

PERIODIC REVIEW REPORT

Ballpark at St. George Station Staten Island, New York NYSDEC Site No. V00228

Prepared for

**New York City
Economic Development Corporation**
New York, New York

Prepared by



TRC Environmental Corporation
New York, New York

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TRC Project No. 341863

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ENGINEER OF RECORD CERTIFICATION

I, James Peronto, am currently a registered professional engineer licensed by the State of New York and that this Periodic Review Report was prepared in accordance with all applicable statutes and regulations and in substantial accordance with the Department-approved Site Management Plan for the Ballpark at St. George Station Site on Staten Island, New York (NYSDEC Site No. V00228).

For each institutional or engineering control (IC/EC) identified for the Site, except as noted below and on the completed IC/EC certifications, I certify that all the following statements are true:

- (a) the institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by DER;
- (b) nothing has occurred that would impair the ability of such control to protect public health and the environment;
- (c) nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control;
- (d) access to the site will continue to be provided to DER to evaluate the remedy, including access to evaluate the continued maintenance of this control; and
- (e) if a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for their intended purpose under the document.

Exceptions to the above certification of the institutional and engineering controls include the following:

- 1. The filing of an updated deed restriction allowing use of the property for commercial and/or industrial uses is in process as indicated in Section 3.2 and the associated NYSDEC letter in Appendix H.
- 2. The incomplete site cover on the NY Wheel area where the final site cover has not been constructed and the existing temporary cover area is fenced thereby restricting public access as described in NY Wheel area PRR in Appendix E.
- 3. The indoor combustible gas monitoring system has not yet been installed for the Terminal Building on the NY Wheel Site where the building interior construction is not complete, and the building is not operational or occupied.
- 4. Repair of the Site shoreline stabilization features where parts of the shoreline seawall have collapsed and soil and riprap stone covers are deteriorated must be completed in accordance with a NYSDEC-approved Corrective Measures Work Plan.


All use restrictions, institutional controls, engineering controls and/or any operation and maintenance requirements applicable to the site are contained in a deed restriction created and recorded pursuant to ECL 71-3605 and that any affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.



09/30/2025

Date


Signature

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

1.0 INTRODUCTION

TRC Environmental Corporation (TRC) was retained by the New York City Economic Development Corporation (NYCEDC) to conduct an annual periodic review and prepare a Periodic Review Report (PRR) for the Ballpark at St. George Station site (hereinafter referred to as the “Site”) on Staten Island, New York. The location of this Site is shown on Figure 1. The subject Site was reportedly utilized as a railroad locomotive and railcar servicing and maintenance facility and a railcar switchyard from 1883 to 1994. The City of New York purchased the Site in November 1998 for the development of a minor league baseball stadium and accessory public parking lots. The stadium, known as the Richmond County Bank Ballpark, is the home of the Staten Island Ferry Hawks (formerly the Staten Island Yankees). The stadium development plan is provided as Figure 2. This PRR covers the period from June 22, 2024 to June 11, 2025 (the date of TRC’s 2025 site inspection). The last PRR for the Site was prepared by TRC in July 2024 for the July 1, 2023 to June 21, 2024 period (the date of TRC’s 2024 site inspection).

Since the stadium was constructed and opened in 2001, portions of the Site were redeveloped. The Site was previously subdivided to include the Empire Outlets site (also referred to as “South Site 2”) on the south side of the baseball stadium and the New York Wheel site (also referred to as “North Site 1”) on the north side of the baseball stadium. Figure 3 provides the locations of both development projects on the Site. A copy of the PRR for the New York Wheel site and the Site Inspection Report for the Empire Outlets site, which were prepared by others for each of these two areas on the Site, are provided in Appendices E and F.

TRC was retained by the NYCEDC to conduct several phases of environmental investigations of this property from 1998 to 2000. On December 1, 1999, the New York State Department of Environmental Conservation (NYSDEC) and the City of New York entered into a Voluntary Cleanup Agreement (VCA) (Index Number W2-0852-99-10) that required the completion of the site investigation and remediation, if necessary. A Notice of Agreement documenting the finalization of the VCA for all parties who may acquire interest in the property was filed with Richmond County in December 1999.

The subject property is located in the northeastern St. George section of Staten Island. The subject site consists of approximately 52 acres of shoreline property, of which 26 acres comprise upland area and the remaining 26 acres are located under water. The Site includes the approximately 2.2-acre South Site 2 (Empire Outlets) in its southeastern portion and the

approximately 8.9-acre North Site 1 (New York Wheel) in its northwestern portion both shown on Figure 3. The aerial photograph on Figure 4 shows the South Site 2 area in the northwestern portion of the Site (within red-colored Site boundary outline) and the adjoining off-site South Site 1 area in the southeastern portion of the Empire Outlets building development footprint.

The Site is bounded by the following: a waterfront promenade along the New York Harbor to the northeast; a parking lot identified as South Site 1 to the southeast (with the Saint George Ferry Terminal beyond); Richmond Terrace roadway, which is highly developed with residences and small commercial/retail buildings, to the southwest; and undeveloped parkland and a portion of Bank Street to the northwest. The elevation of the Site is approximately 20 feet lower than the adjacent Richmond Terrace to the southwest, with a retaining wall separating the two.

The Site parcel was formerly identified on Tax Map Nos. 16 and 17 as Lot 20 of Block 2, excluding the railroad right-of-way. Since the redevelopment of the North Site 1 and South Site 2, Lot 20 was subdivided into Lots 15 (part of), 20 and 22 as shown on Figure 3.

Prior to the development of the minor league baseball stadium on the Ballpark at St. George Station Site, approximately three acres at the eastern end of the site were used as a public parking lot for the Staten Island Ferry terminal, located immediately east of the property. An area in the central portion of the site, approximately 3 acres in size and covered with shredded asphalt shingles, was also used for ferry parking. The western portion of the site, beyond the shingle-covered area, was characterized by an open grassed area with sparse tree growth. The entire northern edge of the site consisted of shoreline and various shoreline features including pilings, the remains of several dilapidated piers, damaged concrete bulkheads, and assorted debris. Several railroad tracks extended into the southern corner of the site. The only building was a small shack located at the eastern end of the site that was occupied by the parking lot attendant.

Remediation activities conducted prior to the baseball stadium development included the removal of an arsenic hot spot in the surface soil, the removal of lead hot spots in the sediments, the capping of soils containing polycyclic aromatic hydrocarbons (PAH) and metals with clean soil, pavement or structures. In addition, based on the detection of methane in the soil gas at several locations, a passive sub-slab gas venting system was installed below the concrete slab-covered areas of the new stadium building and indoor combustible gas monitoring system was installed. The soil and shoreline sediment removal locations are shown on the attached Figure 5.

In addition, the removal of soil contaminated with arsenic was conducted in the vicinity of surface soil sample SS-7 at the location shown on Figure 5. The top 12 inches of soil/fill materials were removed from the location. Prior to backfilling the area with clean soil, a permeable white filter fabric liner was placed over the excavation area as a demarcation liner.

Prior to the baseball stadium development, sediments contaminated with lead were removed from the vicinity of sediment samples SD-4 and SD-6. The top 3 feet of sediment was removed from these two shoreline areas shown on Figure 5. Prior to backfilling the area with clean sand and gravel, a black geotextile filter fabric was placed over the excavated shoreline area. The geotextile filter fabric used is a non-biodegradable, black, ultraviolet resistant, nonwoven, needle punched polypropylene fabric. Natural stone riprap was provided over the SD-4 and SD-6 removal areas and along much of the shoreline for stabilization and to prevent erosion.

Capping of other contaminated soils/fill across the Site was accomplished through the construction of baseball stadium development features (e.g., pavement, structures, riprap) or through the placement of a clean soil cover over impacted soil materials. Clean soil covers are present over areas of the site not covered by paved surfaces or permanent structures (e.g., buildings). The clean soil cover consists of at least 18 inches of clean soil in the open landscaped areas, except for the areas immediately surrounding the large pre-existing trees in the western-most wooded park area, where at least 6 inches of clean soil cover exists except for immediately adjacent to existing mature trees with exposed roots where a 6-inch thick layer of wood mulch is present. Some of the bermed landscaped areas have clean soil thickness of up to 36-inches in depth. The top 6 to 8 inches of all clean soil covers consist of topsoil material.

A permeable demarcation filter fabric was also placed below the soil cover layer in areas not covered by buildings or pavement with less than 18 inches of clean soil cover. The filter fabric liner was not placed within the drip line of existing and new trees or shrubs in this area, due to concerns regarding plant mortality. The fabric used is a light-duty, permeable, non-biodegradable, white geotextile fabric.

The stormwater management system installed for the baseball stadium development consisted of a series of swales and catch basins across the developed area that collected and directed stormwater to two hydrodynamic separator devices, four onsite detention basins and to stormwater outfalls along the shoreline. The two separators and four detention basins collected stormwater runoff from the paved parking lots and roadways to provide for the removal of solids and floating debris prior to

discharge to shoreline outfalls. Under the Site redevelopment, the one separator device and two detention basins on the Empire Outlets site (South Site 2) were eliminated and replaced with new stormwater management practices. Whereas, on the NY Wheel site (north Site 1), the central detention basin adjacent to the west side of the stadium was eliminated. The new stormwater management practices associated with the fully developed NY Wheel site will be installed when this site development is completed. The western-most basin in the wooded area just west of the NY Wheel site remains on the Site. The inspection of the eliminated basins and separator is no longer a part of annual site inspection reported in this PRR. The new stormwater controls installed or planned as part of the site development projects include a combination of underground stormwater detention systems and hydrodynamic separators located in the new development site areas. Descriptions of the new stormwater controls installed or planned on the Site for each of the two development projects are included in each of the respective attached reports in Appendix E and F.

A passive sub-slab methane venting system and interior continuous combustible gas monitoring system was installed for the ballpark stadium building during the construction of the baseball stadium in 2000-2001. The sub-slab vent piping consists of solid and perforated PVC piping. The piping consists of interconnected sections of solid and perforated 4-inch diameter Schedule 40 polyvinylchloride (PVC) pipe in below-grade gravel filled trenches overlain by a 6-inch thick interconnecting gravel layer. The tops and sides of the perforated piping are covered with a filter fabric to prevent clogging of the piping perforations with backfill and cover materials. In those areas finished with a concrete slab, the gravel layer is overlain with a 6-mil thick plastic vapor barrier. The plastic is covered with a sand layer that underlies the concrete slab. The vent piping exits the building as a set of four pipes at two locations: at the far, northwestern end of the stadium structure (left field side) and at the far northeastern end of the stadium structure (right field side). Generally, each set of vent pipes is associated with sub-slab vent piping that covers that half of the stadium. The vent piping that exits the building is constructed of 4-inch diameter Schedule 40 steel pipe. The steel piping is painted black for corrosion protection. Each pipe terminates at a gooseneck end with a mushroom cap and screen. The exterior vent pipe gooseneck sections are enclosed in chain link fencing.

In conjunction with the installation of the methane venting system, a continuous interior combustible gas monitoring system was installed in 2001 within the lower level of the stadium structure in areas where methane accumulation was considered to be a potential concern. The

original indoor fixed combustible gas monitoring system, that consisted of 18 sensors and a monitoring panel, was replaced in 2022 after the sensors began to fail and were no longer supported by the manufacturer Sentry. The new monitoring system consists of a new Sentry 5000-32IT controller and 18 new Sentry Model 5100-28-IT infrared combustible gas detectors. The new controller and sensors were installed at the same locations as the original gas monitoring system using the prior electrical layout. Drawings depicting the layout and details for the gas monitoring system are included in Appendix D.

As presented in Section X of the VCA, institutional controls in the form of a deed restriction known as a Declaration of Covenants and Restrictions were originally recorded on September 14, 2005 with the Office of the Richmond County Clerk, Staten Island, New York. In line with recent site redevelopment activities, NYCEDC submitted a request to modify the deed restriction to specifically allow use of the property for commercial and/or industrial uses (versus the existing deed restriction language that prohibits use for any purpose other than as a sports stadium, public parking lot, and water-front esplanade). On January 5, 2022, NYSDEC issued a letter to NYCEDC approving this change of use restrictions. A copy of the letter is provided in Appendix H. A filing for the revised deed restriction incorporating the revised use restriction language in the NYSDEC letter is being prepared by the NYC Law Department for NYCEDC along with an updated metes and bounds property boundary Site survey map for submittal to NYSDEC for review and approval. A copy of the updated survey map set with the current property lot layout and the Site metes and bounds description is provided in Appendix I. Following NYSDEC's approval of the revised deed restriction and updated map, it will be submitted by the NYC Law Department to the Richmond County Clerk's Office for recording. The current deed restriction requirements include the following:

- a provision that the City of New York, on behalf of itself and its successors and assigns, consents to the enforcement by the NYSDEC, or if at any such time the NYSDEC shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens (hereafter referred to as the "Relevant Agency"), of the deed restrictions and covenants not to contest such enforcement;
- a land use restriction that prohibits the site from ever being used for purposes other than for the current use, which is a minor league baseball stadium, public parking lot and water-front esplanade, without prior permission from the NYSDEC, or if at any such time the NYSDEC shall no longer exist, any New York State agency or the Relevant Agency;

- a site ground water use restriction that prohibits the use of ground water underlying the site without treatment rendering it safe for drinking water, irrigation, or industrial purposes, as appropriate, unless prior written permission to use site ground water without treatment is obtained from the NYSDEC or the Relevant Agency;
- a requirement that the City of New York and its successors and assigns are to continue in full force and effect any institutional and/or engineering controls required, including the sub-slab methane venting system and the gas monitoring system, pursuant to the VCA and maintain such controls unless prior permission to discontinue such controls is obtained from NYSDEC or the Relevant Agency;
- a requirement that written approval be obtained from NYSDEC or the Relevant Agency prior to any excavation activities on the site exceeding the following limitations: the clean soil cover consisting of at least 18 inches in open areas, the clean soil cover and filter fabric demarcation layer in the western wooded open area, the paved surfaces and underlying imported subgrade layer, and the footprints of existing buildings and structures and underlying imported subgrade materials. The limits of the above described areas are shown on the site map provided in Schedule B of the deed restriction. If excavation occurs on the property, any soils excavated must be managed, characterized and properly disposed of off-site in an approved and permitted facility in accordance with regulations and directives of the NYSDEC or Relevant Agency, or re-deposited onsite and covered with filter fabric and clean soil cover, unless it is demonstrated to the satisfaction of the NYSDEC or Relevant Agency that such soil is not contaminated with any substance that will pose a risk to human health; and
- a requirement that any deed of conveyance of the property, or any portion thereof, shall indicate that the conveyance is subject to the Declaration of Covenants and Restrictions, unless the NYSDEC or Relevant Agency has consented to the termination of such covenants and restrictions.

TRC prepared an Operation Maintenance and Monitoring (OM&M) Plan for the Site in March 2006. The OM&M Plan summarized the completed remedial activities and presented the operation, maintenance, and monitoring requirements for the Site remedial measures to ensure the long-term protection of public health and the environment. The OM&M Plan was used by AKRF to prepare a Site Management Plan (SMP) in February 2015 based on the NYSDEC SMP template. The SMP was updated by AKRF for the NY Wheel site in September 2016 with the addition of a Health and Safety Plan (HASP) Addendum (SMP Appendix E) and a Gas Monitoring System Operations & Maintenance (O&M) Plan (SMP Appendix P). The SMP is being updated by AKRF to address the following: any changes in the Site cover since 2016, the new synthetic turf athletic field cover system that was installed in the ballpark stadium, the new indoor gas monitoring system

installed in the ballpark stadium, the indoor gas monitoring system installed in the Empire Outlets complex, and an updated Excavation Work Plan to reflect regulatory changes since 2016.

This Periodic Review Report along with the attached Institutional and Engineering Controls (IC/EC) Certification Form (Appendix A) is required to be completed and submitted to NYSDEC to document compliance with the SMP and to certify that the institutional and engineering controls are unchanged (unless otherwise approved by NYSDEC) and the remedy remains protective of public health and the environment. Also provided are copies of the PRR and Site Inspection Report prepared for the North Site 1 (New York Wheel) and the South Site 2 (Empire Outlets) parts of the Site in Appendices E and F, respectively. Copies of completed/signed IC/EC Certification forms for both of those Site parcels are also provided in Appendix A as supporting documentation for the IC/EC form provided for the entire Site. Section 2 of this report provides an overview of the findings of the site inspections that were conducted by TRC for the periodic review of the baseball stadium portion of the Site between South Site 2 and North Site 1. Conclusions and any required corrective measures for the overall Site and the associated certifications are provided in Section 3.

2.0 SITE INSPECTION

The accessible soil-covered areas, paved surfaces, shoreline stone riprap, stadium building ground level concrete floor slab, and sub-slab gas vent pipes associated with the baseball stadium portion of the Site (Lot 20) were inspected by TRC to verify their continued long-term integrity. This included the Site area between the South Site 2 (Empire Outlets) and North Site 1 (New York Wheel) as well as the shoreline of the Site. In addition, the baseball stadium building indoor combustible gas monitoring system was inspected to verify its continued operation. The Site areas occupied by the construction sites for the adjacent New York Wheel (Lot 21) and Empire Outlets (part of Lot 15) developments are being inspected by others and, as a result, the documentation of the inspections associated with each are presented separately with the reports in Appendices E and F, respectively.

The annual baseball stadium and shoreline area site inspection was completed on June 11, 2025 by Mr. Robert Bowden of TRC under the direction of Mr. James Peronto of TRC; both are State of New York-licensed Professional Engineers (PEs). A copy of the completed TRC Annual Site Inspection Log is provided in Appendix B. Copies of photographs taken during the TRC site inspections documenting the observed conditions are provided in the photograph log in Appendix C. Specific photo numbers from the photograph log are referenced in the site inspection findings summarized below.

Covers

The annual site inspections included visual walkover surveys of the soil covered areas. The items inspected included the vegetation, any mulch cover, and the topsoil for any signs of erosion, settlement, subsistence, movement, or other undesirable conditions. During the site inspection, areas where sparse vegetation growth was observed includes the former playground/lawn area outside of the left field fencing (Photo 3) a landscaped area along the northwest edge of the stadium area (Photo 7), and several areas in the landscaped area that runs between the paved roadway and shoreline esplanade area along the northern side of the stadium (Photos 11). Although access was restricted to the western wooded area that was fenced off due to the adjacent New York Wheel incomplete project and paused construction activities, tall grass/weed vegetation was observed present over most of this isolated wooded area (Photo 31). **The bare soil areas must be**

revegetated with grass or otherwise permanently stabilized (e.g., install and maintain a wood mulch cover layer) to prevent erosion of the soil cover.

The inspections also included visual walkover surveys of paved areas (concrete sidewalk, pavers, and asphalt roadway) which included the portion of Bank Street between the stadium and the shoreline and the western plaza area near left field (Photos 1, 4, 6, 9, and 10). Damaged areas in the concrete sidewalk (e.g., cracks), were noted during the inspection (Photo 10). However, none of the underlying subbase was observed at observed damaged concrete locations.

The asphalt paved roadway damage (e.g., large cracks, potholes) documented in the prior site inspections was repaired by a NYCEDC contractor with the repaving of the roadway in August 2024. The road area repaved is a 540-foot-long section of the 24-foot wide roadway section that runs adjacent to the stadium between the September 11th Memorial Plaza (adjacent to the stadium left field plaza entrance) and the ferry landing/stadium right field plaza entrance. The repaving included the following: milling/removal of asphalt top course to 2 inch depth, offsite disposal of millings, application of tack coat on milled asphalt surface, installation of 2-inch thick Type 6 asphalt top course, and the striping of new pavement with standard traffic paint double yellow center line, bike lane symbols and crosswalks.

The interior ground-level concrete floor slab of the stadium building was inspected to observe the condition of both previously repaired and noted new floor cracks that needed to be caulked, sealed and/or otherwise repaired to minimize potential sub-slab vapor intrusion. During the inspection, TRC observed that all significant floor cracks had been filled (Photos 39 through 41). The cracks were filled by the stadium operator in May/June 2025 with Quikrete Concrete Crack Seal.

Subslab Passive Exterior Gas Vent Pipes

The exterior steel vent pipes of the sub-slab passive gas venting system were inspected to ensure that they are in good condition and secure. Sets of gas vent gooseneck pipes are located inside fenced enclosures located outside of the right field/first base line and left field/third base line walls. In addition, gas measurements were obtained from each vent pipe with a portable organic vapor analyzer and a portable landfill gas meter. As indicated in the Gas Survey Log completed by TRC and provided in Appendix B, no organic vapors or methane gas were measured at the vent pipes during the June 2025 site inspection.

Gas vent pipe aspects inspected include the general condition of the exterior steel vent piping, any corrosion on the piping, the pipe end caps/screens, and the chain-link fencing enclosure surrounding each set of the vent pipes. The sets of four vent pipes located at both the northwestern end (left field/third base line side) and northeastern end (right field/first base line side) of the stadium structure were inspected. The fencing for the easternmost (right field side) vent piping was replaced in 2022 as part of the construction of the new ferry landing utility interconnect and the fencing was observed to be in good condition. However, there is significant vegetation observed growing within the right field fenced enclosure that requires eradication/removal (Photo 13). At the westernmost vent piping (left field side), TRC observed a small amount of vegetation growing in the enclosure and that the west side of the chain-link fence enclosure was partially open and had been partly secured with wiring (Photo 12). **Based on these findings, the following corrective measures are required at the two fenced enclosures: eradicate/remove the vegetation from both locations and the western (left field) fence enclosure must be properly secured to the corner posts and top rail with fence clips.**

Site Shoreline

The stone riprap and gravel cover present at the SD-4 and SD-6 shoreline sediment remediation areas was visually inspected. Items assessed during the inspection included the continued uniform presence of stone riprap and gravel cover across the two remediation areas and any exposure of the underlying black filter fabric demarcation liner. As was the case in the prior site inspections, TRC observed that much of the armor stone covering the SD-4 area had been washed away and as a result much of the underlying gravel cover is exposed and unprotected. **As part of the shoreline restoration work, larger/heavier stone riprap must be replaced over this**

entire SD-4 area to fill in those areas where the prior smaller/lighter stone cover has washed away and to cover the remaining smaller stone/concrete debris and gravel. At location SD-6 adjacent to the September 11th Memorial Plaza deck that overhangs the shoreline, there is still sufficient large stone cover present along with the underlying gravel visible between the stone cover (Photo 20).

At other locations along the site shoreline, TRC observed the collapse of the concrete seawall/bulkhead and the loss of riprap and gravel fill from along the base of the bulkhead along portions of the shoreline. Due to this condition, portions of the shoreline concrete seawall/bulkhead collapsed following a significant 2010 storm event and, as a result, sections of the adjacent inland soil area having at least an 18-inch thick, clean soil cover had also collapsed (dropped approximately 6 inches to 1 foot). During the July 2012 inspection, the underlying white demarcation filter fabric or historic fill soil were not evident in the collapsed shoreline soil areas. However, after Hurricane Sandy in October 2012, additional clean soil cover eroded and the underlying white demarcation fabric and/or underlying fill was exposed at several locations inland and adjacent to the retaining wall along the shoreline. Adjacent to the idle New York Wheel construction site is where the concrete seawall/bulkhead was previously observed undermined/collapsed and the adjacent inland soil eroded. The concrete seawall/bulkhead along the entire site shoreline continues to be undermined by wave action and the underlying gravel fill eroded (Photos 21 through 31). At one shoreline locations (Photo 25 and 26), the concrete seawall/bulkhead and chain-link fencing that runs along the bulkhead has collapsed and broken away. In addition, one of the stormwater outfalls was observed to be partially blocked with some of the dispersed gravel fill along the shoreline (Photo 19) and another is blocked with washed ashore debris (Photo 28); both outlets should be cleared of obstructions and the concrete wingwall edges of all three outlets protected with stone riprap.

The NYC Office of Management and Budget (OMB) registered and assigned funding to NYCEDC for the shoreline seawall/bulkhead repair work. Federal Emergency Management Agency (FEMA) provided funding for the shoreline repairs and, as a result, a competitive public procurement was required along with a more detailed project review and approval process. After the original FEMA grant for the project expired in November 2022, the FEMA grant was reapproved in February 2023. The new FEMA grant expires in March 2026. NYCEDC has selected and contracted with Matrix New World Engineering for the engineering design,

preparation of project bid documents, and the review of competitive bids for the project construction.

The planned shoreline bulkhead restoration project includes in-kind repair, restoration, and enhancement of the waterfront between and including the North Shore Waterfront Esplanade Park to the west and the Staten Island September 11th Memorial Plaza to the east. This accounts for rehabilitation of approximately 2,000 linear feet (LF) of existing concrete retaining wall and in-kind replacement of rock revetment/riprap along this area. Additionally, three (3) existing NYCDEP stormwater outfalls will be reconstructed to fit within the new revetment footprint. The soil area behind the new cast-in-place concrete retaining wall will be backfilled to match existing grade and provided with a clean soil cover that meets the SMP requirements.

The following is the current schedule for the planned shoreline bulkhead restoration project design and construction.

Design Start: October 28, 2024

Design Completion: July 11, 2025

Construction Start: January 26, 2026

Construction Completion: November 30, 2026

Indoor Combustible Gas Monitoring System

The original indoor fixed combustible gas monitoring system installed in 2001 was replaced in 2022. The new system consists of a Sentry 5000-32IT controller and 18 new Sentry Model 5100-28-IT infrared combustible gas detectors. The new controller and sensors were installed at the same locations of the prior gas monitoring system. **Gas monitoring system manufacturers and TRC recommends that combustible gas monitoring system inspections and calibrations be conducted at least every 6 months. TRC recommends conducting the semiannual gas monitoring system calibrations during the Winter heating season and in the Spring just prior to the start of the minor league baseball season.**

The gas monitoring system inspections and calibrations are to be performed by persons qualified in the maintenance of the gas monitoring system. NYCEDC has issued a service contract to a factory-trained/certified company, Economy Plumbing & Heating, to conduct the inspections and calibrations of the gas monitoring system. Copies of records for the gas monitoring system inspections/calibrations conducted by Economy Plumbing & Heating on January 6, 2025 and June

11, 2025 are provided in Appendix D. The full system was inspected and successfully calibrated on June 11, 2025. A system inspection performed on May 27, 2025 indicated that one of the gas sensors (#112 in 1st Base Unoccupied Space) was faulty and could not be calibrated. The failed gas sensor module 112 was replaced on June 11, 2025 and the system was successfully calibrated that day by Economy Plumbing.

TRC checked the gas monitoring system control panel during TRC's June 11, 2025 site inspection. On that date, the screen of the monitoring system controller was observed to have no current alarms and no warnings (Photos 36 and 37). However, module trouble was indicated for sensor module 213(Photo 38). During the June 11, 2025 inspection, TRC downloaded an electronic copy of the History Report from the system controller. The History Report showed the trouble reports for sensors 112 and 213 and the cleared trouble reports. On June 11th, Sensor 213 was reset by Economy and passed calibration. As indicated above, sensor 112 was replaced on June 11th and the entire system passed calibration that day. A copy of the History Report downloaded by TRC on June 11, 2025 is provided with the Economy gas monitoring system inspection and calibration records in Appendix D.

During the June 11, 2025 site inspection, TRC also conducted an indoor ambient air survey of methane and organic vapors in the lower level of the stadium building including in each of the rooms where gas monitoring sensors are installed. The indoor air monitoring results are summarized on the completed copies of the Gas Survey Log provided in Appendix B of the PRR. As indicated on the completed logs, the following instrumentation was used in the field for the surveys: a Thermo Scientific TVA2020 toxic vapor analyzer equipped with a PID and FID and a Landtec GEM 5000 landfill gas analyzer for methane, oxygen, and carbon dioxide content. The findings of these surveys indicated no detectable methane gas (within $\pm 0.3\%$ accuracy) at the monitored locations. Low concentrations of organic vapors were detected with the flame ionization detector (FID) in the Commissary (10.16 ppm) and connecting Switch Gear Room (4.2 ppm) and Wet Vendor Room (2.5 ppm). The source of these detections appeared to be related to the nearby operation of a natural gas fired oven in the Commissary that was active at the time of the survey. The oven is provided with an overhead range hood for outdoor venting. The FID organic vapor detections are very likely related to active operation of the gas stove during the inspection. Very low FID concentrations were also detected in the Fire Pump Room (2.3 ppm)

and adjacent Hallway (1.2 ppm), however, there were no noticeable odors. None of the combustible gas monitoring system sensors at these locations had alarms.

