.
Monitoring well data -	If groundwater contamination can be attributed to the discharge, more extensive remediation or investigation may be required.
Future use of site -	Although it is not this department's policy to allow pockets of contamination to remain in the ground throughout the county, in certain cases, where the cleanup objectives listed in this document can not be achieved, higher concentrations of contaminants may be allowed to remain in place if the site can be stabilized in a manner acceptable to the Department. In these instances, land, or deed, restrictions may be required.
Direct Human Exposure -	If ingestion, inhalation or dermal contact is a concern, other soil screening guidance documents should be used to formulate a cleanup goal, especially if that value is lower than the "Cleanup Objective" listed in this document.

APPENDIX A
CLEANUP OBJECTIVES AND ACTION LEVELS FOR VOLATILE ORGANICS (UG/KG)

Contaminant	Action Levels (ppb)	Cleanup Objectives (ppb)
Acetone	**	**
Acrolein	100	50
Acrylonitrile	100	50
Allyl Chloride	400	200
t-Amyl Methyl Ether	4,000	2,000
Benzene	120	60
Bromobenzene	2,800	1,400
Bromochloromethane	400	200
Bromodichloromethane	4,600	2,300
Bromoform	13,000	6,300
n-Butyl Acetate	20,000	10,000
n-Butylbenzene	12,000	5,900
sec-Butylbenzene	12,000	5,900
tert-Butylbenzene	12,000	5,900
t-Butyl Ethyl Ether	4,000	2,000
Carbon Disulfide	5,600	2,800
Carbon Tetrachloride	1,600	800
Chlorobenzene	2,200	1,100
Chlorodifluoromethane	100	50
Chloroethane	400	200
2-Chloroethyl Vinyl Ether	1,000	500
Chloroform	800	400
Chloromethane	100	50
Chlorotoluene(s)	5,200	2,600
cis-Decahydronaphthalene	200,000	100,000
trans-Decahydronaphthalene	200,000	100,000
Decane	200,000	100,000
Dibromochloromethane	6,200	3,100
1,2-Dibromo-3-chloropropane	100	50
1,2-Dibromoethane	600	300
Dibromomethane	400	200
o-(1,2)-Dichlorobenzene	2,200	1,100
m-(1,3)-Dichlorobenzene	4,800	2,400
p-(1,4)-Dichlorobenzene	3,600	1,800
Dichlorodifluoromethane	600	300

Appendix A (continued)

Contaminant	Action Levels (ppb)	Cleanup Objectives (ppb)
1,1-Dichloroethane	600	300
1,2-Dichloroethane	100	50
1,1-Dichloroethene	600	300
cis-1,2-Dichloroethene	500	250
trans-1,2-Dichloroethene	400	200
1,2-Dichloropropane	100	50
1,3-Dichloropropane	600	300
2,2-Dichloropropane	600	300
1,1-Dichloropropene	200	100
cis-1,3-Dichloropropene	100	50
trans-1,3-Dichloropropene	100	50
p-Diethylbenzene	52,000	26,000
Diethyl Ether	600	300
Ethylbenzene	2,000	1,000
Ethyl Methacrylate	4,200	2,100
p-Ethyltoluene	9,000	4,500
Freon 113	12,000	6,000
Hexachlorobutadiene	54,000	27,000
Hexachloroethane	22,000	11,000
Hexane	150,000	73,000
2-Hexanone	13,000	6,700
Isopropylbenzene	9,400	4,700
p-Isopropyltoluene	22,000	11,000
Limonene	200,000	100,000
Methylene Chloride	100	50
(MTBE) tert-Butyl methyl ether	200	100
Methyl Ethyl Ketone (Butanone)	400	200
Methyl Iodide	200	100
Methyl Isobutyl Ketone	1,400	700
Methyl Isothiocyanate	600	300
Methyl Methacrylate	1,400	700
Naphthalene	24,000	12,000
Nitrobenzene	100	50
2-Nitropropane	600	300
Nonane	200,000	100,000
Octane	200,000	100,000
n-Propylbenzene	8,000	4,000
Styrene	9,200	4,600

Contaminant	Action Levels (ppb)	Cleanup Objectives (ppb)
1,1,1,2-Tetrachloroethane	600	300
1,1,2,2-Tetrachloroethane	800	400
Tetrachloroethene	2,600	1,300
Tetrahydrofuran	2,200	1,100
1,2,4,5-Tetramethylbenzene	18,000	8,800
Toluene	3,000	1,500
1,2,3-Trichlorobenzene	17,000	8,300
1,2,4-Trichlorobenzene	17,000	8,300
1,1,1-Trichloroethane	1,400	700
1,1,2-Trichloroethane	200	100
Trichloroethene	1,000	500
Trichlorofluoromethane	1,600	800
1,2,3-Trichloropropane	100	50
1,2,4-Trimethylbenzene	7,200	3,600
1,3,5-Trimethylbenzene	16,800	8,400
Undecane	200,000	100,000
Vinyl Acetate	600	300
Vinyl Chloride	100	50
Xylene(s)	3,200	1,600

** Due to its relatively short half-life in the environment, if acetone is the only contaminant of concern in a sample, the primary response should be to determine and eliminate the source of the acetone discharge. The requirement to perform a remediation will be determined on a case-by-case basis.

APPENDIX B
SOIL CLEANUP OBJECTIVES AND ACTION LEVELS FOR METALS (MG/KG)

Contaminant	Action Levels (ppm)	Cleanup Objective (ppm)
Arsenic	30.0	6.0
Barium	4,000.0	820.0
Beryllium	240.0	47.0
Cadmium	40.0	7.5
Chromium	100.0	20.0
Copper	8,500.0	1,700.0
Lead	2,000.0	450.0
Mercury	3.7	0.7
Nickel	650.0	130.0
Silver	50.0	10.0

Note: Certain metals, such as aluminum, iron and manganese, appear naturally in Long Island soils and are not considered to be significant under most conditions. Other metals will be evaluated on a case-by-case basis.

APPENDIX C

CLEANUP OBJECTIVES AND ACTION LEVELS FOR SEMI-VOLATILE ORGANICS (UG/KG)

	Action Levels (ppb)	Cleanup Objectives (ppb)
Acenaphthene	200,000	98,000
Anthracene	200,000	100,000
Benzo(a)anthracene	2,000	1,000
Benzo(b)fluoranthene	3,400	1,700
Benzo(k)fluoranthene	3,400	1,700
Benzo(g,h,i)perylene	200,000	100,000
Benzo(a)pyrene	44,000	22,000
Chrysene	2,000	1,000
Dibenzo(a,h)anthracene	200,000	100,000
Fluoranthene	200,000	100,000
Fluorene	200,000	100,000
Indeno(1,2,3-cd)pyrene	16,000	8,000
Phenanthrene	200,000	100,000
Pyrene	200,000	100,000

Note: VOC and Semi-VOC contaminants were evaluated in a manner consistent with the New York State Department of Environmental Conservation's Technical and Administrative Guidance Memorandum (TAGM), HWR-94-4046. Cleanup objectives were established using the following relationship, subject to a maximum contaminant concentration of 100,000 ppb. Action levels were generally set at twice the cleanup objective, subject to a maximum contaminant concentration of 200,000 ppb. Cleanup Objectives were calculated using the following:

$$\mathbf{C_s = (DAF)(f)(C_w)(K_{oc})}$$

Where:

C_s = Allowable Soil Concentrations (ppb)
DAF = Dilution Attenuation Factor of 100
f = organic fraction in soil (assumed to be 1%, or 0.01)
C_w = Water Quality Value (6NYCCR 703.5, or TOGS 1.1.1) in ppb
K_{oc} = Organic Carbon Partition Coefficient (an approximation of the propensity of a compound to adsorb to organic matter in the soil)

Metals cleanup objectives were calculated based on the following:

$$\mathbf{C_s = (DAF)(C_w)(K_d)}$$

Where:

C_s = Allowable Soil Concentrations (ppm)
DAF = Dilution Attenuation Factor of 20 for Cleanup Objectives and 100 for Action Levels
C_w = Water Quality Value (6NYCCR 703.5, or TOGS 1.1.1) in ppm
K_d = Soil Water Distribution Coefficient (partitioning coefficient for inorganics)

APPENDIX D
Specification Package

REMEDIAL ACTIVITIES
LAWRENCE AVIATION INDUSTRIES– SITE 152016
100 SHEEP PASTURE ROAD
PORT JEFFERSON, NEW YORK

TABLE OF CONTENTS

Division 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:

Adapted from CSI Form No. 13.0B, 2004 edition

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? _____

_____

Adapted from CSI Form No. 20.3, 1998 edition

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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 Prosed Change Order, in accordance with the Contract Documents, for the proposed Work described in the Proposed Change Order Request.

1.5 PROPOSED CHANGE ORDERS

A. General.
   1. Prepare and transmit written Proposed Change Order to ENGINEER in response to each Proposed Change Order Request; or when CONTRACTOR believes a change in the Contract Price or Contract Times or other change to the terms of the Contract is required; or to appeal an initial decision by ENGINEER concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the General Conditions.

B. Procedure.
   1. Prepare and transmit Proposed Change Order within time limits indicated in the General Conditions, as may be modified by the Supplementary Conditions.
   2. Transmit Change Proposals in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section. Include with each Proposed Change Order all required supporting documentation and a separate letter of transmittal.
   3. ENGINEER's Review and Requests for Interpretation:
      a. ENGINEER will review and act on each Proposed Change Order in accordance with, and within the time limits indicated in, the General Conditions, as may be modified by the Supplementary Conditions.
      b. When, ENGINEER requests additional information to render a decision, submit required information within three days of receipt of ENGINEER's request, unless ENGINEER allows more time. Submit the required information via correspondence that refers to the specific Proposed Change Order number.

c. DEPARTMENT shall transmit to ENGINEER such comments, if any, that DEPARTMENT has on the Change Proposal, within 30 days of DEPARTMENT's receipt of the Proposed Change Order.
d. ENGINEER will render a written decision on the Proposed Change Order.
e. ENGINEER's response to Proposed Change Order will be transmitted in accordance with Section 01 31 26, Electronic Communication Protocols, and requirements of this Section, the General Conditions, and the Supplementary Conditions.

4. ENGINEER's response to each Proposed Change Order will be distributed to:
   a. CONTRACTOR.
   b. DEPARTMENT
   c. ENGINEER.
5. If Proposed Change Order is recommended for approval by ENGINEER and is approved by DEPARTMENT, an Approved Change Order will be issued or, when applicable, an appropriate use of contingency allowance will be authorized by DEPARTMENT.
6. If parties do not agree on terms for the change, DEPARTMENT or CONTRACTOR may file a Claim against the other, in accordance with the General Conditions, as may be modified by the Supplementary Conditions.

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

4. Unless otherwise directed by ENGINEER, attach to the Proposed Change Order detailed breakdowns of pricing (Cost of the Work and CONTRACTOR's fee) including:
    a. List of Work tasks to accomplish the change.
    b. For each task, labor cost breakdown including labor classification, total hours per labor classification, and hourly cost rate for each labor classification.
    c. Construction equipment and machinery to be used, including manufacturer, model, and year of manufacture, and number of hours for each.
    d. Detailed breakdown of cost of materials and equipment to be incorporated into the Work, including quantities, unit costs, and total cost, with Supplier's written quotations.
    d. Breakdowns of the Cost of the Work and fee for Subcontractors, including labor, construction equipment and machinery, and materials and equipment incorporated into the Work, other costs, and Subcontractor fees (e.g., overhead and profit).
    f. Breakdown of other costs eligible, in accordance with the General Conditions and the Supplementary Conditions under "Cost of the Work" provisions.
    g. Other information required by ENGINEER.
    h. CONTRACTOR's fees applied to eligible CONTRACTOR costs and eligible Subcontractor costs.
    i. The change order backup shall be completed using the NYS Standard MURK 2018 (or current) format. DEPARTMENT will provide an electronic version for CONTRACTOR use.

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 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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PROPOSED CHANGE ORDER REQUEST

DEPARTMENT:

Project Name: _____

Proposal Request No.: _____ Date: _____

Contract Name and No.: _____

Contractor: _____

Other Contracts Involved in Proposed Change: _____

TO CONTRACTOR: Please submit a complete Change Proposal for the proposed modifications described below. If the associated Change Proposal is approved, a Change Order or allowance authorization will be issued to authorize adjustment so the scope of the Work. This Proposal Request is not a Change Order, Work Change Directive, Field Order, or an authorization to proceed with the proposed Work described below.

SCOPE OF PROPOSED WORK:

1. *Item*:
2. *Item*:
3. *Item*:

Proposal requested by: _____

Signature of Requestor: _____

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PROPOSED CHANGE ORDER

DEPARTMENT:

_____

Project Name: _____

Change Proposal No.: _____ Date: _____

Submitted in Response to Proposal Request No.: _____

Contract Name and No.: _____
Contractor: _____

Subject: _____

_____

The following changes to the Contract are proposed:

SCOPE OF WORK: *(attach and list supporting information as required)*

1. *Item*:
2. *Item*:

JUSTIFICATION:

1. *Item*:
2. *Item*:

CHANGES IN CONTRACT PRICE AND CONTRACT TIMES:

We propose that the Contract Price and Contract Times be changed as follows:

For Contract Price, attach detailed cost breakdowns for Contractor and Subcontractors, Supplier quotations, and other information required.

For the Contract Times, state increase, decrease, or no change to Contract Times for Substantial Completion, readiness for final payment, and Milestones, if any. If increase or decrease, state specific number of days for changes to the Contract Times.

Description	Amount	Contract Times (days)	
		Substantial	Final
1. Item	$0.00	0	0
2. Item	$0.00	0	0
Total This Change Proposal	**$0.00**	**0**	**0**

Changes to Milestones, if any: _____

Contractor represents that supporting data attached to this Change Proposal are accurate and complete. The requested time or price adjustment indicated in this Change Proposal is the entire adjustment to which Contractor believes it is entitled as a result of the proposed change(s) indicated herein.

Change Proposal by: _____

Signature of Proposer: _____

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Field Order No. _____

Date of Issuance: Site Name:

Owner: Owner's Contract No.:

Contractor: Site No.:

Engineer:

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

Reference: _____ _____

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

Description:

Attachments:

ISSUED:	RECEIVED:
By: _____	By: _____
Engineer (Authorized Signature)	Contractor (Authorized Signature)
Title: _____	Title: _____
Date: _____	Date: _____

Copy to: DEPARTMENT Project Manager and DEPARTMENT Designated Representative

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SECTION 01 29 73

SCHEDULE OF VALUES

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:
   1. CONTRACTOR shall prepare and submit to ENGINEER for acceptance a Schedule of Values that allocates 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.
   1. 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 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.
k. Substitutes and "Or-Equals":
    1) Product options.
    2) Procedures for proposing "or-equals".
    3) Procedures for proposing substitutes.
l. 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
m. 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.
n. Testing and inspections, including notification requirements.
o. Disposal of demolition materials.
p. Record documents.
q. 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
8. Problems, conflicts, and observations.
9. Quality standards, testing, and inspections.
10. Coordination between parties.
11. Site management issues, including access, security, maintenance and protection of traffic, maintenance, cleaning, and other Site issues.
12. Permits.
13. Construction photographic documentation, as applicable.
14. Record documents status, as applicable.
15. Punch list status, as applicable.
16. 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 sent 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-Builts)	DWG and PDF	C	EMA	E, D	M (5)	(5)
Other record documents	PDF	C	EMA	E. D	M (5)	(5)
Contract closeout documents						

B. Key to Electronic Data Protocol Table:

Data Format:

EM .msg, .htm, .txt, .rtf, e-mail text
W .docx, Microsoft® Word 2007 or later EX
.xlsx, Microsoft® Excel 2007 or later PDF
.pdf. Portable Document Format
DWG .dwg. Autodesk AutoCAD 2019 drawing.

Transmitting Party:

D	DEPARTMENT
C	CONTRACTOR
E	ENGINEER

Transmission Method:

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

Receiving Party:

D	DEPARTMENT
C	CONTRACTOR
E	ENGINEER

Permitted Uses:

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

Notes:

(1) Modifications by ENGINEER to CONTRACTOR's submittals and requests for interpretations are limited to printing out, marking-up, and adding comment sheets.

(2) May be distributed only to affected Subcontractors and Suppliers. Print out, sign document, and return executed ("wet") signatures to ENGINEER after Department Approval.

(3) Submit printed Applications for Payment with original ("wet") signatures.

(4) Submit notices, including Claims, in accordance with the notice provisions of the General Conditions.

(5) Submit record drawings in native CAD format indicated when CONTRACTOR has executed ENGINEER's standard agreement for release of electronic files. In addition, always submit record drawings as a PDF file. Comply with requirements of Section 01 78 39, Project Record Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

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SECTION 01 32 16

PROGRESS SCHEDULE

PART 1 – GENERAL

1.1 DESCRIPTION

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

1.2 SUBMITTALS

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

f. Furnish each Progress Schedule submittal with letter of transmittal complying with requirements of Section 01 33 00, Submittal Procedures, and specifically indicating the following:
   1) Listing of activities and dates that have changed since the previous Progress Schedule submittal.
   2) Discussion of problems causing delays, anticipated duration of delays, and proposed countermeasures.

3. Recovery Schedules: Submit in accordance with this Section, and other provisions of the General Conditions.
4. Accelerated Schedules may be submitted for in accordance with General Conditions Section VIII, Article 5.3.
5. Adjusted Project Schedules shall be submitted in accordance with General Conditions Section VIII, Article 5.6
6. If CONTRACTOR doesn't intend to perform Work on the date 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 DEPARMENT, 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

PHOTOGRAPHIC DOCUMENTATION

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:
   1. Furnish photographic documentation for the following:
      a. Pre-construction.
      b. Construction progress.
      c. Final.

B. Image Quality:
   1. Photographic documentation shall be in color.
   2. Photographic images 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.

1.2 QUALITY ASSURANCE

A. At the Site, CONTRACTOR shall be responsible for photo documenting daily activity, the photographic subjects, views, and angles will vary with progress of the Work.

1.3 SUBMITTALS

A. Informational Submittals: Submit the following:
   1. Pre-construction Photographic Documentation: Submit acceptable pre-construction photographic documentation (prints and digital files) prior to mobilizing to and disturbing the Site. Submit pre-construction photographic documentation not later than the first Application for Payment, unless other schedule for pre-construction photographic documentation is accepted by ENGINEER.
   2. Construction Progress Photographic Documentation: Submit acceptable construction progress photographic documentation (prints and digital files) not less-often than monthly. Submit with each Application for Payment, unless otherwise agreed to by ENGINEER.
   3. Qualifications Statements:
      a. When requested by ENGINEER, prior to starting photographic documentation, submit photographer qualifications and record of experience. List of construction photography experience shall include the following for each project:
         1) Project name and location
         2) Nature of construction.

3) Photographer's client with contract information.
4) Approximate duration of photographer's services.

B. Closeout Submittals: Submit the following:
1. Final Photographic Documentation: Submit acceptable final photographic documentation (prints and digital files) prior to requesting the final inspection by ENGINEER, not otherwise provided under Paragraph A (2.) .
2. Photographic Documentation shall be considered part of the Record Documentation.

1.4 PHOTOGRAPHIC DOCUMENTATION – GENERAL

A. Digital Files of Photographs:
1. For each photograph taken, furnish high-quality digital image in "JPG" file format compatible with Microsoft Windows 7 and higher operating systems.
2. Image resolution shall be sufficient for clear, high-resolution prints. Minimum resolution shall be 150 dots per inch (dpi). Minimum size of digital images shall be equal to specified print size.
3. Do not imprint date and time in the image.
4. Electronic image filename shall describe the image; do not submit filenames automatically created by digital camera. For example, an acceptable electronic filename would be, "Dewatering Building – Looking West at Centrifuge No. 2.jpg".
5. Form of Digital Submittal – Images on temporary storage devices or through file transfer:
a. Submit digital files on compact discs (CD), USB drive, or shared cloud storage drive.
b. Submit three copies of each temporary storage device with digital files of photographic images.
c. Include file index for each file transfer containing photographic documentation:
1) Date(s) photographs were taken.
2) Name of Owner.
3) Name of the Site.
4) Project name.
5) Photographer name and address.

1.5 PRE-CONSTRUCTION PHOTOGRAPHIC DOCUMENTATION

A. Pre-construction Photographic Documentation:
1. Obtain and submit pre-construction photographic documentation to record Site conditions prior to construction. Photographs shall document work areas of all prime contracts under the Project.
2. Pre-construction photographs are not part of required number of construction progress photographs specified in Article 1.6 of this Section.

3. Furnish pre-construction video of all work areas included in all prime contracts on the Project, including indoor and outdoor work areas and staging areas.

B. If disagreement arises on the condition of the Site and insufficient pre-construction photographic documentation was submitted prior to the disagreement, restore the grounds or area in question to extent directed by ENGINEER and to satisfaction of ENGINEER.

1.6 CONSTRUCTION PROGRESS PHOTOGRAPHIC DOCUMENTATION

A. Progress Photographs:
   1. Take photographs not less often than twice per month.
   2. Take no less than 20 photographs each time photographer is at the Site.
   3. Obtain and submit interior and exterior photographic documentation of each structure in the work area as directed by ENGINEER at the time photographic documentation is taken.

1.7 FINAL PHOTOGRAPHIC DOCUMENTATION

A. Final Photographs:
   1. Take photographs at time and day acceptable to ENGINEER. Work documented in final (record) photographs shall be generally complete, including major features of completed work, as determined by the ENGINEER and DEPARTMENT.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

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SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION

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

4. Maintenance Material Submittals include:
a. Spare parts.
b. Extra stock materials.
c. Tools.

5. When type of submittal is not specified and is not included in the list above, request an interpretation from ENGINEER and ENGINEER will determine the type of submittal.

B. Not Included in this Section: Administrative and procedural requirements for following are covered elsewhere in the Contract Documents:

1. Requests for interpretations of the Contract Documents.
2. Change Orders, Work Change Directives, and Field Orders.
3. Applications for Payment
4. Reports, documentation, and permit applications required to be furnished by CONTRACTOR to authorities having jurisdiction.

C. In accordance with Section III, Article 5, the Apparent Low Bidder shall, at a minimum, submit the following with the required five-day submittal package, 5 days following the Notice of Apparent Low Bidder.
1. Plan of Operations (Work Plan) and Progress Schedule
2. Health and Safety Plan

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 and in attached Table 01 33 00A, however, this list is not inclusive of all submittals required elsewhere:
1. Final plans, engineered approved plans, as described in Paragraph 1.2.C.
2. Interim progress schedule, schedule of values, and technical submittals detailed in the first three months of the progress schedule
3. All other technical submittals required by the contract in accordance with the approved Submittal Registry and in accordance with General Conditions, Articles 5.24 through 5.30.
4. All other submittals as required by the Supplementary Specifications applicable to the Work being performed or as requested by the ENGINEER.

1.3 REQUIREMENTS FOR SCHEDULE OF SUBMITTALS

A. Informational Submittals: Submit the following:
1. Schedule of Submittals:
a. Timing:

1) Furnish submittal within time frames indicated in the Contract Documents.
2) Submit updated Schedule of Submittals with each submittal of the updated Progress Schedule.

b. Content: In accordance with the General Conditions, as may be modified by the Supplementary Conditions, and this Section. Requirements for content of preliminary Schedule of Submittals and subsequent submittals of the Schedule of Submittals are identical. Identify on Schedule of Submittals all submittals required in the Contract Documents. Updates of Schedule of Submittals shall show scheduled dates and actual dates for completed tasks. Indicate submittals that are on the Project's critical path. Indicate the following for each submittal:
   1) Date by which submittal will be received by ENGINEER.
   2) Whether submittal will be for a substitution or "or-equal". Procedures for requesting approval of substitutes and "or-equals" are specified in the General Conditions, Section 01 25 00, Substitution Procedures, and Section 01 62 00, Product Options (for "or-equals").
   3) Date by which ENGINEER's response is required. Not less than 14 days shall be allowed for ENGINEER's review, starting upon ENGINEER's actual receipt of each submittal. Allow increased time for large or complex submittals.
   4) For submittals for materials or equipment, date by which material or equipment must be at the Site to avoid delaying the Work and to avoid delaying the work of other contractors, if any.

c. Prepare Schedule of Submittals using same software, and in same format, specified for Progress Schedules in Section 01 32 16, Progress Schedule.

d. Coordinate Schedule of Submittals with the Progress Schedule.

e. Schedule of Submittals that is not compatible with the Progress Schedule, or that does not indicate submittals on the Project's critical path, or that that places extraordinary demands on ENGINEER for time and resources, is unacceptable. Do not include submittals not required by the Contract Documents.

f. In preparing Schedule of Submittals:
   1) Considering the nature and complexity of each submittal, allow sufficient time for review and revision.
   2) Reasonable time shall be allowed for: ENGINEER's review and processing of submittals, for submittals to be revised and resubmitted, and for returning submittals to CONTRACTOR.
   3) Identify and accordingly schedule submittals that are expected to have long anticipated review times.

1.4 PROCEDURE FOR SUBMITTALS

A. Submittal Identification System: Use the following submittal identification system, consisting of submittal number and review cycle number.
   1. Submittal Number: Shall be separate and unique number correlating to each individual submittal required. Assign submittal numbers as follows:
      a. First part of submittal number shall be the applicable Specifications Section number, followed by a hyphen.
      b. Second part of submittal number shall be a three-digit number (sequentially numbered from 001 through 999) assigned to each separate and unique submittal furnished under the associated Specifications Section.
      c. Typical submittal number for the third submittal furnished for Section 40 05 19, Ductile Iron Process Pipe, would be "40 05 19-003".
   2. Review Cycle Number: Shall be a number indicating the initial submittal or re-submittal associated with each submittal number:
      a. "01" = Initial (first) submittal.
      b. "02" = Second submittal (e.g., first re-submittal).
      c. "03" = Third submittal (e.g., second re-submittal).
   3. Examples:

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: _____

Reference

Submittal Title: _____

Specifications:

Section: _____

Page No.: _____

Paragraph No.: _____

Drawing No.:_____of _____

Location of Work: _____

Submittal No. and Review Cycle: _____

_____

Coordinated by Contractor with Submittal Nos.:

_____

_____

__

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

Approved for Contractor by:_____"

D. Submittal Marking and Organization:

1. Mark on each page of submittal and each individual component submitted with submittal number and applicable Specifications paragraph. Mark each page of each submittal with the submittal page number.
2. Arrange submittal information in same order as requirements are written in the associated Specifications Section.

3. Each Shop Drawing sheet shall have title block with complete identifying information satisfactory to ENGINEER.
4. Package together submittals for the same Specifications Section. Do not furnish required information piecemeal.

E. Format of Submittal and Recipients:

1. Action Submittals and Informational Submittals: Furnish in accordance with Table 01 33 00B, except that submittals of Samples shall be as specified elsewhere in this Section:

TABLE 01 33 00B: SUBMITTAL CONTACTS AND REQUIRED FORMAT

	Address for Deliveries	Contact Person	E-mail Address	Format*	No. of Printed Copies
a.	Engineer:	(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 + +

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Table 01 33 00A
Project Submittals

Section	Submittal	Submission Timing/Associated Work Task
	SECTION III - BIDDING INFORMATION AND REQUIREMENTS	
Article 5 a	Form of Bid filled out (Section V Article 1a)	With bid
Article 5 a	Bid Bond or Certified Check (Section V Article 1d)	With bid
Article 5 a	Non-Collusion Certificate (Section V Article 1b)	With bid
Article 5 a	MacBride Fair Employment Principles (signed) (Section V Article 1b)	With bid
Article 5 a	Offerer's Affirmation of Understanding of and Agreement pursuant to State Finance Law 139-j(3) and 139-j(6) (b) (signed) (Section V Article 1b)	With bid
Article 5 a	Offerer Disclosure of Prior Non-Responsibility Determinations (signed) (Section V Article 1e)	With bid
Article 5 a	Vendor Assurance of No Conflict of Interest or Detrimental Effect (Section V Article 1f)	With bid
Article 5 a	Sexual Harrasment Prevention Certificate (Section V Article 1g)	With bid
Article 5 b	Off-site permitted facility to receive material along with copy of the facilities permit	Within 5 days of low bid notification
Article 5 b	Plan of Operations (Work Plan) and Progress Schedule, Health and Safety Plan, Sampling Plan, and QA/QC Plan	Within 5 days of low bid notification
Article 5 b	Statement of Surety's intent (Section V Article 2a)	Within 5 days of low bid notification
Article 5 b	Copy of Site Pollution Liability insurance policy demonstrating that the bidder has the required $5 million of Pollution Liability insurance.	Within 5 days of low bid notification
Article 5 b	Description of projects completed by Bidder documenting its experience	Within 5 days of low bid notification
Article 5 b	Vendor Responsibility Questionnaire or affidavit of no change (in accordance with Section V Article 2c)	Within 5 days of low bid notification
Article 5 b	Policy Statement and M/WBE Work plan (in accordance with Section V Article 2b)	Within 5 days of low bid notification
Article 5 b	Signed Executive Order No. 177 certification (in accordance with Section V Article 2e)	Within 5 days of low bid notification

Table 01 33 00A
Project Submittals

Article 5 b	Any other information that demonstrates Bidder's ability to perform the work	Within 5 days of low bid notification
Article 5 b	Low bidders may be asked to submit additional information to demonstrate competency	Within 5 days of low bid notification
Article 5 c	Executed Agreement	Within 14 days of Notice of Intent to Award
Article 5 c	Performance Bond with Power of Attorney & Surety Financial Statement (Section V Article 3c)	Within 14 days of Notice of Intent to Award
Article 5 c	Labor & Materials Bond with Power of Attorney & Surety Financial Statement (Section V Article 3d)	Within 14 days of Notice of Intent to Award
Article 5 c	Bid Breakdown of Items	Within 14 days of Notice of Intent to Award
Article 5 c	Certificates of Insurance	Within 14 days of Notice of Intent to Award
Article 5 c	Consultant/Contractor Detailed M/WBE-EEO Utilization Plan (Section V Article 2b)	Within 14 days of Notice of Intent to Award
Article 12	Bid Breakdown	Within 14 days of Notice of Intent to Award
SECTION VIII - GENERAL CONDITIONS		
1.4.1	Interim Progress Schedule	Within 10 days after Notice of Award, prior to commencement of work
1.4.2	Interim Schedule of Shop Drawing, Material, Soil Characteristic, Sample Collection, and Analytical Test Result Submissions	Within 10 days after Notice of Award, prior to commencement of work
1.4.3	Interim Schedule of Values	Within 10 days after Notice of Award, prior to commencement of work
1.6	Proposed Progress Schedule (CPM/Schedule of Values/User Manual)	Within 20 days after starting work at site
3.2	Copies of all permits/approvals for use of premises not furnished by the DEPARTMENT under Section 3.1	Before utilization of associated areas
SECTION X - STANDARD		

Table 01 33 00A
Project Submittals

SPECIFICATIONS		
SECTION 00030 - Green Remediation Practices		
1.4 A	Form "A" Summary of Green Remediation Metrics	With application for payment.
1.4 B	Green Remediation Plan	As component of Contractor's Work Plan
SECTION 01 29 73 - Schedule of Values		
1.2 A	Schedule of Values	Within 10 days of the beginning of Contract Times in accordance with the Notice To Proceed
SECTION 01 32 16 - Progress Schedule		
1.2 A(1)	Interim Schedule submittal set including the CPM Diagram, Schedule of Shop Drawings, Schedule of Values, and supporting narrative.	Within 10 days of Notice of Award
1.2 A(2)	Progress Schedules	Every 2 weeks during project
1.2 A(3)	Recovery Project Schedules	As needed
1.2 A(4)	Accelerated Project Schedules	As needed
1.2 A(5)	Adjusted Project Schedules	As needed
SECTION 01 32 33 - Photographic Documentation		
1.3 (A)(1)	Pre-construction photo documentation	Prior to mobilizing to and disturbing site.
1.3 (A)(2)	Construction progress photo documentation	At a minimum, monthly during site work.
1.3 (A)(3)	Qualifications of construction photographer	Prior to starting photo documentation, at request of Engineer.
	Closeout Submittals	
1.3 (B)(1)	Final Photo Documentation	Prior to requesting final inspection

Table 01 33 00A
Project Submittals

SECTION 01 33 00 - Submittal Procedures		
1.2 (C)(1)	Health and Safety Plan	Within 5 days of low bid notification
1.2 (C)(2)	Work Plan	Within 5 days of low bid notification
1.2 (C)(3)	Railroad Work Plan	Within 5 days of low bid notification
1.2 (C)(4)	Sampling Plan, Quality Control Project Plan and QAPP	Within 5 days of low bid notification
SECTION 01 35 29 - Contractor's Health and Safety Plan		
1.3, 1.4	Site specific health and safety plan	The sooner of: seven days prior to pre-construction conference or 30 days prior to scheduled mobilization.

Table 01 33 00A
Project Submittals

Section	Submittal	Submission Timing/Associated Work Task
SECTION 01 35 43.13 - Environmental Procedures for Hazardous Materials		
1.3 (A)	Constituents of concern proposed for use on site	No later than 3 days prior to arrival onsite.
1.3 (B)	Analytical results of constituents of concern generated on site.	Within 48 hours of reciept of analytical results.
1.1 (A)(2)	Hazardous material management plan	As a component of site-specific health and safety plan
SECTION 01 45 29.13 -Testing Laboratory Services Furnished by Contractor		
1.4 (A)(1)	Sampling Plan, Quality Control Project Plan	Within 5 days of low bid notification
1.4 (A)(2)	QAPP	Within 5 days of low bid notification
SECTION 01 52 11 - Engineer's Field Office		
1.2 (A)(1)	Engineer's field office layout, facilities, etc.	Prior to staging field office onsite
SECTION 01 57 33 - Security		
1.2 (A)(1-3)	Shop drawings, product data, and qualifications of security firm	Prior to mobilization to site
1.2 (A)(4)	Monthly logs, entry/exit logs, watchman logs	Monthly
1.2 (B)	Employee Information	Prior to mobilization to site
SECTION 01 58 00 - Project Identification and Signs		
1.3 (A)(1)	Shop drawings	Prior to implementation / installation onsite
1.3 (A)(2)	Specifications and product data	At request of Engineer.
SECTION 01 71 23 - Field Engineering		
1.2 (A)(3)(a)	Surveying Plan including qualifications of surveyor	Ten days prior to beginning survey work.
1.2 (A)(3)(c)	Raw instrument data/field data	Two days following completion of survey work.
1.2 (A)(4)(b)	Qualifications of field engineer	At request of Engineer.
SECTION 01 76 50 - Nuisance Control		

Table 01 33 00A
Project Submittals

1.5 (A)	Nuisance Controls and Management Plan	As a component of Contractor's HASP
1.5 (C)	Monitoring Reports	Weekly
1.5 (D)	Community relations liason qualifications	As a component of Nuisance Control and Management Plan
SECTION 01 77 19 - Closeout Requirements		
1.2 (A)(1)(b)	Quality control / testing results for individual materials/equipment items	Prior to requesting substantial completion.
1.2 (A)(1)(c)	Operations and Maintenance Manuals	Prior to requesting substantial completion.
1.2 (A)(1)(d)	Permits, inspections, and approvals of authorities having jurisdiction for the substantially completed Work	Prior to requesting substantial completion.
SECTION 01 78 39 - Project Record Documents		
1.2 (A)	Preliminary Record Documents	Within 7 days following substantial completion of the work.
SECTION XI - SUPPLEMENTARY SPECIFICATIONS		
SECTION 01 10 00 - Summary		
1.7 (D)(a)	Highway Work Permit	At least 30 days prior to construction.
1.7 (D)(b)	Construction Permit	At least 30 days prior to construction.
1.8 (A)	Storm Water Pollution Prevention Plan (SWPPP)	At least 30 days prior to construction.
SECTION 01 40 00 - Quality Requirements		
3.3 (F)	Test Results Report	3 days following completion of each test
3.3 (G)	Performance Testing Irregularities or Deficiencies	Within 24 hours following the observation of irregularities or deficiencies
SECTION 01 55 26 - Traffic Control		
1.3 (B)	Traffic Control and Site Access Plan	Within 60 days of Notice to Proceed
3.1 (G)	Responsible Charge	At the Pre-Construction conference
3.2 (B)	Permits for working in rights of way	At least 10 days prior to working in those areas
SECTION 01 74 24 - Site Restoration		
1.2 (B)	Pre-Construction Site Conditions Survey	At least 10 days prior to start of construction

Table 01 33 00A
Project Submittals

1.2 (C)	Restoration Materials Submittal for Approval	At least 10 days prior to use onsite
1.2 (D)	Substantial Completion Notification and Inspection Request	When Work is substantially completed
1.2 (E)	Final Completion Certificate and Inspection	When Work is completed, including items from Substantial Completion
SECTION 02 41 19 - Demolition		
1.2 (B)	Demolition Schedule	Within 60 days of Notice to Proceed
1.2 (C)	Shop Drawings	Within 60 days of Notice to Proceed
1.2 (D)	Demolition Report	Daily
SECTION 31 25 00 - Erosion and Sedimentation Control		
1.3 (B)	Product Date	At least 10 days prior to use onsite
1.3 (C)	Manufacturer's Certificate	Within 60 days of Notice to Proceed
1.3 (D)	Erosion and Sediment Control Plan	Within 60 days of Notice to Proceed
3.5 (C)	Inspection Reports	Upon request

Table 01 33 00A
Project Submittals

Section	Submittal	Submission Timing/Associated Work Task
SECTION XIII - WAGE RATES AND ASSOCIATED CONTRACT REQUIREMENTS		
Certified Payrolls		With each payment
NOTE:	**This list is not meant to be an all encompassing list of submittals. The Contractor is not exempt from providing submittals as required by the specifications.**	

SECTION 01 35 29

CONTRACTOR'S HEALTH AND SAFETY PLAN

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:
   1. CONTRACTOR shall prepare and maintain a written, site-specific, health and safety plan (SSHASP), and conduct all construction activities in safe manner that avoids:
      a. injuries to employees, Subcontractors, and other persons with an interest at or near the Site;
      b. employee exposures to health hazards above occupational limits established by Laws or Regulations, American Conference of Governmental Industrial Hygienists (ACGIH), and Nuclear Regulatory Commission (NRC), as applicable;
      c. exposure of the public and DEPARTMENT's employees to air contaminants above levels established for public exposure by the USEPA, NRC, and by other authorities having jurisdiction at the Site;
      d. significant increases in concentrations of contaminants in soil, water, or sediment near the Site; or
      e. violations of OSHA Regulations, or other Laws or Regulations.
   2. The CONTRACTOR is solely responsible and liable for the health and safety of all on-site personnel and any off-site community potentially impacted by the remediation.
   3. This section describes the minimum health and safety requirements for this project including the requirements for the development of a written, site-specific, Health and Safety Plan (SSHASP). All on-site workers must comply with the requirements of the SSHASP. The CONTRACTOR's SSHASP 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 SSHASP is a required deliverable for this project. The SSHASP will be reviewed by the ENGINEER. The CONTRACTOR will resubmit the SSHASP, addressing all review comments from the ENGINEER. The CONTRACTOR shall not initiate on-site work in contaminated areas until an acceptable SSHASP 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 appraised, 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 SSHASP is a deliverable product of this project. The ENGINEER will review and comment on the CONTRACTOR's SSHASP. Agreed upon responses to all comments will be incorporated into the final copy of the SSHASP. The SSHASP shall govern all work performed for this contract. The SSHASP 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 air 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 SSHASP, 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 (DEPARTMENT & 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 (DEPARTMENT & DOH) personnel to review.

c. Vapor Emission Response Plan consisting of the following:
   1. If the ambient air concentration of organic vapors exceeds 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 say 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 SSHASP 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.
c. Other personnel required for operations involving Constituents of Concern and Hazardous Environmental Conditions and emergency response, and general functions and responsibilities of each.
d. Lines of authority, responsibility, and communication.

2. Review and update organizational structure as necessary to reflect current status of work activities on the Project and status of personnel.

E. Work Plan:
1. Comprehensive work plan portion of SSHASP shall refer to or incorporate information on the following:
a. Tasks and objectives of work activities, 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 SSHASP.

10. The CONTRACTOR shall maintain onsite available personal protective equipment for use by the DEPARTMENT.
11. 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.
12. 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.
13. The CONTRACTOR shall provide full decontamination facilities at all hazardous zones. Decontamination facilities must be described in detail in the SSHASP.
14. 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.
15. 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.
16. The CONTRACTOR shall develop, as part of the SSHASP, 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.
17. 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.