3.0 CONCLUSIONS

Based on the findings of the Site inspections and status of the on-going Site construction activities, corrective measures are required to existing site engineering controls and the completion of new engineering controls currently under construction in the New York Wheel area is required to ensure the effective performance of the engineering controls and the continued protection of public health and environment. The following presents a summary of the engineering controls requiring corrective actions or construction completion for the baseball stadium area, the Empire Outlets area (South Site 2), and the New York Wheel area (North Site 1) portions of the Site. Also provided is a separate discussion of the Institutional and Engineering Controls Certification Forms (IC/EC Certification Form) completed for the Site including those completed for the Empire Outlets and New York Wheel projects. Copies of the supporting PRR and Site Inspection Reports including the certifications for the New York Wheel and Empire Outlets Site areas are attached as Appendices E and F, respectively. Copies of all the completed/signed IC/EC Certification Forms are also provided in Appendix A.

3.1 Corrective Measures Required

3.1.1 Baseball Stadium Site Area

Based on the findings of the site inspections, the required corrective measures include the repair/replacement of the damaged shoreline concrete seawall/bulkhead and replacement of armor stone riprap along parts of the site shoreline and seawall/bulkhead, including at the SD-4 shoreline sediment remediation location. Also, adjacent eroded inland clean soil cover and underlying soil areas must be restored and the grassed clean soil cover reestablished at the restored locations along the damaged seawall. Along the site shoreline, the separating demarcation fabric between any restored soil cover and underlying historic fill/soil must also be verified and reinstalled, as needed, and consistent with the original site remedy for the location. This shoreline area will be addressed under the shoreline bulkhead restoration project scheduled to start in January 2026.

The NYC Office of Management and Budget (OMB) registered and assigned funding to NYCEDC for the shoreline seawall/bulkhead restoration work which was provided by FEMA. NYCEDC has selected and contracted with Matrix New World Engineering for the design, preparation of project bid documents, and review of the competitive bids for the project construction. The following is the current schedule for the project design and construction.

Design Start: October 28, 2024

Design Completion: July 11, 2025

Construction Start: January 26, 2026

Construction Completion: November 30, 2026

In addition to the major shoreline repairs, minor repairs that are required to maintain other site remedy components include the revegetation of or placement of mulch over the stressed/heavily worn grassed lawn areas to protect the soil cover from erosion. None of these outstanding minor repairs are currently believed to present an immediate threat to public health or the environment. The NYCEDC and stadium operator are in the process of completing these repairs and expect to have them completed by Spring 2026.

A Corrective Measures Work Plan (CMWP) was previously prepared by TRC in 2013 for the shoreline seawall/bulkhead restoration corrective measures required for the Site shoreline. The CMWP is provided in Appendix G of this report. Since this plan was prepared, additional shoreline erosion has occurred, and the preliminary existing conditions and engineering design drawings provided with the plan are being updated by Matrix New World Engineering under contract to NYCEDC. The CMWP, including the design drawings and project schedule, is being revised with the updated design for the shoreline seawall/bulkhead restoration. The updated CMWP will be submitted to NYSDEC for review and approval prior to the shoreline restoration construction work.

The following environmental permits have been obtained for the shoreline bulkhead restoration project: United States Army Corps of Engineers permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344), and NYSDEC permit authorizations pursuant to Article 15, Title 5 Excavation & Fill of Navigable Waters, Article 25 Tidal Wetlands, and Section 401 Clean Water Act Water Quality Certification, a New York City Department of Environmental Protection (NYCDEP) Stormwater Construction Permit, and a New York City Department of Small Business Services (SBS) Waterfront Permits Work Permit (pending). Copies of the permits are provided with the IC/EC Certification for the Site in Appendix A.

3.1.2 Empire Outlets (South Site 2)

The following presents a summary of the engineering controls previously completed for the Empire Outlets area.

- The construction of the building concrete foundations/slabs and paved surfaces that serve as the site cover.
- The installation of vapor barriers and a passive sub-slab depressurization system (SSDS).
- The installation of an indoor combustible gas monitoring system.

Empire Outlets has retained R. Donovan & Son Electric Co. Inc. of Brooklyn, New York to conduct all maintenance on the gas monitoring system. On December 11, 2024, Donvan & Son Electric replaced four gas detectors located in Walgreens Back, Wetzel's Pretzels Front, Wetzel's Pretzels Back, Bake Culture Front that had previously failed calibration and another detector (Starbucks) that failed to calibrate on that date. The records for the purchase, replacement, and December 11, 2024 calibration of the detectors are provided in Appendix F.

Empire Outlets has retained GEI Consultants of Huntington Station, New York to conduct the annual site inspections. GEI conducted an annual site inspection of the Empire Outlets area on June 30, 2025. A copy of the GEI inspection report is provided in Appendix F. The findings of the GEI site inspection of the Empire Outlets area indicate that there was no visible evidence of damage to the site cover system (building concrete slabs and paved surfaces), no reported or observed soil disturbance activities, all but one of the six SSDS vapor monitoring points (MP-1 stuck cover) were accessible and in good condition with no field detections of volatile organic compounds (VOCs) or methane, the SSDS roof vents were in good condition, and no detections of VOCs or methane during indoor air quality screening in monitored spaces. GEI also performed bump testing and field calibration of the methane system. All the detectors were field calibrated using a two-point calibration and checked with a confirmatory bump test after each calibration.

During the June 30, 2025 inspection, the detector in the fuel tank room indicated an ambient methane level of 11% LEL and could not be calibrated. However, real time monitoring with a handheld meter indicated 0% LEL. As such, it is likely the methane detector needs to be serviced and recalibrated prior to the next monitoring event. Each of the other 15 methane detectors read 0% LEL upon initial inspection. Eleven detectors passed calibration and bump testing. Three detectors (Wetzel's Pretzels Front-of-House, Wetzel's Pretzels Back-of-House and Haagen Dazs Back-of-House) passed zero calibration but failed multiple attempts at span calibration.

The system installer (Donovan Electric) consulted with their supplier and the manufacturer (Honeywell) regarding the four detectors (Fuel Oil Room, Wetzel's Pretzels Front-of-House, Wetzel's Pretzels Back-of-House and Haagen Dazs Back-of-House) that failed span calibration. Based on that consultation, these four detectors were replaced on September 4, 2025. A confirmation record for the ordering of the four replacement detectors plus four spare detectors is provided in Appendix F.

Following replacement of the above-referenced four methane detectors, on September 18, 2025, GEI conducted a site inspection and bump tests of the detectors to confirm functionality. During the inspection, facilities management staff indicated that no soil disturbing activities were performed and there were no new penetrations of the building slabs. During the indoor air quality screening, methane and VOCs were not detected in any of the monitored locations. Bump testing and field calibration of the methane monitoring system was performed by GEI. All methane detectors were reading 0% LEL upon initial inspection and passed calibration and bump testing. The well cover at MP-1 will be repaired or replaced to permit future inspections and monitoring at that point. A copy of the inspection and monitoring report is provided in Appendix F.

The next Empire Outlets site inspection by GEI is the quarterly site, SSDS, and methane monitoring system inspection scheduled for December 2025. The next site inspection report will include a summary of the site inspection findings, indoor air monitoring results, methane monitoring system operation observations, and any required and completed gas monitoring system maintenance activities.

3.1.3 New York Wheel (North Site 1)

The following presents a summary of the status of the construction of the engineering controls for the New York Wheel project as summarized in the associated PRR provided in Appendix E of this report.

- The historical Site cover was removed from North Site 1. The new cover has been partially installed (concrete Garage, Terminal Building and Wheel foundations, and some paved areas are in place). Where installed, the new cover was observed to be in good condition. The exception, a crack noted in an asphalt driveway west of the Garage, did not penetrate through the asphalt, and will be repaired during future construction. The cover will be restored throughout this area as subgrade construction is completed, which will be documented in subsequent PRRs. The new cover will consist of impervious surfaces (concrete foundations and asphalt or concrete paved

areas) and landscaping (a minimum of 12 inches of imported clean soil underlain by a demarcation layer) and will meet the requirements outlined in the SMP.

- The SSDS on North Site 1 was installed (with the exception of the wind turbine cap on the rooftop SSDS riser) and operational as of April 23, 2018. The vapor barrier had been installed beneath the ground-level enclosed Garage areas and beneath the Terminal Building foundation. A temporary cap was placed on the SSDS riser in late January 2018 to protect it from the elements; the temporary cap will be replaced with a permanent wind turbine cap as building construction progresses. Once the Terminal Building construction is complete, indoor air quality sampling in the Terminal Building is necessary to demonstrate that the passive SSDS is adequate and does not need to be made active. In addition, a methane monitoring system will be installed in the Terminal Building in accordance with the SMP.
- Pre-soil disturbance groundwater samples and samples collected following the first phase of soil disturbance identified no evidence of significant petroleum contamination in the area of historical residual petroleum contamination in the northeastern portion of North Site 1. Of the six groundwater monitoring wells historically located in this area, only three could be located for sampling. These wells (and an additional historical well encountered during construction) were properly closed prior to the start of significant soil disturbance. Six wells will be re-installed in this area following the completion of construction, and one round of sampling for VOCs and SVOCs will be conducted to confirm that no residual petroleum contamination is present.
- The historical Site stormwater management system on North Site 1 was disturbed by the ongoing construction; the historical Western Basin and Central Basin were backfilled. These basins will be replaced by a new stormwater management system as summarized in Section 2.3.2 of the AKRF PRR in Appendix E.

Due to the stalled project construction, portions of North Site 1 are not yet provided with the required cover system. Upon completion of construction, the entire North Site 1 will be provided with a cover in accordance with the SMP. The final cover for this area will be documented in subsequent PRR submittals.

The North Site 1 sub-slab vapor barriers and depressurization system were installed. The indoor gas monitoring system will be installed after future completion of the Terminal Building. Upon completion of the Terminal Building construction, one round of indoor air quality sampling will be conducted in the building to demonstrate that the passive SSDS is adequate and does not need to be made active. The final completion of the indoor air quality testing and installation of indoor combustible gas monitoring system will be documented in subsequent PRR submittals after completion of the Terminal Building construction.

An annual site inspection of the NY Wheel area was conducted by AKRF on June 19, 2025. A copy of the completed site inspection log and photographs is provided in Appendix F of the NY

Wheel PRR in Appendix E. No soil disturbance took place during this reporting period; however, AKRF conducted monthly SWPPP inspections (the frequency was reduced as no soil disturbance was in progress) during the reporting period under a contract with NYCEDC. Since the permanent North Site 1 cover is not fully installed but no soil disturbance is in progress, the monthly SWPPP inspections are planned to continue until the Site is fully capped. The June 2025 annual site inspection of the NY Wheel site area indicated the following deficiencies that require corrective measures:

- Some surficial cracks, which did not penetrate through the asphalt or expose underlying soils, were noted in the asphalt driveway west of the Garage and temporary asphalt cover on the eastern side of North Site 1. The pavement cracks are minor and have not fully penetrated the temporary asphalt driveway cover and as such repairs are not required at this time. The area is inspected monthly by AKRF as part of the SWPPP inspections to verify that the temporary asphalt and gravel cover is still intact. Minor repairs to the temporary site cover, including the addition of gravel, will be completed as needed prior to the resumption of construction, which will be documented in subsequent PRRs.
- A small area of unpaved, partially vegetated soil (original on-site soil/fill with some weed growth) is located in the western portion of North Site 1, as shown on Figure 5, and in Detail 7 on Figure 8 of the AKRF PRR in Appendix E. The unpaved areas are surrounded by a chain-link fence with a locked gate and are inaccessible to the public. The permanent site cover will be restored throughout North Site 1 as subgrade construction is completed, which will be documented in subsequent PRRs.
- During the inspection, the majority of the Bank Street stockpile generated by New York Wheel construction during the August 26, 2010 to April 23, 2021 reporting period was noted to be densely vegetated, as shown in photographs in Appendix F. Some remnants of previously placed tarps were noted on the Bank Street stockpiles and some fallen silt fencing was noted along the stockpile. However, due to dense vegetation covering the stockpile, no soil runoff onto Bank Street was noted. Limited silt fence repair (reinstalling fallen or sagging fence) was completed on June 27, 2025; however, additional silt fence maintenance (e.g., burying the toe of the fence line, reinstalling any remaining sagging fence, and replacing fence that shows wear and tear) was recommended by AKRF. NYCEDC is retaining a contractor to repair or replace the damaged silt fence in Spring 2026.
- During the inspection, a soil stockpile was noted west-adjacent to and off of North Site 1. This stockpile was not covered or surrounded by silt fencing, and some soil runoff onto the adjacent Bank Street was observed. This condition was observed in prior site inspections. The stockpile was a remnant of soil stockpiling by the MTA during off-site construction activities in 2021. Smaller stockpiles of gravel, wood chips, and cut tree limbs were noted adjacent to this stockpile. Stormwater inlet protection was noted. NYCEDC notified MTA to implement corrective measures when the unprotected stockpile was first observed by AKRF in February 2021. NYCEDC will once again

notify MTA that the remaining soil needs to be properly covered and surrounded by silt fencing or disposed of off-site.

- Some damaged construction chain-link fencing and fencing fabric were noted along the northern North Site 1 perimeter during the site inspection. The damaged chain-link fencing and fencing fabric will be repaired or replaced by NYCEDC as part of the shoreline revetment restoration project scheduled to start in January 2026.
- During the inspection, the outlet of the stormwater pipe connecting North Site 1 to the off-site detention basin to the west of North Site 1, vegetation overgrowth was noted in basin. However, the outlet of the stormwater pipe connecting North Site 1 to this detention basin and the inlet of the pipe leading from the basin to the stormwater outfall were observed to be in good condition and were not blocked by vegetation.
- An approximately 2-foot by 3-foot area of subsidence, which exposed subsurface soil, was noted in the temporary asphalt cover between North Site 1 and the fence along the shoreline, as shown on Figure 5 of the AKRF PRR. The area of subsidence is enclosed by chain-link construction fencing and is not accessible to the public. The subsidence location was backfilled with gravel to grade by Gilbane under contract to NYCEDC. Ultimately, this area will be reconstructed during the upcoming shoreline bulkhead restoration project scheduled to start in January 2026 and anticipated to be completed in November 2026.

The above corrective measures are anticipated to be addressed by NYCEDC by Spring 2026. The disturbed temporary cover areas are within the NY Wheel area that is surrounded by a chain-link fence with a locked gate and are thereby inaccessible to the public.

3.2 Institutional and Engineering Controls Certifications

The Institutional and Engineering Controls Certification Form (IC/EC Certification Form) has been completed for the entire VCA Site and is provided in Appendix A. However, based on the findings of the Site inspections and incomplete Site development construction activities on the New York Wheel part of the Site, the Owner/Designated Representative (NYCEDC) and Professional Engineer (TRC) cannot certify the Site engineering controls for the following reasons:

- Corrective measures are required to repair damage/erosion to shoreline elements of the soil cover, concrete seawall/bulkhead, and stone rip-rap shoreline protection system for the Site.
- Construction activities have not been completed on the New York Wheel (North Site 1) Site area. As a result, the new engineering controls in this area including the site cover and indoor combustible gas monitoring system are not fully complete.

To support the filing of the IC/EC Certification form for the entire Site with this PRR, IC/EC Certification Forms were completed by the operators of both the North Site 1 (New York Wheel) and the South Site 2 (Empire Outlets).

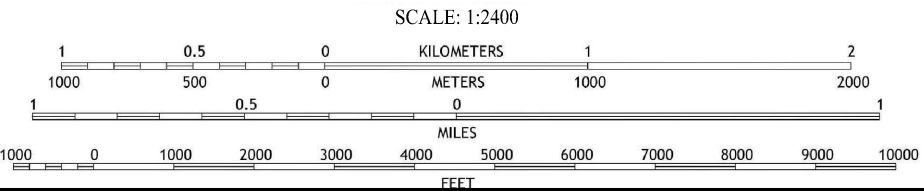
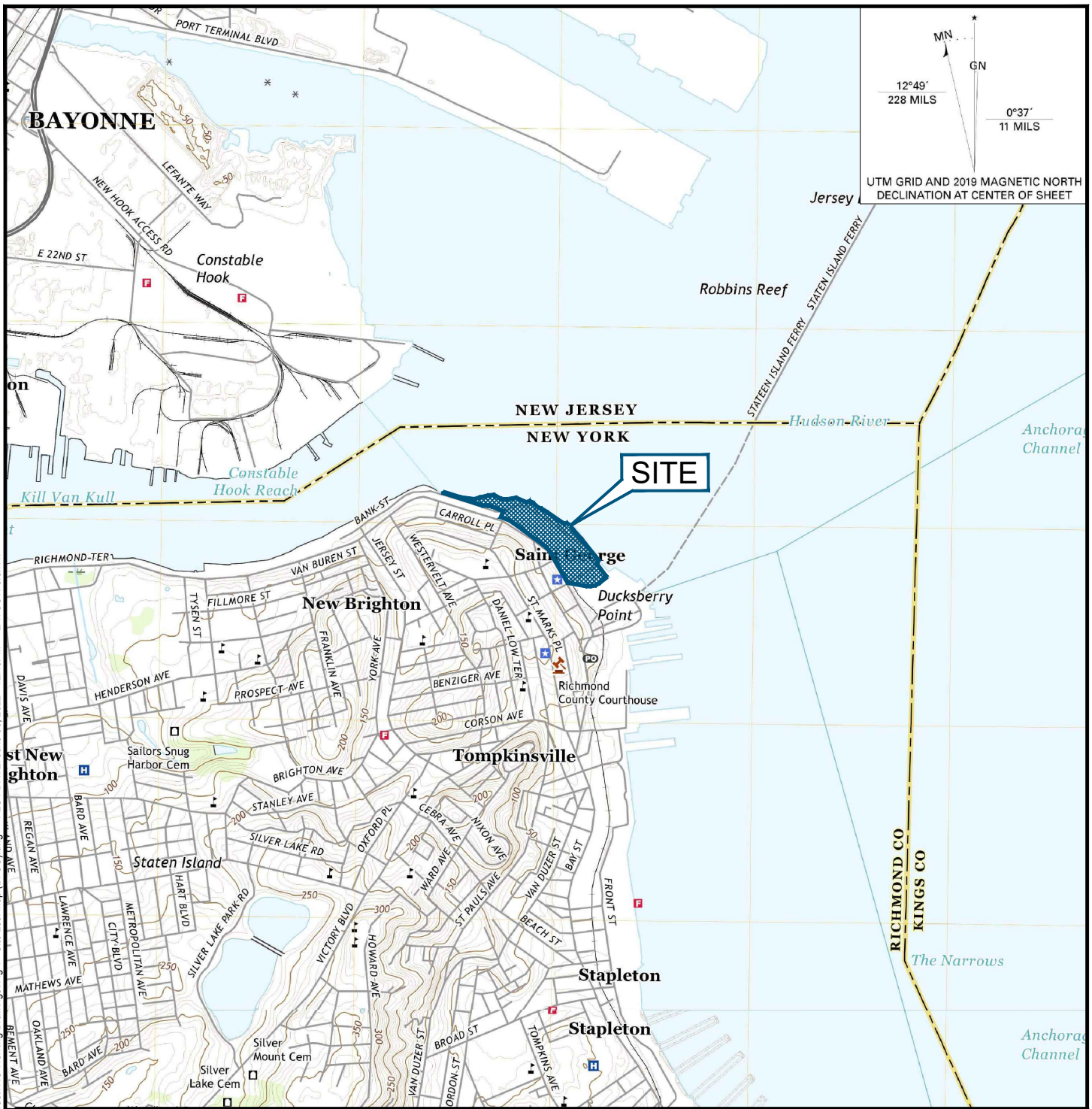
An IC/EC Certification Form was completed by NYCEDC and the consultant for North Site 1 (New York Wheel) Site development. A copy of the completed IC/EC certification form is provided in Appendix L of the New York Wheel PRR provided as Appendix E to this report. A copy of this completed IC/EC form is also provided in Appendix A. Since the construction of the engineering controls, including the site cover and indoor gas monitoring system, is not complete, they could not certify that the required engineering controls are in place.

For South Site 2, an IC/EC Certification Form was completed by the developer and consultant for the South Site 2 (Empire Outlets) Site development. A copy of the completed certification form is provided with the Empire Outlets documentation in Appendix F of this report. A copy of this completed IC/EC form is also provided in Appendix A.

The institutional controls for the entire Site remain in place and are in the form of a deed restriction known as a Declaration of Covenants and Restrictions recorded on September 14, 2005 with the Office of the Richmond County Clerk, Staten Island, New York. As a result of the site redevelopment activities, NYCEDC submitted a request to modify the deed restriction to specifically allow use of the property for commercial and/or industrial uses (versus the existing deed restriction language that prohibits use for any purpose other than as a sports stadium, public parking lot, and water-front esplanade). On January 5, 2022, NYSDEC issued a letter to NYCEDC approving this change of use restrictions. A copy of the letter is provided in Appendix H. A filing for the revised deed restriction incorporating the revised land use restriction language in the NYSDEC letter is being prepared by the NYC Law Department for NYCEDC for submittal to NYSDEC for review and approval. Since the VCA Site area has been broken into several new tax lots (20, 22, and part of 15) after the current deed restriction was established, NYSDEC has requested NYCEDC to provide a current property survey with a metes and bounds description of the VCA Site for the revised deed restriction. An updated metes and bounds property survey was recently completed for the VCA Site area. The survey was completed by Control Point Associates, Inc. of New York, New York under contract to TRC. A copy of the updated Site survey maps with the current property lot layout is provided in Appendix I. Upon completion of the revised deed restriction, NYCEDC will submit the draft deed restriction revision with the updated survey map to NYSDEC for review. NYCEDC anticipates filing the revised deed restriction with the updated metes and bounds property survey map and description to NYSDEC by January 31, 2026. Following NYSDEC's review of the updated property survey and incorporation of the survey in

FIGURES

8.5x11 --- ATTACHED KEYS: --- ATTACHED IMAGES: NJ Jersey City, 20190202, TM, NY, The Narrows, 20190913, TM, Site Layout Plan (BPSG);
DRAWING NAME: t:\HDelgado\J Peronto\341863.03 - BP at St. George\Figures\TRC Working Drawings\Fig 1 - Site Loc. Map (BPSG).dwg --- PLOT DATE: June 30, 2022 - 12:45PM --- LAYOUT: 8.5x11P



MAP INCLUDES INFORMATION FROM THE FOLLOWING MAP SHEET(S):
TP, JERSEY CITY, NJ, 7.5 MINUTE DATED 2019,
S, THE NARROWS, NY, 7.5 MINUTE DATED 2019.

QUADRANGLE LOCATION
MAP OBTAINED THROUGH USE OF TOPOVIEW WITH THE INTERFACE CREATED BY THE NATIONAL GEOLOGIC MAP DATABASE PROJECT (NGMDB), IN SUPPORT OF THE TOPOGRAPHIC MAPPING PROGRAM, MANAGED BY THE USGS NATIONAL GEOSPATIAL PROGRAM (NGP).

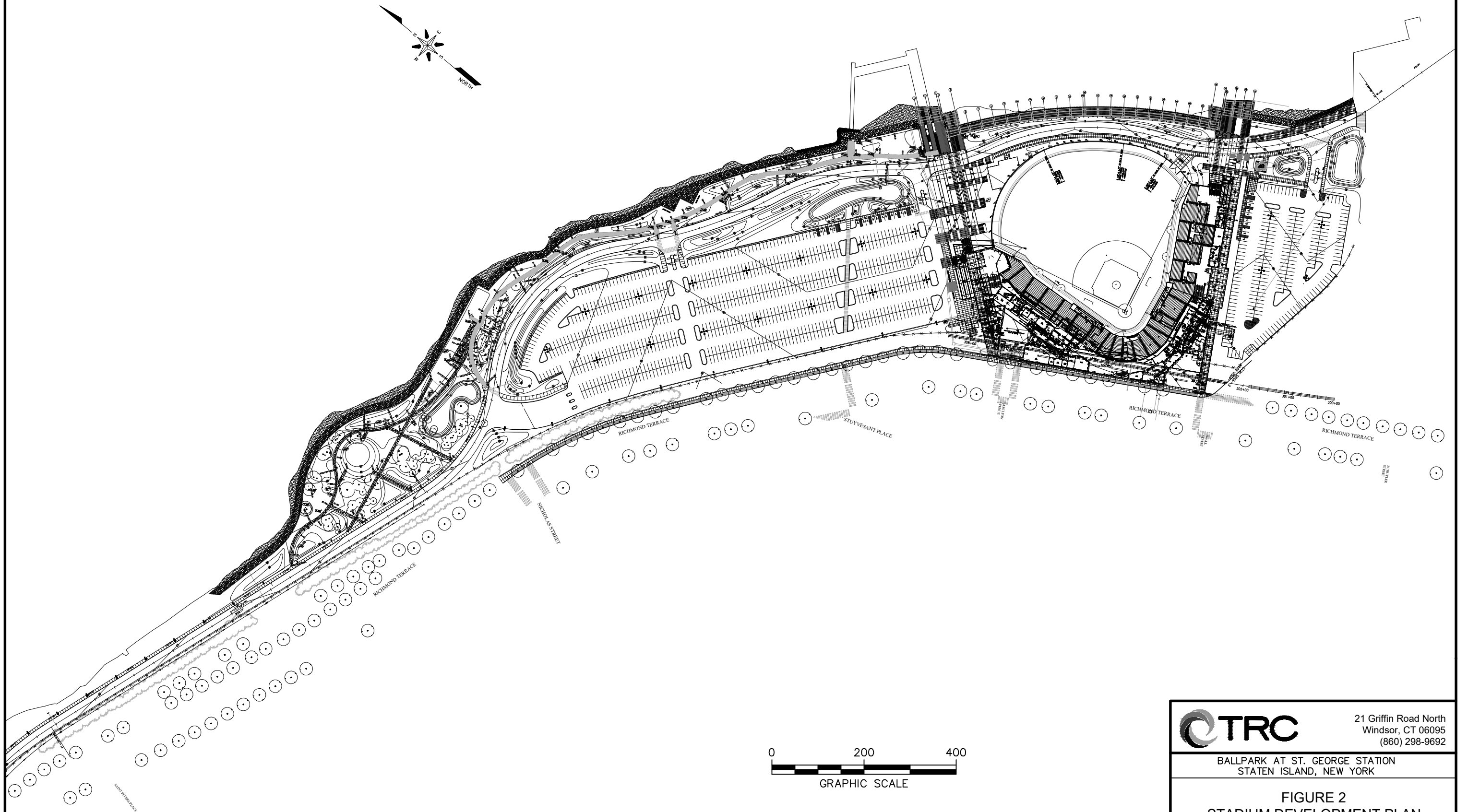
21 Griffin Road North
Windsor, CT 06095
Phone: 860.298.9692
www.trccompanies.com

PROJECT: **BALLPARK AT ST. GEORGE STATION
STATEN ISLAND, NEW YORK**

TITLE: **SITE LOCATION MAP**

DRAWN BY:	H. DELGADO
CHECKED BY:	J. PERONTO
APPROVED BY:	J. PERONTO
DATE:	JUNE 2022
PROJ. NO.:	341863.0000.0000
FILE:	Fig 1 - Site Loc. Map (BPSG).dwg