18. 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.
19. 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.
20. Real-time monitoring shall be conducted using the following equipment:
    a. Organic vapor photoionizers shall be Photovac TIP, total organic vapor analyzer as manufactured by Photovac International, 739B Park Avenue, Huntington, New York 11743 or equal. The CONTRACTOR shall provide one Photovac TIP for each and every hazardous work zone operation.
    b. Particulate monitoring must be performed using real-time particulate monitors (MiniRam Model MIEPDM-3, or equal) and shall monitor particulate matter in the range of 0-10 microns diameter (PM10) with the following minimum performance standards:

       Object to be measured: Dust, Mists, Aerosols

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

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

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

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

       Particle Size Range of Maximum Response: 0.1-10 µ

       Total Number of Data Points in Memory: 10,000

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

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

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

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

Automatic alarms are suggested.

c. Particulate levels will be monitored and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task. A monitor such as the personal DataRAM, manufactured by Monitoring Instruments for the Environment, Inc., or equivalent, can be used as a real time particulate screening tool. Although the instrument's design does not allow it to make a sharp differentiation of particulates at the PM10 standard, the instrument could be used in the passive mode without a pump to provide readings in the 0.1 to 10µ range in the immediate vicinity of construction activities.

d. Monitor the air, using the same equipment, for 10-15 minutes upwind of the work site to establish background level. The background level shall be established before the start of each shift every day. In the event that downwind particulates are detected at levels in excess of 150 ug/m3 or 2.5 times the established background level at the work site, re-measure the background concentrations upwind of the work zone using the same equipment. If the measured particulate level at the work zone is 100 ug/m3 above background, monitor the downwind site perimeter and implement additional dust controls in the work zone. Continue to take hourly measurements of the upwind background concentrations and compare such concentrations with the particulate level at the work zone, until the downwind level at the work zone is less than 100 ug/m3 above the upwind level. If at any time the measured particulate level at the work zone is more than 150 ug/m3 over background concentration, the CONTRACTOR shall immediately suspend work at the site, promptly notify the Safety Officer, and implement suitable corrective action or engineering controls before work resumes.

e. Real-time monitoring will be conducted at any excavation of contaminated soil or sediments. Real-time monitoring will also be conducted at perimeter locations including an upwind (background) and three downwind locations. A background reading will be established daily at the beginning of the work shift. If the wind direction changes during the course of the day, a new background reading will be made. Downwind readings at the perimeter will be made when CONTRACTOR action levels have been exceeded at the excavation face or at a minimum of twice a day.

f. If action levels are exceeded at the perimeter location for fugitive dust, work must be suspended and engineering controls must be implemented to bring concentrations back down to acceptable levels.

g. Construction activities generate dust which could potentially transport contaminants off site. There may be situations when visible dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Therefore, if dust is observed leaving the working site, additional dust suppression techniques must be employed by the CONTRACTOR.

21. 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 (Mather Hospital)		(631) 473-1320
Poison Control Center		(800)-222-1222
Chemical Emergency Advice (CHEMTREC)		(800) 424-9300
NYSDEC Central Office	Work Hours After Hours	(518) 457-7878 (800) 342-9296 (leave message)
NYSDEC Regional Office	Work Hours	(631) 444-0200
Suffolk County Dept. of Health		(631) 854-0000
New York State Dept. of Health -Metropolitan Area Region, Central Islip Office		(631) 851-4300

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) safety data sheets (SDS) 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. SDS Notebooks:
    a. At minimum, maintain at the Site two notebooks containing: 1) Inventory of materials containing a Constituent of Concern (including all chemicals); and, 2) Current (dated within the past two years) SDS for all materials being used to accomplish the Work, whether or not defined as a Constituent of Concern.
    b. Keep one notebook in CONTRACTOR's field office at the Site; keep second notebook at location acceptable to ENGINEER.
    c. Keep notebooks up-to-date as materials are brought to and removed from the Site.

C. Emergency/Spill Response Plan: Develop, implement, and maintain an emergency/spill response plan, for each Constituent of Concern or each class/group of material containing a Constituent of Concern, as applicable. At minimum, response plan shall include the following:
1. Description of equipment available at the Site to contain or respond to emergency related to or spill of the material.
2. Procedures for notifying, and contact information for: authorities having jurisdiction, emergency responders, DEPARTMENT, ENGINEER, the public as applicable, and other entities as required.
3. Response coordination procedures between CONTRACTOR, DEPARTMENT and others as appropriate.

4. Site plan showing proposed location of Constituents of Concern storage area and location of spill containment/response equipment, and location of storm water drainage inlets and drainage routes, including storm sewers, ditches and swales, and surface waters.
5. Description of Constituent of Concern handling and spill response training provided to CONTRACTOR's and Subcontractors' employees, in accordance with 29 CFR 1926.21(b) and other Laws and Regulations.

D. Storage of Materials Containing Constituents of Concern and Storage of Non-Hazardous Materials:
1. Vessels containing materials with a Constituent of Concern shall bear applicable hazard diamond(s).
2. Container Labeling:
a. Properly label each container of consumable materials, whether or not classified as containing a Constituent of Concern.
b. Stencil CONTRACTOR's name and, as applicable, Subcontractor's name, on each vessel containing a Constituent of Concern and, for non-hazardous materials, on each container over five-gallon capacity. Containers shall bear securely-attached label clearly identifying contents. Label containers that are filled from larger containers.
c. If DEPARTMENT becomes aware of unlabeled containers at the Site, ENGINEER and/or DEPARTMENT's environmental representative will so advise CONTRACTOR. Properly label container(s) within one hour of receipt of such notice from DEPARTMENT or remove container from the Site.
3. To greatest extent possible, store off-Site materials containing a Constituent of Concern until required for use in the Work.

E. Area for Storing Materials Containing a Constituent of Concern:
1. Maintain designated storage area for materials containing a Constituent of Concern. Storage area shall include secondary containment to prevent release of spilled or leaking substances. Storage area shall include barriers to prevent vehicles from colliding with storage containers and shall include protection from environmental factors such as weather.
2. Provide signage in accordance with Laws and Regulations, clearly identifying the storage area.

F. Not less than monthly, CONTRACTOR's safety representative shall meet with the ENGINEER and/or DEPARTMENT's environmental representative to review CONTRACTOR's HMMP documents, procedures, and inspect storage areas and the Site in general, to verify compliance with this Section.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

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SECTION 01 42 00

REFERENCES

PART 1 – GENERAL

1.1 DESCRIPTION

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

1.2 DEFINITIONS AND TERMINOLOGY

A. Definitions and terminology applicable to all the Contract Documents are included in the General Conditions, as may be modified by the Supplementary Conditions.

B. Additional terminology used in the Contract Documents includes the following:
   1. "Indicated" refers to graphic representations, notes, or schedules on the Drawings, or to other paragraphs, provisions, tables, or schedules in the Specifications and similar locations in the other Contract Documents. Terminology such as "shown", "noted", "scheduled", and "specified" are used to help the user locate the reference without limitation on the location.
   2. "Installer", "applicator", or "erector" is CONTRACTOR or another person or entity engaged by CONTRACTOR, either as an employee or Subcontractor, to perform a particular construction activity, including installation, erection, application, or similar Work. Installers shall be experienced in the Work that installer is engaged to perform.
      a. The term "experienced", when used in conjunction with the term "installer", means having successfully completed not less than five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated and required; being familiar with Laws and Regulations; and having complied with requirements of authorities having jurisdiction, and complying with requirements of the Supplier of the material or equipment being installed, unless other experience requirements specific to that element of the Work are indicated elsewhere in the Contract Documents.
   3. "Site" refers to the horizontal and vertical area requiring Work by Contractor, as bounded by and represented in the Contract Documents.

4. "Contractor work area" also referred to as the "limit of disturbance" refers to the horizontal and vertical area requiring Work by the Contractor as depicted on the Contract Drawings.
5. 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.
6. "Assigned specialists" and similar terms: Certain Sections of the Specifications require that specific construction activities be performed by specialists with recognized, extensive experience in such operations. Engage said specialists for such activities, and their engagement is a requirement over which CONTRACTOR has no option. These requirements do not conflict with enforcement of building codes and other Laws and Regulations. Also, such requirements are not intended to interfere with local trade union jurisdictional settlements and similar conventions. Such assignments shall not relieve CONTRACTOR of responsibility for complying with the requirements of the Contract Documents.

1.3 APPLICABLE CODES

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

1.4 ABBREVIATIONS

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

alternating current	a-c
ampere	A
antemeridian	a.m.
Architectural Barriers Act	ABA
Americans with Disabilities Act	ADA
Americans with Disabilities Act Accessibility Guidelines	ADAAG
ante meridian	a.m.
average	avg
biochemical oxygen demand	BOD
five-day biochemical oxygen demand	BOD_5
brake horsepower	bhp
British thermal unit	Btu

building information model		BIM
carbonaceous biochemical oxygen demand		CBOD
five-day carbonaceous biochemical oxygen demand		$CBOD_5$
chemical oxygen demand		COD
Centigrade (or Celsius)		C
chlorinated polyvinyl chloride		CPVC
chlorofluorocarbons		CFC
Code of Federal Regulations		CFR
computer-aided drafting and design		CADD, or CAD
cubic inch		cu in
cubic foot		cu ft
cubic yard		cu yd, or CY
cubic feet per minute		cfm
cubic feet per second		cfs
decibel		db
degree Centigrade (or Celsius)	(Write)	degrees C, ºC, or deg
degrees Fahrenheit		degrees F, ºF, or deg F
diameter		dia
direct current		d-c
dollars		$
each		ea
efficiency		eff
Fahrenheit		F
feet		ft
feet per hour		fph, or ft/hr
feet per minute		fpm
feet per second		fps, or ft/min
figure		fig
flange		flg
foot-pound		ft-lb
gallon		gal
gallons per hour		gph, or gal/hr
gallons per minute		gpm
gallons per second		gps
gram		g
grams per liter		g/L

Hertz	Hz
horsepower	hp or HP
hour	hr
human-machine interface	HMI
inch	in.
inches of mercury	in. Hg
inches water gage	in. w.g.
inch-pound	in.-lb
inside diameter	ID
iron pipe size	IPS
thousand pounds	kips
thousand pounds per square inch	ksi
kilovolt-ampere	kva
kilowatt	kw
kilowatt-hour	kwhr or kwh
linear foot	lin ft or LF
liter	L
Leadership in Energy and Environmental Design (USGBC)	LEED
maximum	max
mercury	Hg
milligram	mg
milligrams per liter	mg/l or mg/L
milliliter	ml
millimeter	mm
million gallons per day	mgd or MGD
million gallon	MG
minimum	min
national pipe threads	NPT
net positive suction head	NPSH
net positive suction head available	NPSHA
net positive suction head required	NPSHR
nitrogen oxide (total concentration of mono-nitrogen oxides such as nitric oxide (NO) and nitrogen dioxide (NO_2))	NOx
nominal pipe size	NPS
number	no.
operator interface terminal	OIT

ounce	oz
ounce-force	ozf
outside diameter	OD
parts per hundred	pph
parts per million	ppm
parts per billion	ppb
polychlorinated biphenyl	PCB
polyvinyl chloride	PVC
post meridian	p.m.
pound	lb
pounds per square inch	psi
pounds per square inch absolute	psia
pounds per square inch gauge	psig
pounds per square foot	psf
process control system	PCS
programmable logic controller	PLC
revolutions per minute	rpm
second	sec
specific gravity	sp gr, or SG
square	sq
square foot	sq ft, sf, or ft^2
square inch	sq in., or in^2
square yard	sq yd, or SY
standard	std
standard cubic feet per minute	scfm
total dynamic head	TDH
totally-enclosed fan-cooled	TEFC
volt	V
volts alternating current	vac
volts direct current	vdc
volatile organic compounds	VOC

1.6 REFERENCE STANDARDS

A. Refer to Article 3 of the General Conditions, as may be modified by the Supplementary Conditions, relative to reference standards and resolving discrepancies between reference standards and the Contract Documents.

Provisions of reference standards are in effect in accordance with the Specifications.

B. Copies of Standards: Each entity engaged in the Work shall be familiar with reference standards applicable to its construction activity. Copies of applicable reference standards are not bound with the Contract Documents. Where reference standards are needed for a construction activity, obtain copies of standards from the publication source.

C. Abbreviations and Names: Where reference standards, specifications, codes, manuals, Laws or Regulations, or other published data of international, national, regional or local organizations are referred to in the Contract Documents, the organization issuing the standard may be referred to by their acronym or abbreviation only. The following acronyms or abbreviations that may appear in the Contract Documents shall have the meanings indicated below. Listing is alphabetical by acronym.

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

APA	The Engineered Wood Association
APHA	American Public Health Association
API	American Petroleum Institute
AREA	American Railway Engineering Association
ARI	Air Conditioning and Refrigeration Institute
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASNT	American Society for Non-Destructive Testing
ASQ	American Society for Quality
ASSE	American Society of Safety Engineers
ASTM	American Society for Testing and Materials
AWCI	Association of the Wall and Ceiling Industry
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BAAQMD	Bay Area Air Quality Management District
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association
CBMA	Certified Ballast Manufacturers Association
CDA	Copper Development Association
CEMA	Conveyor Equipment Manufacturers Association
CGA	Compressed Gas Association
CISCA	Ceilings and Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CMAA	Crane Manufacturers Association of America
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
DIN	Deutsches Institut fur Normung eV (German Institute for Standardization)
DIPRA	Ductile Iron Pipe Research Association
EJCDC	Engineers Joint Contract Documents Committee
EJMA	Expansion Joint Manufacturers Association, Inc.

ETL	Intertek Testing Services, Inc. (formerly ETL Testing Laboratories, Inc.)
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM	Factory Mutual (FM Global)
FRPI	Fiberglass Reinforced Plastics Institute
FS	Federal Specification
GA	Gypsum Association
GANA	Glass Association of North America
HEW	United States Department of Health, Education and Welfare
HI	Hydraulic Institute
HMI	Hoist Manufacturers Institute
HUD	United States Department of Housing and Urban Development
IBC	International Building Code
ICC	International Code Council
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronics Engineers
IESNA	Illuminating Engineering Society of North America
IFI	Industrial Fasteners Institute
IRI	Industrial Risk Insurers
ISA	Instrumentation, Systems, and Automation Society (formerly Instrument Society of America)
ISO	Insurance Services Office
ISO	International Organization for Standardization
LPI	Lightning Protection Institute
MIA	Marble Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MS	Military Specifications
MSS	Manufacturers' Standardization Society
MMA	Monorail Manufacturers Association
NAAMM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NAPF	National Association of Pipe Fabricators, Inc.
NARUC	National Association of Regulatory Utilities Commissioners
NBHA	National Builders Hardware Association
NBS	United States Department of Commerce, National Bureau of Standards
NCMA	National Concrete Masonry Association

NEC	National Electric Code
NELMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NETA	International Electrical Testing Association
NFPA	National Fire Protection Association
NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NHPMA	Northern Hardwood and Pine Manufacturers Association
NIST	United States Department of Commerce, National Institute of Standards and Technology
NLGA	National Lumber Grades Authority
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	National Sanitation Foundation
NSSGA	National Stone, Sand, and Gravel Association
NTMA	National Terrazzo and Mosaic Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PEI	Porcelain Enamel Institute
PFI	Pipe Fabrication Institute
PPI	Plastics Pipe Institute
PGMC	Primary Glass Manufacturers Council
PS	Product Standards Section, United States Department of Commerce
RCSC	Research Council on Structural Connections (part of AISC)
RMA	Rubber Manufacturers Association
SAE	Society of Automotive Engineers
SCAQMD	Southern California Air Quality Management District
SCPRF	Structural Clay Products Research Foundation
SCTE	Society of Cable Telecommunications Engineers
SDI	Steel Deck Institute
SDI	Steel Door Institute
SIGMA	Sealed Insulating Glass Manufacturing Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association

SPI	Society of the Plastics Industry
SPIB	Southern Pine Inspection Bureau
SSPC	Society for Protective Coatings
SWI	Steel Window Institute
TCNA	Tile Council of North America
TEMA	Tubular Exchanger Manufacturers Association
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
UL	Underwriters Laboratories, Inc.
USAB	United States Access Board
USDOE	United States Department of Energy
USEPA	United States Environmental Protection Agency
USGBC	United States Green Building Council
USGS	United States Geological Survey
USPHS	United States Public Health Service
WCLIB	West Coast Lumber Inspection Bureau

WCMA Window Covering Manufacturers Association
WCMA Wood Component Manufacturers Association
WDMA Window and Door Manufacturers Association WEF
Water Environment Federation
WWEMA Water and Wastewater Equipment Manufacturers Association
WWPA Western Wood Products Association

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 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.

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 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 prior approved of DEPARTMENT.

1.2 QUALITY ASSURANCE

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

1.3 SUBMITTALS

A. Action Submittals: Submit the following:
   1. Shop Drawings:
      a. Layout of each sign (sign proof), indicating layout, text, font, character size, graphics (if any), type and grade of materials, including sign materials, supports, and bracing prior to installation onsite.
   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 the 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 + +

October 2016

Signs at Sites in the Division of Environmental Remediation's Remedial Programs

Program signs are required at State Superfund Sites that meet the following criteria:

- Entering remedial construction, and
- State funded, and
- Remedial construction will cost at least $1 million.

Site signs will not be required for State Superfund Sites at other points in the remedial process. Signs will not be required for sites being addressed in any other remedial programs. Exceptions can be made on a case-by-case basis, and require the prior review and approval of the DER Division Director.

The intention is for a sign to remain for the duration of the remedial construction, and to be removed upon project completion.

To ensure consistency, instructions, specifications, and a generic sign format begin on page 2:

Sign Requirements

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

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

Inserts: **“**New York State and 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”.

Color Scheme: All body font should be black or green Pantone 350 C or CMYK 80/43/83/42. If blue is desired, use following values: Pantone 288 C or CMYK 100/87/27/19.

New York State and DEC logo: The logo is available as .eps and .jpg files at: L:/DER/DER Shared/DER Site Sign Policy. Both utilize the correct color. Most sign shops would prefer the .eps file as it is the intended for professional offset printing and is completely scalable. If a vendor needs a different format, use the .jpg file.

Text:

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

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

{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

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

Type Specifications: All type 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 page 3.

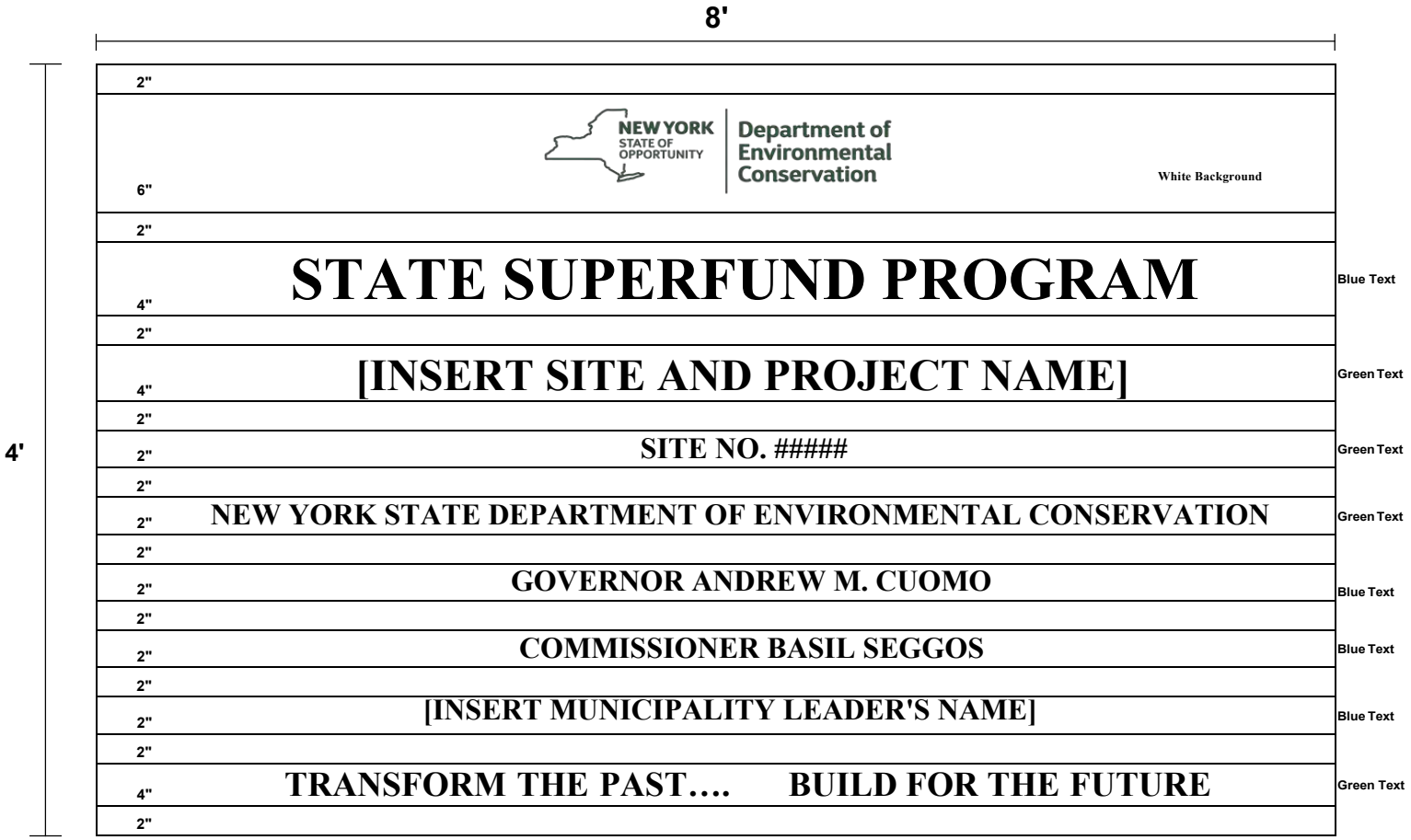

FIGURE 00007-1
PROJECT SIGN

END OF SECTION

SECTION 01 62 00

PRODUCT OPTIONS

PART 1 – GENERAL

1.1 DESCRIPTION

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

1.2 PRODUCT OPTIONS

A. For materials and equipment specified only by reference standard or description, without reference to Supplier, furnish materials and equipment complying with such standard, by a Supplier or from a source that complies with the Contract Documents.