FIGURE 1



21 Griffin Road North
Windsor, CT 06095
(860) 298-9692

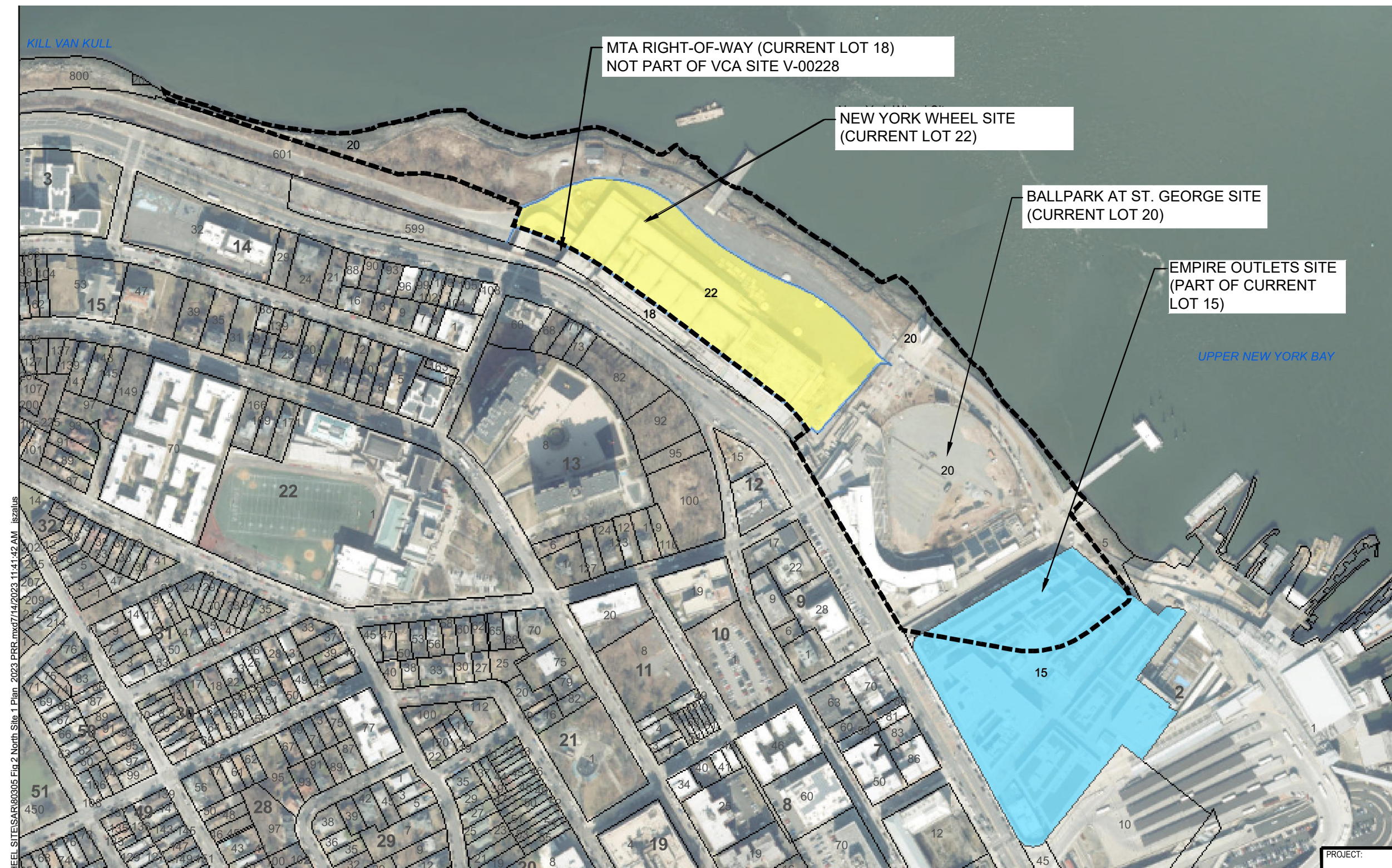
BALLPARK AT ST. GEORGE STATION
STATEN ISLAND, NEW YORK

FIGURE 2 STADIUM DEVELOPMENT PLAN






Date: 07/09/10

Project No. 113429-000310-000001

11x17 -- ATTACHED REFS: bowl, MAIN SERV, FIELD, Standstand -- ATTACHED IMAGES: GEPRO-09-2020 (BPSG),
DRAWING NAME: \\HDelgado\J.Peronto\341863.03 - BP at St. George\figures\TRC VDI Fig 3 - Site Layout Plan (BPSG). R1.dwg -- PLOT DATE: July 17, 2023 - 5:17PM -- LAYOUT: 11x17L

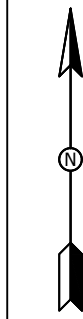



LEGEND:

-  VCA SITE V-00228 (HISTORIC TAX BLOCK 2, LOT 20)
-  NEW YORK WHEEL SITE (NORTH SITE1)
-  EMPIRE OUTLETS SITE (CURRENT LOT 15)
-  LOT BOUNDARY AND TAX LOT NUMBER
-  TAX BLOCK NUMBER

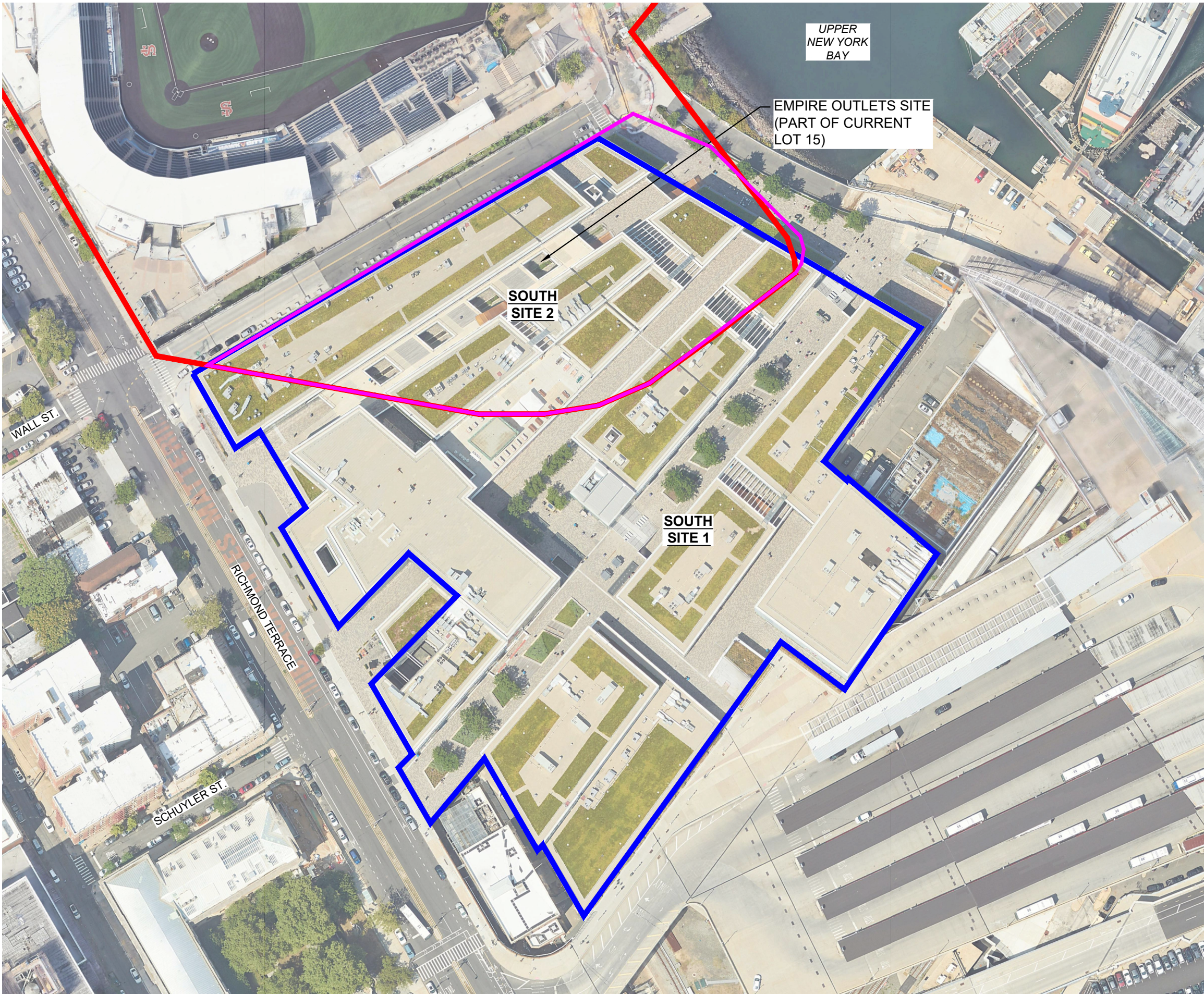
SOURCE ADAPTED FROM:

PREPARED BY AKRF, INC. ENVIRONMENTAL CONSULTANTS FOR PERIODIC REVIEW REPORT 2023, BALLPARK AT ST. GEORGE STADIUM - NORTH SITE 1 PLAN, NEW YORK WHEEL SITE, STATEN ISLAND, NEW YORK, NYSDEC VCP SITE NO V00228, JULY 14, 2023.



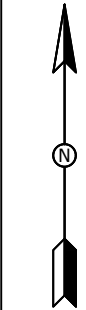
PROJECT: BALLPARK AT ST. GEORGE STATION STATEN ISLAND, NEW YORK			
TITLE: SITE LAYOUT PLAN			
DRAWN BY:	H. DELGADO	PROJ NO.:	341863.0000.0000
CHECKED BY:	J. PERONTO	FIGURE 3	
APPROVED BY:	J. PERONTO		
DATE:	JULY 2023		
		21 Griffin Road North Windsor, CT 06095 Phone: 860.298.9692 www.trccompanies.com	
FILE NO.:		Fig 3 - Site Layout Plan (BPSG). R1.dwg	

11x17 --- ATTACHED REFS: bowl; MAIN SERV. FIELD; STATEN ISLAND --- ATTACHED IMAGES: Figure 4 - V00228, Ballpark at St. George, SAMP Figures 072916, Site Layout Plan (BPSG);
DRAWING NAME: \\NYC-FPI\Shared\Hdelgado\Peronto\341863.03 - BP at St. George\Figures\TRC WDI\Fig 4 - Empire Outlets (South Sites 2 & 1) APL (BPSG); R1.dwg --- PLOT DATE: July 17, 2023 - 8:17PM --- LAYOUT: 11X17L



LEGEND:

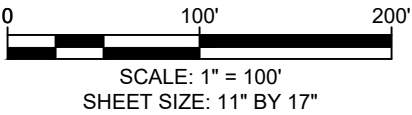
- SOUTH SITE 2 PROJECT BOUNDARY
- BUILDING FOOTPRINT
- VCA BOUNDARY



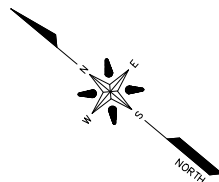
SOURCE ADAPTED FROM:

PREPARED BY AKRF, INC. ENVIRONMENTAL CONSULTANTS FOR REPORT; BALLPARK AT ST. GEORGE STADIUM, RICHMOND COUNTY, NEW YORK SITE MANAGEMENT PLAN, NYSDEC SITE NUMBER: V00228, 09/2016 TITLED; FIGURE 2 SOUTH SITE 2 PLAN DATED 11/19/2014.

- NOTES:**
- LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND BOUNDARIES ARE APPROXIMATE.
 - AERIAL BASE MAP SOURCED FROM GOOGLE EARTH PRO 2023 DATED JUNE 19, 2022.



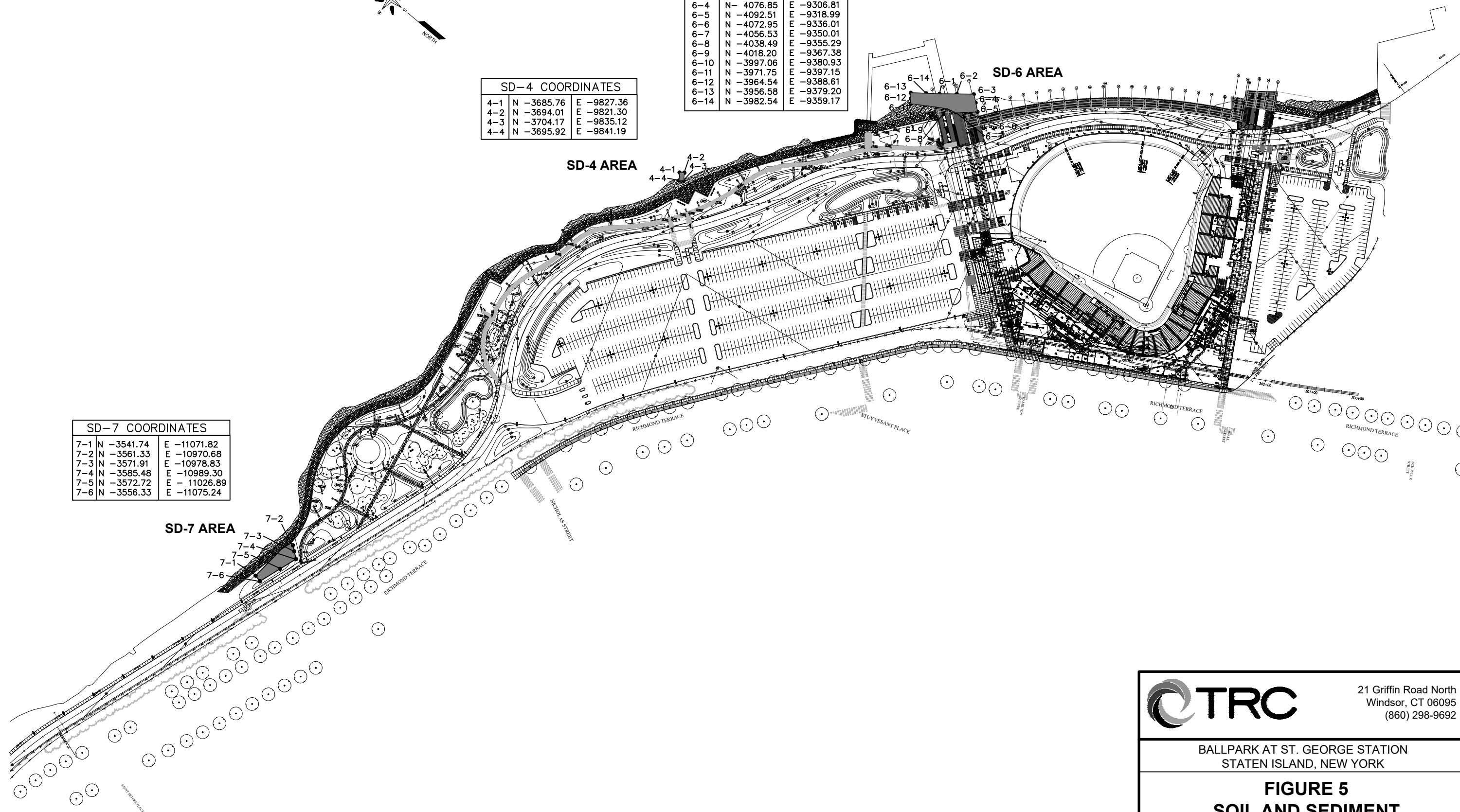
PROJECT: BALLPARK AT ST. GEORGE STATION STATEN ISLAND, NEW YORK			
TITLE: EMPIRE OUTLETS DEVELOPMENT (SOUTH SITE 2 AND SOUTH SITE 1) AERIAL PHOTO LOCATION			
DRAWN BY:	H. DELGADO	PROJ NO.:	341863.0000.0000
CHECKED BY:	J. PERONTO	FIGURE 4	
APPROVED BY:	J. PERONTO		
DATE:	JULY 2023		
		21 Griffin Road North Windsor, CT 06095 Phone: 860.298.9692 www.trccompanies.com	
FILE NO.:		Fig 4 - Empire Outlets (South Sites 2 & 1) APL (BPSG) R1.dwg	



SD-4 COORDINATES		
4-1	N -3685.76	E -9827.36
4-2	N -3694.01	E -9821.30
4-3	N -3704.17	E -9835.12
4-4	N -3695.92	E -9841.19

SD-6 COORDINATES		
6-1	N -4005.36	E -9341.57
6-2	N -4033.81	E -9318.54
6-3	N -4062.21	E -9295.43
6-4	N -4076.85	E -9306.81
6-5	N -4092.51	E -9318.99
6-6	N -4072.95	E -9336.01
6-7	N -4056.53	E -9350.01
6-8	N -4038.49	E -9355.29
6-9	N -4018.20	E -9367.38
6-10	N -3997.06	E -9380.93
6-11	N -3971.75	E -9397.15
6-12	N -3964.54	E -9388.61
6-13	N -3956.58	E -9379.20
6-14	N -3982.54	E -9359.17

SD-7 COORDINATES		
7-1	N -3541.74	E -11071.82
7-2	N -3561.33	E -10970.68
7-3	N -3571.91	E -10978.83
7-4	N -3585.48	E -10989.30
7-5	N -3572.72	E -11026.89
7-6	N -3556.33	E -11075.24





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(860) 298-9692

BALLPARK AT ST. GEORGE STATION
STATEN ISLAND, NEW YORK

FIGURE 5
SOIL AND SEDIMENT
REMOVAL LOCATIONS

Date: 04/25/13 | Project No. 177603-000050-000000

APPENDIX A
INSTITUTIONAL AND ENGINEERING CONTROLS
CERTIFICATION FORM



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details

Box 1

Site No. **V00228**

Site Name **Ballpark at St. George Station**

Lots 20, 22, and Part of Lot 15

Site Address: Between North Ramp and Jersey St., Block 2, ~~Lot 20~~ Zip Code: 10301

City/Town: Staten Island

County: Richmond

Site Acreage: 52.000

June 22, 2024 June 11, 2025

Reporting Period: ~~May 31, 2021 to May 31, 2023~~

**SEPARATE SUPPORTING IC/EC CERTIFICATION FORMS ARE PROVIDED
FOR LOT 22 (NY WHEEL) AND PART OF LOT 15 (EMPIRE OUTLETS) AREAS**

YES NO

1. Is the information above correct? **Corrections made above**

✓

If NO, include handwritten above or on a separate sheet.

2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?

✓

3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?

✓

4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? **Attached permits for**

✓

Shoreline Bulkhead Replacement-NYSDEC 2-6402-00087/00028 & USACE NAN-2023-00838
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

5. Is the site currently undergoing development?

✓

Box 2

YES NO

6. Is the current site use consistent with the use(s) listed below?
Commercial and Industrial

✓

7. Are all ICs in place and functioning as designed?

✓

updated deed restriction is in process by NYC Law Dept.

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Description of Institutional ControlsParcelOwnerInstitutional Control

2-20 , 2-22, & 2-15 (part of) New York City Economic Development Corp

Ground Water Use Restriction

(*) NYSDEC issued 01/05/2022 letter approving land use for commerical and/or industrial uses.
Revised deed restriction in process by NYC Law Dept.

Landuse Restriction

- 1) Declaration of Covenants shall run with the land
- 2) Prohibition of land use for purpose other than sports stadium, parking lots, esplanade (*)
- 3) Prohibition of groundwater use
- 4) ECs - sub-slab methane venting system and gas monitoring system
- 5) Shall be no excavation unless prior approval by DEC:
deeper than 18 inch clean soil
No excavation deeper than 18 inch to prevent damage to demarcation layer
In paved areas - no excavation below underlaying imported subgrade layer
In areas covered by buildings - no excavation below the footprint of such structures and underlying imported subgrade materials.

Description of Engineering ControlsParcelEngineering Control

2-20 , 2-22, & 2-15 (part of)

Vapor Mitigation
Cover System
Subsurface Barriers

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

✓

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment; **storm damage of shoreline bulkhead/seawall requires repair**

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

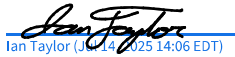
(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

✓

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.


Ian Taylor (JUL 14 2025 14:06 EDT)

(On behalf of City of NY)

07/14/2025

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. V00228

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

Date

EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as a Professional Engineer for the _____
(Owner or Remedial Party)

Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification

Stamp
(Required for PE)

Date



**Department of
Environmental
Conservation**

KATHY HOCHUL
Governor

SEAN MAHAR
Interim Commissioner

December 17, 2024

David Aneiro, SVP
NYC Economic Development Corp.
One Liberty Plaza, 14th Fl.
New York, NY 10006

Re: **NYSDEC Permit No. 2-6402-00087/00028**
NYC EDC – SI Esplanade Bulkhead
Shoreline Rehab - Block 2, Lot 20
Staten Island, New York
ECL Article 25 - Tidal Wetlands
ECL Article 15 - Excavation & Fill in Navigable Waters
6 NYCRR Part 608 - Water Quality Certification
NOTICE OF PERMIT ISSUANCE

Dear David Aneiro:

Enclosed is your permit. Please read it carefully. You are required to comply with all conditions of the permit.

Please note that Natural Resources Condition 3 of the permit requires submittal of the attached "Notice of Intent to Commence Work" at least 5 days prior to the start of the permitted activity, and Natural Resources Condition 4 of the permit requires submittal of the attached "Notice of Completion of Work" no later than 10 days following completion.

If you have any administrative questions, please email me at lisa.horwitz@dec.ny.gov. If you have any technical questions, please email nathan.fuentes@dec.ny.gov.

Sincerely,

Lisa E. Horwitz
Environmental Analyst II



PERMIT
Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:

NYC ECONOMIC DEVELOPMENT CORP

1 Liberty Plz Fl 14

NEW YORK, NY 10006
(212) 619-5000

NYC Dept of Small Business Services
1 Liberty Plz Fl 12
NEW YORK, NY 10006

Facility:

NYC EDC PROPERTY- ST
GEORGE/RICHMOND TER WATERFRONT
RICHMOND TERR B 2 L 1, 5, 10, 20|Btw SI Esp
Park to west and SI Sept 11 Memorial to east,
adjacent to south of Upper NY Bay, north of Bank
St, approx .3 mi NW of SI Ferry Terminal
STATEN ISLAND, NY 10029

Facility Location: in RICHMOND COUNTY **Village:** Richmond

Facility Principal Reference Point: NYTM-E: 578 NYTM-N: 4500
Latitude: 40°38'49.8" Longitude: 74°04'38.9"

Project Location: St George, Staten Island, Block 2, Lots 1, 5, 10, 20.

Authorized Activity: In-kind repair, restoration, and enhancement of the waterfront between and including the North Shore Waterfront Esplanade Park to the west and Staten Island Sept 11th Memorial to the east. Rehab of ~2,200 LF of existing concrete retaining wall and in-kind replacement of riprap along 2200LF stretch.

Permit Authorizations

Excavation & Fill in Navigable Waters - Under Article 15, Title 5

Permit ID 2-6402-00087/00027

New Permit

Effective Date: 12/17/2024

Expiration Date: 12/31/2029

Tidal Wetlands - Under Article 25

Permit ID 2-6402-00087/00028

New Permit

Effective Date: 12/17/2024

Expiration Date: 12/31/2029

Water Quality Certification - Under Section 401 - Clean Water Act

Permit ID 2-6402-00087/00029

New Permit

Effective Date: 12/17/2024

Expiration Date: 12/31/2029



NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

Permit Administrator: STEPHEN A WATTS, Regional Permit Administrator

Address: NYSDEC Region 2 Headquarters
47-40 21st St
Long Island City, NY 11101 -5401

Stephen A Watts III

Digitally signed by Stephen A
Watts III
Date: 2024.12.17 16:53:41 -05'00'

Authorized Signature: _____

Date 12 / 17 / 2024

Permit Components

NATURAL RESOURCE PERMIT CONDITIONS

WATER QUALITY CERTIFICATION SPECIFIC CONDITION

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

NATURAL RESOURCE PERMIT CONDITIONS - Apply to the Following Permits: EXCAVATION & FILL IN NAVIGABLE WATERS; TIDAL WETLANDS; WATER QUALITY CERTIFICATION

1. Conformance With Plans All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or applicant's agent as part of the permit application. Such approved plans were prepared by see Natural Resource Condition 2.

2. Conformance with Plans - Addenda In addition to plans referenced in the Condition titled "Conformance with Plans," the activities authorized by this permit must be in strict conformance with the following approved plans and/or submissions made as part of the permit application:

- a. Application package prepared by Matrix New World Engineering on behalf of NYC EDC for the "Staten Island Esplanade Bulkhead Rehabilitation Project," dated and received by NYSDEC on January 22, 2024, except where superseded by
- b. Resubmission package prepared by Matrix New World Engineering on behalf of NYC EDC for the "Staten Island Esplanade Bulkhead Rehabilitation Project," dated and received by NYSDEC on July 26, 2024, including plans prepared by MNWE for "St. George Esplanade Bulkhead Rehabilitation," Sheets 1-11, Drawing Nos. G-101, 102, R-101-108, and S-501, dated January 19, 2024, last revised July 2, 2024.



3. Notification to NYSDEC At least five (5) days prior to the start of work, Permittee must complete and submit the attached “Notice of Intent to Commence Work” form to the NYSDEC Division of Marine Resources via email at DMR.R2@dec.ny.gov.

4. Post Sign and Permit This NYSDEC permit and attached permit sign must be conspicuously posted in a publicly accessible location at the project site. They must be visible, legible, and protected from the elements at all times. This sign is to be posted for the duration of work authorized by this permit.

5. Notice of Completion of Work Within ten (10) days of the completion of work, Permittee must complete and submit the attached Notice of Completion of Work form to NYSDEC Division of Marine Resources via email at DMR.R2@dec.ny.gov.

6. Post-Construction Photographs Post-construction photographs of the work area must be submitted to the NYSDEC Division of Marine Resources via email at DMR.R2@dec.ny.gov within 30 days of the completion of work.

7. Best Management Practices Best management practices will be employed to prevent the loss of sediment, debris, and construction materials from entering the waterways. Such practices may include, but are not limited to staked hay bales, silt fencing, turbidity curtains, containment booms.

8. Demolition and Construction Debris Should any demolition or construction debris fall into the waterway or enter the tidal wetlands, it must be removed immediately.

9. Disposal of Demolition and Construction Debris All demolition and construction debris must be properly disposed of at a licensed facility.

10. Fill Material All fill will consist of “clean” sand, gravel, or soil. The use of material such as asphalt, slag, fly-ash, recycled concrete aggregate (RCA), broken concrete, or demolition debris is strictly prohibited.

11. Disposal of Sediments Sediments removed must be disposed of at an approved upland facility.

12. No Equipment Below Apparent High Water Equipment operation below (seaward) of apparent high water is strictly prohibited, except as authorized by this permit.

13. Equipment, Material Stored Within Work Site or Upland The storage of construction equipment and materials must be confined to within the project work site and/or upland areas greater than 50 linear feet from the tidal wetland boundary.

14. Concrete Leachate During construction, no wet or fresh concrete or leachate shall be allowed to escape into any wetlands or waters of New York State, nor shall washings from ready-mixed concrete trucks, mixers, or other devices be allowed to enter any wetland or waters. Only watertight or waterproof forms shall be used. Wet concrete shall not be poured to displace water within the forms.

15. Contain Exposed, Stockpiled Soils All disturbed areas where soil will be temporarily exposed or stockpiled for longer than 48 hours shall be contained by a continuous line of staked hay bales/silt curtain (or other NYSDEC-approved devices) placed on the seaward side between the fill and the wetland or protected buffer area. Tarps are authorized to supplement these approved methods.



16. Minimize Adverse Impacts to Wetlands, Wildlife, Water All work must be performed in a manner which minimizes adverse impacts to wetlands, wildlife, water quality, and natural resources.

17. Precautions Against Contamination of Waters All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.

18. Failure to Meet Permit Conditions Failure of the permittee to meet all the conditions of this permit is a violation of this permit and grounds for an order to immediately cease the permitted activity at the project site.

19. No Interference With Navigation There shall be no unreasonable interference with navigation by the work herein authorized.

20. Prior Approval of Changes If the Permittee desires to make any changes in construction techniques, species to be planted, the site plan, any mitigation plan, scheduling or staging of construction, or any other aspect of this project, the Permittee shall submit a written request to the Regional Permit Administrator to make such proposed changes and shall not make such changes unless authorized in writing by the Department.

21. State May Require Site Restoration If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may lawfully require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.

22. State May Order Removal or Alteration of Work If future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department of Environmental Conservation it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners, shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.