B. For materials and equipment specified by naming one or more items or Suppliers, furnish the named materials and equipment that comply with the Contract Documents, unless an "or-equal" or substitute item is approved by ENGINEER.

C. For materials and equipment specified by naming one or more items or Suppliers and the term, "or-equal", when CONTRACTOR proposes a material or equipment item or Supplier as an "or-equal", submit to ENGINEER a request for approval of an "or-equal" item or Supplier.

1.3 "OR-EQUAL" ITEMS

A. Procedure:
   1. For proposed materials and equipment not named in the Contract Documents and considered as an "or-equal" in accordance with the General Conditions, CONTRACTOR shall request in writing ENGINEER's approval of the "or-equal".
   2. Request for approval of an "or-equal" item shall accompany the Shop Drawing or product data submittal for the proposed item

B. Requests for approval of "or-equals" shall include:
   1. CONTRACTOR's written request that the proposed item be considered as an "or-equal" in accordance with the General Conditions, accompanied by CONTRACTOR's certifications required in the General Conditions.
   2. Documentation adequate to demonstrate to ENGINEER that proposed item does not require extensive revisions to the Contract Documents, that proposed

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

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

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

SECTION 01 65 00

PRODUCT DELIVERY REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:
   1. This Section includes general requirements for preparing for shipping, delivering, and handling materials and equipment to be incorporated into the Work.
   2. CONTRACTOR shall make all arrangements for transporting, delivering, and handling of materials and equipment required for 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 + +

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 North American Vertical Datum of 1988..

D. Site Control:
   1. Provide one permanent site control monument with elevations referenced to a North American Vertical Datum of 1988 (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 will be reviewed by the ENGINEER for acceptability.

E. Intermediate Survey
   1. Provide survey drawings delineating the areas and depth of all excavations prior to backfilling, and the locations of all confirmatory soil and sediment

sample points, upon completion of rough shaping and grading and prior to placement of cover materials

F. As-Built Topographic Maps
   1. Submit upon completion of the final backfill materials and restoration of all disturbed areas.

G. 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 North American Vertical Datum of 1988.
   3. Surveys required for payment for bid items are identified in Section XII – Measurement and Payment. Payment surveys shall be completed only after notification of the ENGINEER in advance.

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 North American Vertical Datum of 1988..
   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.

+ + END OF SECTION + +

SECTION 01 76 50

NUISANCE CONTROLS, MANAGEMENT, AND CORRECTIVE MEASURES

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes requirements for managing, controlling nuisance issues and associated corrective measures during construction. Consideration of equipment noise and vibration levels shall be part of each stage of project planning.

B. 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.

C. 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).

1.2 PERFORMANCE REQUIREMENTS

A. 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.

B. 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 noise ordinance levels or other levels or at the start of a project.

C. 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.

D. 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.

1.3 REFERENCES

A. 42 US Code, Chapter 65 Noise Control

B. Incorporated Village of Port Jefferson Code, Chapter 173 Noise

C. Turbidity - 6NYCRR 703.2 - No increase that will cause a substantial visible contrast to natural conditions.

D. 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."

E. Fugitive Dust – Clean Air Act – Particulate Matter (PM) Air Quality Standards

F. Vibration – New York State Department of Transportation Engineering Instruction 05-045.

1.4 RELATED WORK SPECIFIED ELSEWHERE

A. Section 01 35 29 – Contractor's Health and Safety Plan

1.5 SUBMITTALS

A. Nuisance Controls and Management Plan as a component of the Health and Safety 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 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 consideration for works during sensitive times could also be included in the summary.

C. Monitoring Reports shall be submitted to ENGINEER weekly.

D. Community Relations Liaison Qualifications
   1. The CONTRACTOR will submit resume/qualification of their Community Relations Liaison person as a component of the Nuisance Controls and Management Plan.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 COMMUNITY CONSULTATION

E. 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.

F. 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.

G. 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.

H. 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.

I. Methods of notification for work and ongoing communication about project progress can include:

- Letterbox drops
- Meetings
- Individual contact
- Direct emails to all stakeholders

3.2 COMPLAINT RESOLUTION

A. The CONTRACTOR shall immediately notify the 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 ties that may require special consideration:

1. Resident sleep periods
2. 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 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 health and safety “tail-gate” meetings.

2. The CONTRACTOR shall develop a one-page summary of general practices for nuisance management and clearly display on site. Operating hours, delivery times, truck routes, and extra considerations for works

during sensitive times could also be included in the summary. Workers shall be reminded about these commitments during daily “tail-gate” meetings.

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

B. Noise and Vibration

1. The CONTRACTOR shall implement work practices to reduce noise complaints, particularly important at night or during sensitive times.

2. General construction activities shall be carried out in the following ways:

   a. Minimize metal-on-metal contact.

   b. Avoid dropping items from a height.

   c. Use equipment sensibly: Turn off equipment when not in use. Throttle settings shall be reduced if possible.

   d. Require appropriate staff conduct: Staff shall not use loud radios and/or stereos outdoors during sensitive times, such as early in the morning in a residential area.

   e. Shouting or swearing, loud talking, and slamming vehicle doors should be avoided.

   f. Public Announcement (PA) systems are not allowed.

   g. Use noise shields/acoustic curtains around higher noise operations.

   h. 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.

3. Plant and equipment – CONTRACTOR shall endeavor to use low-noise, low-vibration well- maintained equipment where feasible and reasonable.

4. Equipment Selection – Consideration of equipment noise and vibration levels shall be part of each stage of project planning and contract specifications.

5. 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.

6. 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.

7. 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. 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.

    c. Equipment that is causing excessive nuisance impacts in a manner that is not typical for the equipment shall be removed from the site.

8. Alternatives to traditional “beeper” alarms

    a. The traditional ‘beeper’ alarms for mobile equipment can create a nuisance during projects where there is a lot of movement (such as prolonged use of scissor lifts) or if works are being conducted at night.

    b. Some examples of alternatives that are less disturbing include:

    c. ‘Smart alarms’ that adjust their volume depending on the ambient level of noise. These are particularly useful during operations in quieter suburban areas, where other noise on the site is less, or when works take place during quieter periods such as early morning.

    d. ‘Broadband’ or ‘quacker’ alarms. These emit a less annoying sound and are more directional. This means the sound is focused to the area of concern and is less likely to travel to noise-sensitive areas.

    e. The use of these alternative technologies must be:

        1) determined by a competent person based on an assessment of the site, its conditions and on the machines involved

1) compatible with the machines so it does not adversely affect their operation

2) accompanied by specific procedures for installation and maintenance to ensure correct operation

3) communicated to all site staff to ensure they are aware of the new alarm and how it works.

f. The requirements of relevant occupational health and safety must be complied with in all cases.

9. Site planning, barriers and layout

a. 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.

10. Managing disturbances from trucks and mobile equipment

a. 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.

b. 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.

c. 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.

d. 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.

e. 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.

f. Other considerations, such as safety and traffic impacts, will apply when looking at truck access and routes.

11. Location of plant and equipment

a. The CONTRACTOR shall aim to locate plant and equipment away from sensitive sites, thereby maximizing the distance from affected parties. When plant and equipment needs to be located close to noise sensitive areas, restricting the hours of operation should be considered.

b. When possible, noisy fabrication work shall be done off site and transported to the site at a later date.

12. 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.

13. Because of the nature of these types of devices, the options for reducing vibration may be limited. Maximizing the distance between the source and receiver should be considered to the extent practical. Conducting work when most people are not in the area (e.g., at work) or when sensitive equipment is not operating can avoid or minimize adverse impacts.

14. In some circumstances, temporary relocation of residents during these operations may be appropriate. In the absence of measures that can physically reduce induced ground vibration, informing the public about the project and potential vibratory impacts should be performed to avoid adverse reactions from the public. The CONTRACTOR must be sensitive to the needs of the community, including testing timeframes at the schools and other nearby activities which may result in adverse reactions from the public.

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

C. 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 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 windblown dust. All trucks or containers being utilized for transport and disposal of excavated material at the Site are required to be fitted with a tarpaulin or solid, sliding or slot-top type covers with no gaps when fully deployed. Trucks or containers 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. 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.

5. 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.

6. Transfer points refer to any time material is loaded or unloaded during removal activities. For the purposes of this project, the primary transfer points of concern will be the transfer of soil material from the excavator or processing area to a waiting truck. The secondary transfer points of concern will be the unloading of the clean soil for use in backfilling of excavated areas. At all transfer points, the following guidelines will be maintained:

a. During loading of impacted soil, the material must be moist during the transfer, and the transfer shall be into an overhead truck trailer only. The material drop into the trailer must not exceed 4 feet.

b. 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).

c. All trucks shall adhere to the established tarping policy.

d. 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.

7. In order to keep roadways clean and free of accumulation, the CONTRACTOR will coordinate with the Village of Port Jefferson 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.

8. Sidewalks and public rights of way, 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.).

9. All trucks are to take the most efficient and direct route to the disposal facility as possible.

10. Spraying dusty wastes with water as they are unloaded.

11. Ensuring that street sweeping operations use enough water to avoid kicking up dust.

D. Disruptive Lighting

1. Lighting 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.

E. 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

F. 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.

G. Following a work stoppage, appropriate corrective measures as determined by Engineer will be implemented prior to work resuming.

H. Chronic or repeated incidents of nuisance issues will result in the disallowance of a day of compensation for site services and health and safety.

I. 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 Section 01 29 76, Progress Payment Procedures.
   2. Documents required in the General Conditions, as may be modified by the Supplementary Conditions.
   3. List of all disputes that CONTRACTOR believes are unsettled.
   4. Consent of Surety to Final Payment:
      a. Acceptable form includes AIA® G707™, "Consent of Surety to Final Payment" (1994 or later edition), or other form acceptable to DEPARTMENT.
   5. Releases or Waivers of Lien Rights:
      a. When submitting releases or waivers of Lien rights, furnish release or waiver by CONTRACTOR and each Subcontractor and Supplier that provided CONTRACTOR, Subcontractor, or Supplier with labor, material, or equipment totaling $1,000.00 or more for the Contract.

b. Furnish final list of Subcontractors and Suppliers, using the form included in Section 01 29 76, Progress Payment Procedures, indicating final amount of the associated subcontract or purchase order for each. Include on the list all lower-tier Subcontractors and Suppliers retained by Subcontractors and Suppliers with direct subcontract or purchase order with CONTRACTOR.

c. Each release or waiver of Lien shall be signed by an authorized representative of the entity submitting release or waiver of Lien, and shall include CONTRACTOR's, Subcontractor's, or Supplier's (as applicable) corporate seal, when applicable.

d. Release or waiver of Lien may be conditional upon receipt of final payment.

6. Affidavits:

a. In lieu of the release or waiver of Liens, CONTRACTOR may submit the following, for CONTRACTOR and each Subcontractor and Supplier that provided CONTRACTOR, Subcontractor, or Supplier with labor, material, or equipment totaling $1000 or more, to DEPARTMENT's satisfaction:

1) Affidavit of payment of debts and claims. Acceptable form includes AIA® G706™, "Contractor's Affidavit of Payment of Debts and Claims" (1994 or later edition), or other form acceptable to DEPARTMENT, and;

2) Affidavit of release of Liens. Acceptable form includes AIA® G706A™, "Affidavit of Release of Liens" (1994 or later edition), or other form acceptable to DEPARTMENT.

b. Affidavits and supporting documents furnished under this Paragraph 1.4.B.6 shall comply with the requirements of the General Conditions, as may be modified by the Supplementary Conditions.

c. Each affidavit furnished shall be signed by an authorized representative of the entity furnishing the affidavit, and shall include CONTRACTOR's, Subcontractor's, or Supplier's (as applicable) corporate seal, when applicable.

7. Evidence satisfactory to DEPARTMENT that all title issues have been resolved such that title to all Work, materials, and equipment has passed to DEPARTMENT free and clear of Liens or other title defects or will so pass upon final payment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 ATTACHMENTS

A. The documents listed below, following this Section's "End of Section" designation, are part of this Specifications Section:
   1. Sample letter for CONTRACTOR's use in requesting inspection for Substantial Completion (two pages).
   2. Sample partial checklist to identify readiness for final inspection (four pages).
   3. Sample letter for CONTRACTOR's use in requesting final inspection (one page).

B. In the model language of the attached sample letters for the CONTRACTOR to request inspection for Substantial Completion and the final inspection, italicized language in brackets, e.g., "[*insert date*]" indicates instructions to the drafter of the letter and often indicates specific information to be inserted by CONTRACTOR; do not include bracketed, italicized text in the final version of the letter(s) prepared for the Project. Non-italicized language in brackets is optional language; use the appropriate language to complete the actual letter for the Project and edit where required to suit the specific circumstances.

+ + END OF SECTION + +

SAMPLE LETTER FOR CONTRACTOR'S USE IN REQUESTING INSPECTION FOR SUBSTANTIAL COMPLETION

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

[*Date*]

[*Name of Engineer's contact person*]
[*Engineer's Name*]
[*Street address*]
[*City, state, postal code*]

Subject:
[*Project name, Contract designation*]
Request for Inspection for Substantial Completion

Dear [*addressee*]:

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

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

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

1. Security, Protection, Insurance:
    a. Site Security: [*insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for security of the Site*].
    b. Protection of the Substantially Completed Work: [*insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for protection*].
    c. Property Insurance: [*insert proposal; typically DEPARTMENT assumes responsibility for property insurance upon Substantial Completion*]
2. Operation and Maintenance:
    a. Operation: [*insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for operating the substantially completed Work*].

b. Maintenance: [*insert proposal; address whether DEPARTMENT or CONTRACTOR will be responsible for maintaining the substantially completed Work*].

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

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

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

Sincerely,

[*CONTRACTOR's company name*]

[*Signatory name*]
[*Signatory's title*]

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

Copies:
[*DEPARTMENT's project manager*]

SAMPLE CHECKLIST TO IDENTIFY READINESS FOR FINAL INSPECTION

Project:_____
Contract:_____
Contractor: _____

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

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

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

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

SAMPLE LETTER FOR CONTRACTOR'S USE IN REQUESTING FINAL INSPECTION

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

[*Date*]

[*Name of Engineer's contact person*]
[*Engineer's Name*]
[*Street address*]
[*City, state, postal code*]

Subject:
[*Project name, Contract designation*]
Request for Final Inspection

Dear [*addressee*]:

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

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

Sincerely,

[*Contractor's company name*]

[*Signatory name*]
[*Signatory's title*]

Attachments:
None

Copies:
[*DEPARTMENT's project manager*]

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SECTION 01 77 23

INSPECTIONS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:
   1. This Section includes requirements for the Substantial Completion, Final Completion, and any specified Warranty inspections and is coordinated with the payment provisions of the General Conditions, Section VIII, Articles 13.6 through 13.13.
   2. When CONTRACTOR considers all or part of the Work ready for its intended use, CONTRACTOR shall notify DEPARTMENT and ENGINEER in writing that the Work specified is substantially complete. Within a reasonable time thereafter, not to exceed 30 days, DEPARTMENT, CONTRACTOR and ENGINEER shall make an inspection of the Work, or portion thereof, to determine status of completion. A tentative certificate of Substantial Completion shall fix the date of Substantial Completion, with an attached list of items to be completed or corrected prior to final payment.
   3. Shortly before the end of the Substantial completion period required under the General Conditions, ENGINEER will schedule with DEPARTMENT and CONTRACTOR the inspection and will advise DEPARTMENT and CONTRACTOR in writing of the date and time for the inspection.

B. CONTRACTOR's project manager shall attend the inspection.

C. Upon written notice from CONTRACTOR that the entire Work or agreed portion is complete, ENGINEER will make a final inspection with DEPARTMENT and CONTRACTOR. ENGINEER will notify CONTRACTOR in writing of all particulars in which this inspection reveals that work is either accepted or incomplete or defective.

D. After the final inspection, CONTRACTOR shall submit "final" Application for Payment in accordance with the final Application for Payment procedures of the General Conditions, as may be modified by the Supplementary Conditions, and the Specifications, including furnishing all required Contract closeout documentation and completion of all Work except for the inspection and associated correction Work (if any). DEPARTMENT will release remaining retainage withheld for the inspection following the inspection and completion of correction Work (if any), in accordance with progress payment procedures of the Contract, except that consent of surety to final payment shall accompany the last Application for Payment.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

+ + END OF SECTION + +

REMEDIAL ACTIVITIES
LAWRENCE AVIATION INDUSTRIES – SITE # 152016
100 SHEEP PASTURE ROAD
PORT JEFFERSON, NEW YORK

TABLE OF CONTENTS

SUPPLEMENTARY SPECIFICATIONS

CONTRACT DRAWINGS

Plans entitled Lawrence Aviation Industries – Site # 152016, 100 Sheep Pasture Road, Port Jefferson, New York

OTHER ATTACHMENTS

SECTION 00 01 15

LIST OF CONSTRUCTION CONTRACT DRAWINGS

1	TITLE SHEET
C1.0	SITE PLAN
C2.0	DETAILS

END OF SECTION

SECTION 00 33 00

EXISTING CONDITIONS

PART 1 GENERAL

1.1 DESCRIPTION

A. The Lawrence Aviation Industries site (Site #152016) is classified as a Class 2 inactive hazardous waste disposal site by the New York State Department of Environmental Conservation (DEPARTMENT) due to contamination related to the past use of the site. Soil and groundwater on-site have been contaminated with PCBs, inorganics and VOCs. There is direct discharge of contaminated groundwater into a downgradient pond near the Port Jefferson Harbor. EPA has completed a removal action for the on-site soils. The New York State Right of Way remediation is complete and the NYSDOT has completed construction of the bike path. The groundwater and site soils are being addressed with the onsite and offsite groundwater pump and treat systems and the excavation and offsite disposal program. The pump and treat systems are now in the operation, maintenance, and monitoring phase.

B. Location: The site is located in a residential and commercial section of unincorporated Hamlet of Port Jefferson Station within the town of Brookhaven.

C. Site Features: The former Lawrence Aviation Industries Site is located on 126 acres of land. The facility lies above and to the south of the Village of Port Jefferson in Port Jefferson Station. The land itself is somewhat level though the terrain is steeply sloped down towards the harbor and Long Island Sound heading north of the site.

D. Current Zoning and Land Use: The Lawrence Aviation Industries industrial area is zoned commercial. The site is a former industrial manufacturing facility. There are a number of large and small commercial buildings that comprise the 36 acres of the industrial area of the 126 acre facility. The plant is now completely shut down and all the buildings are in a derelict condition.

E. Past Use and History: The company produced titanium sheet metal for use in the aviation industry. The waste generated from manufacturing included fluorides, sludges, caustic acids and halogenated solvents. Wastes were dumped in several areas on-site including lagoons and cesspools. When the site was an active manufacturing facility, large quantities of wastes were generated and improperly stored, requiring a large scale drum removal. This

initial removal action was completed under the DEPARTMENT RCRA (active facility) program in 1991. These indiscriminate disposal practices and improper hazardous waste storage practices have led to significant groundwater contamination. The site was referred to State Superfund for a remedial investigation and feasibility study (RI/FS) by the DEPARTMENT. The Attorney General's office eventually had to seek court-ordered gained access to the site.

F. Site Geology and Hydrogeology: The site is in the northern Glacial deposits south of the Long Island Sound. The shallow soils are generally comprised of glacially deposited sands and gravels with intermittent non-continuous clay lenses and varying sizes of boulders scattered throughout the formation. This was all part of the remnants of the receding Wisconsin ice sheets from the end of the Pleistocene epic. The area is one of the high points of LI and the water table is approximately 190 feet below land surface. Groundwater at the site generally flows north.

G. Remediation at the site is protective. Residual contamination is being addressed through active treatment. The primary contaminants of concern are chlorinated solvents and metals in groundwater. Remedial actions have successfully achieved soil cleanup objectives for industrial use. Residual contamination in the groundwater is being managed under an Operation and Maintenance Plan.

H. A fence surrounds this former industrial site and site access is restricted, so exposures to contaminated soils are not expected. Drinking contaminated groundwater is not likely since public water serves the area and there are no longer any known users of private well water nearby. People may be exposed to contaminants in surface water if using the Old Mill Creek Pond, however, signs are posted that discourage people from using these waters. Although indoor air in buildings overlying contaminated groundwater may be affected by soil vapor intrusion, measures are being taken to mitigate where the potential is verified.

I. Between October 2023 and February 2024 site demolition activities were performed and all site structures that were slated for demolition have been removed and only the former building foundations and only select machine pits, former sanitary systems, and two underground storage tanks remain. Additionally, all remaining transformers, machinery, and associated waste were removed and disposed of and/or recycled offsite. As part of demolition activities, the pits and sumps housing machinery were properly drained of fluids, trash removed, and were abandoned in place by breaking up the bottom of each pit to allow for water infiltration and were backfilled to grade with recycled concrete aggregate (RCA). Limited equipment capabilities and/or signs of oily contamination resulted in leaving four

machine pits and two underground storage tanks (USTs) to be abandoned under this scope of work. Additionally, as part of the Town of Brookhaven Building demolition permit, all site sanitary systems, cesspools and dry wells are to be properly sampled and abandoned in accordance with Suffolk County Department of Health Services Standard Operating Procedures (SOP) 9-95. A copy of SOP 9-95.

1.2 LIMITATIONS OF SUBSURFACE EXPLORATIONS

A. Explorations are not intended to indicate subsurface conditions except at the locations of the borings and are based on the information available and the ENGINEER's interpretations at the time borings were made.

B. Explorations were not made to determine project constructability or cost. Therefore, they may not be suitable or adequate for purposes other than for the ENGINEER's use in designing the project.

C. Reuse of the exploration logs and other subsurface information, including, without limitation, any subsurface investigation prepared by the ENGINEER on behalf of the DEPARTMENT, by the CONTRACTOR and its subcontractors, must be at its own risk and without legal liability on the ENGINEER and DEPARTMENT.

D. Indemnify and hold the ENGINEER and DEPARTMENT harmless from all claims, damages, expenses, and costs resulting from the CONTRACTOR's own interpretation of this information.

1.3 LIMITATIONS OF EXISTING KNOWN UTILITIES

A. Do not infer that utility locations shown on the Drawings are accurate, or that all existing utilities and structures are depicted. Identify the location of the utilities required to complete the work.

PART 2 PRODUCTS

Not Applicable

PART 3 EXECUTION

3.1 SUPPLEMENTAL SUBSURFACE INVESTIGATION

A. Review the available subsurface information and conduct additional explorations and investigations as deemed necessary to develop independent soil parameters for the purposes of shoring design, slope stability, and constructability.

B. Additional test borings and other exploratory operations may be made by the CONTRACTOR at no cost to the DEPARTMENT.

3.2 SUPPLEMENTAL UTILITY LOCATION AND RESPONSIBILITY

A. Locate all existing utilities and underground structures in the vicinity of the Work Area on the Site.

B. Identify and mark utilities in accordance with New York regulations. Contact DIG SAFELY NEW YORK at 811 or 1-800-962-7962 before starting on-site excavation.

C. Repair all work-related damage to existing utilities, which are to remain in service, at no expense to the DEPARTMENT.

D. Contact the affected utility and property owners as soon as damage is discovered.

E. The cost for performing the Work described in Subpart 3.2, excluding 3.2C, is considered incidental to the Work.

END OF SECTION

SECTION 01 10 00

SUMMARY

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes
1. Contract description.
2. Definitions.
3. Contacts
4. ENGINEER'S authority.
5. Access to site.
6. CONTRACTOR's use of site and premises.
7. Work Hours.
8. Control of work.
9. Legal notification.
10. Special site consideration.
11. Site security.
12. Site safety.
13. Specification conventions.

1.2 CONTRACT DESCRIPTION

A. This Specification section provides a general description of the Work. The Contractor shall refer to the appropriate detailed Specifications section for project specifics.

B. The New York State Department of Environmental Conservation (DEPARTMENT) is accepting bids for the remedial activities at the Lawrence Aviation Industries Site.

C. General Description of proposed Work:
.
1. Site to be cleared and grubbed as necessary to perform the work.
2. Abandonment of all on-site sanitary systems, cesspools and drywells.
3. Temporary chain link fencing shall surround open excavations/pits.
4. Abandonment of four (4) machine pits as specified in the work plan.
5. Removal of two (2) non-petroleum underground storage tanks.
6. The Work will include and protection of existing above ground and underground utilities.
7. Pits will be dewatered and cleaned by the DEPARTMENT prior to Contractor backfilling.
8. Pit bottoms shall be broken up to eliminate the potential for accumulating water then backfilled.
9. Demolition debris shall be processed and disposed of according to local and state guidelines.

D. All Work items are to be conducted according to the Technical Specifications and the Contract Drawings.

E. The Work shall be planned, scheduled, and performed in stages to complete the Work within the requirements of the Contract Document. Work shall be scheduled to be of as little inconvenience to the property owners as possible and shall be conducted in such a manner so as to have as little impact on existing land use as possible.

1.3 DEFINITIONS

A. Definitions of contractual or associated parties, referenced herein on the Contract Drawings and in the Technical Specifications, are listed below:
   1. DEPARTMENT— New York State Department of Environmental Conservation (NYSDEC).
   2. ENGINEER — HRP Associates, Inc.
   3. CONTRACTOR—A person, company or organization who has contracted with the DEPARTMENT and is directly responsible for performance of the Work referenced in the Technical Specifications, Contract Drawings or as included herein.
   4. SUBCONTRACTOR—A person, company or organization who has contracted with the CONTRACTOR for the purpose of supplying services, materials, assemblies or other items as required to perform the Work referenced in the Technical Specifications, Contract Drawings or as included herein.
   5. Village of Port Jefferson Property Owners
   6. Others—A person, company or organization who has contracted with the DEPARTMENT for the purpose of supplying services, materials, or other items of Work independent of those services, materials, or other items of Work supplied by the CONTRACTOR.

1.4 CONTACTS

Table 1 –Contact List

Name	Project Role	Email	Address	Phone
New York State Department of Environmental Conservation (NYSDEC)				
Payson Long	DEC Site Project Manager	payson.long@dec.ny.gov	625 Broadway, Albany, NT 12233	518-402-9813
Suffolk County				
Janet Gremli	Principal Public Health Sanitarian SCDHS/SCLBC	janet.gremli@suffolkcountyny.gov	100 Veterans Memorial Hwy, P.O. Box 6100, Hauppauge, NY 11788	631-854-2513
Groundwater and Environmental Services, Inc. (GES)				
Scott McDonald	GES Project Manager	SMcDonald@GESonline.com	6780 Northern Blvd, Suite 100, East Syracuse, NY 13057	800-220-3069, ext. 4066
HRP Associates, Inc.				
Derek Roy	Client Manager	derek.roy@hrpassociates.com	197 Scott Swamp Road, Farmington, CT 06032	860-674-9570
Thomas Battles	Engineer of Record	thomas.battles@hrpassociates.com	197 Scott Swamp Road, Farmington, CT 06032	860-674-9570

1.5 ACCESS TO SITE

A. The CONTRACTOR shall have access to the Site as shown on the Contract Drawings and in accordance with the Technical Specifications, and in general the Contract Documents which are intended to include access agreements obtained by the DEPARTMENT.

B. The DEPARTMENT has obtained right-of-entry and/or access agreements with property owner as provided in the Contract Documents. Requirements for access may include specific CONTRACTOR coordination with individual property owners, and other CONTRACTOR-provided responsibilities. All CONTRACTOR activities required to facilitate access to involved properties in accordance with right-of-entry and access agreement documents are subsidiary to the Work, and no additional payment shall be made.

C. The Limits of Disturbance (LOD)s shall be as described in these Technical Specifications and depicted on Contract Drawings. All Work shall be confined to the LODs and completed to the lines, grades, and dimensions called for on the Contract Documents unless directed otherwise by the DEPARTMENT. All Work performed beyond designated limits without prior approval shall be corrected to the DEPARTMENT satisfaction, at no additional cost to the DEPARTMENT.

D. The Contractor shall observe applicable traffic laws and New York State Department of Transportation (NYSDOT) requirements.

E. All project and personnel vehicles shall be parked in designated areas.

1.6 WORK HOURS

A. Work shall be performed during periods in which adequate light levels are available to provide a safe working environment. Night work shall not be allowed for performance of the Work without written prior approval from DEPARTMENT.

1.7 CONTROL OF WORK

A. Confirm Contract Drawings dimensions and elevations as applicable.

B. ENGINEER can provide electronic AutoCAD files in AutoCAD Civil 3D 2021 format to CONTRACTOR, if requested. The hard copy design Drawings supersede the electronic grade files in all cases.

1.8 LEGAL NOTIFICATION

A. The CONTRACTOR shall give all notices and comply with all laws, ordinances, codes, permits, rules, and regulations bearing on the conduct of the Work as drawn and specified. If the CONTRACTOR performs any Work contrary to such laws, ordinances, codes, permits, rules, and regulations, CONTRACTOR shall bear all costs arising therefrom. It is the responsibility of the CONTRACTOR to identify and secure any and all permits to be maintained during the course of the project as required to execute the Contract.

B. This project is completed as a component of a site remediation project under the New York State Superfund Program, and completed by the DEPARTMENT, allowing for certain DEPARTMENT permits to be waived. In those cases, substantive permit requirements shall be achieved in lieu of obtaining the formal permits. This includes the following permits:
   1. Section 401 Water Quality Permit Certification: As long as the Nationwide Permit 12 requirements are met, a blanket Section 401 Water Quality Permit Certification is granted by the DEPARTMENT.

C. DEPARTMENT will provide the following documents/permits:
   1. Access Permits:
      a. Right of Entry

D. CONTRACTOR shall comply with and execute requirements in all permits.

1.9 SPECIAL SITE CONSIDERATION

A. The CONTRACTOR shall control storm water runoff in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (current edition) and the New York State Stormwater Design Manual (current edition)

B. CONTRACTOR shall use ultra-low sulfur #2 diesel fuel in all diesel construction equipment used during the project.

1.10 SITE SECURITY

A. Security will not be provided by ENGINEER or the DEPARTMENT. The CONTRACTOR shall, at all times, take reasonable precautions in conducting all operations under this contract in a manner to avoid the risk of loss, theft or damage to the equipment and supplies. ENGINEER or the DEPARTMENT will not be responsible for the loss, theft, or damage of the CONTRACTOR ’s equipment.

B. The CONTRACTOR shall be responsible for providing fencing, barricades, signs, flags, caution tape, and other means, as necessary, to prevent unauthorized access to the site and protect the Work, materials and equipment stored onsite.

1.11 SITE SAFETY

A. The CONTRACTOR shall comply with Safety and Health Regulations for Construction, promulgated by the Secretary of Labor under Section 107 of the Contract Work Hours and Safety Standards Act, as set forth in Title 29, C.F.R. Copies of these regulations may be obtained from Labor Building, 14th and Constitution Avenue N.W., Washington, DC 20013, or at the following web address: www.osha.gov. The CONTRACTOR shall also comply with the provisions of the Federal Occupational Safety and Health Act, as amended.

B. The CONTRACTOR shall provide at least one non-freezing-type fire extinguisher in each Work vehicle on the premises.

C. The CONTRACTOR shall provide and maintain a basic first aid kit.
   1. Provide first aid supply commensurate with size of project with items necessary for first aid treatment of all injuries.
   2. Advise workers of the location of first aid supplies.
   3. Post telephone numbers of nearest hospital or ambulance service and fire station in conspicuous location. Advise all workers of location of telephone numbers.

D. The CONTRACTOR shall provide protection for pedestrians and vehicles when construction is within public rights-of-way. Trenches or excavation left open overnight shall be clearly delineated and barriers should be placed to prevent access.

E. The CONTRACTOR will be required to provide safety measures for during and outside of construction work hours in accordance with permitting requirements.

1.12 WINTER SHUTDOWN

A. The CONTRACTOR may not suspend work due to winter weather conditions until the following requirements have been met:
   1. All open trenches and excavations have been backfilled to the ground surface. Barriers around open excavations and trenches will not be acceptable.
   2. Make preparations for winter conditions before the weather and physical condition of the right-of-way have degraded to the point where effective implementation of the stabilization measures is precluded.
   3. All exposed soils shall be at least rough graded, and drainage patterns shall be restored. Apply erosion and sediment controls (i.e., silt fence) and temporary seeding of critical areas as Specified in Section 32 92 19 – Seeding.
   4. Inspect temporary erosion and sediment controls and ensure they are in good working order.

1.13 SPECIFICATION CONVENTIONS

A. Some of these specifications are written in imperative mood and streamlined form. This imperative language is directed to the CONTRACTOR, unless specifically noted otherwise. The words “shall be” are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 14 00

WORK RESTRICTIONS

PART 1 GENERAL

1.1 USE OF PREMISES

A. Limit use of premises to Work in areas indicated. Do not disturb portions of Site beyond areas in which Work is indicated without approval from the DEPARTMENT and property OWNER(s)
   1. Limits: confine demolition operations to within the Limit of Work, as designated on Contract Drawings. Provide storage areas and support facilities as necessary for execution of the Work. Do not enter areas located outside the Limit of Work. Coordinated work activities with the OWNER and the DEPARTMENT.
   2. If conducting this Work will require access and the use of several properties, the DEPARTMENT will obtain property access agreements. Adhere to the requirements and conditions of the access agreements.
B. Promptly repair damage to premises caused by construction operations. Upon completion of Work, restore premises to original conditions.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes
1. Quality control and control of the work.
2. Tolerances.
3. References.
4. Labeling.
5. Examination.
6. Testing and inspection services.

1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Before ordering any fabricated material or doing any Work, verify all measurements at the project site. No additional compensation will be allowed because of differences between actual dimensions and the measurements indicated on the Contract Drawings. Report any discrepancy immediately to the ENGINEER for instructions before proceeding with the Work.

C. Comply with manufacturers' instructions, including each step-in sequence.

D. When manufacturer's instructions conflict with Contract Documents, request clarification from ENGINEER or the DEPARTMENT before proceeding.

E. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

F. Work shall be performed by persons qualified to produce required and specified quality.

G. Verify field measurements are as indicated on shop drawings or as instructed by manufacturer.

H. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When such tolerances conflict with Contract Documents, request clarification from ENGINEER before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard by date of issue current on date of Contract Documents, except where specific date is established by code.

C. Obtain copies of standards where required by product specification sections.

D. When specified reference standards conflict with Contract Documents, request clarification from the ENGINEER before proceeding.

E. Neither contractual relationships, duties, nor responsibilities of parties in Contract shall be altered from Contract Documents by mention or inference otherwise in reference documents.

1.5 LABELING

A. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label:
   1. Model number
   2. Serial number
   3. Performance characteristics

PART 2 PRODUCTS - Not Used.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing site conditions are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Examine and verify specific conditions described in individual specification sections.

3.2 PHASES OF CONTROL

A. Construction Quality Control (CQC) is the means by which the CONTRACTOR ensures that the work, to include that of SUBCONTRACTORS and suppliers, complies with the requirements of the Contract Documents. At least three phases of control are required to be conducted by the CONTRACTOR for each definable feature of the work as follows:

B. Preparatory Phase

1. This phase is performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase includes:
    a. A review of each paragraph of applicable specifications, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by DEPARTMENT personnel until final acceptance of the work.
    b. Review of the Contract Drawings.
    c. Check to assure that all materials and/or equipment have been tested, submitted, and approved.
    d. Review of provisions that have been made to provide required control inspection and testing.
    e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the Contract Documents.
    f. Examination of required materials, equipment, and sample work to assure that they are on hand, comply with approved Shop Drawings or submitted data, and are properly stored.
    g. Review of the appropriate activity hazard analysis to assure safety requirements are met.
    h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
    i. Check to ensure that the portion of the plan for the work to be performed has been accepted by the DEPARTMENT.
    j. Discussion of the initial control phase.
    k. The DEPARTMENT needs to be notified at least 48 hours in advance of beginning the preparatory control phase. Include a meeting conducted by the CONTRACTOR during the preparatory phase. Document the results of the preparatory phase actions by separate minutes prepared by the CONTRACTOR and attach to the daily report. Instruct applicable workers as to the acceptable level of workmanship required to meet contract specifications.

C. Initial Phase
    1. This phase is accomplished at the beginning of a definable feature of work. Accomplish the following:
        a. Check initial work as it is conducted to ensure that it is in full compliance with Contract Document's requirements. Review minutes of the preparatory meeting.
        b. Verify adequacy of controls to ensure full Contract Document compliance. Verify required control inspection and testing are in compliance with the Contract Documents.
        c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
        d. Resolve all differences.
        e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
        f. The DEPARTMENT needs to be notified at least 48 hours in advance of beginning the initial phase for a definable feature of work. Prepare separate minutes of this phase and attach to the daily report. Indicate the exact location of initial phase for a definable feature of work for future reference and comparison with follow-up phases.

g. The initial phase for each definable feature of work is repeated for each new crew to work onsite, or any time specified quality standards are not being met.

D. Follow-up Phase
1. Perform daily checks to assure control activities, including control testing, are providing continued compliance with Contract Document's requirements, until completion of the particular feature of work. Record the checks in the CQC documentation. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of work that may be affected by the deficient work. Do not build upon, nor conceal, non-conforming work.

E. Additional Preparatory and Initial Phases
1. Conduct additional preparatory and initial phases on the same definable features of work: if the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.3 TESTING AND INSPECTION SERVICES

A. The DEPARTMENT may test for backfill soil compaction

END OF SECTION

SECTION 01 55 26

TRAFFIC CONTROL

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes
   1. Traffic Control Requirements
   2. Traffic Control Devices
   3. Schedule and Coordination

1.2 REFERENCES

A. The publications listed below forms a part of this specification to the extent referenced. The publication is referred to in the text by basic designation only.
   1. New York State Manual of Uniform Traffic Control Devises (MUTCD)
   2. New York State Department of Transportation (NYSDOT) Standard Specifications (17 NY CRR, Chapter V)
   3. New York State (NYS) Standard Sheets

1.3 SUBMITTALS

A. Submittal Section 01 33 00 – Submittal Procedures.

B. Traffic Control and Site Access Plan shall include, but not be limited to:
   1. Anticipated impacts to onsite and offsite traffic.
   2. Access routes for project traffic to each work area.
   3. Protection and maintenance of traffic for the active businesses and residences in the immediate vicinity of the limits of work.
   4. Estimated daily project traffic flows for each phase of the work.
   5. Procedures for cleaning debris and spillage from public roads.
   6. This Plan shall identify equipment and describe procedures to minimize the creation and dispersion of dust and the removal of earthen materials tracked onto site and off-site roadways by construction vehicles. The Plan shall address major construction activities that will contribute to these situations and the CONTRACTOR'S approach to control them.

1.4 INTENT

A. Maintain safe conditions for the CONTRACTOR'S workers, the general public and all vehicles.

B. Maintenance and protection of safe traffic for the active businesses in the immediate vicinity of the limits of work and surrounding areas.

C. Minimize the inconvenience to the general public and property owners affected.

D. Give the right of way to emergency vehicles in all situations.

PART 2 PRODUCTS

2.1 OWNERSHIP

A. The products specified herein shall be leased or owned by the CONTRACTOR and will not become the property of the DEPARTMENT. All products specified herein shall be removed from the work site when no longer needed.

2.2 TRAFFIC CONTROL DEVICES

A. All the following items shall conform to NYSDOT Section 619-2, MUTCD, NYS Standard Sheets:
   1. Construction and maintenance signs
   2. Construction fence
   3. Barricades
   4. Traffic cones

2.3 MISCELLANEOUS EQUIPMENT

A. Other items, which include safety vests, flags or signs for flagmen, and communication devices, shall be standard and adequate for their intended function. They shall be in accordance with the NYSDOT and MUTCD where applicable or as required by NYSDOT Work Permit.

PART 3 EXECUTION

3.1 GENERAL

A. All work under this section shall be performed in accordance with NYSDOT Standard Specifications, the MUTCD, NYS Standard Sheets, and as stated herein.

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 traffic control devices required for the type of operation being performed.

C. Keep all affected property driveways and parking lots, as well as public roads free of debris and spillage from hauling equipment at all times. Haul routes shall be cleaned at least once per day to limit dust generation. Dry brooming is prohibited.

D. Provide access at all times to private property unless otherwise coordinated with the property owner.

E. All work-related vehicles and non-operating equipment that are parked for a short period of time (2 hours or less) shall be parked at the support area. Longer periods of time shall be in accordance with requirements for non-working hours.

F. The CONTRACTOR's responsibility to the public is to protect the public from damage to person and property, which may result directly or indirectly from any construction operation.

G. Furnish the name of the individual in direct employ of the CONTRACTOR who is to be responsible for the installation and maintenance of the traffic control for the project. If the installation and maintenance are to be accomplished by a subcontractor, consent shall be requested 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 his direct employ.

H. The CONTRACTOR shall take necessary measures, in addition to those required by Federal, State, and local laws and regulations, to minimize the migration of dust and earthen material from construction areas including the utilization of wind indicators and air monitoring.

I. Dust generating surfaces within the active work limits shall be maintained and sprayed with clean water from approved sources to provide complete moistening of the ground, or as otherwise directed by the DEPARTMENT.