23. State Not Liable for Damage The State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.



WATER QUALITY CERTIFICATION SPECIFIC CONDITIONS

1. Water Quality Certification The authorized project, as conditioned pursuant to the Certificate, complies with Section 301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act, as amended and as implemented by the limitations, standards, and criteria of state statutory and regulatory requirements set forth in 6 NYCRR Section 608.9(a). The authorized project, as conditioned, will also comply with applicable New York State water quality standards, including but not limited to effluent limitations, best usages and thermal discharge criteria, as applicable, as set forth in 6 NYCRR Parts 701, 702, 703, and 704.

GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. Facility Inspection by The Department The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. Relationship of this Permit to Other Department Orders and Determinations Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. Applications For Permit Renewals, Modifications or Transfers The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator
NYSDEC Region 2 Headquarters
47-40 21st St
Long Island City, NY11101 -5401

4. Submission of Renewal Application The permittee must submit a renewal application at least 30 days before permit expiration for the following permit authorizations: Excavation & Fill in Navigable Waters, Tidal Wetlands, Water Quality Certification.



5. Permit Modifications, Suspensions and Revocations by the Department The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

- a. materially false or inaccurate statements in the permit application or supporting papers;
- b. failure by the permittee to comply with any terms or conditions of the permit;
- c. exceeding the scope of the project as described in the permit application;
- d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. Permit Transfer Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.



Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.



NOTICE OF INTENT TO COMMENCE WORK

Date: _____

NYSDEC Natural Resources
Attn. Natural Resources Supervisor
N.Y.S.D.E.C Region 2 Office
47-40 21st Street
Long Island City, N.Y. 11101

Re: NYSDEC Permit No. 2-6402-00087/00028
NYC EDC – SI Esplanade Bulkhead
Shoreline Rehab - Block 2, Lot 20
Staten Island, New York

Dear NYSDEC Natural Resources Supervisor:

In accordance with Natural Resource Condition 3 of the referenced permit, I hereby serve notice to commence work on _____, 20____.

This is also to certify that, having read this entire permit, I am fully aware of and understand the general and natural resource conditions therein, and agree to comply with all such conditions further understand that prior to undertaking any modification to the subject work, I must seek and receive written approval of the NYSDEC Regional Permit Administrator.

Signature of Permittee

Signature of Contractor

Name of Permittee (please print)

Name of Contractor (please print)

Street Address of Contractor

City, State, & Zip Code of Contractor

Telephone Number of Contractor

WARNING

The permittee and his contractor (if any) are required to follow all permit conditions. Violations of the permit may lead to legal action, including the imposition of substantial monetary fines and corrective work.

cc: Environmental Permits
Marine Resources

NOTICE OF COMPLETION OF WORK

Date: _____

**NYSDEC Natural Resources
Attn. Natural Resources Supervisor
N.Y.S.D.E.C Region 2 Office
47-40 21st Street
Long Island City, N.Y. 11101**

**Re: NYSDEC Permit No. 2-6402-00087/00028
NYC EDC – SI Esplanade Bulkhead
Shoreline Rehab - Block 2, Lot 20
Staten Island, New York**

Dear NYSDEC Natural Resources Supervisor:

In accordance with Natural Resource Condition 4 of the referenced permit, I hereby serve notice that the work allowed by the above referenced permit has been completed as of _____, 20____, consistent with the requirements of the above referenced permit.

Signature of Permittee

Signature of Contractor

Name of Permittee (please print)

Name of Contractor (please print)

Street Address of Contractor

City, State, & Zip Code of Contractor

Telephone Number of Contractor

**cc: Environmental Permits
Marine Resources**

New York State
Department of Environmental Conservation



The Department of Environmental Conservation (DEC) has issued permit(s) pursuant to the Environmental Conservation Law for work being conducted at this site. For further information regarding the nature and extent of work approved and any Departmental conditions on it, contact the Regional Permit Administrator listed below. Please refer to the permit number shown when contacting the DEC.

Regional Permit Administrator

Permit Number 2-6402-00087/00028

Expiration Date 12/31/2029

NOTE: This notice is NOT a permit

Stephen A. Watts III
47-40 21st Street
LIC, NY 11101
(718) 482-4997

DEPARTMENT OF THE ARMY PERMIT

Permittee: New York City Economic Development Corporation
One Liberty Plaza, 14th Floor
New York, New York 10006

Permit Number: NAN-2023-00838

Permit Date: _____

Issuing Office: US Army Corps of Engineers, New York District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer. You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

Waterfront Esplanade:

Rehabilitation of an approximately 2,200 foot-long, waterfront esplanade bulkhead between the North Shore Esplanade Park to the west and the State Island September 11th Memorial to the east.

Retaining Wall:

The project involves the rehabilitation of approximately 2,200 linear feet of an existing 5-foot high, 1.5-foot thick "L-shaped" concrete retaining wall with rock revetment. The existing 2,200 linear foot concrete retaining wall, reinforced with #4 epoxy-coated rebar, would be improved with cast-in-place concrete enhancements and backfilled to height.

Rock Revetment/Riprap:

Proposed shoreline arming (i.e., rock revetment) adjacent and seaward of the concrete retaining wall involves the in-kind removal and replacement of 3-foot 10-inch-thick stone riprap (24" diameter armored stone) along the entire 2,200 linear foot stretch of retaining wall. A 1-foot-thick area of bedding stone would be installed beneath the proposed rock revetment to allow for water filtration to underlying soils. In total approximately 10,820 square feet of existing revetment will be removed and reconstructed.

Outfall:

Reconstruction of the headwalls of 3 existing New York City Department of Environmental Protection (NYCDEP) stormwater outfalls, in-kind. The reconstructed outfall headwalls would be shaped to promote improved function and better scour protection from silting.

All work shall be performed in accordance with the attached dated permit drawings; Special Conditions (A) through (J) listed below, and the New York State Department of Environmental Conservation Section 401 Water Quality Certificate 2-6402-00087/00029, which are all hereby

PERMITTEE: New York City Economic Development Corporation

PERMIT NUMBER: NAN-2023-00838

made part of this permit.

Project Location:

IN: Upper New York Bay

AT: The St. George's neighborhood in the Borough of Staten Island, between the North Shore Esplanade Park to the west and the State Island September 11th Memorial to the east, Richmond County, City of New York, New York

Permit Conditions:

General Conditions:

1. Time limit for completing the regulated work authorized herein ends on _____. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least two (2) months before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. The permittee shall allow representatives from this office to inspect the authorized activities at any time deemed necessary; and shall promptly provide any required written reports, to ensure that authorized activities are being or have been accomplished in accordance with the terms and conditions of this permit.

Special Conditions:

A. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work

PERMITTEE: New York City Economic Development Corporation
PERMIT NUMBER: NAN-2023-00838

shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

B. The permittee shall submit the following information, at a minimum, to the First Coast Guard District and Sector New York by email D01-SMB-LNM@uscg.mil and SECTORNYWWM@uscg.mil, a minimum of 14 days before starting operations for publication in the Local Notice to Mariners:

- Date of submission**
- Name, phone number, and email address of project point of contact**
- Company Name**
- Type of Work**
- Waterway and location where work will be done**
- Latitude & Longitude of work area (Degrees, Minutes, Thousandths of seconds)**
- Work Start & Stop dates and Hours of Operation**
- Equipment on scene**
- Passing Arrangements / Time to move vessels to not impede navigation**
- VHF Radio Channel monitored**
- Disposal Site (if used)**
- NOAA Chart Number for the area**

C. The permittee shall email a copy of the USACE Permit; as-built drawings; and NOAA Permit/Public Notice Status Report from <https://www.nauticalcharts.noaa.gov/charts/docs/charts-updates/USACE+Permit+Status+Report.pdf> to ocs.ndb@noaa.gov so they may initiate the appropriate chart and Coast Pilot corrections.

D. The permittee shall ensure any current, or future, outdoor lighting is located or shielded so that it is not confused with any aids to navigation and does not interfere with navigation on the adjacent waterway. If installed, the lights must be white and non-flashing.

E. The permittee shall check in with the Vessel Traffic Service New York watch supervisor, who can be reached at (718) 354-4088 or SECNYVTS@uscg.mil fifteen minutes prior to mobilizing vessels on scene and fifteen minutes before starting work, and upon completion, each day.

F. The permittee shall utilize Best Management Practices (BMPs) to minimize turbidity during all in-water work activities as well as prevent construction materials, including debris, from entering any waterway to become drift or pollution hazards.

G. The permittee shall avoid in-water work including dredging, pile installation (i.e., for bulkheads/cofferdams, wharfs) or other extractive or turbidity/sediment generating activities from January 15 to May 31 of any calendar year in estuarine/nearshore waters of six meters in

PERMITTEE: New York City Economic Development Corporation

PERMIT NUMBER: NAN-2023-00838

depth or less to avoid impacts to winter flounder early life stages (spawning adults, eggs, larvae).

H. The permittee shall report any undocumented archaeological resources that are encountered to the Stockbridge-Munsee Community, and the Inadvertent Discovery Policy on the Stockbridge-Munsee Community Webpage will be followed.

I. The permittee will pay due attention to incidental and routine movement of heavy machinery both inside and outside the area of potential effects (APE), that may cause unintended or inadvertent impacts to cultural resources.

J. The permittee will notify the Stockbridge-Munsee Community should the proposed work be altered to expand beyond the current scope of work and/or APE.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S. Code 403).

(X) Section 404 of the Clean Water Act (33 U.S. Code 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization:

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability: In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.
 - e. Damage claims associated with any future modification, suspension, or revocation of this permit.
- 4. Reliance on Applicant's Data:** The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
- 5. Reevaluation of Permit Decision:** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.


Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

PERMITTEE: New York City Economic Development Corporation

PERMIT NUMBER: NAN-2023-00838

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Ian Taylor 
Ian Taylor (May 19, 2025 16:27 EDT)
(PERMITTEE)

(DATE)

New York City Economic Development Corporation

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

(COMMANDER AND DISTRICT ENGINEER)

(DATE)

**FOR AND IN BEHALF OF
Alexander L. Young
Colonel, U.S. Army
Commander and District Engineer**

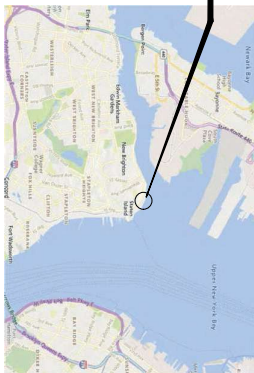
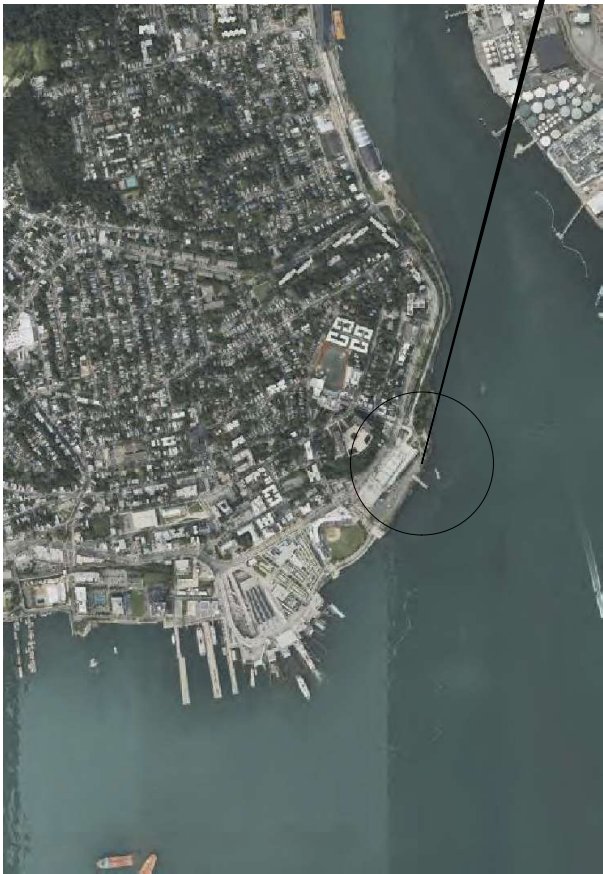
When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below. A copy of the permit signed by the transferee should be sent to this office.

(TRANSFEREE)

(DATE)

Plotted: 1/19/2024 10:22 AM, By: Brian Kenney
© MATRINNEWORLD/2019/19-053 NYCEDC Staten Island Esplanade Bulkhead/DWG/Plotsheets/09-Cover Sheet.dwg/Cover Sheet

NOTICE TO CONTRACTOR:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES OF THE STATE OF NEW YORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES OF THE STATE OF NEW YORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES OF THE STATE OF NEW YORK.



INDEX OF SHEETS	
NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL RETENTION WALL
3	EXISTING CONCRETE RETAINMENT WALL
4	EXISTING CONCRETE RETAINMENT WALL
5	CONSTRUCTION PLAN I
6	CONSTRUCTION PLAN II
7	RETAINMENT WALL SECTION I
8	RETAINMENT WALL SECTION II
9	RETAINMENT WALL SECTION III
10	RETAINMENT WALL SECTION IV
11	CONSTRUCTION PLAN

COVER SHEET		MATRINNEWORLD Engineering Program Matrix New World Engineering, Land Surveying and Landscape Architecture, P.A. 442 State Route 35, Second Floor Eatontown, New Jersey 07724 WWW.MATRINNEWORLD.COM NEW JERSEY CERTIFICATE OF AUTHORITY NO. 240A27962300	NICHOLAS NEW YORK PROFESSIONAL ENGINEER LICENSE NO. 009136 DATE	DESIGNED BY: [] CHECKED BY: [] APPROVED BY: [] DATE: []		
WHITESTONE WATERFRONT FACILITY RETENTION WALL REPLACEMENT				REVISIONS NO. DATE DESCRIPTION 1 01/19/2024 0% DESIGN SUBMITTAL		
SCALE: AS SHOWN		DATE: 01/19/2024		PROJECT NUMBER: 1001		
G-101		SHEET 1 OF 11				

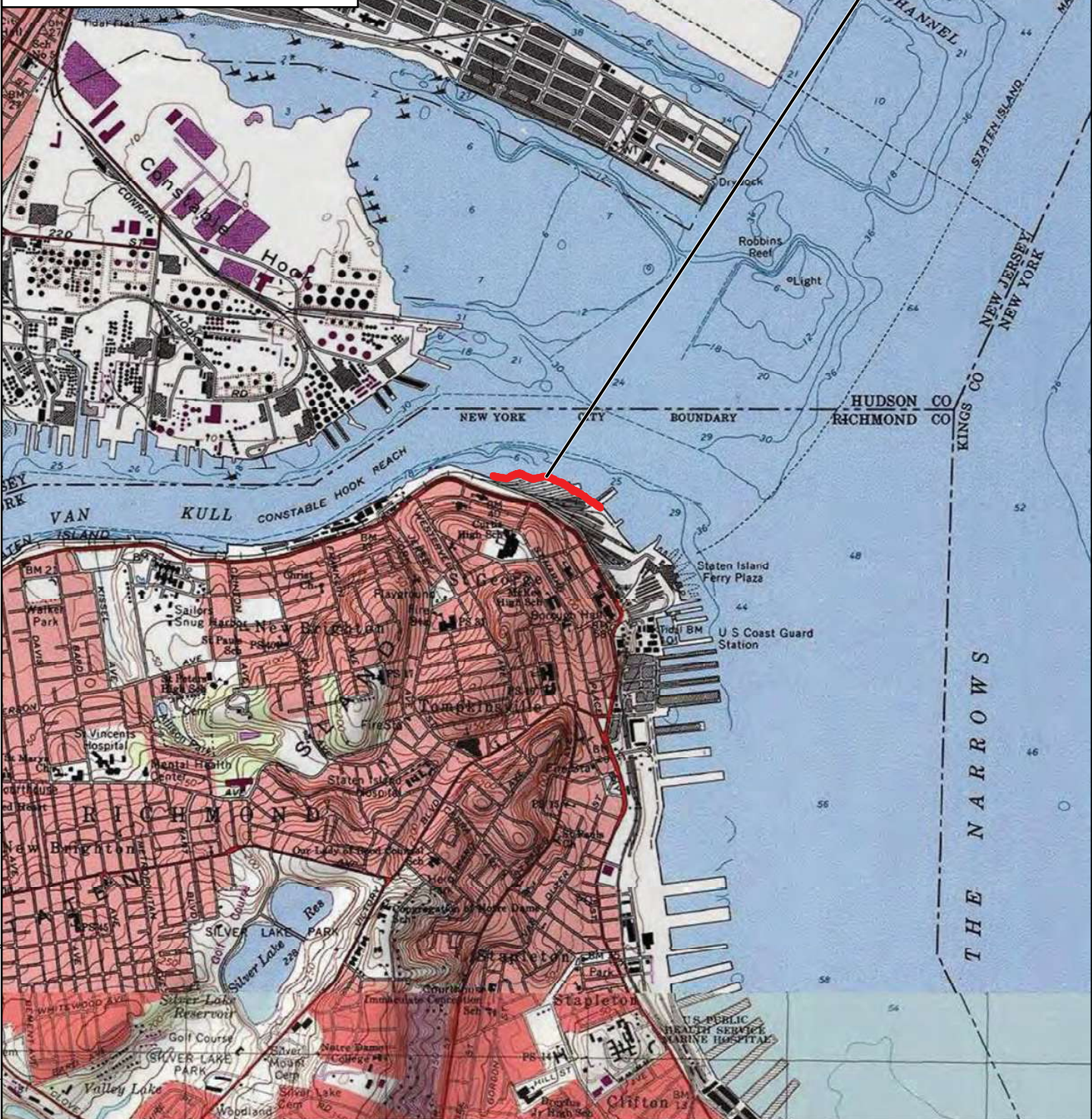
LEGEND

 APPROXIMATE SITE BOUNDARY

NOTES:

1. THE SITE IS LOCATED IN THE SOUTHEAST CORNER OF THE JERSEY CITY USGS QUADRANGLE MAP.

SITE LOCATION:
N40° 38' 54.039"
W74° 4' 47.149"



STATEN ISLAND ESPLANADE
BULKHEAD REHABILITATION
BOROUGH OF STATEN ISLAND
NEW YORK CITY, NEW YORK

MATRIXNEWORLD
Engineering Progress

**Matrix New World Engineering, Land Surveying
and Landscape Architecture, P.C.**
20 West 37th Street, 12th Floor
New York, NY 10018

**Tel: 973.240.1800
Fax: 973.240.1818
matrixnewworld.com**

STATE OF NEW YORK CERTIFICATE OF AUTHORIZATION No. 17-082661

USGS QUADRANGLE MAP

DRAWN BY:
MM

APPROVED BY:
RS

PROJECT NO:
19-253

DATE:
11-03-2023

DATE:
11-03-2023

SCALE:
1:26,400

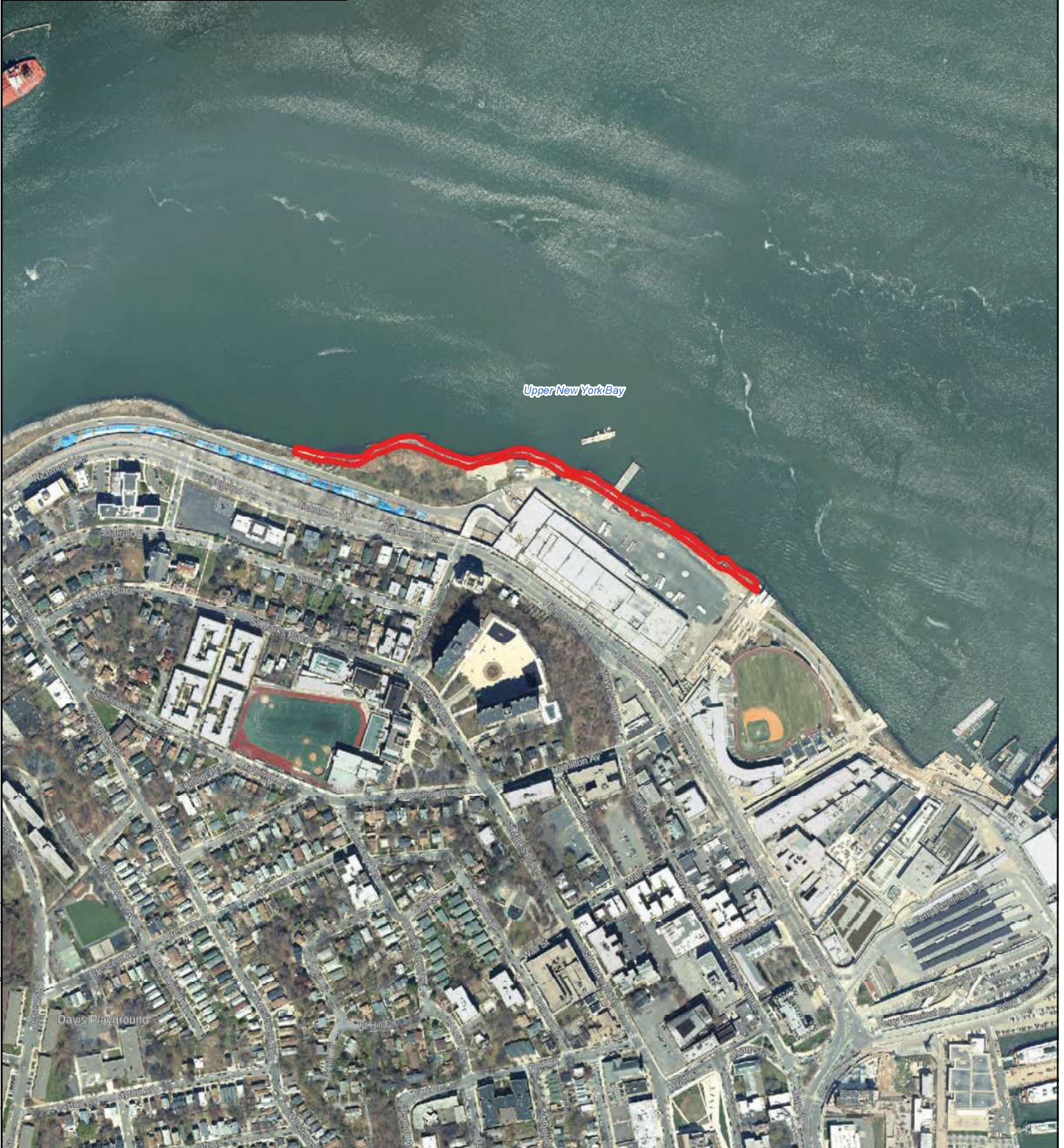
FIGURE:

3.1

LEGEND

 APPROXIMATE SITE BOUNDARY

0 250 500 1,000
FEET



STATEN ISLAND ESPLANADE
BULKHEAD REHABILITATION
BOROUGH OF STATEN ISLAND
NEW YORK CITY, NEW YORK

MATRIXNEWORLD
Engineering Progress

Matrix New World Engineering, Land Surveying
and Landscape Architecture, P.C.
20 West 37th Street, 12th Floor
New York, NY 10018
Tel: 973.240.1800
Fax: 973.240.1818
matrixnewworld.com

STATE OF NEW YORK CERTIFICATE OF AUTHORIZATION No. 17-082661

VICINITY MAP

DRAWN BY:
MM

APPROVED BY:
RS

PROJECT NO:
19-253

DATE:
11-03-2023

DATE:
11-03-2023

SCALE:
1:6,000

FIGURE:

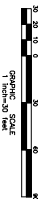
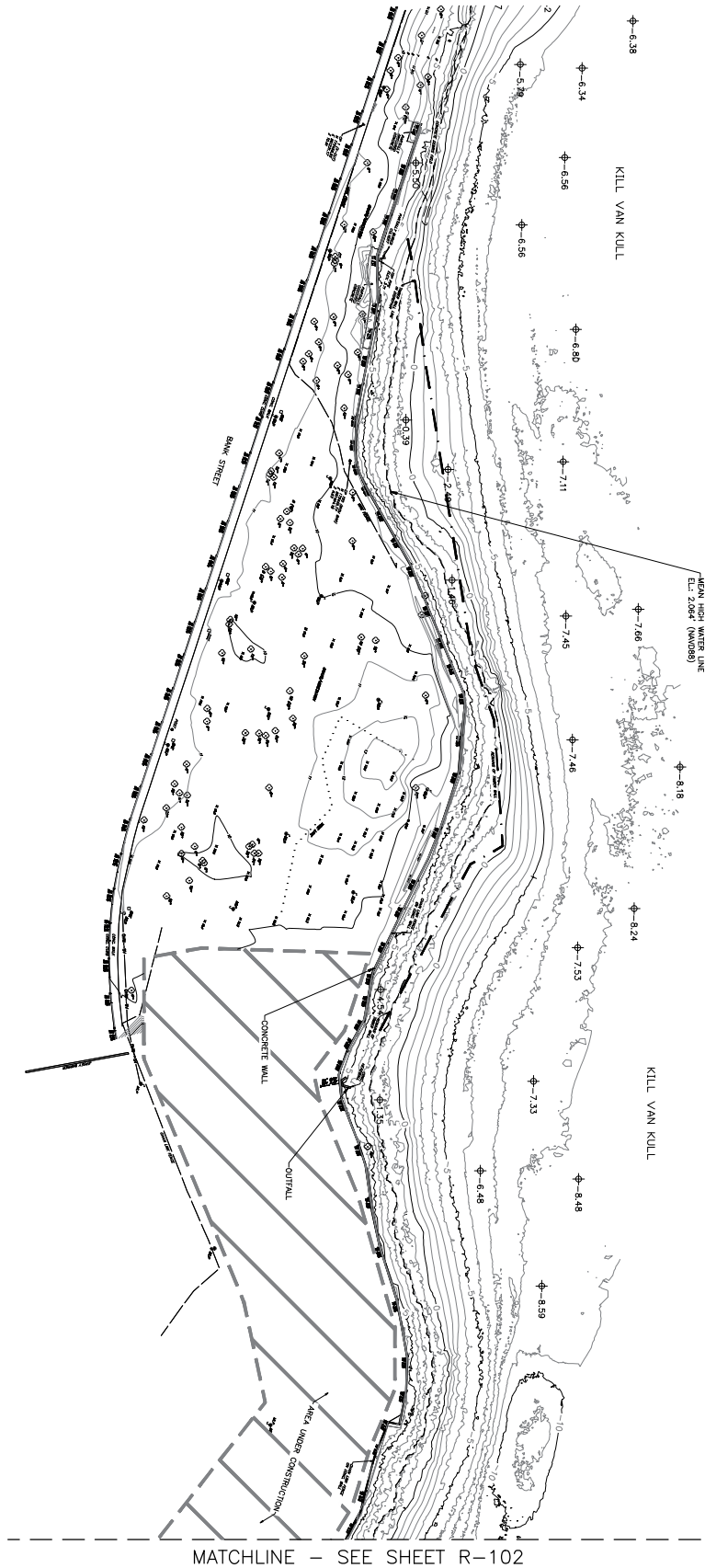
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USACE FILE: NAN-2023-00838-MCC

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 MATRANNEWORLD\F\2019\15-23 NYCEDC Staten Island Esplanade Bulkhead\DWG\Plotsheets\02-Existing Conditions.dwg\Existing Conditions 1

EXISTING CONDITIONS PLAN I

SCALE: 1"=30'