J. The CONTRACTOR shall be responsible for the removal of earthen material that is tracked onto site and off-site roadways by construction vehicles. The CONTRACTOR shall continually inspect roadways and remove the materials immediately to maintain a clean and hazard free driving surface.

K. The CONTRACTOR shall remove temporary equipment and facilities when no longer required, restore ground to original, or to specified conditions.

3.2 COORDINATION AND SCHEDULE

A. No traffic shall be disrupted over holiday weekends unless approved by the DEPARTMENT.

END OF SECTION

SECTION 01 57 26

DUST CONTROL & AIR MONITORING

1. GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Dust Control

   2. Air Monitoring

B. Related Sections:
   1. Section 02 41 19 – Demolition
   2. Section 31 10 00 – Site Clearing
   3. Section 31 25 00 - Erosion and Sedimentation Controls

1.3 DEFINITIONS

A. "Dust" shall mean airborne particulate matter that is associated with or results from the Contractor's activities: Of particular concern is dust associated with the Contractor's excavation activities: truck traffic onto and off of the Site; loading and decontamination of transportation vehicles; demolition activities, on-site crushing operations, and wind traversing exposed stockpiled soil and debris.

B. "Visible dust" shall mean dust that can be detected visibly, without instrumentation.

C. "Measurable dust" shall mean dust that can be directly measured through real-time monitoring devices employed by the Engineer or EPA.

D. "Dust Action Level" shall mean the real-time measurement of Measurable Dust as outlined in the Community Air Monitoring Plan (CAMP).

1.4 SCOPE

A. Contractor shall implement dust and vapor control techniques at all times during work to prevent the formation and migration of dust and vapors during demolition, crushing, excavation, and removal of debris and soil at the Site. At a minimum, the following dust and vapor specific techniques in areas of known or anticipated vapors will include:
   4. Thorough wetting of areas to be excavated for at least an hour before starting soil excavation, demolition, and loading activities.
   5. Providing and operating a sprinkler or mist system adjacent to demolition, excavation, crushing and soil loading activities and adjacent to each piece of operating equipment expected to generate dust.
   6. Designating personnel with personnel with watering hoses or other watering equipment to supplement sprinkler misting control techniques.
   7. Limiting rates of demolition, excavation, crushing operations to meet the standards of this Section.

1.5 SYSTEM DESCRIPTION

A. The ENVIRONMENTAL CONTRACTOR will furnish, install, test, operate, monitor, and maintain an air monitoring system at the Site..

B. The ENVIRONMENTAL CONTRACTOR will report any departures from general background to the Safety Officer prior to entering the area. The Safety Officer will determine when and if operations should be shut down, which will be communicated to the Contractor as appropriate.

C. All readings will be recorded and be available for State (DEPARTMENT and DOH) personnel to review.

1.6 PERFORMANCE REQUIREMENTS

A. The Contractor shall develop and implement a dust and vapor control plan. The Contractor shall execute work by methods to minimize the generation of dust from all construction activities. Fugitive dust control strategies shall prevent dust from exiting the work zone, prevent visible emissions from exceeding air quality regulations, and prevent public nuisance and exposure to site contaminants.

B. The Contractor will be issued a temporary Stop Work Order, with no cause for delay or damages, and will re-assess Site activities and dust control measures, if:

1. Visible dust is observed beyond the limits of the site.
2. If airborne action levels are exceeded at any time during soil remedial activities until it is demonstrated that airborne action levels are achieved by the Contractor's upgraded control measures.
3. At the discretion of the DEPARTMENT.

C. The Contractor may make no claims for delays, no extension of contract time will be available, and no additional compensation will be paid due to the Contractor's failure to meet dust control requirements.

D. The Contractor shall be responsible for the clean-up, remediation, and sampling of any off-site deposition of dust. The Contractor shall also be responsible for the cleaning of adjacent buildings, structures, windows and automobiles due to actions by the Contractor and his work. This cost shall be included in the general cost to perform the work.

1.7 PERMIT REQUIREMENTS

A. The Contractor shall obtain all permits necessary to operate portable crushing operations in accordance with the DEPARTMENT requirements, and all required DEPARTMENT notifications.

1.8 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit data for equipment/methods being Implemented:

C. Field Reports: Test and monitoring reports

1.9 QUALITY ASSURANCE

A. Comply with water disposal requirements of authorities having jurisdiction.

1.10 SEQUENCING

A. Section 01 10 00 - Summary: Requirements for sequencing.

B. Sequence work to obtain required permits before start of crushing operations.

C. Sequence work to install dust control measures a minimum of 7 days before testing and operating dust control systems.

1.11 COORDINATION

A. Section 01 10 00 – Summary: Requirements for coordination.

2. EXECUTION

A. To control the formation of dust during demolition and remediation activities, the Contractor shall:
   1. Keep vehicle speeds on the Site below 15 miles per hour.
   2. Mist or spray with water at least twice daily to prevent formation of dust while clearing the site, demolition activities, crushing activities, excavating, transferring and loading materials on-site, or loading or decontaminating transportation vehicles.
   3. Control excavation activities to minimize the generation of dust.
   4. Keep the drop heights to a minimum while loading transportation vehicles.
   4. Cover all trucks and transport vehicles hauling soil, concrete, and other loose materials or require all trucks and transport vehicles to maintain at least 2 feet of freeboard.
   5. Conform to Stockpile Management requirements set forth in the Contract Documents.
   6. Sweep daily, or more frequently as needed or as directed by the Engineer, with a street sweeper if visible soil material is carried onto public streets.
   7. In the event wind speeds exceeds 20 mph for more than 15 minutes causes visible dust, Contractor shall halt soil-moving activities until wind speeds decrease and no visible emissions are observed.

2.1 EXAMINATION

A. Section 01 10 00 - Summary: Verification of existing conditions before starting work.

2.2 REAL TIME MONITORING

A. Real-time air monitoring shall be conducted by the ENVIRONMENTAL CONTRACTOR, in coordination with the Contractor:

1. Real-time monitoring will be conducted by the ENVIRONMENTAL CONTRACTOR at any excavation of soil or sediments and during demolition work, as coordinated with the Contractor.
2. If the ENVIRONMENTAL CONTRACTOR-established 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, as coordinated with the Contractor.

2.3 DOCUMENTATION MONITORING

A. Documentation monitoring may be conducted by the ENVIRONMENTAL CONTRACTOR at the perimeter of the (upwind and downwind) for total dust and volatiles. Documentation monitoring will be conducted during demolition, staging or removal activities.

B. Documentation samples may be collected at established perimeter locations. The locations will be chosen according to site activities and expected wind direction. The perimeter locations will be established and marked with high visibility paint or flagging at approximately equidistant points around the site.

C. Documentation samples may be collected at regularly scheduled intervals or at the initiation of a new phase of on-site work. Samples will be collected during the normal work hours when activities are occurring on site.

2.4 COMMUNITY AIR MONITORING PLAN

A. The Contractor shall adhere to the Community Air Monitoring Plan (CAMP) that has been developed for the project by Groundwater and Environmental Services, Inc. It requires real-time monitoring for particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress during remedial activities at the site.

B. The ENVIRONMENTAL CONTRACTOR shall install a meteorological station on site that will be capable of recording, at a minimum, wind velocity and direction.

3. FIELD QUALITY CONTROL

A. Section 014000 - Quality Requirements.

END OF SECTION

SECTION 01 74 24

SITE RESTORATION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes
   1. Site Restoration Requirements for Disturbed Areas

1.2 SUBMITTALS

A. Submittal Section 01 33 00 – Submittal Procedures.

B. CONTRACTOR shall submit photographs and existing site conditions survey to document the pre-construction conditions of the site to the satisfaction of the DEPARTMENT. Upon request of the DEPARTMENT, CONTRACTOR shall submit additional documentation.
   1. CONTRACTOR shall be responsible for completing site restoration requirements.

C. CONTRACTOR shall submit and obtain the DEPARTMENT'S approval for all materials prior to start of restoration.

D. Substantial completion notification and inspection request.

E. Final completion certificate and inspection request.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 RESTORATION OF DISTURBED AREAS

A. CONTRACTOR shall backfill the various pits, cesspools, drywells and underground storage tanks (UST) to finished grade utilizing approved import material tested in accordance with Section 01 40 00 – Quality Requirements.

B. CONTRACTOR shall repair any damage made to existing vegetated areas associated with the work. Vegetation shall be restored to existing conditions or as shown on the Contract Drawings and as approved by the ENGINEER. Seeding shall be conducted as specified in Section 32 92 19 – Seeding.

END OF SECTION

SECTION 02 41 19

DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes
   1. Removal of all items marked for removal on the Contract Drawings.
   2. Removal of debris.

1.2 RELATED SECTIONS
A. Section 31 25 00 Erosion and Sedimentation Controls

1.3 SUBMITTALS

A. Submittal Section 01 33 00 – Submittal Procedures.

B. Shop Drawings:
   1. Indicate work sequence.
   2. Indicate location and construction of temporary work.

C. Demolition Report
   1. Types and quantities of debris removed and handling activities to point of disposal.

PART 2 PRODUCTS - Not Used.

PART 3 EXECUTION

3.1 PREPARATION

A. Verify existing conditions before starting work.

B. Request underground utilities to be located and marked within the construction area prior to completing demolition. Utilize subcontract private utility locate specialists as required to identify and map utilities known or discovered that intersect work areas.

C. Locate, identify, and protect utilities from damage unless Contract Drawings indicate otherwise or ENGINEER approved their removal.

D. Identify temporary stockpile areas for placing removed materials.

E. Notify affected utility companies before starting work and comply with their requirements.

F. Mark location and termination of utilities.

3.2 CONSTRUCTION REQUIREMENTS

A. The CONTRACTOR shall perform all activities in accordance with Federal, State, and

local standards.

B. Demolition work shall not begin in any portion of the site until all known utilities have been staked and verified by the CONTRACTOR . The CONTRACTOR is responsible for the damage resulting from known utilities that are improperly verified, abandoned, and demolished.

C. Completely demolish and remove portions of structures as defined on the Contract Documents, including all appurtenances related or connected thereto, necessary to accommodate new construction.

D. All known existing utilities to be cut to existing grade and capped and/or bulkheaded with concrete have been shown on the Contract Drawings.

E. Debris removed from the project site, including equipment, concrete, metals, or other demolished materials shall become property of CONTRACTOR and shall be disposed of by CONTRACTOR, in accordance with all applicable laws and regulations.

F. Explosives and Blasting are NOT permitted in performance of demolition work.

3.3 PROTECTION

A. Perform demolition in such manner as to eliminate hazards to persons and property; to minimize interference with use of adjacent areas, utilities and structures or interruption of use of such utilities.

B. Provide safeguards, including warning signs, barricades, temporary fences, warning lights, and other similar items that are required for protection of all personnel during demolition and removal operations.

C. The CONTRACTOR shall adhere to all Federal, State, and Local requirements for confined space entry and perform applicable work accordingly.

D. Prevent spread of flying particles and dust. Rubbish and debris shall be sprinkled with water to keep dust to a minimum.

E. Do not use water to the extent it causes flooding, contaminated runoff, or icing.

F. Protect trees not shown to be removed on the Contract Drawings, unless approved otherwise by DEPARTMENT.

G. Install cap or bulkhead in ends of abandoned piping and conduit as shown on the Contract Drawings.

H. All Federal, State, and Local fire and safety regulations shall be observed in performance of work and include the following:
   1. Whenever a cutting torch or other equipment that might cause a fire is used, provide and maintain combination fire extinguishers (Class A, B, and C) within 35 feet ready for immediate use. All possible users shall be instructed in use of fire extinguishers.
   2. Hydrants shall be accessible at all times. No debris shall be permitted to accumulate within a radius of 15 feet of fire hydrants.

I. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials onsite.

J. Remove materials as work progresses. Upon completion of work, leave areas in clean and restored condition.

K. Remove temporary work.

3.4 CLEAN-UP

A. Remove spilled material from Project Site.

B. Upon completion of work of this Specification Section and after removal of all debris, the site shall be left in a condition satisfactory to the ENGINEER. Cleanup shall include disposal offsite of all items and materials not required to perform the remainder of the work, which includes all demolition debris, miscellaneous debris, rubbish, other solid waste, resulting from demolition operations.

END OF SECTION

SECTION 02 60 00

CONTAMINATED SITE MATERIAL REMOVAL

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
1. The work included under this item consists of the Contractor's requirements for the loading, transportation, and final off-site disposal of all Controlled Materials.
2. This item shall apply to Controlled Materials generated by the Contractor and all subcontractors.
3. The Contractor must use an approved, permitted treatment/disposal facility for both State and Federal regulated solid and liquid wastes. See section 1.9 below for approved disposal facilities. Identification of the proposed disposal facilities must be coordinated by the Contractor.

B. Related Sections:
1. Section 31 10 00 - Site Clearing.
2. Section 02 61 13 - Excavation and Handling of Contaminated Materials.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

A. Basis of Payment:

Each "Disposal of Controlled Materials" line item, defined under Section 1.4, shall be at the applicable Contract Unit Price, which price shall include the incidental handling, loading, and transportation of Controlled Materials from the Temporary Waste Stockpile and/or rolloffs to the treatment/disposal facility, the treatment/disposal or recycling of Controlled Materials, the preparation of manifests, bills of lading, and fees paid; and all equipment, materials, tools, and labor incidental to loading, transporting, weighing, treating/recycling, and disposal of Controlled Materials. Dust control, equipment decontamination, and time and mileage related to the weighing of trucks for verification purposes are all considered incidental to this work and shall be included in the Contract Unit Price.

B. Method of Measurement:

The work of "Disposal of Controlled Materials" shall be measured for payment as the actual net weight in tons of material delivered to the disposal facility. Such determinations shall be made by measuring each hauling vehicle on the permanent scales at the treatment/recycling facility. Total weight shall be the summation of weigh bills

issued by the facility.

Equipment decontamination shall not be measured for payment.

1.3 REFERENCES

A. Occupational Safety & Health Administration:
   1. 29 CFR 1910.120, "HAZWOPER" regulations
   2. 29 CFR 1910.1200, "HAZCOM" regulations
   3. Trenching: 29 CFR 1926-(650-653)

B. Environmental Protection Agency Regulations

1.4 DEFINITIONS

A. PCB Impacted Soil less than 50 ppm PCB disposed of off-site: Shall include all soil materials that are directed to be disposed of off-site by the Engineer, that have been determined by the Engineer to be contaminated with regulated substances below hazardous concentrations. These materials, after proper characterization by the Engineer, shall be transported by a licensed waste transporter approved by the Engineer and disposed of at an EPA-permitted and approved non-municipal non-hazardous waste landfill, subject to 40 CFR Part 257, as applicable. To be measured by Ton.

B. Disposable PPE – Non-TSCA: Shall include all disposable personal protection equipment (e.g. non-liquid materials such as rags, gloves, booties and other disposable PPE equipment) that are directed to be disposed of off-site by the Engineer, that have been determined by the Engineer to be contaminated with regulated substances below hazardous concentrations. These materials, after proper characterization by the Engineer, shall be transported by a licensed waste transporter approved by the Engineer and disposed of at an EPA-permitted and approved non-municipal non-hazardous waste landfill, subject to 40 CFR Part 257, as applicable. These materials require special handling within the WSA in order to isolate them from controlled materials being stored therein. Disposal of PPE will not be measured for payment.
   1. The contents of the drum shall be labeled in accordance with both DOT and EPA regulations.

C. Decontamination Solvents – less than 50 ppm PCBs: Shall include all decontamination solvents used to decontaminate non-porous surfaces, that has been determined by the Engineer to be contaminated with regulated substances below regulated concentrations. These materials, after proper characterization by the Engineer, shall be transported by a licensed waste transporter approved by the Engineer. The decontamination solvents shall be ultimately burned and marketed in accordance with the used oil requirements set forth in 40 CFR 761.20(e) or disposed of in accordance with 40 CFR 761.60(a). Decontamination solvents will not be measured for payment.

1.5 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Selected Disposal Facility information: The name, address, and contact information for the proposed treatment/disposal facility, which shall include the name and phone number of an authorized representative of the facility. The Contractor shall submit a copy of the facility's:
   1. Acceptance criteria
   2. Sampling frequency requirements
   3. Copy of the facility's operational permit.
   4. Listing of the names of the waste transporters that will be used to transport material for this project.

C. Disposal Facility Disposal Authorization Documentation: The Contractor shall submit to the Consultant any documentation required to obtain Disposal Facility Authorization at least five (5) working days prior to disposal. The Contractor shall submit to the Owner the Waste Generator Certification at least five (5) working days prior to disposal.

D. The Consultant shall be responsible for providing the following information:
   1. Laboratory Analytical Reports
   2. Approval letters required by Environmental Professional/Engineer (i.e. Licensed Environmental Professional, Registered Geologist, Professional Geologist, Professional Engineer, etc.)

E. Disposal Records: Submit documentation satisfactory to Engineer, attesting to final and legal disposal of waste materials removed from site. Include records for the following:
   1. Bills of Lading
   2. Universal Waste Manifests
   3. Weight tickets/receipts for disposal.
   4. A summary of the weight (in tons and/or gallons) of each class of waste material removed from the site for disposal shall be submitted to the Owner and Engineer each month and at the completion of the project, or as directed by the Environmental Professional.
   5. Certificates of Destruction for all materials that have been disposed of by methods of incineration, smelting, etc.

1.6 CLOSEOUT SUBMITTALS

A. Section 01 77 19 – Contract Closeout Requirements: Requirements for submittals.

1.7 QUALITY ASSURANCE

A. Perform Work in accordance with the following:
   1. United States Environmental Protection Agency.
   2. State of New York Department of Environmental Conservation
   3. United States Occupational Safety & Health Administration

B. Maintain one copy of each document on site.

1.8 QUALIFICATIONS

A. Remediation Company: Company specializing in performing work of this section with minimum 5 years documented experience. Company must provide references for at least 2 completed demolition/remediation projects complete with financial records for the last 3 years, Experience Modification Rate (EMR) and list of company officers.

B. Workers: All persons working on this project and providing field work must possess an active 40 hour OSHA HAZWOPER 29CFR1910.120 training certificate, adhere specifically to the regulations and have demonstrated at least 3 days of documented work Site specific field experience training from their company, under the guidance of an experienced supervisor.

C. Hauling Company: All haulers removing contaminated material from the site shall be licensed to perform the work. During the entire contract period, the hauling company shall provide and maintain equipment (trucks, etc) to service the Site. The equipment shall be kept in good repair, appearance and in a sanitary condition by the contractor. The contractor will stage the equipment at an off-Site location (yet to be identified) and will not stage the equipment in or around the community streets surrounding the Site.

1.9 CONTAMINATED SITE DISPOSAL FACILITIES

A. The New York DEC shall approve the disposal facility.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Prevent surface runoff from entering excavation.

B. Prevent erosion of soil stockpile to prevent spreading contamination.

1.11 COORDINATION

A. Coordinate with the Consultant: The Consultant will sample materials for final waste characterization at a frequency established by the selected disposal facilities. The Contractor shall designate to the Consultant which facility it intends to use prior to samples being taken. Any change of intended disposal facility may prompt the need to resample and will therefore restart the time required for laboratory turnaround. The laboratory will furnish such results to the Consultant. Upon receipt, the Consultant will make available to the Contractor the results of the final waste characterization determinations:

B. Contractor Take Note:

1. No delay claim will be considered based upon the Contractor's failure to select facility(s) with enough capacity to handle the anticipated volume of Controlled Materials being generated by its activities.
2. No delay claim will be considered due to laboratory delays beyond the control of the Engineer.

PART 2 PRODUCTS

2.1 ACCESSORIES

A. Plastic:

1. Provide plastic cover in accordance with Contract Documents and State or Local regulations.

2.2 TRANSPORTATION

A. Vehicles used to transport Controlled Materials must be free from leaks, equipped with load tarpaulins, and any discharge openings must be securely closed during transportation.

B. All vehicles shall be decontaminated by the Contractor prior to leaving the loadout areas.

C. For track-out prevention and control, all truck exteriors shall be broom cleaned after loading. If this method is not successful, the truck will be directed to the truck wash for cleaning prior to leaving Site.

D. No materials shall leave the site unless a disposal facility willing to accept all of the material being transported has agreed to accept the type and quantity of waste.

E. All materials haulers/vendors shall be licensed in the State of New York to haul/transport contaminated materials.

PART 3 EXECUTION

3.1 PREPARATION

A. Notify regulating agencies regarding activities.
B. Obtain licenses, permits, and inspections required for activities.
C. Notify affected utility companies before starting work and comply with their requirements.
D. Mark location of utilities.