R-101 SHEET 3 OF 11	EXISTING CONDITIONS PLAN I WHITESTONE WATERFRONT FACILITY RETENTION WALL REPLACEMENT	MATRIXNEWORLD Engineering Program Matrix New World Engineering, Land Surveying and Landscape Architecture, P.A. 442 State Route 35, Second Floor Eatontown, New Jersey 07724 WISE / DDE / FSE www.matrixnewworld.com NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 240A27902300	NICHOLAS J. BODOLIO NEW YORK PROFESSIONAL ENGINEER LICENSE NO. 099336 0000000000 DATE	PREPARED BY: [] CHECKED BY: [] DATE: [] 60% DESIGN SUBMITTAL 00% DESIGN SUBMITTAL DATE: [] REVIEWED BY: [] DATE: []
	PROJECT NUMBER: [] DATE: [] SCALE: 1"=30' DRAWN BY: []	MATRANNEWORLD BEECHURST, BOROUGH OF QUEENS, NEW YORK	PROJECT: [] SHEET: [] DATE: [] 60% DESIGN SUBMITTAL 00% DESIGN SUBMITTAL DATE: [] REVIEWED BY: [] DATE: []	PROJECT: [] SHEET: [] DATE: [] 60% DESIGN SUBMITTAL 00% DESIGN SUBMITTAL DATE: [] REVIEWED BY: [] DATE: []
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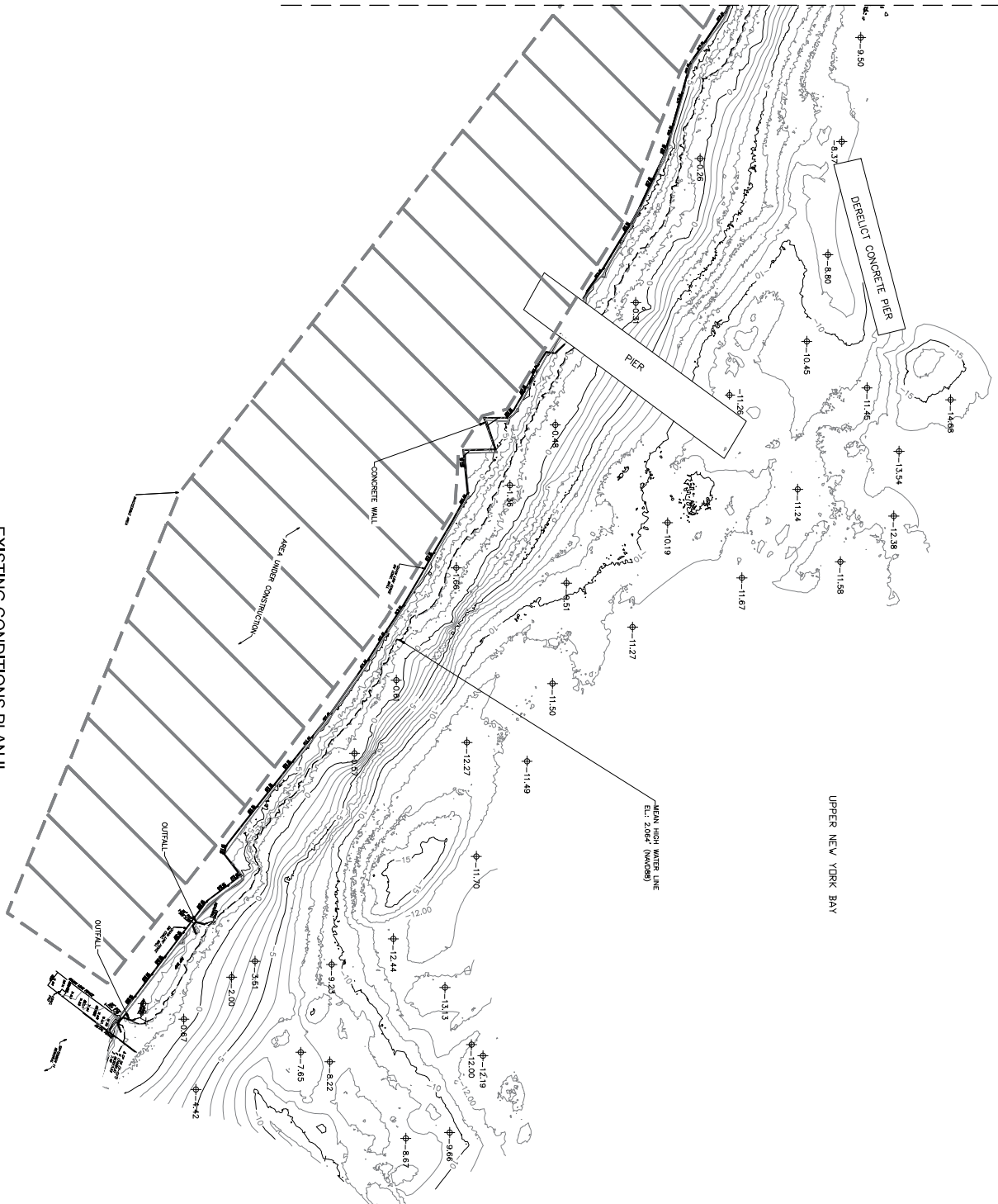
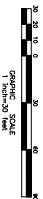
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Plotted: 1/19/2024 10:28 AM, By: Brian Kenney
MATRIXNEWORLD\PI\2019\15-253 NYCEC Staten Island Esplanade Bulkhead\DWG\PI\25-Existing Conditions.dwg\Existing Conditions II

MATCHLINE — SEE SHEET R-101

EXISTING CONDITIONS PLAN II

SCALE: 1"=30'

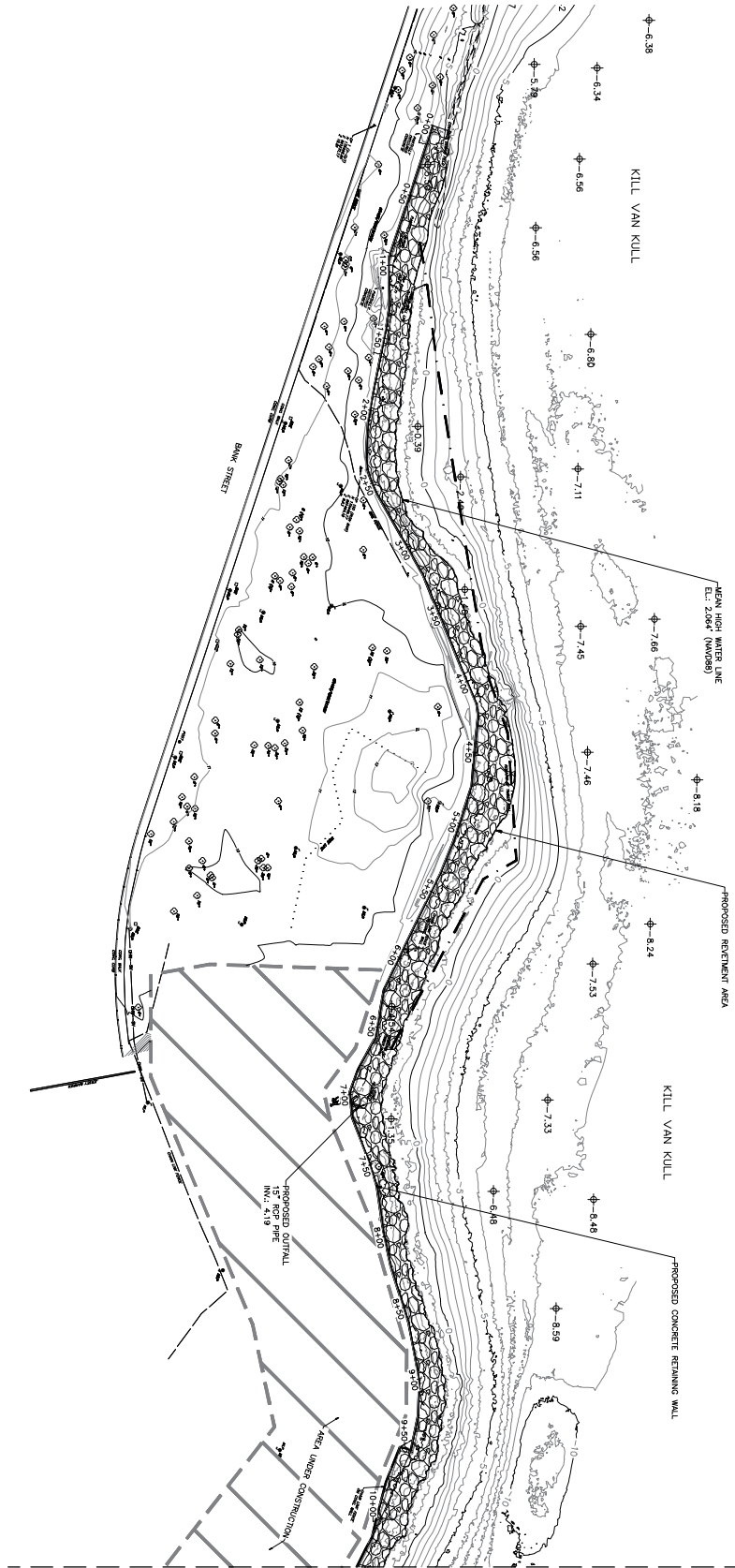


NEW YORK LONG ISLAND STATE PLANE
COORDINATE SYSTEM NAD 1983

PROJECT NUMBER: NAN-2023-00838-MCC DATE: 1-1-24 SCALE: 1"=30' R-102 SHEET 11 OF 11	EXISTING CONDITIONS PLAN II WHITESTONE WATERFRONT FACILITY RETENTION WALL REPLACEMENT <small>STATED BY: BEECHURST, BOROUGH OF QUEENS, NEW YORK</small>	MATRIXNEWORLD Engineering Program <small>Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C. 442 State Route 35, Second Floor Eatontown, New Jersey 07724 WIRE: (732) 788-1888 NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 240A2792300</small>	NICHOLAS J. BOYLE, P.E. NEW YORK PROFESSIONAL ENGINEER LICENSE NO. 000000000 099136 DATE: 1-1-24	<table border="1"><tr><td>DESIGNED BY</td><td>NEW</td><td>DATE</td><td>1-1-24</td></tr><tr><td>CHECKED BY</td><td>NEW</td><td>DATE</td><td>1-1-24</td></tr><tr><td>IN CHARGE</td><td>NEW</td><td>DATE</td><td>1-1-24</td></tr><tr><td>APPROVED BY</td><td>NEW</td><td>DATE</td><td>1-1-24</td></tr><tr><td>DATE</td><td>1-1-24</td><td>TIME</td><td>10:28 AM</td></tr></table>	DESIGNED BY	NEW	DATE	1-1-24	CHECKED BY	NEW	DATE	1-1-24	IN CHARGE	NEW	DATE	1-1-24	APPROVED BY	NEW	DATE	1-1-24	DATE	1-1-24	TIME	10:28 AM			
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IN CHARGE	NEW	DATE	1-1-24																								
APPROVED BY	NEW	DATE	1-1-24																								
DATE	1-1-24	TIME	10:28 AM																								
<table border="1"><thead><tr><th>NO.</th><th>DESCRIPTION</th><th>DATE</th><th>BY</th><th>CHKD.</th><th>APPD.</th></tr></thead><tbody><tr><td>1</td><td>00% DESIGN SUBMITTAL</td><td>1/1/24</td><td>NEW</td><td>NEW</td><td>NEW</td></tr><tr><td>2</td><td>DESIGN</td><td>1/1/24</td><td>NEW</td><td>NEW</td><td>NEW</td></tr><tr><td>3</td><td>REVISION</td><td></td><td></td><td></td><td></td></tr></tbody></table>				NO.	DESCRIPTION	DATE	BY	CHKD.	APPD.	1	00% DESIGN SUBMITTAL	1/1/24	NEW	NEW	NEW	2	DESIGN	1/1/24	NEW	NEW	NEW	3	REVISION				
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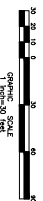
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CONSTRUCTION PLAN I
SCALE: 1"=30'



MATCHLINE - SEE SHEET R-104

NEW YORK LONG ISLAND STATE PLANE
COORDINATE SYSTEM NAD 1983

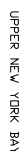


PROJECT NUMBER R-103 SHEET 5 OF 11	CONSTRUCTION PLAN I	MATRIXNEWORLD Engineering Program Matrix New World Engineering, Land Surveying and Landscape Architecture, P.A. 442 State Route 35, Second Floor Eatontown, New Jersey 07724 WIRE: 732.682.7886 NEW JERSEY CERTIFICATE OF AUTHORIZATION N.J. 240A27902300	NICHOLAS NEW YORK PROFESSIONAL ENGINEER LICENSE NO. 099136	DATE	1/19/2024
	WHITESTONE WATERFRONT FACILITY RETENTION WALL REPLACEMENT			BY	BK
	REVISIONS			NO	1
	REVISIONS			NO	2

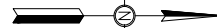
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© MATRIXNEWORLD, P: 2019-19-253 NYCEDC Staten Island Expressway Bulkhead/DWG/Plotsheets/03-Construction Plan.dwg/Construction Plan

CONSTRUCTION PLAN II

SCALE: 1"=30'



NEW YORK LONG ISLAND STATE PLANE
COORDINATE SYSTEM NAD 1983

**WHITESTONE WATERFRONT FACILITY
RETENTION WALL REPLACEMENT**

SITUATED IN
BEECKHURST, BOROUGH OF QUEENS, NEW YORK

Matrix New World Engineering, Land Surveying
and Landscape Architecture, P.C.
442 State Route 35, Second Floor Tel: 732-688-2999
Eatontown, New Jersey 07724 Fax: 973-240-1818
WBE / DBE / SBE www.matrixnewworld.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27962300

XX/XX/XX
DATE

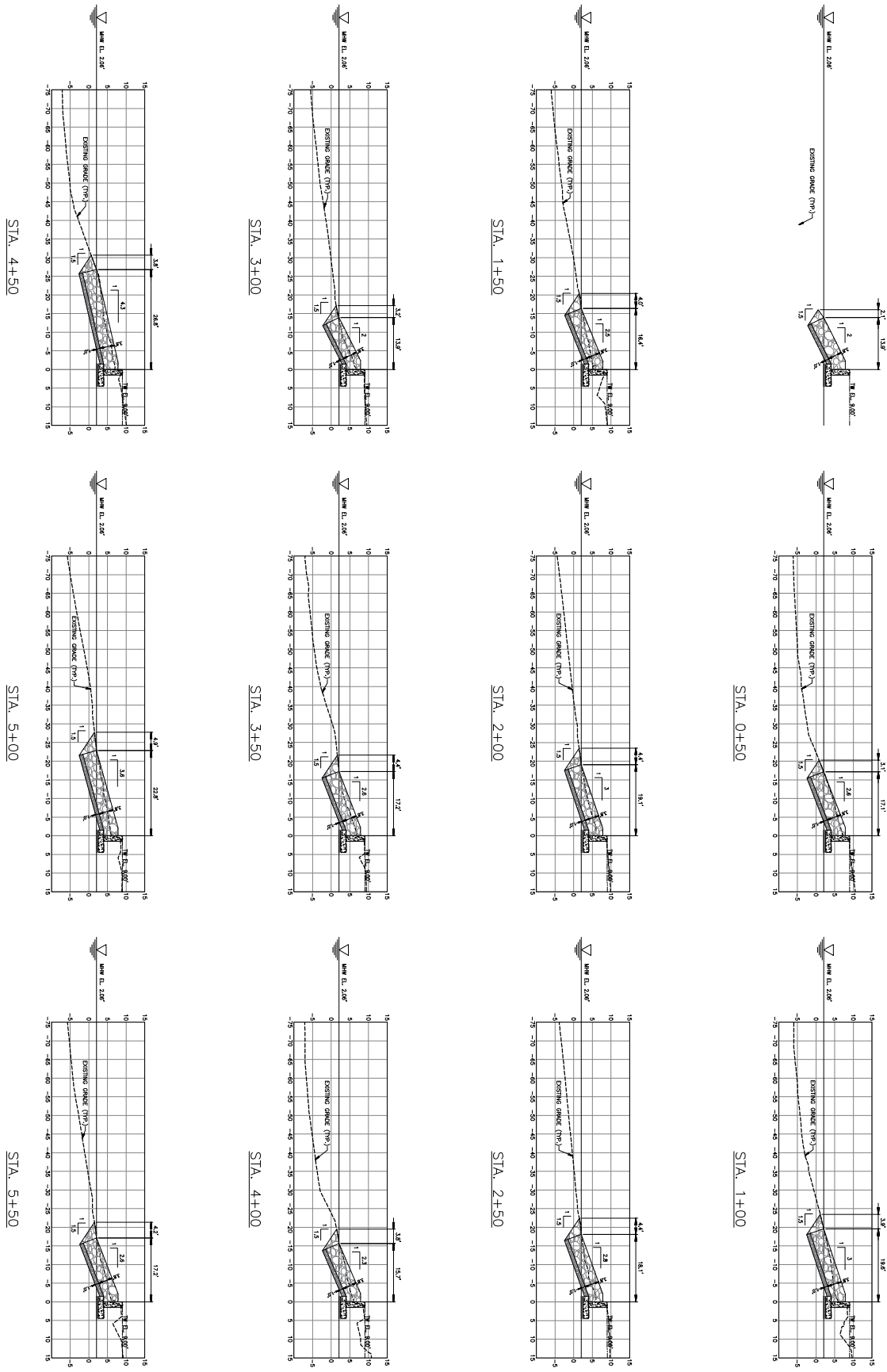
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NO

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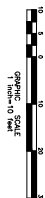
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 MATRIMNEWORLD\2019\15-23 NYCEC Stain Island and Esplanade Bulkhead\DWG\Jobsheets\05-Cross Sections.dwg\Cross Sections I



REVIEW CROSS SECTIONS STA. 0+00 TO 5+50		MATRIXNEWORLD Engineering Program Matrix New World Engineering, Land Surveying and Landscape Architecture, P.A. 442 State Route 35, Second Floor Eatontown, New Jersey 07724 WARE: DCE: FBS: www.matrixnewworld.com NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24627962000		NICHOLAS NEW YORK PROFESSIONAL ENGINEER LICENSE NO. 099136 DATE: 1/19/2024													
PROJECT NUMBER: R-105 DATE: 1/19/24 SCALE: 1"=10' SHEET: 7 OF 11	<table border="1"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> <th>BY</th> <th>CHKD</th> <th>APPD</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>05-Cross Sections.dwg</td> <td>1/19/24</td> <td>BK</td> <td></td> <td></td> </tr> </tbody> </table>					NO.	REVISION	DATE	BY	CHKD	APPD	1	05-Cross Sections.dwg	1/19/24	BK		
NO.	REVISION	DATE	BY	CHKD	APPD												
1	05-Cross Sections.dwg	1/19/24	BK														

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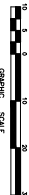
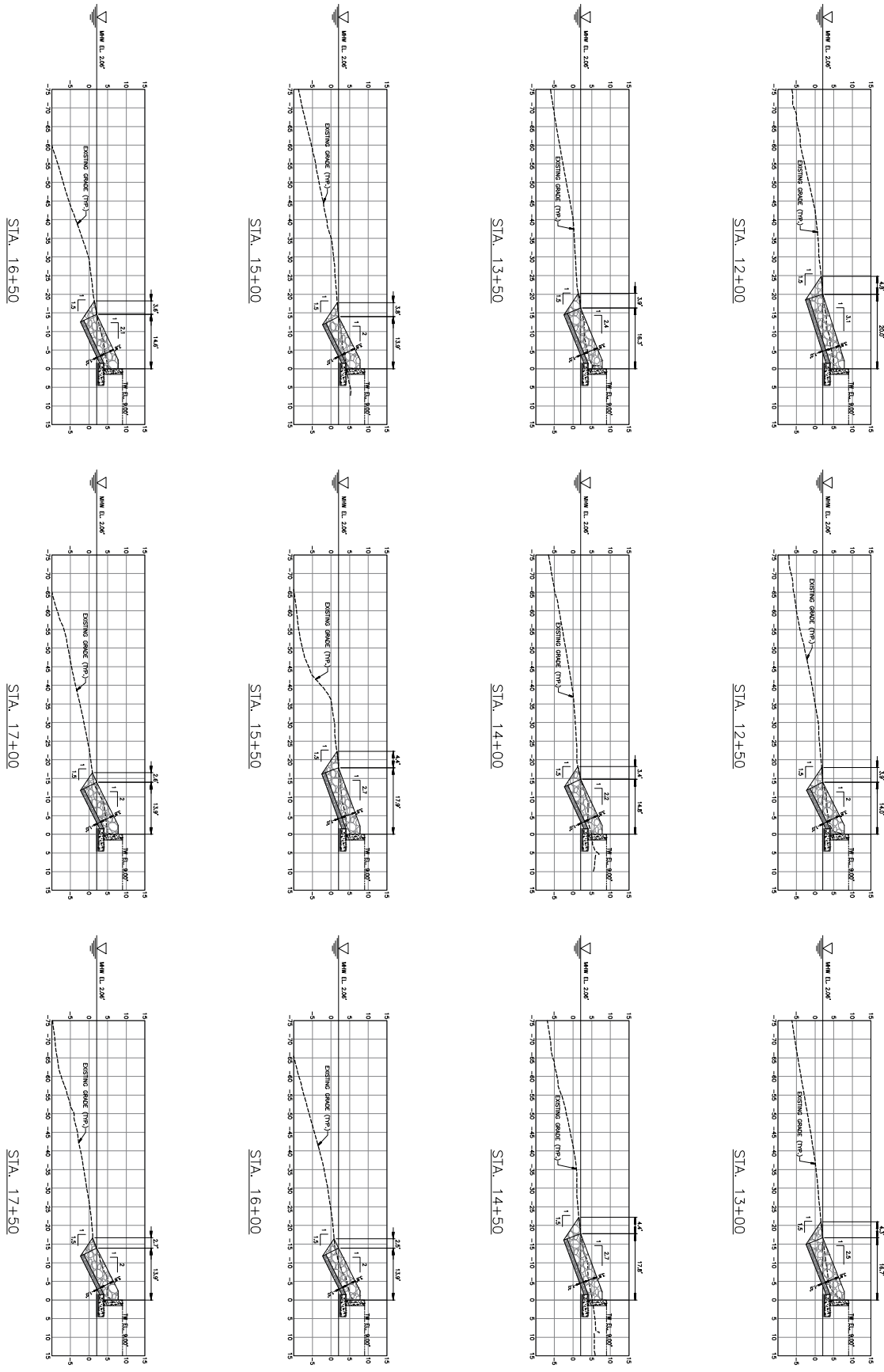
NICHOLAS DECORTIS, P.E.
NEW YORK PROFESSIONAL ENGINEER
LICENSE NO. 099336



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DATE

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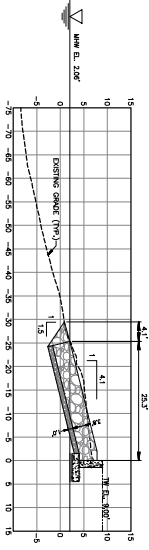


REVIEW CROSS SECTIONS STA. 12+00 TO 17+50		MATRIXNEWORLD Engineering Program Matrix New World Engineering, Land Surveying and Landscape Architecture, P.A. 442 State Route 35, Second Floor Eatontown, New Jersey 07724 WARE: DOE F88E www.matrixnewworld.com NEW JERSEY CERTIFICATE OF AUTHORITY No. 246A7962300		NICHOLAS NEW YORK PROFESSIONAL ENGINEER LICENSE NO. 099136 DATE		0% OCCUPANCY LOAD 0% WIND LOAD 0% SEISMIC LOAD 0% SOIL LOAD 0% WATER LOAD 0% AIR LOAD 0% OTHER LOAD
PROJECT NUMBER: 15-53	DATE: 1-19-24	SCALE: 1"=10'	REVISIONS:	NO.	DATE	BY
WHITESTONE WATERFRONT FACILITY RETENTION WALL REPLACEMENT STA. 12+00 TO 17+50 BEECHURST, BOROUGH OF QUEENS, NEW YORK			0% OCCUPANCY LOAD 0% WIND LOAD 0% SEISMIC LOAD 0% SOIL LOAD 0% WATER LOAD 0% AIR LOAD 0% OTHER LOAD			

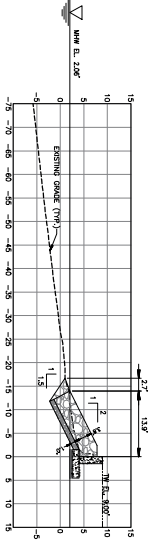
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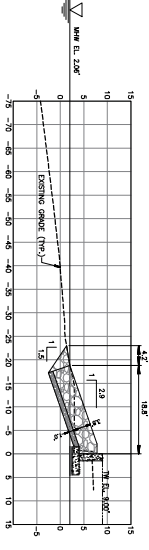
STA. 18+00



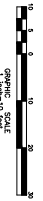
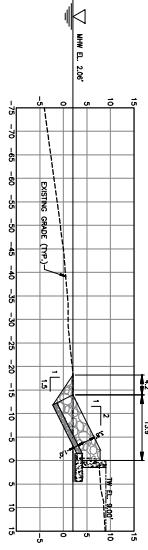
STA. 18+50



STA. 19+00



STA. 19+50



REVETMENT CROSS SECTIONS STA. 18+00 TO 19+50		MATRIXNEWORLD Engineering Program Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C. 442 State Route 35, Second Floor Eatontown, New Jersey 07724 WIRE: 732.687.8882 NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 240A27962300		NICHOLAS NEW YORK PROFESSIONAL ENGINEER LICENSE NO. 009136 DATE: 09/13/16		<table border="1"><tr><td>DESIGNED BY</td><td>NEW</td></tr><tr><td>CHECKED BY</td><td>NEW</td></tr><tr><td>APPROVED BY</td><td>NEW</td></tr><tr><td>DATE</td><td>01/19/2024</td></tr></table>		DESIGNED BY	NEW	CHECKED BY	NEW	APPROVED BY	NEW	DATE	01/19/2024								
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WHITESTONE WATERFRONT FACILITY RETENTION WALL REPLACEMENT						<table border="1"><tr><td>60% DECISION SUBMITTAL</td><td>60% DECISION SUBMITTAL</td><td>60% DECISION SUBMITTAL</td><td>60% DECISION SUBMITTAL</td><td>60% DECISION SUBMITTAL</td><td>60% DECISION SUBMITTAL</td><td>60% DECISION SUBMITTAL</td><td>60% DECISION SUBMITTAL</td></tr><tr><td>DATE</td><td>DATE</td><td>DATE</td><td>DATE</td><td>DATE</td><td>DATE</td><td>DATE</td><td>DATE</td></tr></table>		60% DECISION SUBMITTAL	60% DECISION SUBMITTAL	60% DECISION SUBMITTAL	60% DECISION SUBMITTAL	60% DECISION SUBMITTAL	60% DECISION SUBMITTAL	60% DECISION SUBMITTAL	60% DECISION SUBMITTAL	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
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SHEET 10 OF 11																							

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© MATRIXNEWORLD.P:12019119-253 NYCEDC Staten Island Expressway Bulkhead.DWG\Plotsheets\04-Details.dwg\Construction Details

[illegible]



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details

Box 1

Site No. **V00228 (North Site 1)**

Site Name **Ballpark at St. George Station**

Site Address: Between North Ramp and Jersey St., Block 2, Lot ~~20-22~~ Zip Code: 10301

City/Town: Staten Island

County: Richmond

Site Acreage: ~~52.000~~ **8.9**

Reporting Period: ~~May 31, 2024 to May 31, 2025~~ **June 28, 2024 - June 19, 2025**

YES NO

1. Is the information above correct?

☐ ☒

If NO, include handwritten above or on a separate sheet.

2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?

☐ ☒

3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?

☐ ☒

4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?

☐ ☒

If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

5. Is the site currently undergoing development?

☐ ☒

Box 2

YES NO

6. Is the current site use consistent with the use(s) listed below?
Commercial and Industrial

☒ ☐

7. Are all ICs in place and functioning as designed?

☒ ☐

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Description of Institutional ControlsParcelOwnerInstitutional Control**2-20**

New York City Economic Development Corp

Ground Water Use Restriction

Landuse Restriction

- 1) Declaration of Covenants shall run with the land
- 2) Prohibition of land use for purpose other than sports stadium, parking lots, esplanade
- 3) Prohibition of groundwater use
- 4) ECs - sub-slab methane venting system and gas monitoring system
- 5) Shall be no excavation unless prior approval by DEC:
 deeper than 18 inch clean soil
 No excavation deeper than 18 inch to prevent damage to demarcation layer
 In paved areas - no excavation below underlaying imported subgrade layer
 In areas covered by buildings - no excavation below the footprint of such structures and underlying imported subgrade materials.

Description of Engineering ControlsParcelEngineering ControlCompleted? Y/N**2-20 22**

Vapor Mitigation

Y

Cover System

N

Subsurface Barriers

Y

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO



2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO



**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. V00228

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Ian Taylor (SVP of NYC EDC) at One Liberty Plaza, 14th Floor,
print name print business address

am certifying as Owner (On behalf of City of NY) (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.


Ian Taylor (Jul 14, 2025 14:06 EDT)

(On behalf of City of NY)

07/14/2025

Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

Date

EC CERTIFICATIONS

Box 7

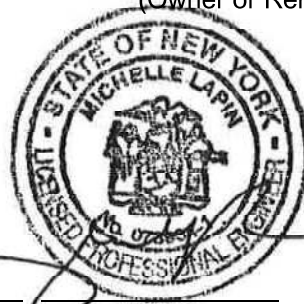
Professional Engineer Signature


I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Michelle Lapin at 440 Park Avenue South, 7th Floor, New York, NY 10016,
print name print business address

am certifying as a Professional Engineer for the AKRF, Inc.
(Owner or Remedial Party)


Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification




Stamp
(Required for PE)

7/9/2025
Date



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details

Box 1

Site No. **V00228**

Site Name **Ballpark at St. George Station (Empire Outlets South Site 2)**

Site Address: Between North Ramp and Jersey St., Block 2, Lot 15 Zip Code: 10301
City/Town: Staten Island
County: Richmond
Site Acreage: 2.2

Reporting Period: May 31, 2024 to May 31, 2025

YES NO

1. Is the information above correct?

☒ ☐

If NO, include handwritten above or on a separate sheet.

2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?

☐ ☒

3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?

☐ ☒

4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?

☐ ☒

If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

5. Is the site currently undergoing development?

☐ ☒

Box 2

YES NO

6. Is the current site use consistent with the use(s) listed below?
Commercial and Industrial

☒ ☐

7. Are all ICs in place and functioning as designed?

☐ ☒ ☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
2-15	New York City Economic Development Corp	Land Use Restriction Ground Water Use Restriction

- 1) Declaration of covenants shall run with the land.
- 2) Prohibition of land use for purpose other than commercial use
 - See Attachment II- Letter from New York State Department of Environmental Conservation to New York City Economic Development Corporation re: Deed Restriction Modification.
- 3) Prohibition of groundwater use
- 4) ECs - subslab methane venting system and gas monitoring system
- 5) Shall be no excavation unless prior approval by DEC:
 - In paved areas - no excavation below underlaying imported subgrade layer
 - In paved areas - no excavation below the footprint of such structures and underlying imported subgrade materials.

Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
2-15	Vapor Mitigation Cover System Subsurface Barriers Methane Monitoring System

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☒☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☒☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. V00228

Box 6


SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Isidoro Albino at 35B Richmond Terrace, SI, NY 10301,
print name print business address

am certifying as Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

 (AGENT)
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

July 8, 2025
Date

EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Gary Rozmus at GEI CONSULTANTS, INC. DBA GEI CONSULTANTS ENGINEERING,
GEOLOGY, ARCHITECTURE & LANDSCAPE ARCHITECTURE,
print name print business address

am certifying as a Professional Engineer for the EO Staten Island Property Owner LLC
(~~Owner~~ or Remedial Party)


Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification



Stamp
(Required for PE)

July 8, 2025

Date

Corrective Measures

Based on the site inspection and indoor air quality readings the Institutional and ECs implemented at the site are functioning and are protective of human health. However, maintenance is required on some components of the methane monitoring system as described below:

The system installer (Donovan Electric) will consult with their supplier and/or the manufacturer (Honeywell) regarding the four detectors (Fuel Oil Room, Wetzel's Pretzels Front of House, Wetzel's Pretzels Back of House and Haagen Dazs Back of House) that failed span calibration. These four detectors will be repaired, replaced, or reconfigured, as necessary, to restore functionality.

Following restoration of the above mentioned four methane detectors, GEI will conduct bump tests of the detectors to confirm functionality. Field calibration will be performed by GEI if bump test readings are found to be out of range.

The well cover at MP-1 should be repaired or replaced to permit future inspections. Documentation of the implementation of the maintenance activities will be reported in the September 2025 quarterly inspection report.

APPENDIX B
ANNUAL SITE INSPECTION RECORDS

**ANNUAL SITE INSPECTION LOG
BALLPARK AT ST. GEORGE STATION**

Page 1 of 3

Inspected by: Robert Bowden / TRC

Weather/Temperature: 77°, Mostly Sunny, Wind: NE/NW 9 mph.

Date: 6/11/25 11 AM

Recent Significant Weather Events? Yes No

If Yes, Describe:

		Status		Corrective Action Required	Comment Number	Correction Date
		Satisf	Unsatisf			
SOIL COVER AREAS	BALLFIELD AREA	Bare spots	✓	Left field former playground	1	
		Sparse growth areas	✓	Left field vent pipes	1	
		Weed encroachment	✓	Right field vent pipes		
		Stressed vegetation		N/A - Turf Field		
		Infield clay area				
		Settlement or subsistence			3	
		Cracks				
		Burrowing/animal intrusion				
		Erosion		Shoreline	2	
		Any recent excavation/disturbance?	Y	Plantings/mulch installed	13	
		If yes, was cover adequately repaired?	Y	N		
	WESTERN WOODED AREA	Bare spots	✓			
		Sparse growth areas	✓			
		Weed encroachment		Heavily vegetated	5	
		Stressed vegetation	✓			
		Mulch coverage	✓			
		Settlement or subsistence	✓			
		Cracks	✓			
		Burrowing/animal intrusion	✓			
		Erosion		Shoreline erosion	2	
		Visibility of white filter fabric	✓			
		Any recent excavation/disturbance?	Y	Partial soil removal		
		If yes, was cover adequately repaired?	Y	N		
	SS-7 REMOVAL AREA	Bare spots	✓			
		Sparse growth areas	✓			
		Weed encroachment	✓			
		Stressed vegetation	✓			
		Cracks	✓			
		Burrowing/animal intrusion	✓			
		Erosion		Shoreline	2	
		Visibility of white filter fabric	✓			
		Any recent excavation/disturbance?	Y	N		
		If yes, was cover adequately repaired?	Y	N		
	LAWN AREA (ALONG ROADWAY)	Bare spots	✓			
		Sparse growth areas	✓			
		Weed encroachment	✓			
		Stressed vegetation	✓			
		Cracks	✓			
		Burrowing/animal intrusion	✓			
		Erosion	✓			
		Any recent excavation/disturbance?	Y	N		
		If yes, was cover adequately repaired?	Y	N		
STADIUM ROADWAY/ESPLANADE	CONCRETE, ASPHALT, PAVERS	Cracks		Minor sidewalk	6	
		Depressions	✓			
		Bumps	✓			
		Potholes	✓			
		Exposed underlying soil	✓			
		Any recent pavement repairs?	Y	roadway repaired	6	
		If yes, was pavement adequately repaired?	✓			

Comments are provided at the end of the log

Inspector's Initials: RCB

6/11/25

**ANNUAL SITE INSPECTION LOG
BALLPARK AT ST. GEORGE STATION**

Page 2 of 3

			Status		Corrective Action Required	Comment Number	Correction Date
			Satisf	Unsatisf			
PAVED SURFACES (EMPIRE OUTLETS ROADWAY/ESPLANADE)	CONCRETE, ASPHALT, PAVERS	Cracks					
		Depressions			Few surface cracks	7	
		Bumps	✓		-		
		Potholes	✓		-		
		Exposed underlying soil	✓		-		
		Any recent pavement repairs?	Y	(N)	-		
		If yes, was pavement adequately repaired?					
SHORELINE PROTECTION		SD-4 Shore Remediation Area					
		Riprap coverage		✓	Requires riprap	8	
		Visibility of gravel backfill		✓	Fence damage / hole	8	
		Visibility of black filter fabric		✓	visible fabric	8	
		Photodocumentation conducted?	(Y)	N	-		
		SD-6 Shore Remediation Area					
		Riprap coverage	✓		-		
		Visibility of gravel backfill	✓		-		
		Visibility of black filter fabric	✓		-		
		Photodocumentation conducted?	(Y)	N	-		
		Remaining Riprap Areas			-		
		Stormwater Outfalls			-		
GAS VENTING & MONITORING SYSTEMS	EXTERIOR VENT PIPING	Northwestern (Left Field) Vent Piping					
		General condition	✓		-		
		Corrosion	✓		-		
		Cap/Screen	✓		-		
		Fencing	✓		repaired, but still hole	10	
		Photodocumentation conducted?	(Y)	N	-		
		Vegetation Overgrowth	✓		-		
		Northeastern (Right Field) Vent Piping					
		General condition	✓		-		
		Corrosion	✓		-		
	INTERIOR FLOOR SLAB	Cap/Screen	✓		-		
		Fencing	✓		-		
		Photodocumentation conducted?	(Y)	N	-		
		Vegetation Overgrowth		✓	Excess vegetation	10	
	RECORD-KEEPING	Quarterly calibration documentation	✓		Sensor repaired	12	
		Quarterly inspection documentation	✓		on 6/11/25	12	
		Status reports	✓		-		
		History reports	✓		History downloaded	12	
		Key event reports	✓		-		

Inspector Signature: RC Bowden Inspector Name: Robert Bowden / TRC
 Date: 6/11/25 PE License #: NY 105565

COMMENTS

COMMENT
NUMBER

COMMENT

1 - Few bare spots along outside of outfield fencing and former playground area. Minor disturbed area along Rig Wheel site fence, mulch installed (Photos 3, 5, 6, 7, 11)

2 - Shoreline erosion of soil cap where bulkhead collapsed. Replacement of bulkhead and riprap required. Black filter fabric visible @ SD-4 area (Photos 23, 24, 25, 26)

Page 2 of 3

COMMENTS

RB

ANNUAL SITE INSPECTION LOG

BALLPARK AT ST. GEORGE STATION

Inspector's Initials: RB

Date: 6/11/25

**GAS SURVEY LOG
BALLPARK AT ST. GEORGE STATION**

DATE: 6/11/25, 10 AM
 WEATHER: Mostly Sunny
 OUTSIDE TEMPERATURE: 74
 WIND: NW 6
 INSTRUMENTS: FID, PID, Landfill Gas Detector
 SAMPLER NAME/COMPANY: Robert Bowden / TRC

LOCATION	TIME	CONCENTRATION (ppm or %)			NOTES/COMMENTS
		FID	PID	CH4/O2/CO2	
<u>1st Base Side Vent Pipes</u>					
East 1 (easternmost)	1040	0.0	0.0	0.0/0.0/21.2	Fenced-in Enclosure & vent pipes
East 2	1040	0.0	0.0	0.0/0.0/21.2	
East 3	1040	0.0	0.0	0.0/0.0/21.2	- Excess vegetation & vent pipes
East 4 (westernmost)	1040	0.0	0.0	0.0/0.0/21.2	
<u>3rd Base Side Vent Pipes</u>					
West 1 (easternmost)	1050	0.0	0.0	0.0/0.0/21.3	- Fencing repaired, but still small hole & fencing
West 2	1050	0.0	0.0	0.0/0.0/21.3	
West 3	1050	0.0	0.0	0.0/0.0/21.3	
West 4 (westernmost)	1050	0.0	0.0	0.0/0.0/21.3	
Maintenance Room (3rd Base)	1004	0.2	0.0	0.0/0.1/20.5	Overhead door to ball field close
Mechanical Room (Rm 1.01.07)	1008	0.2	0.0	0.0/0.1/20.5	door closed
Commissary (Rm 1.03.05)	1009	10.1	0.0	0.0/0.1/20.5	61 H2O/FID max looking at time of inspection
Hallway	1003	0.0	0.0	0.0/0.1/20.5	overhead door to parking open
Switch Gear Room (Rm 1.01.10)	1010	4.2	0.0	0.0/0.1/20.5	door closed
Wet Vending Room	1013	2.5	0.0	0.0/0.0/20.6	door closed
Storage (next to Fire Pump Rm)	1017	0.0	0.0	0.0/0.0/20.8	door open
Fire Pump Room (Room 1.12.01)	1015	2.3	0.0	0.0/0.0/20.7	No odor, door closed
Hallway	1019	1.2	0.0	0.0/0.0/20.8	-
Mechanical Room (Room 1.17.03)	1020	0.0	0.0	0.0/0.0/20.8	door closed
Open Unoccupied Space (Area F)	1024	0.0	0.0	0.0/0.0/20.9	Bay door open and crew replacing sensor 213

NOTES:

Normal oxygen level is 19.5-21% in ambient air

FID/PID: TVA 2020 Toxic Vapor Analyzer - Pine ID 34652

Landtec GEM5000 - Pine ID 22890

- A/C running during inspection
- Oven being used in Commissary
- Sensor in Area beneath 1st Base bleachers being replaced by Economy Plumbing.

HISTORY REPORT
PRINTED JUNE 11, 2025
GAS MONITORING SYSTEM
BALLPARK AT ST GEORGE STATION

Date and Time	Tag Module # Description
6/11/2025 11:50	LOGIC: SENTRY-IT Logic online
6/11/2025 11:50	213(mech rm 1st bas):TROUBLE bits=16
6/11/2025 11:50	213(mech rm 1st bas):TROUBLE CLEARED
6/11/2025 11:45	112(Unnoc Sp 1st #4):CALIBRATED
6/11/2025 11:36	213(mech rm 1st bas):TROUBLE bits=16
6/11/2025 11:36	213(mech rm 1st bas):TROUBLE CLEARED
6/11/2025 11:26	213(mech rm 1st bas):TROUBLE bits=16
6/11/2025 11:26	213(mech rm 1st bas):TROUBLE CLEARED
6/11/2025 11:26	112(Unnoc Sp 1st #4):TROUBLE CLEARED
6/3/2025 3:27	213(mech rm 1st bas):TROUBLE bits=16
5/27/2025 13:03	216(visitors locker):CALIBRATED
5/27/2025 13:03	215(promo storage):CALIBRATED
5/27/2025 13:03	214(unoccupied space):CALIBRATED
5/27/2025 13:03	213(mech rm 1st bas):CALIBRATED
5/27/2025 13:03	204(Commisary):CALIBRATED
5/27/2025 13:03	203(Main Swtch Gear):CALIBRATED
5/27/2025 13:03	111(Unnoc Sp 1st #3):CALIBRATED
5/27/2025 13:03	110(Unnoc Sp 1st #2):CALIBRATED
5/27/2025 13:03	109(Unnoc Sp 1st #1):CALIBRATED
5/27/2025 13:03	108(Unnoc Sp Behind):CALIBRATED
5/27/2025 13:03	107(Home Locker Rm):CALIBRATED
5/27/2025 13:03	106(Unnoc Space 3rd):CALIBRATED
5/27/2025 13:03	104(Unocc Space 3rd):CALIBRATED
5/27/2025 13:03	103(Coaches Rm):CALIBRATED
5/27/2025 13:03	102(Mech Rm 3rd):CALIBRATED
5/27/2025 13:03	101(FLD Maint Rm):CALIBRATED

APPENDIX C

TRC SITE INSPECTION PHOTOGRAPHS

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 1: Stadium west plaza area (looking from stadium stairs to the north at the harbor).




Photo 2: Adjacent NY Wheel construction site to the west of the stadium. Gravel-covered observation wheel location is to the right of building.



Photo 3: Bare spots at grass area located outside left field stadium wall.



Photo 4: Landscaped area outside of left field of Ballpark outfield fencing.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	1 of 12	NYCEDC	Ballpark at St. George	

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 5: Newly installed mulch and plantings adjacent to fencing between Ballpark area and Big Wheel Site (looking west).




Photo 6: Newly installed adjacent to fencing between Ballpark area and Big Wheel Site (looking south)



Photo 7: Bare spots and rutting present adjacent to fencing between Ballpark area and Big Wheel Site (looking west).



Photo 8: Landscaped area located between right field stadium wall and shoreline (looking northwest).

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	2 of 12	NYCEDC	Ballpark at St. George	

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 9: Repaved roadway to repair surface cracking between right field stadium wall and shoreline (looking northwest).




Photo 10: Repaved roadway and minor sidewalk surface cracking between right field stadium wall and shoreline (looking northeast).



Photo 11: Bare spot at landscaped area located between right field stadium wall and shoreline (looking north).



Photo 12: Repaired fencing at 3rd Base Side Vent Pipes.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	3 of 12	NYCEDC	Ballpark at St. George	

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 13: Excess vegetation at 1st Base Side Vent Pipes.



Photo 14: NYC Ferry Terminal area.



Photo 15: Empire Outlets area located east of Ballpark Site (looking east).

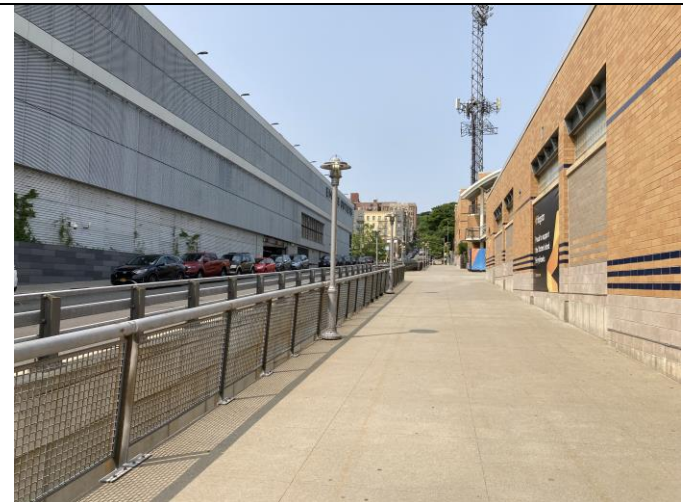



Photo 16: Paved concrete sidewalk, pavers, and roadway located east of Ballpark Site (looking south).

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	4 of 12	NYCEDC	Ballpark at St. George	

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 17: Big Wheel Site and Railroad track located to the west of the stadium (looking West).




Photo 18: Adjacent NY Wheel construction site to the west of the stadium (looking North).



Photo 19: Site stormwater outfall from the central retention basin. Outlet is partially blocked with gravel.



Photo 20: Site shoreline adjacent to the stadium west plaza and 911 Memorial (looking East).

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	5 of 12	NYCEDC	Ballpark at St. George	

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 21: Photo 20: Site shoreline adjacent to the stadium west plaza and 911 Memorial (looking West).




Photo 22: NYCDEP sewer outfall along shoreline and adjacent to NY Wheel construction Site.



Photo 23: Site shoreline adjacent to NY Wheel construction Site (looking East).



Photo 24: Undermined shoreline bulkhead wall at western end of NY Wheel construction Site.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	6 of 12	NYCEDC	Ballpark at St. George	

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 25: Collapsed shoreline bulkhead wall at western end of NY Wheel construction Site (1).




Photo 26: Collapsed shoreline bulkhead wall at western end of NY Wheel construction Site (2).



Photo 27: Damaged section of fencing at western end of NY Wheel construction Site.



Photo 28: Partially blocked NYCDEP sewer outfall along shoreline at western end of NY Wheel construction Site.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	7 of 12	NYCEDC	Ballpark at St. George	

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 29: Hole in fencing at western end of NY Wheel construction Site.




Photo 30: Remains of a former timber sheet pile wall supported by large quarry stones along western wooded Site area. Retains shoreline stone/gravel covered area and protecting shoreline.



Photo 31: Soil covered wooded area at the west end of the Site. Ground is heavily vegetated.



Photo 32: Construction entrance at west end of NY Wheel construction Site (looking north).

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	8 of 12	NYCEDC	Ballpark at St. George	

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 33: Partially covered soil pile located west of Big Wheel Site on adjacent MTA property (1).



Photo 34: Partially covered soil pile located west of Big Wheel Site on adjacent MTA property (2).



Photo 35: Fencing reinstalled at soil pile located west of Big Wheel Site along Bank Street.

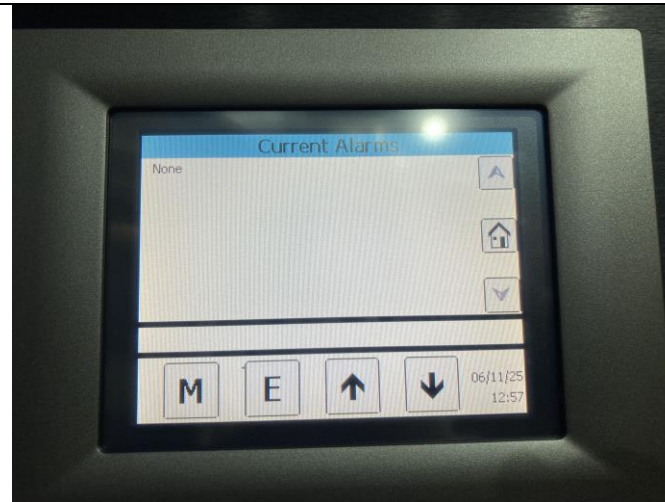



Photo 36: Inspection of indoor combustible gas monitoring system panel Alarms Report.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	9 of 12	NYCEDC	Ballpark at St. George	

Appendix C **Site Inspection Photograph Log** **June 11, 2025**

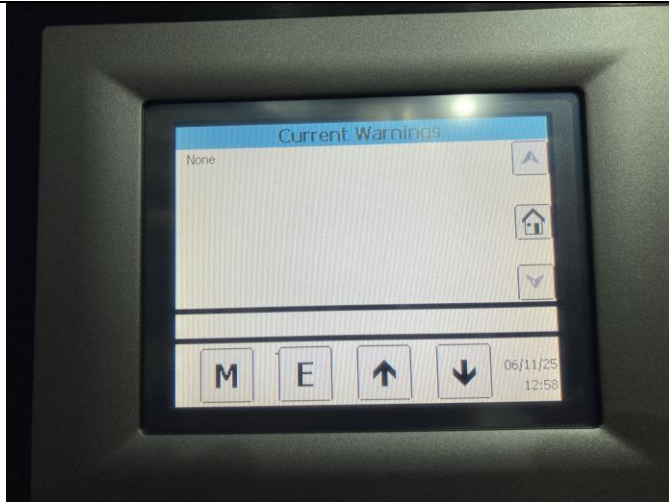


Photo 37: Inspection of indoor combustible gas monitoring system panel Warnings Report.

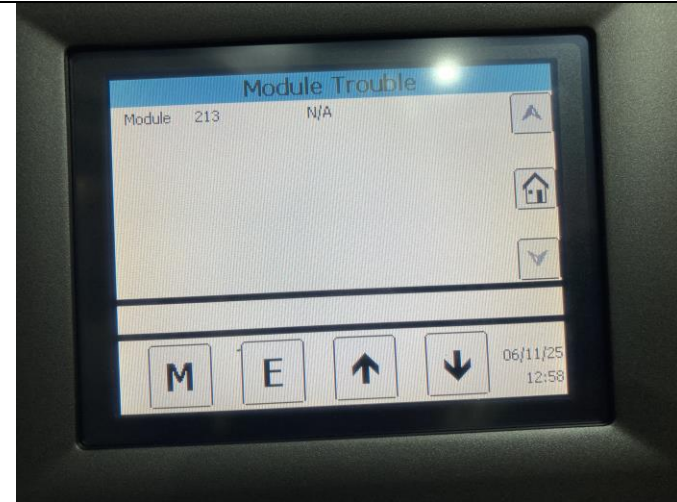



Photo 38: Inspection of indoor combustible gas monitoring system panel Warnings Report. Module 213 was being replaced at the time of inspection.



Photo 39: Resealed concrete slab floor crack in main hallway (1).



Photo 40: Resealed concrete slab floor crack in main hallway (2).

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	10 of 12	NYCEDC	Ballpark at St. George	

Appendix C
Site Inspection Photograph Log
June 11, 2025



Photo 41: Resealed concrete slab floor crack in main hallway (3).



Photo 42: Inspection of gas survey sensor at left field Maintenance Room of Ballpark.

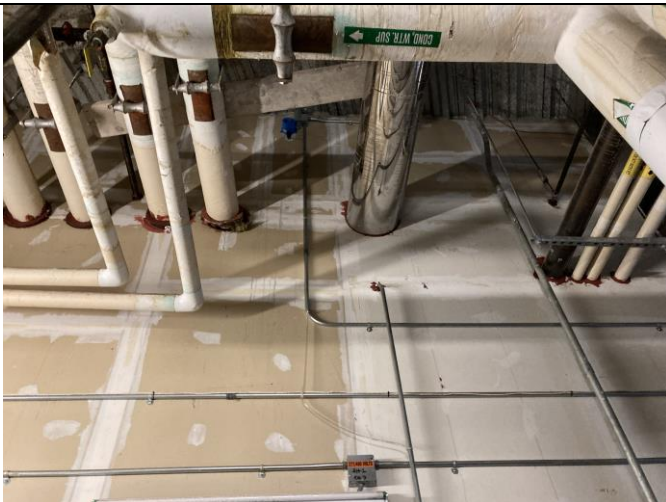



Photo 43: Inspection of gas survey sensor in Boiler Room of Ballpark.



Photo 44: Replacement of gas survey sensor in right field storage area.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	11 of 12	NYCEDC	Ballpark at St. George	

Appendix C

Site Inspection Photograph Log

June 11, 2025



Photo 45: Inspection of synthetic turf warning track and synthetic turf infield of Ballpark Area (looking northwest).




Photo 46: Inspection of synthetic turf warning track and synthetic turf infield of Ballpark Area (looking north).



Photo 47: Inspection of synthetic turf of Ballpark Area (looking east from leftfield outfield).

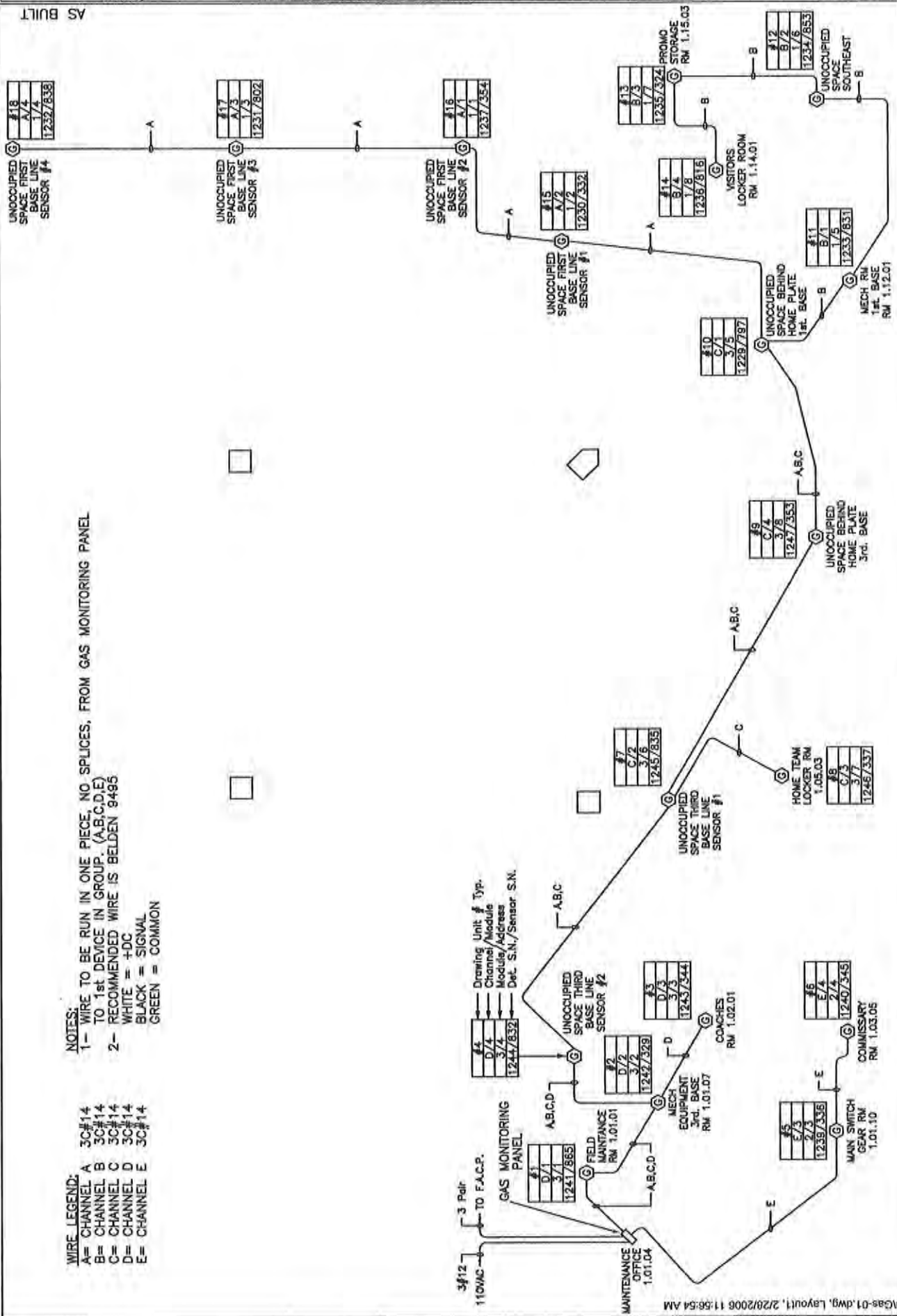


Photo 48: Landscaped area located between right field stadium wall and shoreline (looking northwest).