3.2 EXCAVATION

A. Excavate in accordance with Section 02 61 13 for Work of this Section.
B. All Controlled Materials handled and transported for disposal will require Special Handling according to the requirements of these specifications and any applicable federal, state or local regulations.
C. Contractors that work with, or have the potential to be exposed to, Controlled Materials in the course of construction activities. Health and Safety provisions may include the use of chemical protective clothing, personal protective equipment, implementation of engineering controls, air and personnel monitoring, and decontamination procedures.
D. The Contractor shall minimize the spread of Controlled Materials during handling and transportation for disposal.
E. The Contractor shall keep paved areas including, but not limited to, areas adjacent to excavations, roadways leading to and from the project site, parking areas, and public roadways free from dirt, dust, Controlled Materials, or other materials. If such materials are deposited, spilled, or spread, such material shall be removed promptly, and properly disposed of to the satisfaction of the Engineer no later than the end of each working day or as directed by the Engineer.
F. In the event that there appears to be a consistent discrepancy between the weight of material leaving the project, and the weight of material reported delivered to the disposal facility, the Consultant reserves the right to have random truckloads of material weighed at a scale facility to be determined by the Consultant. The scale cost will be borne by the Owner, however the contractor shall not be entitled to any additional compensation for increased trucking time for such action.

3.3 SCRAP METAL (Not Used)

3.4 EQUIPMENT DECONTAMINATION

A. Equipment Decontamination shall be in accordance with the provisions in the specification, in accordance with the project work plans, and in accordance with the receiving facility.

3.5 WASTE DISPOSAL

A. Collect construction waste, impacted material and waste from construction area, daily or as required.

B. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste; containerize properly, and legally dispose off-site.

C. Remove debris, rubbish, and other materials resulting from excavation operations. Transport and legally dispose off-site.
   1. When hazardous materials are encountered during excavation operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.
   2. Burning of removed materials is not permitted on project site.
   3. Pay for required weighing and measuring fees and charges to legally dispose waste materials off-site.

D. Remove contaminated soil and legally dispose off-site.

E. Remove excess uncontaminated excavated material from site.

END OF SECTION

SECTION 02 61 13

EXCAVATION AND HANDLING OF CONTAMINATED MATERIALS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. The Work under this item shall include all materials, equipment, tools and labor required to perform the work, which includes but is not limited to, the following:
      a. Excavate and manage Controlled Materials, as defined in these specifications, as shown on the contract drawings, and/or as directed by the Consultant.
      b. Backfilling and compaction of excavated materials that will remain on site, particularly in the sloping and/or benching of the die cast area excavation.
   2. This item shall apply to all Controlled Materials generated by the Contractor and all subcontractors.

B. The intention of this specification is to enforce all requirements, either specified or implied, which are outlined in the all Work Plans included in the Contract Documents of this Bid Package.

C. Related Sections:
   1. Section 31 10 00 - Site Clearing.
   2. Section 02 60 00 - Contaminated Site Material Removal

E. Related Work Plans:
   1. Scope of Work – Work Plan prepared by HRP Associates, Inc., dated June 6, 2024.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

A. Excavation and Handling of Contaminated Materials
   1. Basis of Measurement: This item will not be measured for payment.
   2. The Excavation of Contaminated Materials: This includes the work of excavating, loading, transporting, stockpiling, handling, and maintaining various Contaminated Materials as indicated on the plans and as directed by the Consultant.
   3. The following items are considered incidental items and will not be measured separately for payments:
      a. The work of excavating and stockpiling Contaminated Materials encountered during identification, relocation, and installation of site utilities shall not be measured for payment.
      b. Sweeping and Dust control activities shall not be measured for payment.
      c. Equipment decontamination shall not be measured for payment.
      d. Incidental dewatering shall not be measured for payment.
   4. Establishment of survey control points and layout necessary to achieve restoration of existing site grades shall not be measured for payment.

1.3 DEFINITIONS

A. Controlled or Contaminated Materials: Soils or other materials including, but not limited to, the following: soil, demolition debris, underground structures. The materials may contain contaminants identified in previous subsurface investigations, the results of which have been made part of these documents.

1.4 REGULATORY REQUIREMENTS

A. Comply with 29 CFR 1926 “Safety and Health Regulations for Construction”.
B. Conform to 29 CFR 1910.120, “HAZWOPER” regulations, and 29 CFR 1910.1200, “HAZCOM” regulations, as warranted.
C. Conform to applicable Sections of Missouri Department of Transportation “Engineering Policy Guide (EPG),” most current version including the recent policy changes.

1.5 SUBMITTALS

A. Three weeks prior to the start of work, submit to the Engineer for review a written phasing plan and schedule for all associated with the soil remediation.

PART 2 PRODUCTS

2.1 MATERIALS

A. All polyethylene sheeting used for covering stockpiled Controlled Materials and underlaid beneath stockpiled Controlled Materials, shall have a minimum thickness of 8-10 mils.
B. Sandbags used to secure polyethylene sheeting covers shall have a minimum weight of 20 lbs.
C. Temporary construction fencing shall 6-foot high chain link.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions prior to Work. Notify the Consultant upon discovery of any unanticipated conditions.
B. At least three working days prior to the start of any excavating activities, the Contractor will notify DIG SAFELY (800-272-4480) for verification of utility locations.
C. Cooperate with the Consultant’s directions to explore existing conditions to verify location, extent, and depth of contaminated soil that needs to be handled in accordance with the Remediation Plan for this site.

3.2 PREPARATION

A. The Contractor shall coordinate with the Consultant to identify locations for Temporary Waste Stockpiles.
B. The Contractor shall locate, identify and protect from damage utilities that will remain.

C. Protect benchmarks, monitoring wells, and confirmatory sample location staking from damage by excavating equipment and vehicular traffic, unless otherwise indicated by the Engineer. Benchmarks, staking, and monitoring wells that are damaged or destroyed will be repaired or replaced by the Owner at the Contractor's expense.

D. Identify and confirm limits of remediation that are designated for removal and off-site disposal.

3.3 EXCAVATION OF CONTROLLED / CONTAMINATED MATERIALS

A. General Requirements

1. All Controlled Materials excavated under the contract will require Special Handling according to the requirements of these specifications and any applicable federal, state or local regulations.
2. Contractors that work with, or have the potential to be exposed to Contaminated Materials in the course of construction activities shall meet the requirements of the Environmental Health and Safety Plan. Health and Safety provisions may include the use of personal protective equipment, implementation of engineering controls, air and personnel monitoring, and decontamination procedures.
3. The Contractor shall keep paved areas including, but not limited to, areas adjacent to excavations, roadways leading to and from the project site, parking areas, and public roadways free from dirt, dust, Contaminated Materials, or other materials. If such materials are deposited, spilled, or spread, such material shall be removed promptly, and properly disposed of to the satisfaction of the Consultant no later than the end of each working day or as directed by the Engineer. Wet sweeping shall be used as necessary to reduce dust emissions.

B. Excavation of Controlled Materials

1. Comply with all site earthwork requirements set forth these Specifications.
2. The Contractor shall keep non-contaminated material (to be used as backfill) segregated from Controlled and Contaminated Materials at the direction of the Consultant. Non-contaminated material shall be determined as such by the Consultant. All Controlled Materials excavated during the course of construction shall be transported directly to and stockpiled in, the designated stockpile areas. Material designated clean fill shall not be considered a Controlled Material.
3. The Contractor shall segregate boulders and construction debris from excavated Controlled Materials to the extent practicable. This segregation shall occur at the point of excavation, prior to the movement of any Controlled Materials. The Engineer may evaluate excavated boulders and debris to determine if such material can be designated as clean fill or construction debris. Material designated as clean fill or construction debris shall not be considered a Controlled Material.
4. Maintain excavation areas to facilitate in-place soil sampling and additional excavation if necessary. Laboratory turnaround time is expected to be five (5) working days. If, for safety or other reasons, it is necessary to backfill a remedial area prior to achieving clean closure, line excavation with filter fabric and backfill with site material or imported fill as directed by the Engineer.
5. Transport all Controlled Materials excavated within the Project Limits off site. The work shall conform to these specifications and the work plans prepared for the project.

3.4 MOISTURE CONTROL

A. Wet or saturated Controlled Materials soils shall be allowed to dry before removal off the site. Dry shall be determined by the ability of materials to be trucked off-site without free-draining liquids.

3.5 OPERATION OF WASTE STOCKPILE AREAS

A. The Contractor shall keep all stockpiles covered with 6 mil polyethylene sheeting at all times, with the exception of periods when a stockpile is being actively worked. Polyethylene sheeting shall be secured or weighed down with sandbags, roped tires, a combination thereof, or other materials approved by the Consultant, in such a manner as to prevent the plastic from being dislodged by wind.

3.6 EQUIPMENT DECONTAMINATION

A. All equipment shall be provided to the work site free of contamination. The Consultant may prohibit any equipment which in his/her opinion has not been thoroughly decontaminated prior to arrival. Any decontamination of the Contractor's equipment prior to arrival at the site shall be at the expense of the Contractor. The Contractor is prohibited from decontaminating any equipment on-site which is not thoroughly decontaminated prior to arrival.

B. The Contractor shall furnish labor, materials, tools, and equipment for decontamination of all equipment and supplies, which are used to handle Controlled Materials. Decontamination shall be conducted at an area designated by the Construction Manager for such purpose. Frequency of decontamination shall be determined by the Consultant and may be required prior to equipment and supplies leaving the project site and/or between stages of the work.

C. Dry decontamination procedures are recommended. Residuals from dry decontamination activities shall be collected and managed as New York Regulated Waste. If dry methods are unsatisfactory as determined by the Consultant, the Contractor shall modify decontamination procedures as required subject to the Consultant's approval.

3.7 PCB EQUIPMENT DECONTAMINATION PROCEDURES

A. The Contractor shall capture and contain all solvents and cleaners for reuse, decontamination, or disposal. Clean organic solvents contain <2 ppm PCBs. Clean water contains <3 ppb PCBs.

B. The Contractor shall capture and contain all solvents and cleaners for reuse, decontamination, or disposal. Clean organic solvents contain <2 ppm PCBs. Clean water contains <3 ppb PCBs.

C. Prior to decontamination, if PCB-containing liquid is present on the surface to be cleaned, thoroughly wipe or mop the entire surface with absorbent paper or cloth until no liquid is visible on the surface.

3.8 DUST CONTROL

A. See Dust Control Specification.

3.9 BACKFILLING AND PROTECTION

A. Backfilling of excavations shall conform to Section 31 05 13 Soils for Earthwork.
B. Protect excavations by methods required to prevent cave-in or loose soil from falling into excavation. The Contractor shall follow all requirements of Section 31 05 13 during the performance of the work described herein.
C. Provide temporary shoring and/or benching for trenching and excavation per OSHA requirements.
D. Surround excavations with temporary construction fencing or barricades where sloping is not possible and as required by the Consultant.

END OF SECTION

SECTION 02 65 00

REMOVAL, DISPOSAL, AND ABANDONMENT OF STORAGE TANKS AND APPURTENANCES

PART 1 GENERAL

1.01 This specification has considered that the above ground tanks are empty.

The costs to provide and dispose of PPE, confined space equipment and training, all labor, materials, equipment and permits shall be included in the general cost to perform the work.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Temporary Utilities and Controls: Section 01 51 05.

B. Erosion and Sedimentation Controls: Section 31 25 00.

1.03 SUBMITTALS

A. Removal procedures, waste disposal locations and schedule.

B. Plan of Operations:
   1. Include, at a minimum, a description of project approach covering methods for sampling, analysis, removal and disposal of all waste. Additionally the Plan of Operations shall include:
      a. Description of a method for tank demolition.
      b. Description of the waste segregation and staging methods to be used for poly sheeting, and spent personal protective equipment.
      c. Methods to be used for cleaning of tank and piping.
      d. Identification of all waste transporters and disposal facilities including copies of all required certifications and permits.
      e. Required certifications and permits including copies of valid permits for all waste haulers, disposal sites, and weigh scales
   2. Submit at a minimum of two (2) weeks prior to commencing work.
   3. Waste shall include, but not be limited to tank, piping, tank contents, wash water, samples, and used personal protective equipment.

C. Copy of notifications to the New York State Department of Environmental Conservation, informing the Department of the planned closure and removal of the tank.

D. Record Documents:
   1. Completed waste manifests (or bill of lading for non-hazardous materials) as described herein, accounting for all materials removed from the site.

E. Health and Safety Plan, (HASP): Including regulations for confined space entry (29 CFR 1910.146) and other applicable portions of 29 CFR 1926, that addresses exposure of workers to residual product and accumulated sludge that may need to be removed from the tanks, and potential exposure to explosive/combustible atmospheres.
   1. The DEPARTMENT's Representative will review and comment on the HASP but will neither approve nor disapprove it.

F. Confined Space Entry Permit and the worker training certificates required to clean out the tank, as needed.

G. Manifests: Contractor shall submit copies of all load tickets and manifests, if applicable. Certification of destination, receipt, and disposal of demolition materials must also be submitted.

H. Scrap yard records indicating receipt and acceptance of UST licensed to accept such materials.

I. UST Closure Report: Prepared by the ENVIRONMENTAL CONSULTANT, in coordination with the CONTRACTOR.

1.04 REQUIRED CERTIFICATIONS AND LICENSES

A. Employees involved in hazardous waste operations shall have been trained in accordance with OSHA Final Standards to Protect Workers in Hazardous Waste Operations 29 CFR 1910.120 or most recent revision thereof.

B. Waste haulers shall maintain a valid 6 NYCRR Part 364 Permit.

1.05 REGULATORY REQUIREMENTS

A. Abide by all applicable rules and regulations, including but not limited to the following:
   1. New York State Uniform Fire Prevention and Building Code.
   2. Applicable OSHA worker safety regulations.
   3. State, county, and federal regulations pertaining to the handling, storage, transport, and disposal of wastes generated during the project.

4. Coordinate and obtain all permits as required by permitting authorities.

1.06 ABBREVIATIONS

A. The following terms shall have the meanings ascribed to them in this Section, wherever they appear in this Section.
   1. UST: Undergroundground Storage Tank
   2. HASP: Health and Safety Plan.
   3. NFPA: National Fire Protection Association.
   4. NYSDEC: New York State Department of Environmental Conservation.
   5. NYSDOT: New York State Department of Transportation.
   6. OSFM: Office of the State Fire Marshal.
   7. OSHA: Occupational Safety and Health Administration.
   8. USEPA: United States Environmental Protection Agency.

1.07 NOTIFICATION

A. In accordance with 6NYCRR 613-1.9 (f) reporting for permanent closure or change in service of tank systems, the Contractor shall notify the DEPARTMENT thirty (30) days prior to permanent closure of the tank.

B. Notify (by telephone) the DEPARTMENT's Representative at least 48 hours prior to beginning closure operations at the tank.

C. If contaminated soils are encountered, the DEPARTMENT's Representative will notify the DEPARTMENT Spills Hotline.

1.08 EXISTING CONDITIONS

A. Protect and safeguard from damage all existing structural systems, fencing, equipment, and surfaces that will remain. Contractor shall repair at no additional cost any damage to structures, appurtenances or the landscape not scheduled for removal work.

1.09 ENVIRONMENTAL OVERSIGHT

A. The ENVIRONMENTAL CONSULTANT will act on the DEPARTMENT's behalf for field observation.

B. The ENVIRONMENTAL CONSULTANT will advise the DEPARTMENT's Representative on environmental matters.
   1. Such advisement does not relieve the Contractor's obligation to comply with all applicable environmental and health and safety

regulations promulgated by the federal, state, or local governments.

2. No activity on the part of The ENVIRONMENTAL CONSULTANT represents the Contractor's compliance with applicable environmental or health and safety regulations.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 PREPARATION

A. Notify the DEPARTMENT's Representative minimum of 30 days in advance of tank removal or abandonment.
   1. Alternative arrangements must be approved in writing by the DEPARTMENT's Representative.

B. Contact the DEPARTMENT at least 30 business days prior to the removal of the underground storage tanks. Notify the DEPARTMENT using forms or electronic means provided by the DEPARTMENT.

C. Provide, erect, and maintain temporary barriers and security devices.

D. Prevent movement or settlement of adjacent structures. Provide bracing and shoring.

E. Remove and dispose of abandoned conduit or piping.
   1. Identify disconnection locations on Project Record Documents.

F. Perform tank removal in a manner that will minimize dust, noise, and other nuisance. Maintain haul routes for disposal of material clean and free of debris.

G. Provide monitoring equipment at site as required by the Site Health and Safety Plan. Operate and maintain in accordance with manufacturer's recommendations.

3.02 STORAGE TANK LIQUID REMOVAL (IF APPLICABLE)

A. Prior to demolition of the USTs, empty the tanks as follows:
   1. Remove all product to its lowest draw-off point.
   2. Drain and flush piping into the tank (one or two gallons of water should be sufficient).
   3. Pump out the liquid below the draw-off point (tank bottom).
      a. Use an explosion-proof hand or vacuum pump.

b. Approximately 6" of liquid remains in the tank below the lowest draw-off point.
c. Pump out the entire tank bottom including the remaining product layer.

4. Bond equipment to tank and ground tank to a separate ground when purging tank with compressed air or inert gas under pressure.

5. Tank contents shall be properly disposed of in accordance with the DEPARTMENT, NYSDOT and local regulations. Provide proof of proper disposal to Environmental Consultant and DEPARTMENT's Representative.

3.03 TANK AND PIPING REMOVAL

A. Inert the interior atmosphere before tank demolition.

B. Disconnect suction, inlet, gauge and all other tank fixtures, except the vent line.

C. Spills or drips shall be contained to prevent contamination of soils during removal.

D. Excavate to uncover existing piping associated with the tank that was not previously removed as part of previous phases of work.
1. Remove all underground piping to the satisfaction of the DEPARTMENT.
2. Do not rupture tank or pipelines.

E. Cease operations and notify the DEPARTMENT's Representative immediately if adjacent structures appear to be endangered. Do not resume operations until corrective measures are taken, and written approval is received by the DEPARTMENT's Representative.

F. Except where noted otherwise, immediately remove demolished material from site.

G. Do not burn or bury materials on site.

H. Remove and properly dispose of all tank fluids.

I. Clean tank, components, and piping in accordance with applicable regulations and remove tank, components, and piping from site.

J. Dispose of removed materials from the site as Work progresses. Leave site in clean condition.

K. Dispose of all wastewater off-site in accordance with applicable federal, state, and local regulations.

L. Submit waste disposal documents. Organize and index records, and include the following:
   1. Waste characterization and waste profiles submitted to each permitted disposal facility. Include documentation of waste stream acceptance by the disposal facility.
   2. Bills of lading or receipts or certifications and weigh tickets generated during the handling and disposal process.
   3. Copies of all written approvals from duly authorized persons and agencies for the discharge of wastewater, where allowed, into storm or sanitary sewer systems, onto the ground, or into the groundwater.
   4. Copies of 6 NYCRR Part 364 permits for waste haulers used in the work, with a separate listing of the material hauled by each entity listed and the final disposal locations of each waste material removed from the site.

3.04 TANK CLEANING

A. Conduct tank cleaning procedures in accordance with the DEPARTMENT guidance documents and API Recommended Practice 1604.

B. Measure levels of combustible vapors and oxygen with a Combustible Gas Indicator (CGI), and initiate ventilation of the tank, if needed:
   1. Ventilate tank using a small gas exhauster until the vapor concentration is reduced to 10 percent or less of the lower explosive limit (LEL).
   2. Oxygen content shall range from 19.5 to 23.5 percent.

C. Ensure final vapor and oxygen concentrations are within the requirements noted above before proceeding to cut and dismantle the tank for its disposal.
   1. Methods for ensuring the tank has been made safe are outlined in Section 7 of NYSDEC's PBS guidance document "Permanent Closure of Petroleum Storage Tanks."

D. Cut openings in tank to facilitate tank cleaning after vapor and oxygen concentrations have been met.
   1. Total surface area of holes cut into tank shall be minimum of 2% of total surface area of tank, or a minimum of 9 square feet each opposite side or end.
   2. Maintain a minimum of two fire extinguishers on-site during cutting of tank.

E. Perform tank cleaning activities within twenty-four (24) hours of tank contents removal

F. Tank Cleaning: Include mopping, scraping and sweeping the interior of the tank. If applicable, comply with OSHA's confined space entry regulations.

G. Collect, contain and place residuals in a United States Department of Transportation approved drum for transporting and disposal.

3.05 CONTAMINATED MATERIAL DISPOSAL DOCUMENTATION (If Applicable)

A. Submit contaminated material disposal documentation prior to payment of any units involving disposal of contaminated materials.

3.06 DISPOSAL OF TANKS AND PIPING

A. Dispose of tanks and all removed appurtenances from the premises as quickly as possible.

B. Legally dispose or recycle the removed tanks and appurtenances in accordance with all local, State and Federal regulations.

C. Obtain disposal facility receipts noting proper tank and cleaning material disposal. Submit receipts to the DEPARTMENT's Representative.

END OF SECTION

SECTION 310513

SOILS FOR EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Subsoil materials.

B. Related Sections:
   1. Section 01 74 24 – Site Restoration
   2. Section 31 25 00 – Erosion and Sedimentation Controls
   3. Section 32 92 19 - Seeding

1.2 REFERENCES

A. American Association of State Highway and Transportation Officials:
   1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. ASTM International:
   1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)).
   2. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3)).
   3. ASTM D2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Materials Source: Submit name of imported materials source, sieve analysis and proctor.

1.4 SUSTAINABLE DESIGN SUBMITTALS (Not Used)

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with the State of New York Department of Transportation (NY-DOT) "Standard Specifications" for Construction and Materials

SECTION 310513

SOILS FOR EARTHWORK

1.6 DEFINITIONS

A. Backfill: Soil materials used to fill an excavation.

B. Base Course: Layer placed between the subbase course and asphalt paving.

C. Bedding Course: Layer placed over the excavated subgrade in a trench or pit before laying a structure.

D. Borrow: Satisfactory soil imported from off site for use as fill or backfill.

E. Drainage Course: Layer supporting slab-on-grade used to minimize capillary flow of pore water.

F. Rock: Solid mineral material with a volume in excess of 1 cubic yard or solid mineral material that cannot be removed with a 1 cubic yard capacity power shovel without mechanical, drilling, or blasting means.

G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

H. Subbase Course: Layer placed between the subgrade and base course for asphalt paving, or layer placed between the subgrade and a concrete pavement or walk.

I. Subgrade or Subsoil: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

J. Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

PART 2 PRODUCTS SUSTAINABILITY CHARACTERISTICS

2.1 SUBSOIL MATERIALS

A. Backfill and Fill: Use satisfactory soil materials.

1. Satisfactory Soils: ASTM D 2487 soil classification groups GW or GM; free of rock or gravel larger than 3.5 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

2. Unsatisfactory Soils: ASTM D 2487 soil classification groups GC, GM, SM, SC, MH,ML CL, CH, OL, OH, and Pt, or a combination of these group symbols. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction or with greater than 15% passing the No. 200 Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

C. Structural Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crashed sand; graded in accordance with ASTM C136 (AASHTO T27), within the following limits:

Sieve Size	Percent Passing
3.5"	100
3/4"	50-100
#4	25-75
#200	<15

On-site excavated soils should not be used within building footprints, or as structural fill beneath foundations.

D. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 TOPSOIL MATERIALS (Not Used)

2.3 SOURCE QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements: Testing and Inspection Services Testing and analysis of soil material.

B. Testing and Analysis of Subsoil Material: Perform in accordance with ASTM D1557.

C. When tests indicate materials do not meet specified requirements, change material and retest.

D. Furnish materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.1 EXCAVATION

A. Excavate subsoil and topsoil from areas designated. Strip topsoil to full depth of topsoil in designated areas.

B. Stockpile excavated material meeting requirements for subsoil materials and topsoil materials.

C. Remove excess excavated materials, subsoil, and topsoil not intended for reuse, from site.

D. Remove excavated materials not meeting requirements for subsoil materials and topsoil materials from site.

3.2 STOCKPILING

A. Stockpile materials on site at locations indicated.

B. Stockpile in sufficient quantities to meet Project schedule and requirements.

C. Separate differing materials with dividers or stockpile apart to prevent intermixing or contamination.

D. Stockpile topsoil 15 feet high maximum.

E. Direct surface water away from stockpile site to prevent erosion or deterioration of materials.

F. Stockpile unsuitable materials on impervious material and cover to prevent erosion and leaching, until disposed of properly off-site.

3.3 STOCKPILE CLEANUP

A. Remove stockpile, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

B. When borrow area is indicated, leave area in clean and neat condition. Grade site surface to prevent free standing surface water.

END OF SECTION

SECTION 31 10 00

SITE CLEARING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Clearing Trees and Vegetation in Work Areas.
   2. Disposal of Debris from Clearing Work.

1.2 REFERENCES

A. Work activities shall be performed in general compliance with American National Standards Institute (ANSI) Z-133: American Standard of Tree Worker Safety, and ANSI A300: Standard Practices for Trees, Shrubs, and Other Woody Plant Maintenance.

PART 2 PRODUCTS - Not Used.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify existing plant life designated to remain is tagged or identified.

C. Identify waste and stockpile areas for placing removed materials.

3.2 PREPARATION

A. Call Dig Safely New York at 811 and receive clearance not less than two full working days before performing Work.
   1. Request underground utilities to be located and marked within and surrounding construction areas.

3.3 PROTECTION

A. Locate, identify, and protect utilities from damage unless drawings indicate otherwise or the DEPARTMENT approves their removal.

B. Protect and maintain any existing wells from damage unless drawings indicate otherwise or the DEPARTMENT approves their removal.

C. Protect benchmarks, survey control points, and existing structures from damage or displacement.

D. Protect trees not shown to be removed on the Drawings, unless approved otherwise by

ENGINEER.

3.4 CLEARING AND GRUBBING

A. Clear trees and vegetation as required for access to site and execution of Work as directed by DEPARTMENT/ENGINEER. Do not clear trees without DEPARTMENT/ENGINEER approval.

3.5 DEBRIS REMOVAL

A. Do not burn or bury materials on site, unless specifically stated otherwise. Leave site in clean condition.

B. Removed items shall become the property of the CONTRACTOR and shall be disposed of by the CONTRACTOR according to state and local regulations unless otherwise stated by the DEPARTMENT.

END OF SECTION

SECTION 31 25 00

EROSION AND SEDIMENTATION CONTROLS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Erosion Protection

1.2 REFERENCES

A. New York State:
   1. Standards and Specifications for Erosion and Sediment Control (current edition).
   2. Stormwater Design Manual (current edition).
   3. New York State Department of Transportation (NYSDOT) Standard Specifications (current edition).

1.3 SUBMITTALS

A. Specification Section 01 33 00 – Submittal Procedures.

B. Manufacturer's Certificate: Certify silt socks/wattles/silt fence, inlet protection meet or exceed New York State Erosion, Sediment & Stormwater requirements.

1.4 EROSION AND SEDIMENT CONTROL

A. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.

B. The excavation, grading, and moving of soil materials shall be scheduled to minimize to the extent practical, the size of areas that will be unprotected from erosion. Disturbed areas shall be restored according to the Technical Specifications and Contract Drawings, as soon as is feasible.

C. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

D. Erosion control devices shall be installed as necessary to minimize and control erosion during and subsequent to construction. Erosion controls shall remain in place during the entire construction period or as otherwise specified. The CONTRACTOR shall:

E. Protect the work from erosion. Erosion of embankments, cuts, and natural slopes that occurs during construction of the project shall be repaired by the CONTRACTOR at his expense.

F. Protect downstream and adjacent properties, drainage channels, and streams from damage due to erosion resulting from project construction operations.

PART 2 PRODUCTS

2.1 SILT SACK

A. SILTSACK Regular Flow with following properties:

1.	Grab Tensile Strength (lbs)	300	ASTM D4632
2.	Elongation at Failure (%)	15	ASTM D4632
3.	Mullen Burst Strength (psi)	750	ASTM D3786
4.	Puncture Strength (lbs)	125	ASTM D4833
5.	Flow Rate (gal/min/sf)	180	ASTM D-4491
6.	UV Resistance @500 hours (%)	75	ASTM D-4355

PART 3 EXECUTION

3.1 INLET PROTECTION DEVICES

A. Install Siltsacks® in catch basins in accordance with manufacturer's instructions.

3.2 REMOVAL OF MATERIALS

A. Following completion of the project, all materials shall be removed from the Site.

3.3 MAINTENANCE

A. Maintain the erosion and sediment control measures in good and effective operating condition by performing routine inspections to determine condition and effectiveness, and repair of erosion and sediment control measures. Use the following procedures to maintain the protective measures.
   1. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment control are in good working order.

3.4 INSPECTIONS

A. General
   1. Inspect disturbed areas of the construction site; areas that have not been finally stabilized; areas used for storage of materials; areas exposed to precipitation, stabilization practices, structural practices, other controls; and areas where vehicles exit the site at least once every seven (7) calendar days and within 24 hours of the end of any storm that produces 0.5 inches or more rainfall at the site, or as required. Once disturbed areas have been stabilized, the inspection schedule may be relaxed to once every month with the ENGINEER's approval.

B. Inspections Details
   1. Inspect disturbed areas and areas used for material storage that are exposed to precipitation for evidence of, or the potential for, sediment entering the drainage system.

Observe erosion and sediment control measures to ensure that they are operating correctly. Inspect discharge locations or points to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Inspect locations where vehicles exit the site for evidence of offsite sediment tracking.

C. Inspection Reports
   1. For each inspection conducted, prepare a report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, maintenance performed, and actions taken. A copy of the inspection report shall be maintained on the job site and furnished to ENGINEER upon request.

3.5 CLEANING

A. When sediment accumulation in sedimentation structures has reached a point one-third depth of sediment structure or device, remove and dispose of sediment.

B. Do not damage structure or device during cleaning operations.

C. Do not permit sediment to erode into construction or site areas or natural waterways.

END OF SECTION

SECTION 32 92 19

SEEDING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes
   1. Seeding.
   2. Mulching.
   3. Maintenance.

1.2 SUBMITTALS

Submittal Section 01 33 00 - Submittal Procedures.

A. Delivery schedule of all materials.

B. Written calendar time period for the vegetation establishment period. When there is more than one vegetation establishment period, describe the boundaries of the vegetated area covered for each period.

C. Prior to delivery of materials, certifications that materials meet requirements specified.

D. Seed reports - mixture, percent pure live seed, minimum percent germination and hard seed, maximum percent weed seed content, date tested and state certification.

E. Fertilizer - chemical analysis, composition percent.

F. Mulch - chemical analysis, composition percent.

G. Product data, manufacturer's specifications and recommended application rates shall be submitted and approved prior to scheduling delivery.

1.3 QUALITY ASSURANCE

A. Provide seed mixture in containers showing percentage of seed mix, germination percentage, inert matter percentage, weed percentage, year of production, net weight, date of packaging, and location of packaging.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable.

B. Except for bulk deliverables, materials shall not be dropped or dumped from vehicles. Materials shall be handled so as to prevent damage.

C. Materials will be inspected upon arrival by ENGINEER for conformance to specifications.

D. Materials shall be stored in areas that provide protection from damage. Seed shall be stored in a cool, dry location away from contaminants.

E. Seed and fertilizer will be stored in cool, dry locations away from contaminants.

F. Chemical treatment materials will not be stored with other landscape materials.

1.5 GUARANTEE

A. Vegetative growth shall be guaranteed for one year from the date of final completion.

B. At the end of the guarantee period, any dead, unhealthy or badly impaired areas shall be replaced.

C. All replacements shall be in kind and at no additional cost to the DEPARTMENT.

PART 2 PRODUCTS

2.1 SEED MIXTURE

A. State-approved seed of the latest season's crop shall be provided in original sealed packages bearing the producer's guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material.

B. Labels shall be in conformance with AMS-01 and applicable state seed laws.

C. Seed mixtures shall meet the requirements of NYSDOT Standard Specifications Section 713-04.

D. Seed Mixtures—All species and their cultivars or varieties must be disease and insect resistant, not considered noxious or invasive, guaranteed hardy and adapted for the locality, and among the top 25% of commercially-available seed types as rated by NTEP (National Turfgrass Evaluation Program). Approved manufacturers: https://www.dot.ny.gov/divisions/engineering/technical-services/technical-services-repository/alme/pages/71304.pdf

1. Lawn Seed Mix for disturbed residential lawn areas shall meet NYSDOT Standard Specification requirements for Lawn Seed Mix defined in Section 713-04.
   a. Lawn Seed Mix shall consist of the following seed mixture:

Common Name	**Scientific Name**	**Percent**
Kentucky Bluegrass (3 var. mix)	*Poa pratensis*	15-40
Fine Fescue (2 var. min. must include creeping red)	*Festuca rubra var.*	30-50
Perennial Ryegrass (2 var. min)	*Lolium perenne*	15-40
Annual Rygrass	*Lolium multiflorum*	5-15

2. General Roadside Seed Mix for all other disturbed areas as indicated in the Contract Drawings shall meet NYSDOT Standard Specification requirements for General Roadside Seed Mix defined in Section 713-04.
   a. General Roadside Seed Mix shall consist of the following seed mixture:

Common Name	**Scientific Name**	**Percent**
Fine Fescue (2 var. min. must include creeping red)	*Festuca rubra var.*	50-70
Perennial Ryegrass (2 var. min)	*Lolium perenne*	15-40
Annual Rygrass	*Lolium multiflorum*	5-15
Clover (White preferred)	*Trifolium repens*	5-10

E. Weed seed shall not exceed one percent by weight of the total mixture.

F. Wet, moldy or otherwise damaged seed shall be rejected.

2.2 FERTILIZER

A. Fertilizer may be used with permission by the ENGINEER. The CONTRACTOR must submit the fertilizer details to the ENGINEER for approval prior to use.

B. Fertilizer shall meet NYSDOT Standard Specification requirements defined in Section 713-03.

2.3 MYCORRHIZAL FUNGI

A. Mycorrhizal Fungi shall meet NYSDOT Standard Specification requirements defined in Section 713-09.

2.4 PESTICIDES

A. Pesticides shall meet NYSDOT Standard Specification requirements defined in Section 713-13.

2.5 MULCH

A. Mulch for turf establishment and erosion control shall meet NYSDOT Standard Specification requirements for either Type I Wood Fiber Mulch, Type II Cellulose Mulch, Type III Cellulose and Wood Fiber Mulch Blend, Type IV Cotton Hydro Mulch, or Type V Pelletized Hydro Mulch defined in Section 713-11.

B. Mulch shall be spread over all non-critical seeded areas.

C. Mulch shall be free from weeds, mold, and other deleterious materials.

PART 3 EXECUTION

3.1 SEEDING CONDITIONS

A. Seeding operations shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture, or other unsatisfactory conditions prevail, the Work shall be stopped when directed. When special conditions warrant a variance to the seeding operations, proposed times shall be submitted to and approved by the ENGINEER.

B. When drought, excessive moisture or other unsatisfactory conditions prevail, the work shall be stopped when directed by the ENGINEER.

C. When special conditions warrant a variance to the seeding operations, proposed times shall be submitted to and approved by the ENGINEER.

D. If permanent seeding cannot be completed within the dates specified in NYSDOT Standard Specifications requirements of Table 610-1 Sodding Seasons for U.S. Department of Agriculture R1, install temporary seed and mulch in accordance with NYSDOT Standard Specifications 209-3.03. If neither permanent nor temporary seeding can be installed within the recommended seeding periods, use temporary mulching or erosion control blanketing to protect the site and delay seeding until the next recommended seeding period.

3.2 PREPARATION

A. Identify all areas that will require seeding. This includes all disturbed areas.

B. Verify prepared soil base is ready to receive the Work of this section.

C. Prepare seeding surface to a smooth and equipment- track-free surface.

D. Fertilization shall be performed in accordance with NYSDOT Standard Specification Section 610-3.06 – Soil Amendments.
   1. Distribute fertilizer evenly over the surface of the soil in areas to be seeded as shown on the Contract Drawings or as directed by the ENGINEER. Fertilize with 600 pounds of 10-10-10 (N-P2O5-K2O) per acre (14 pounds per 1,000 square feet). Any application method that will ensure an even distribution will be acceptable.

E. Tillage:
   1. Soil on slopes gentler than 3:1 (horizontal to vertical) shall be tilled to a minimum depth of four inches.
   2. On slopes between 3:1 and 1:1, the soil shall be tilled to a minimum depth of two inches by scarifying with heavy york rakes or other method.
   3. Rototillers shall be used where soil conditions and length of slope permit.
   4. On slopes 1:1 and steeper, no tillage is required.

3.3 SEEDING

A. Sow grass seed in accordance with NYSDOT Standard Specifications requirements of Table 610-1 Sodding Seasons for U.S. Department of Agriculture R1, unless otherwise approved by CONSULTANT.

B. Prior to seeding, any previously prepared seedbed areas compacted or damaged by interim rain, traffic, or other cause, shall be reworked to restore the ground condition previously specified. Seeding operations shall not take place when the wind velocity exceeds five miles per hour and will prevent uniform seed distribution.

C. Seed shall be uniformly drill seeded. Evenly distribute the seed by sowing equal quantities in two directions at right angles to each other and crossing over each other. Seed shall be uniformly drilled to an average depth of 1/2 inch and at the rates specified using equipment having drills not more than 6-1/2 inches apart. Row markers shall be used with the drill seeder.

D. Application Rates:
   1. Lawn Seed Mix: 30 pounds (lbs.) per acre
   2. Highland Terrace Seed Mix: 20 lbs. per acre
   3. General Roadside Seed Mix: 30 lbs. per acre

E. Immediately after seeding, except for slopes 3-horizontal-to-1-vertical and greater, the entire area shall be firmed with a roller not exceeding 90 pounds for each foot of roller width. Areas seeded with seed drills equipped with rollers shall not be rolled.

F. Water all seeded areas until grass is well established, as described in Section 3.6.

G. Do not seed shoreline areas in excess of that which can be covered with Erosion Control Blanket on same day.

H. Do not seed immediately following rain, when ground is too dry, or when winds are over 12 mph.

3.4 CRITICAL AREA SEEDING

A. Critical areas are all areas with a slope greater than 4:1.

B. Critical areas shall be seeded within 48 hours of final grading.

3.5 MULCHING

A. Mulching shall be performed on the same day as seeding. The CONTRACTOR shall use prairie hay fixed in place with mechanical anchoring on all slopes less than 4:1.

B. Mulch shall be spread uniformly at the rate of two tons per acre. Mulch shall be spread by hand, blower-type mulch spreader or other approved method. Mulching shall be started on the windward side of relatively flat areas or on the upper part of a steep slope and continued uniformly until the area is covered. The mulch shall not be bunched.

C. Immediately following spreading, the mulch shall be anchored to the soil by a scalloped-disk land packer designed to force mulch into the soil surface, or other suitable equipment approved by the ENGINEER. Mulch that is not anchored to the soil will be rejected.

3.6 SEED PROTECTION

A. Immediately after seeding, the area shall be protected against traffic or other use by erecting barricades and providing signage as required, or as directed by the ENGINEER.

3.7 VEGETATION ESTABLISHMENT PERIOD

A. Seeded areas shall be watered at a minimum as follows:
   1. Water twice a day (to apply a minimum of ¼ inch per watering event) for seven days to promote seed germination, then
   2. Water once a day (to apply a minimum of ¼ inch per watering event) for seven days, then
   3. Water three times a week to apply a minimum of 1 inch per week for an additional 28 days.
   4. Skip the next watering event if a rain event occurs that is greater than the amount to be applied during that water event.

B. Control growth of weeds. Apply herbicides to seeded areas. Remedy damage resulting from improper use of herbicides. Manually or mechanically remove weeds from seeded areas or complete weed removal by other methods in these areas as approved by ENGINEER.

C. Control pests that may hinder vegetation establishment.

D. Immediately reseed and water areas showing bare spots.

E. Repair washouts or gullies.

F. Vegetation Establishment Period execution shall continue until:
   1. Minimum watering events have been completed.
   2. Vegetative cover is established over 95 percent of seeded areas.
   3. Not more than five percent of areas with bare spots larger than one square foot.
   4. Less than 15 percent invasive species are present at areas vegetated by CONTRACTOR.
   5. Written approval by ENGINEER.

G. If vegetation establishment is inadequate as determined by the ENGINEER, the CONTRACTOR shall follow up with a single visit, within two weeks, to add soil in rills as determined necessary at the time, prepare seed bed, seed, and mulch in accordance with the specifications.

H. If the project area is seeded in the late fall or winter where vegetation cannot be established, the CONTRACTOR is responsible for any reseeding required in the following spring to establish vegetation in all disturbed areas.

3.8 MAINTENANCE

A. Maintenance of the seeded areas shall include eradicating weeds, eradicating diseases and insects, protecting embankments and ditches from erosion, maintaining erosion control materials and mulch until growth is satisfactorily established, protecting turfed areas from traffic and mowing to maintain turf stand, watering and post fertilization.

B. Mow entire seeded area once to a height of 6 inches after final completion during the guarantee period when the stand of grass is between 12 and 24 inches in height.

C. Watering shall be at intervals to obtain moist soil condition to a minimum depth of 1 inch. Frequency of watering and quantity of water shall be adjusted in accordance with the growth of the vegetation. Runoff, puddling and wilting shall be prevented.

D. Nitrogen carrier fertilizer shall be applied at the rate of no more than 0.5 pounds per 1000 square feet after the first month and again prior to the final acceptance. The application shall be timed prior to the advent of winter dormancy and shall avoid excessively high nitrogen levels. Notify ENGINEER at least one week prior to application.

E. The CONTRACTOR shall re-establish as specified herein, eroded, damaged or barren areas. Mulch shall be repaired or replaced as required.

END OF SECTION