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	
341863	R. Bowden/ TRC	12 of 12	NYCEDC	Ballpark at St. George	

APPENDIX D

STADIUM GAS MONITORING SYSTEM RECORDS



WIRE LEGEND:
A = CHANNEL A 3C#14
B = CHANNEL B 3C#14
C = CHANNEL C 3C#14
D = CHANNEL D 3C#14
E = CHANNEL E 3C#14

NOTES:
1 - WIRE TO BE RUN IN ONE PIECE, NO SPLICES, FROM GAS MONITORING PANEL TO 1st DEVICE IN GROUP. (A,B,C,D,E)
2 - RECOMMENDED WIRE IS BELDEN 9495
WHITE = +DC
BLACK = SIGNAL
GREEN = COMMON

WIRE LEGEND:
A = CHANNEL A
B = CHANNEL B
C = CHANNEL C
D = CHANNEL D
E = CHANNEL E

NOTES:

- 1- WIRE TO BE RUN IN ONE PIECE, NO SPLICES, FROM GAS MONITORING PANEL TO 1st DEVICE IN GROUP. (A,B,C,D,E)
2- RECOMMENDED WIRE IS BELDEN 3485
WHITE = +DC
BLACK = SIGNAL
GREEN = COMMON

AS BUILT

SUMMARY OF GAS SENSOR LOCATIONS BALLPARK AT ST. GEORGE STATION

AREA	ROOM NUMBER	DETAILS
Field Maintenance Room	1.01.01	Located on the western side of concrete wall near the ceiling in the southeastern portion of the area
Mechanical Equipment Room	1.01.07	Located on a western side concrete wall near the ceiling in the southeastern portion of the area
Coaches Room	1.02.01	Located on the suspended tile ceiling near the center of the room.
Unoccupied Space Third Base Line	Access through Vent Opening from Field Maintenance Rm. (Gravel Floor)	Located on the southern side concrete wall near the ceiling in the western portion of the area.
Unoccupied Space Third Base Line	Access through Vent Opening from Field Maintenance Rm. (Gravel Floor)	Located on the southern side concrete wall near the ceiling in the central portion of the area.
Main Gear Switch Room	1.01.10	Located on the eastern side of the concrete wall near the ceiling in the central portion of the room
Commissary Room	1.03.05	Located on the suspended tile ceiling near the central portion of the room and just inside the hallway door
Home Team Locker Room	1.05.03	Located on the suspended tile ceiling near the center of the room
Unoccupied Space Behind Home Plate	Access through Vent Opening from Walkway to Home Plate (Gravel Floor)	Located on the southern side concrete wall near the ceiling in the eastern portion of the area
Unoccupied Space Behind Home Plate	Access through Vent Opening from Walkway to Home Plate (Gravel Floor)	Located on the southern side concrete wall near the ceiling in the central portion of the area
Mechanical Room	1.12.01	Located on the northern side of the concrete wall near the ceiling, in the northwest portion of the room
Unoccupied Space/Storage Room (concrete floor)		Located on the western concrete wall near the ceiling, directly above the doorway to the room
Promo Storage Room	1.15.03	Located on the western side concrete wall near the ceiling of the central portion of the room
Visitors Locker Room	1.14.01	Located on the suspended tile ceiling near the center of the room
Unoccupied Space First Base Line (gravel floor)		Located on the eastern wall near the ceiling in the southernmost portion of the area
Unoccupied Space First Base Line (gravel floor)		Located along the ceiling in the eastern portion of the south-central portion of this area
Unoccupied Space First Base Line (gravel floor)		Located along the ceiling in the eastern portion of the central portion of this area
Unoccupied Space First Base Line (gravel floor)		Located along the ceiling in the eastern portion of the north-central portion of this area

GAS MONITORING SYSTEM INSPECTION AND CALIBRATION LOG
BALLPARK AT ST. GEORGE STATION

Page 1 of 2

Calibration by: <u>Jorge Figueroa</u>		Company: <u>Economy Plumbing</u>			
Date: <u>1/6/25</u>		Calibration Gas Type: <u>Methane Air</u>			
Last Calibration Date: <u>6/26/24</u>		Calibration Gas Concentration: <u>2.5% Methane</u>			

		Yes	No	Corrective Action Required	Correction Date
COMMANDER	Top Display Correct	✓			
	Trouble Light On		✓		
	Alarms On		✓		
	Battery in Good Condition	✓			
	Generate Reports	✓			
	Status Report System Report (if configuration change)	✓	✓		
CONTROLLER 1 (SENSORS 1 THROUGH 8)	Top Display Correct	✓			
	Trouble Light On		✓		
	Alarms On		✓		
	Battery in Good Condition	✓			
	Diagnostic Report Correct	✓			
	Global Calibration				
	Zero Value Readings Completed	✓			
	Zero Air Applied to Any Sensors	✓			
	Span Gas Applied to All Sensors	✓			
	Combustible Gas Flow 100 cc/minute	✓			
	Combustible Gas Applied 3 minutes	✓			
	Error Conditions		✓		
	Low Sensitivity				
	Not Calibrated				
	Local Calibration				
Ambient Air Clean at All Sensors	✓				
Zero Air Applied to Any Sensors	✓				
Span Gas Applied to All Sensors	✓				
Combustible Gas Flow 100 cc/minute	✓				
Combustible Gas Applied 3 minutes	✓				
Error Conditions		✓			
Low Sensitivity					
Not Calibrated					
CONTROLLER 2 (SENSORS 3 & 4)	Top Display Correct	✓			
	Trouble Light On		✓		
	Alarms On		✓		
	Battery in Good Condition	✓			
	Diagnostic Report Correct	✓			
	Global Calibration				
	Zero Value Readings Completed	✓			
	Zero Air Applied to Any Sensors	✓			
	Span Gas Applied to All Sensors	✓			
	Combustible Gas Flow 100 cc/minute	✓			
	Combustible Gas Applied 3 minutes	✓			
	Error Conditions		✓		
	Low Sensitivity				
	Not Calibrated				
	Local Calibration				
Ambient Air Clean at All Sensors	✓				
Zero Air Applied to Any Sensors	✓				
Span Gas Applied to All Sensors	✓				
Combustible Gas Flow 100 cc/minute	✓				
Combustible Gas Applied 3 minutes	✓				
Error Conditions		✓			
Low Sensitivity					
Not Calibrated					

NOTE: Space for Comments at End of Log

Inspector's Initials: JP

Page 2 of 2[illegible]

1/6/2025	Tag	Module #	Description
#####	216	(visitors locker):	CALIBRATED
#####	215	(promo storage):	CALIBRATED
#####	214	(unocupied space):	CALIBRATED
#####	213	(mech rm 1st bas):	CALIBRATED
#####	204	(Commisary):	CALIBRATED
#####	203	(Main Swtch Gear):	CALIBRATED
#####	111	(Unnoc Sp 1st #3):	CALIBRATED
#####	110	(Unnoc Sp 1st #2):	CALIBRATED
#####	109	(Unnoc Sp 1st #1):	CALIBRATED
#####	108	(Unnoc Sp Behind):	CALIBRATED
#####	107	(Home Locker Rm):	CALIBRATED
#####	106	(Unnoc Space 3rd):	CALIBRATED
#####	105	(Unocc Space Hm):	CALIBRATED
#####	104	(Unocc Space 3rd):	CALIBRATED
#####	103	(Coaches Rm):	CALIBRATED
#####	102	(Mech Rm 3rd):	CALIBRATED
#####	101	(FLD Maint Rm):	CALIBRATED
#####	112	(Unnoc Sp 1st #4):	CALIBRATED

GAS MONITORING SYSTEM INSPECTION AND CALIBRATION LOG
BALLPARK AT ST. GEORGE STATION

Page 1 of 2

Calibration by: <u>Jorge Figueroa</u>		Company: <u>Economy Plumbing</u>			
Date: <u>6/11/25</u>		Calibration Gas Type: <u>Methane A.V</u>			
Last Calibration Date: <u>1/6/25</u>		Calibration Gas Concentration: <u>2.5% Methane</u>			
		Yes	No	Corrective Action Required	Correction Date
COMMANDER	Top Display Correct	✓			
	Trouble Light On		✓		
	Alarms On		✓		
	Battery in Good Condition	✓			
	Generate Reports	✓			
	Status Report	✓			
	System Report (if configuration change)		✓		
CONTROLLER 1 (SENSORS 1 THROUGH 8)	Top Display Correct	✓			
	Trouble Light On		✓		
	Alarms On		✓		
	Battery in Good Condition	✓			
	Diagnostic Report Correct	✓			
	Global Calibration				
	Zero Value Readings Completed	✓			
	Zero Air Applied to Any Sensors	✓			
	Span Gas Applied to All Sensors	✓			
	Combustible Gas Flow 100 cc/minute	✓			
	Combustible Gas Applied 3 minutes	✓	✓		
	Error Conditions				
	Low Sensitivity				
	Not Calibrated				
	Local Calibration				
Ambient Air Clean at All Sensors	✓				
Zero Air Applied to Any Sensors	✓				
Span Gas Applied to All Sensors	✓				
Combustible Gas Flow 100 cc/minute	✓				
Combustible Gas Applied 3 minutes	✓	✓			
Error Conditions					
Low Sensitivity					
Not Calibrated					
CONTROLLER 2 (SENSORS 3 & 4)	Top Display Correct	✓			
	Trouble Light On		✓		
	Alarms On		✓		
	Battery in Good Condition	✓			
	Diagnostic Report Correct	✓			
	Global Calibration				
	Zero Value Readings Completed	✓			
	Zero Air Applied to Any Sensors	✓			
	Span Gas Applied to All Sensors	✓			
	Combustible Gas Flow 100 cc/minute	✓			
	Combustible Gas Applied 3 minutes	✓	✓		
	Error Conditions				
	Low Sensitivity				
	Not Calibrated				
	Local Calibration				
Ambient Air Clean at All Sensors	✓				
Zero Air Applied to Any Sensors	✓				
Span Gas Applied to All Sensors	✓				
Combustible Gas Flow 100 cc/minute	✓				
Combustible Gas Applied 3 minutes	✓	✓			
Error Conditions					
Low Sensitivity					
Not Calibrated					

NOTE: Space for Comments at End of Log

Inspector's Initials: JP

Page 2 of 2[illegible]

6/11/2025 Tag	Module #	Description
#####	LOGIC:	SENTRY-IT Logic online
#####	213(mech rm 1st bas):	TROUBLE bits=16
#####	213(mech rm 1st bas):	TROUBLE CLEARED
#####	112(Unnoc Sp 1st #4):	TROUBLE CLEARED
#####	213(mech rm 1st bas):	TROUBLE bits=16
#####	216(visitors locker):	CALIBRATED
#####	215(promo storage):	CALIBRATED
#####	214(unocupied space):	CALIBRATED
#####	213(mech rm 1st bas):	CALIBRATED
#####	204(Commisary):	CALIBRATED
#####	203(Main Swtch Gear):	CALIBRATED
#####	112(Unnoc Sp 1st #4):	CALIBRATED
#####	111(Unnoc Sp 1st #3):	CALIBRATED
#####	110(Unnoc Sp 1st #2):	CALIBRATED
#####	109(Unnoc Sp 1st #1):	CALIBRATED
#####	108(Unnoc Sp Behind):	CALIBRATED
#####	107(Home Locker Rm):	CALIBRATED
#####	106(Unnoc Space 3rd):	CALIBRATED
#####	104(Unocc Space 3rd):	CALIBRATED
#####	103(Coaches Rm):	CALIBRATED
#####	102(Mech Rm 3rd):	CALIBRATED
#####	101(FLD Maint Rm):	CALIBRATED
#####	105(Unocc Space Hm):	CALIBRATED

HISTORY REPORT
PRINTED JUNE 11, 2025
GAS MONITORING SYSTEM
BALLPARK AT ST GEORGE STATION

Date and Time	Tag	Module #	Description
6/11/2025 11:50			LOGIC: SENTRY-IT Logic online
6/11/2025 11:50	213(mech rm 1st bas):TROUBLE	bits=16	
6/11/2025 11:50	213(mech rm 1st bas):TROUBLE	CLEARED	
6/11/2025 11:45	112(Unnoc Sp 1st #4):CALIBRATED		
6/11/2025 11:36	213(mech rm 1st bas):TROUBLE	bits=16	
6/11/2025 11:36	213(mech rm 1st bas):TROUBLE	CLEARED	
6/11/2025 11:26	213(mech rm 1st bas):TROUBLE	bits=16	
6/11/2025 11:26	213(mech rm 1st bas):TROUBLE	CLEARED	
6/11/2025 11:26	112(Unnoc Sp 1st #4):TROUBLE	CLEARED	
6/3/2025 3:27	213(mech rm 1st bas):TROUBLE	bits=16	
5/27/2025 13:03	216(visitors locker):CALIBRATED		
5/27/2025 13:03	215(promo storage):CALIBRATED		
5/27/2025 13:03	214(unoccupied space):CALIBRATED		
5/27/2025 13:03	213(mech rm 1st bas):CALIBRATED		
5/27/2025 13:03	204(Commisary):CALIBRATED		
5/27/2025 13:03	203(Main Swtch Gear):CALIBRATED		
5/27/2025 13:03	111(Unnoc Sp 1st #3):CALIBRATED		
5/27/2025 13:03	110(Unnoc Sp 1st #2):CALIBRATED		
5/27/2025 13:03	109(Unnoc Sp 1st #1):CALIBRATED		
5/27/2025 13:03	108(Unnoc Sp Behind):CALIBRATED		
5/27/2025 13:03	107(Home Locker Rm):CALIBRATED		
5/27/2025 13:03	106(Unnoc Space 3rd):CALIBRATED		
5/27/2025 13:03	104(Unocc Space 3rd):CALIBRATED		
5/27/2025 13:03	103(Coaches Rm):CALIBRATED		
5/27/2025 13:03	102(Mech Rm 3rd):CALIBRATED		
5/27/2025 13:03	101(FLD Maint Rm):CALIBRATED		

APPENDIX E

NEW YORK WHEEL PERIODIC REVIEW REPORT

APPENDIX F
EMPIRE OUTLETS
DOCUMENTATION

SITE INSPECTION REPORTS

July 7, 2025
Project No. 2503863

Mr. Isidoro Albino
Director of Operations
Empire Outlets at St. George
c/o Jones Lang LaSalle
35B Richmond Terrace, Suite MGMT
Staten Island, NY 10301

**Re: Annual Inspections: Methane Monitoring System and Sub-Slab Depressurization System
Empire Outlets
55 Richmond Terrace
Staten Island, New York**

Dear Mr. Albino

GEI Consultants, Inc. DBA GEI Consultants Engineering, Geology, Architecture & Landscape Architecture (GEI) is pleased to submit this annual inspection report describing the activities completed for the methane monitoring system and the sub-slab depressurization system (SSDS) for the Empire Outlets at St. George, Staten Island, New York (the Site). The Site is part of the New York State Brownfield Cleanup Program (BCP), and the remedial action approved for the Site by the New York State Department of Environmental Conservation (NYSDEC) required the implementation of engineering controls (EC) intended to address potential vapor intrusion into the buildings constructed as part of the site redevelopment. As described in the Site Management Plan (SMP) prepared for the Site by AKRF in 2016, the vapor intrusion mitigation requirements include a passive SSDS and a methane monitoring system.

This annual report is focused on the operation, maintenance, and monitoring activities performed during the reporting period (May 31, 2024-May 31, 2025). The SSDS and site cover system were inspected on June 30, 2025. The methane monitoring system was calibrated, and bump tested on June 30, 2025.

Site Description

The Site is situated on the waterfront between the Richmond County Bank Ballpark and the Staten Island Ferry in the St. George area of Staten Island. It comprises a multi-level shopping mall and attached parking. The building is supported by piles. The slab elevation of Parking Level 1 (P1) is approximately 5 ft lower than the elevation of the Retail Level 1 (R1) slab. Due to the presence of shallow groundwater, GEI understands that the P1 slab is designed to withstand hydrostatic pressure. There are no subsurface structures below the slabs. The floor of Parking Level 2 (P2), which sits above P1, is approximately 9 feet above the P1 floor.

The passive SSDS is comprised of perforated PVC piping placed in a layer of crushed stone beneath the floor slab in R1. Vapors that may accumulate beneath the slab are directed to the building roof by solid risers that vent to the atmosphere. Vapor barriers are installed on the bottom of the R1 and P1 slabs to mitigate the

potential for vapors to migrate from the subsurface into buildings. At the Empire Outlets, these vapors include volatile organic compounds (VOC) and methane.

The methane monitoring system is installed in the eight retail spaces located on R1, and in two enclosed spaces in P1. The retail location currently occupied by a Haagen-Dazs ice cream store is a stand-alone structure, and the conduit that connects the detector in that store to the control panel is underground. Each of the other monitored locations are part of the main retail and parking structure.

The methane monitoring system is comprised of three components: sensors that are specifically designed to detect methane as a percent of the lower explosive limit (% LEL); a control panel with integrated audible and visual alarms that allow an operator to monitor multiple sensor locations; and communication cables that connect the sensors to the control panels. A total of 16 sensors are installed at the facility.

The methane monitoring system is manufactured by Honeywell and includes the Sensepoint XCL detector and the 301C Controller. The Sensepoint XCL is designed to detect combustible gasses in a range from 0 to 100% LEL, calibrated to methane. Each sensor is fitted with a port that allows the sensor to be routinely bump tested and calibrated. Bump testing is a qualitative assessment to ensure that system components are functioning, whereas calibration ensures that readings made by sensors are accurate. In addition, the sensors include an LED status indicator facilitating confirmation of the operating condition of the sensor.

Annual Inspection

Annual inspections and post-construction Operations, Monitoring and Maintenance (OM&M) activities are described in the Site-specific OM&M Manual and in the SMP. As required for all sites in the BCP that incorporate ECs, the SMP requires an annual inspection of ECs installed at the site and documentation of the inspection in a report submitted to NYSDEC.

The inspection was conducted in accordance with Section 3.3 of the OM&M Manual and Sections 3.2, 3.3, 4.3 and 4.4 of the SMP and included:

- Observations of the integrity of the cover system.
- Visual inspection of accessible parts of the SSDS, principally SSDS monitoring points.
- Monitoring indoor air quality using a hand-held meter to measure the presence of methane and concentrations of combustible gases (measured as lower explosive limit or LEL) and percent oxygen.
- Using a hand-held meter to monitor sub-slab vapor for the presence of methane by volume, LEL and percent oxygen at installed vapor monitoring points.
- Review of maintenance and repairs made to the system during the prior year.
- Inspection, testing and calibration of the methane detection sensors and the system controller in accordance with the manufacturer's recommendations.

Cover System

Visual inspection of the integrity of the site cover system was performed on June 30, 2025. The cover system consists of building slabs with vapor barrier and paving materials along the waterfront esplanade. No evidence of damage to the site cover system or of soil disturbance activities was observed. Facilities

management at the site informed GEI that no soil disturbing activities were performed during the reporting period, and no new penetrations of the building slabs have been made. A copy of the Site-Wide Inspection Form completed during this inspection is included in Appendix A.

Sub-Slab Depressurization System

All accessible parts of the SSDS were visually inspected on June 30, 2025. Five of the six vapor monitoring points (MP-2 through MP-6) were opened and found to be in good condition. The well cover at MP-1 was deformed and could not be opened. The headspace of each monitoring point, with the exception of the MP-1 point, was screened with a Rae Systems MultiRAE multi-gas meter. No field detections of VOCs or methane were observed in any of the monitoring points inspected. Soil vapor screening data are recorded on the SSDS Inspection Form, included in Appendix A. Photos documenting the condition of the monitoring points are included in Appendix B.

Six SSDS roof vents (VR-1 through VR-6) were visually inspected and found to be in good condition. Photos documenting the condition of the roof vents are included in Appendix B.

Indoor Air Quality Screening

On June 30, 2025, GEI performed indoor air quality screening for methane and VOCs using a Rae Systems MultiRAE multi-gas meter in each room of the R1 and P1 spaces. The handheld meter was used to screen indoor air in the breathing zone throughout each space and at each methane detector location.

Methane and VOCs were not detected in any of the monitored locations. Documentation of indoor air screening is included Methane Monitoring System Inspection Log in Appendix A.

Methane Detector Bump Test

On June 30, 2025, GEI performed bump testing and field calibration of the methane monitoring system. Each of the 16 detectors was tested using vendor supplied calibration gas containing methane at a concentration of 50% LEL. Direct readings were obtained from each detector by connecting to the detector via Bluetooth using the Honeywell Sensepoint mobile app. All detectors were field calibrated using a two-point calibration to 0% LEL (ambient indoor air) and 2.5% by volume methane gas (50% LEL) (vendor supplied calibration gas). A confirmatory bump test was performed following each successful calibration.

During the time of the inspection the monitor in the fuel tank room was reading an ambient level of 11% LEL and could not be calibrated. However, real time monitoring utilizing the handheld unit mentioned above indicated 0% LEL. As such, it is likely the methane monitor needs to be serviced and recalibrated prior to the next monitoring event. Each of the other 15 methane detectors read 0% LEL upon initial inspection. Eleven detectors passed calibration and bump testing. Three detectors (Wetzel's Pretzels Front-of-House, Wetzel's Pretzels Back-of-House and Haagen Dazs Back-of-House) passed zero calibration but failed multiple attempts at span calibration. Testing data are included in Appendix A.

Scheduled Maintenance

Based on the site inspection and indoor air quality readings the Institutional and ECs implemented at the site are functioning and are protective of human health. However, maintenance is required on some components of the methane monitoring system as described below:

- The system installer (Donovan Electric) will consult with their supplier and/or the manufacturer (Honeywell) regarding the four detectors (Fuel Oil Room, Wetzel's Pretzels Front-of-House, Wetzel's Pretzels Back-of-House and Haagen Dazs Back-of-House) that failed span calibration. These four detectors will be repaired, replaced, or reconfigured, as necessary, to restore functionality.
- Following restoration of the above-mentioned four methane detectors, GEI will conduct bump tests of the detectors to confirm functionality. Field calibration will be performed by GEI if bump test readings are found to be out of range.
- The well cover at MP-1 should be repaired or replaced to permit future inspections.

Documentation of the implementation of the maintenance activities will be reported in the September 2025 quarterly inspection report described below.

Follow-Up Inspection

The next anticipated site inspection is the quarterly methane monitoring system bump test scheduled for September 2025. This report will also include the results of the implementation of necessary maintenance activities.

Please contact Henry Gold (917.836.2011/hgold@geiconsultants.com) or Gary Rozmus (631.988.3089/grozmus@geiconsultants.com) if you have any questions.

Sincerely,

**GEI CONSULTANTS, INC. DBA GEI CONSULTANTS ENGINEERING,
GEOLOGY, ARCHITECTURE & LANDSCAPE ARCHITECTURE**



Henry Gold
Senior Environmental Professional



Gary A. Rozmus, P.E.
Senior Consultant

HG/GAR:ag

B:\Working\EO STATEN ISLAND PROPERTY OWNER\2503863 St George Methane Monitoring Inspections\02_PM\2025 Annual Inspection Report\GEI_Annual Inspection Report 2025-07-07.docx

Appendix A Inspection Forms

Site-Wide Inspection Log

Empire Outlet Shops
NYSDEC Site ID No. V-00228
55 Richmond Terrace, Staten Island, NY

Inspector Name: Leif Robertson
Weather: Mostly Sunny, 80° Fahrenheit
Moderate wind from SSW

Date: June 30, 2025
Recent Severe Weather Event? No
Describe: _____

Item	Satisfactory		Comments
	Yes	No	
Site Cap			
Soil Cover Areas			
Bare spots		X	
Weed encroachment		X	
Stressed vegetation		X	
Mulch coverage		X	
Settlement or subsistence		X	
Cracks		X	
Burrowing/animal intrusion		X	
Erosion		X	
Visibility of white filter fabric		X	
Any recent excavation/disturbance?		X	
If yes, was cover adequately repaired?			
Paved Surfaces			
Cracks		X	
Depressions		X	
Bumps		X	
Potholes		X	
Exposed underlying soil		X	
Any recent pavement repairs?		X	
If yes, was pavement adequately repaired?			
Site Use Restrictions			
No on-site vegetable gardens	X		
No groundwater withdrawal	X		
Restricted commercial use maintained	X		

Item	Satisfactory		Comments
	Yes	No	
Soil Management			
Any soil disturbance activities conducted?		X	
If yes, were proper soil management procedures implemented per Excavation Work Plan?			N/A
Close-out reports on file (including manifests for soil disposal)?			N/A

Recommended Corrective Actions
None

Sub-Slab Depressurization System (SSDS) Inspection Log

Empire Outlet Shops
NYSDEC Site ID No. V-00228
55 Richmond Terrace, Staten Island, NY

Inspector Name: Leif Robertson Date: 6/30/2025

General						
Weather: Sunny		Temp.: 80° F		Barometric Pressure:		
Date of last rain event: 6/20/2025						
SSDS Monitoring Points						
Location	Vacuum [in. H ₂ O]	VOCs [ppm]	Methane [% vol.]	LEL [%]	O ₂ [% vol.]	Notes
MP-1	N/A	N/A	N/A	N/A	N/A	Could not open Well Cover
MP-2		0.0	0.0	0.0	20.9	
MP-3		0.0	0.0	0.0	20.9	
MP-4		0.0	0.0	0.0	20.9	
MP-5		0.0	0.0	0.0	20.9	
MP-6		0.0	0.0	0.0	20.9	Could not open Well Cover
Are all monitoring point caps and covers securely attached? <input checked="" type="checkbox"/> Yes / No						
Any evidence of system tampering, vandalism, or damage? Yes / <input checked="" type="checkbox"/> No						
Recommended corrective action(s): Need to replace MP-1 cover as it appears to be deformed and can not be opened.						

SSDS Roof Vents

Location	General Condition	Corrosion	Turbine Ventilator	Notes
VR-1	Good Working Condition	No	Good Working Condition	
VR-2	Good Working Condition	No	Good Working Condition	
VR-3	Good Working Condition	No	Good Working Condition	
VR-4	Good Working Condition	No	Good Working Condition	
VR-5	Good Working Condition	No	Good Working Condition	
VR-6	Good Working Condition	No	Good Working Condition	

Recommended corrective action(s):

None.

Foundation SlabsAny new penetrations or signs of cracking or other damage? Yes / ☒ No

If yes, describe:

Recommended corrective action(s):

None.

Annual Methane Gas Detector Bump Test

Date: June 30, 2025

Methane Monitoring System: Operation, Maintenance, and Monitoring Manual
 Empire Outlet Shops
 55 Richmond Terrace
 Staten Island, New York
 NYSDEC Site ID No. V-00228

Methane Gas Detectors						
Sensor #	Location	Initial (% LEL)	Bump Test (% LEL)	Condition Satisfactory (check one)		Notes (describe status if not satisfactory: requires maintenance or repair, etc)
				Yes	No	
1	Bake Culture - Front	0	54	X		
2	Bake Culture - Rear	0	55	X		
3	Haagen Dazs - Front	0	55	X		
4	Haagen Dazs - Rear	0	N/A		X	Failed Span Calibration
5	Lids - Front	0	70	X		
6	Lids - Rear	0	60	X		
7	Starbucks - Front	0	57	X		
8	Starbucks - Rear	0	59	X		
9	Walgreens - Front	0	77	X		
10	Walgreens - Rear	0	63	X		
11	Wetzels Pretzels - Front	0	N/A		X	Failed Span Calibration
12	Wetzels Pretzels - Rear	0	N/A		X	Failed Span Calibration
13	Vacant Unit #102A	0	62	X		
14	Vacant Unit #104	0	50	X		
15	Guard Booth	0	51	X		
16	Fuel Oil Room	11	N/A		X	Failed Zero Calibration, real time monitoring with a calibrated hand held meter indicated 0% LEL, suggesting that the meter reading is not accurate. Due to the inaccurate reading the sensor could not be calibrated and it should be serviced.

Note:

1. LEL = lower explosive limit

Methane Monitoring System Inspection Log

Empire Outlet Shops
NYSDEC Site ID No. V-00228
55 Richmond Terrace, Staten Island, NY

Inspector Name: Leif Robertson

Weather: Sunny, 80° Farenheit

Moderate wind from SSW

Date: 6/30/2025

Recent Severe Weather Event? Y / ☒ N

Describe: _____

Controller				
Detector ID	Alarm?		Reading [% LEL]	Notes
	Y	N		
Bake Culture FOH		X	0	Sensor failed to span calibrate.
Bake Culture BOH		X	0	
Haagen Dazs FOH		X	0	
Haagen Dazs BOH		X	0	Sensor failed to span calibrate.
Lids FOH		X	0	
Lids BOH		X	0	
Starbucks FOH		X	0	
Starbucks BOH		X	0	
Walgreens FOH		X	0	
Walgreens BOH		X	0	
Wetzels Pretzels FOH		X	0	Sensor failed to span calibrate.
Wetzels Pretzels BOH		X	0	Sensor failed to span calibrate.
Vacant Unit #102A		X	0	
Vacant Unit #104		X	0	

Controller				
Detector ID	Alarm?		Reading [% LEL]	Notes
	Y	N		
Guard Booth		X	0	
Fuel Oil Room		X	11	Real time monitoring was 0% LEL, as such the sensor requires servicing.
Indoor Air Screening (Use if any alarm conditions or readings above zero are noted. Also include as part of annual site-wide inspection.)				
Detector Location	Multi-Gas Meter Readings			Notes
	VOCs [ppm]	Methane [% LEL]	Oxygen [O2]	
Bake Culture FOH	0.0	0	20.9	
Bake Culture BOH	0.0	0	20.9	
Haagen Dazs FOH	0.0	0	20.9	
Haagen Dazs BOH	0.0	0	20.9	
Lids FOH	0.0	0	20.9	
Lids BOH	0.0	0	20.9	
Starbucks FOH	0.0	0	20.9	
Starbucks BOH	0.0	0	20.9	
Walgreens FOH	0.0	0	20.9	
Walgreens BOH	0.0	N/A	20.9	
Wetzels Pretzels FOH	0.0	0	20.9	
Wetzels Pretzels BOH	0.0	0	20.9	
Vacant Unit #102A	0.0	0	20.9	
Vacant Unit #104	0.0	0	20.9	
Guard Booth	0.0	0	20.9	

Indoor Air Screening (Use if any alarm conditions or readings above zero are noted. Also include as part of annual site-wide inspection.)

Detector Location	Multi-Gas Meter Readings			Notes
	VOCs [ppm]	Methane [% LEL]	Oxygen [O2]	
Fuel Oil Room	0.0	0	20.9	

Condition of Methane Detectors

Detector Location	Cap Present	Status Light	Accessible for Testing	Notes
Bake Culture FOH	Yes	Green	Yes	
Bake Culture BOH	Yes	Green	Yes	
Haagen Dazs FOH	Yes	Green	Yes	
Haagen Dazs BOH	Yes	Green	Yes	Failed to Span Calibrate
Lids FOH	Yes	Green	Yes	
Lids BOH	Yes	Green	Yes	
Starbucks FOH	Yes	Green	Yes	
Starbucks BOH	Yes	Green	Yes	
Walgreens FOH	Yes	Green	Yes	
Walgreens BOH	Yes	Green	Yes	
Wetzels Pretzels FOH	Yes	Green	Yes	Failed to Span Calibrate
Wetzels Pretzels BOH	Yes	Green	Yes	Failed to Span Calibrate
Vacant Unit #102A	Yes	Green	Yes	
Vacant Unit #104	Yes	Green	Yes	
Guard Booth	Yes	Green	Yes	
Fuel Oil Room	Yes	Green	Yes	Failed to Zero Calibrate

Recommended Corrective Action(s)

At the time of the inspection, the methane sensor located in the fuel room displayed a reading of 11% LEL and the sensor would not zero calibrate. It should be noted that real time monitoring with a hand held meter, which was calibrated at the start of the inspection, indicated 0% LEL. As such, it is likely that the methane sensor is out of calibration and needs to be serviced. Additionally, both units in Wetzels Pretzels (FOH & BOH) and Haagen Dazs (BOH) failed to span calibrate after numerous attempts. As such, GEI recommends that these units be serviced and span calibrated as soon as possible.

Appendix B Photo Log

Appendix B – Photo Log
Quarterly Inspection Report
Empire Outlets
55 Richmond Terrace, Staten Island, New York

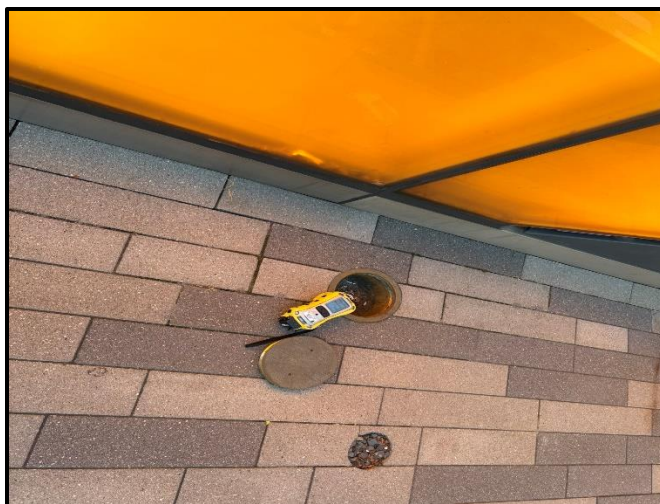


Photo 1. SSDS inspection: vapor monitoring point MP-2

June 30, 2025

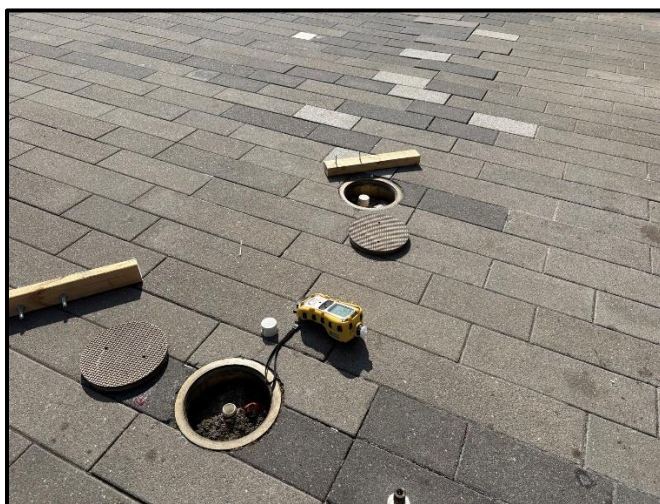


Photo 2. SSDS inspection: vapor monitoring points MP-3 and MP-4

June 30, 2025

Appendix B – Photo Log
Quarterly Inspection Report
Empire Outlets
55 Richmond Terrace, Staten Island, New York

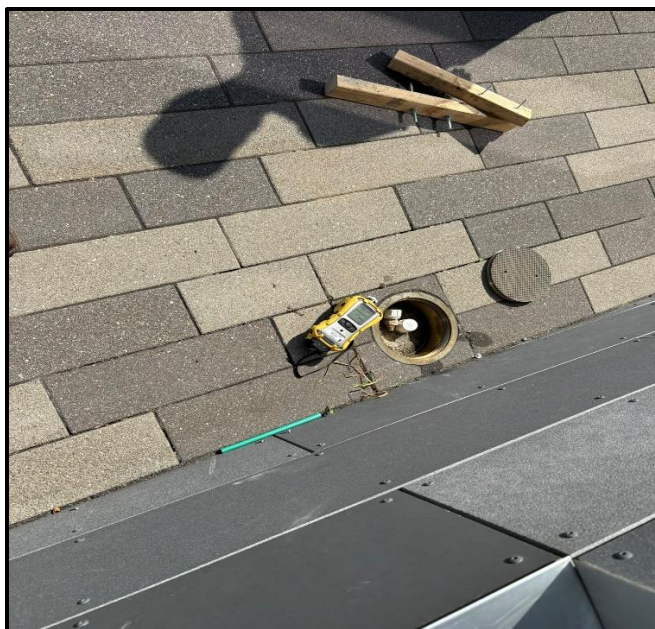


Photo 3. SSDS inspection: vapor monitoring point MP-5

June 30, 2025

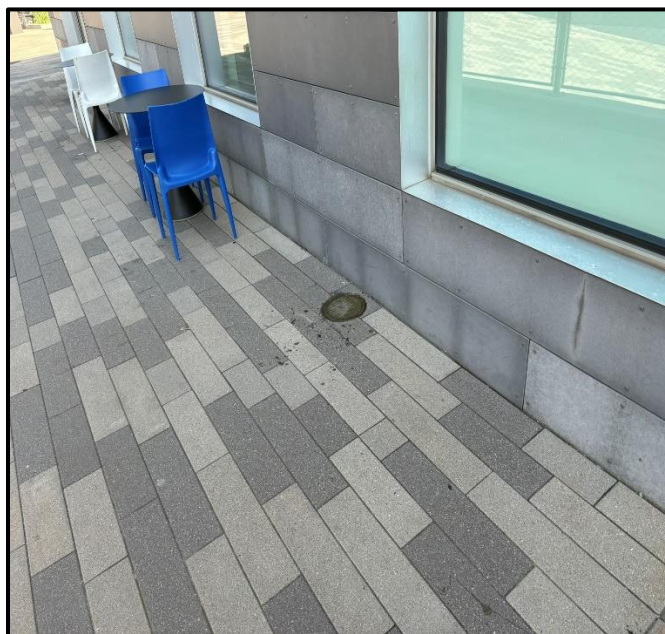


Photo 4. SSDS inspection: vapor monitoring point MP-6.

June 30, 2025

Appendix B – Photo Log
Quarterly Inspection Report
Empire Outlets
55 Richmond Terrace, Staten Island, New York

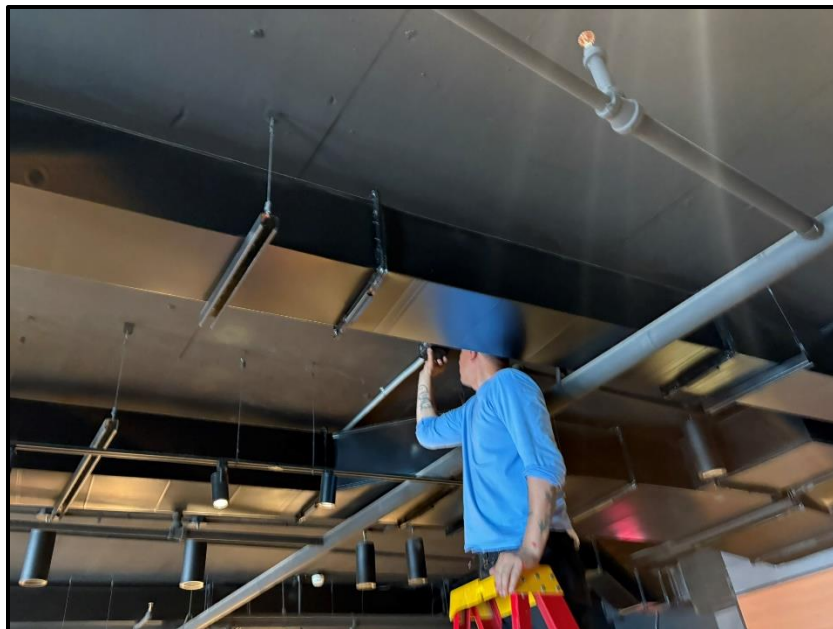


Photo 5. View of methane sensor and calibration.

June 30, 2025



Photo 6. View of roof vents, all roof vents appear to be in good working condition.

June 30, 2025

**Appendix B – Photo Log
Quarterly Inspection Report
Empire Outlets
55 Richmond Terrace, Staten Island, New York**

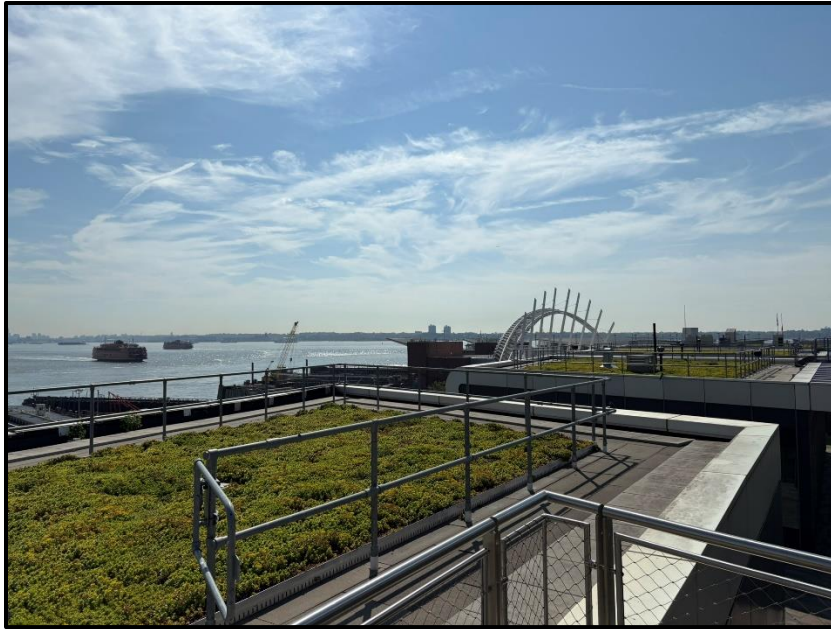


Photo 7. View of roof vents, all roof vents appear to be in good working condition.

June 30, 2025

September 30, 2025

Project No. 2503863

VIA EMAIL: isidoro.albino@jll.com

Mr. Isidoro Albino
Director of Operations
Empire Outlets at St. George
c/o Jones Lang LaSalle
35B Richmond Terrace, Suite MGMT
Staten Island, NY 10301

**Re: Quarterly Inspection Methane Monitoring System and Sub-Slab Depressurization System
Empire Outlets
55 Richmond Terrace, Staten Island, New York 10301**

Dear Mr. Albino:

GEI Consultants, Inc. DBA GEI Consultants Engineering, Geology, Architecture & Landscape Architecture (GEI) is pleased to submit this quarterly inspection report describing the activities completed for the methane monitoring system and the sub-slab depressurization system (SSDS) for the Empire Outlets at St. George, Staten Island, New York (the Site). The Site is part of the New York State Brownfield Cleanup Program (BCP), and the remedial action approved for the Site by the New York State Department of Environmental Conservation (NYSDEC) required the implementation of engineering controls (EC) intended to address potential vapor intrusion into the buildings constructed as part of the site redevelopment. As described in the Site Management Plan (SMP) prepared for the Site by AKRF in 2016, the vapor intrusion mitigation requirements include a passive SSDS and a methane monitoring system.

This quarterly report is focused on the operation, maintenance, and monitoring activities performed during the reporting period. The SSDS and site cover system were inspected on September 18, 2025. The methane monitoring system was calibrated, and bump tested, on September 18, 2025.

Site Description

This Site is situated on the waterfront between the Richmond County Bank Ballpark and the Staten Island Ferry in the St. George area of Staten Island. It comprises a multi-level shopping mall and attached parking. The building is supported by piles. The slab elevation of Parking Level 1 (P1) is approximately 5 ft lower than the elevation of the Retail Level 1 (R1) slab. Due to the presence of shallow groundwater, GEI understands that the P1 slab is designed to withstand hydrostatic pressure. There are no subsurface structures below the slabs. The floor of Parking Level 2 (P2), which sits above P1, is approximately 9 ft above the P1 floor.

The passive SSDS is comprised of perforated PVC piping placed in a layer of crushed stone beneath the floor slab in R1. Vapors that may accumulate beneath the slab are directed to the building roof by solid risers that vent to the atmosphere. Vapor barriers are installed on the bottom of the R1 and P1 slabs to mitigate the potential for vapors to migrate from the subsurface into buildings. At the Empire Outlets, these vapors include volatile organic compounds (VOCs) and methane.

The methane monitoring system is installed in the eight retail spaces located on R1, and in two enclosed spaces in P1. The retail location currently occupied by a Haagen-Dazs ice cream store is a stand-alone structure, and the conduit that connects the detector in that store to the control panel is underground. Each of the other monitored locations is part of the main retail and parking structure.

The methane monitoring system is comprised of three components: sensors that are specifically designed to detect methane as a percent of the lower explosive limit (% LEL); a control panel with integrated audible and visual alarms that allow an operator to monitor multiple sensor locations; and communication cables that connect the sensors to the control panels. Sixteen sensors are installed at the facility.

The methane monitoring system is manufactured by Honeywell and includes the Sensepoint XCL detector and the 301C Controller. The Sensepoint XCL is designed to detect combustible gas in a range from 0 to 100% LEL, calibrated to methane. Each sensor is fitted with a port that allows the sensor to be routinely bump tested and calibrated. Bump testing is a qualitative assessment to ensure that system components are functioning, whereas calibration ensures that readings made by sensors are accurate. In addition, the sensors include an LED status indicator facilitating confirmation of the operating condition of the sensor.

Quarterly Inspection

Quarterly inspections and post-construction Operations, Monitoring and Maintenance (OM&M) activities are described in the Site-specific OM&M Manual and in the SMP. As required for all sites in the BCP that incorporate ECs, the SMP requires an annual inspection of ECs installed at the site and documentation of the inspection in a report submitted to NYSDEC.

The inspection was conducted in accordance with Section 3.3 of the OM&M Manual and Sections 3.2, 3.3, 4.3 and 4.4 of the SMP and included:

- Observations of the integrity of the cover system.
- Visual inspection of accessible parts of the SSDS, principally SSDS monitoring points.
- Monitoring indoor air quality using a hand-held meter to measure percent methane by volume, concentrations of combustible gases (lower explosive limit or LEL) and percent oxygen.
- Using a hand-held meter to monitor sub-slab vapor for percent methane by volume, LEL and percent oxygen at installed vapor monitoring points.
- Inspection, testing and calibration of the methane detection sensors and the system controller in accordance with the manufacturer's recommendations.

Cover System

Visual inspection of the integrity of the site cover system was performed on September 18, 2025. The cover system consists of building slabs with vapor barrier and paving materials along the waterfront esplanade. No evidence of damage to the site cover system or of soil disturbance activities was observed. Facilities management at the site informed GEI that no soil disturbing activities have been performed, and no new penetrations of the building slabs have been made. A copy of the Site-Wide Inspection Form completed during this inspection is included in Appendix A.

Sub-Slab Depressurization System

All accessible parts of the SSDS were visually inspected on September 18, 2025. Five of the six vapor monitoring points (MP-2 through MP-6) were opened and found to be in good condition. It should be noted that the protective cover at MP-1 could not be opened due to the cover being stuck. With the exception of MP-1, the headspace of each monitoring point was screened with a Rae Systems MultiRAE, a hand-held multi-gas meter. The multi-gas meter was calibrated in accordance with the manufacturer's recommendations.

No field detections of VOCs or methane were observed in any of the inspected monitoring points. Soil vapor screening data are recorded on the SSDS Inspection Form, included in Appendix A. Photos documenting the condition of the monitoring points are included in Appendix B.

Indoor Air Quality Screening

On September 18, 2025, GEI performed indoor air quality screening for methane and VOCs using the calibrated Rae Systems MultiRAE multi-gas meter. The meter was used to screen indoor air in the breathing zone throughout each space and at each methane detector location.

Methane and VOCs were not detected in any of the monitored locations. A copy of the indoor air screening log is included in Appendix A.

Quarterly Methane Detector Bump Test

On September 18, 2025, GEI performed bump testing and field calibration of the methane monitoring system. Each of the 16 detectors was tested using vendor supplied calibration gas containing methane at a concentration of 50% LEL. Direct readings were obtained from each detector by connecting to the detector via Bluetooth using the Honeywell Sensepoint mobile app. All detectors were field calibrated using a two-point calibration to 0% LEL (ambient indoor air) and 2.5% by volume methane gas (50% LEL) using vendor supplied calibration gas. A confirmatory bump test was performed following each successful calibration.

All methane detectors were reading 0% LEL upon initial inspection. In addition, all the detectors passed calibration and bump testing. Testing data are included in Appendix A.

Scheduled Maintenance

Based on the site inspection and indoor air quality readings the Institutional and ECs implemented at the site are functioning and are protective of human health. In addition, as all the detectors were functional there is no maintenance required on the monitoring system components at this time. The only required maintenance item is the replacement of the protective cover at MP-1. Routine observations should continue to be conducted by facility personnel.

Follow-Up Inspection

The next quarterly inspection of the methane monitoring system and bump test is scheduled for December 2025. This report will also include the results of the implementation of necessary maintenance activities noted above.

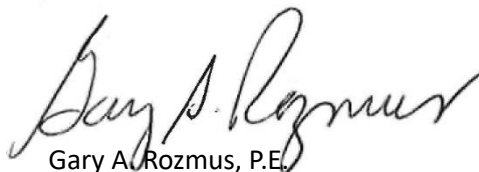
Please contact Henry Gold (917.836.2011 or hgold@geiconsultants.com) or Gary Rozmus (631.988.3089 or grozmus@geiconsultants.com) if you have any questions.

Sincerely,

GEI Consultants, Inc. DBA GEI Consultants
Engineering, Geology, Architecture & Landscape
Architecture



Henry Gold
Senior Environmental Professional



Gary A. Rozmus, P.E.
Senior Consultant

HG/GR:ag

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September 18, 2025\Quarterly Inspection Report 2025-09-30.docx

Appendices

Appendix A

Appendix B Photo Log

Appendix A

Site-Wide Inspection Form

SSDS Inspection Form

Indoor Air Screening Log

Testing Data

Site-Wide Inspection Log

Empire Outlet Shops
NYSDEC Site ID No. V-00228
55 Richmond Terrace, Staten Island, NY

Inspector Name: _____

Date: _____

Weather: _____

Recent Severe Weather Event? Y / ☒ N

Describe: _____

Item	Satisfactory		Comments
	Yes	No	
Site Cap			
Soil Cover Areas			
Bare spots			
Weed encroachment			
Stressed vegetation			
Mulch coverage			
Settlement or subsistence			
Cracks			
Burrowing/animal intrusion			
Erosion			
Visibility of white filter fabric			
Any recent excavation/disturbance?			
If yes, was cover adequately repaired?			
Paved Surfaces			
Cracks			
Depressions			
Bumps			
Potholes			
Exposed underlying soil			
Any recent pavement repairs?			
If yes, was pavement adequately repaired?			
Site Use Restrictions			
No on-site vegetable gardens			
No groundwater withdrawal			
Restricted commercial use maintained			

Sub-Slab Depressurization System (SSDS) Inspection Log

Empire Outlet Shops
NYSDEC Site ID No. V-00228
55 Richmond Terrace, Staten Island, NY

Inspector Name: _____ Date: _____

General						
Weather:		Temp.:		Barometric Pressure:		
Date of last rain event:						
SSDS Monitoring Points						
Location	Vacuum [in. H ₂ O]	VOCs [ppm]	Methane [% vol.]	LEL [%]	O ₂ [% vol.]	Notes
MP-1						
MP-2						
MP-3						
MP-4						
MP-5						
MP-6						
Are all monitoring point caps and covers securely attached? <input checked="" type="checkbox"/> Yes / No						
Any evidence of system tampering, vandalism, or damage? Yes / <input checked="" type="checkbox"/> No						
Recommended corrective action(s):						

Methane Monitoring System Inspection Log

Empire Outlet Shops
NYSDEC Site ID No. V-00228
55 Richmond Terrace, Staten Island, NY

Inspector Name: _____

Weather: _____

Date: _____

Recent Severe Weather Event? Y / ☒ N

Describe: _____

Controller				
Detector ID	Alarm?		Reading [% LEL]	Notes
	Y	N		
Bake Culture FOH				
Bake Culture BOH				
Haagen Dazs FOH				
Haagen Dazs BOH				
Lids FOH				
Lids BOH				
Starbucks FOH				
Starbucks BOH				
Walgreens FOH				
Walgreens BOH				
Wetzels Pretzels FOH				
Wetzels Pretzels BOH				
Vacant Unit #102A				
Vacant Unit #104				

Controller				
Detector ID	Alarm?		Reading [% LEL]	Notes
	Y	N		
Guard Booth				
Fuel Oil Room				
Indoor Air Screening (Use if any alarm conditions or readings above zero are noted. Also include as part of annual site-wide inspection.)				
Detector Location	Multi-Gas Meter Readings			Notes
	VOCs [ppm]	Methane [% LEL]	Oxygen [O2]	
Bake Culture FOH				
Bake Culture BOH				
Haagen Dazs FOH				
Haagen Dazs BOH				
Lids FOH				
Lids BOH				
Starbucks FOH				
Starbucks BOH				
Walgreens FOH				
Walgreens BOH				
Wetzels Pretzels FOH				
Wetzels Pretzels BOH				
Vacant Unit #102A				
Vacant Unit #104				
Guard Booth				

Indoor Air Screening (Use if any alarm conditions or readings above zero are noted. Also include as part of annual site-wide inspection.)

Detector Location	Multi-Gas Meter Readings			Notes
	VOCs [ppm]	Methane [% LEL]	Oxygen [O2]	
Fuel Oil Room				

Condition of Methane Detectors

Detector Location	Cap Present	Status Light	Accessible for Testing	Notes
Bake Culture FOH				
Bake Culture BOH				
Haagen Dazs FOH				
Haagen Dazs BOH				
Lids FOH				
Lids BOH				
Starbucks FOH				
Starbucks BOH				
Walgreens FOH				
Walgreens BOH				
Wetzels Pretzels FOH				
Wetzels Pretzels BOH				
Vacant Unit #102A				
Vacant Unit #104				
Guard Booth				
Fuel Oil Room				

Recommended Corrective Action(s)

Methane Gas Detectors						
Sensor #	Location	Initial (% LEL)	Bump Test (% LEL)	Condition Satisfactory (check one)		Notes (describe status if not satisfactory: requires maintenance or repair, etc)
				Yes	No	
1	Bake Culture - Front	0	56	X		
2	Bake Culture - Rear	0	77	X		
3	Haagen Dazs - Front	0	55	X		
4	Haagen Dazs - Rear	0	55	X		
5	Lids - Front	0	68	X		
6	Lids - Rear	0	58	X		
7	Starbucks - Front	0	72	X		
8	Starbucks - Rear	0	71	X		
9	Walgreens - Front	0	100	X		
10	Walgreens - Rear	0	57	X		
11	Wetzels Pretzels - Front	0	56	X		
12	Wetzels Pretzels - Rear	0	100	X		
13	Vacant Unit #102A	0	71	X		
14	Vacant Unit #104	0	67	X		
15	Guard Booth	0	55	X		
16	Fuel Oil Room	0	58	X		

Note:
1. LEL = lower explosive limit

Appendix B Photo Log

Appendix B – Photo Log
Quarterly Inspection Report
Empire Outlets
55 Richmond Terrace, Staten Island, New York

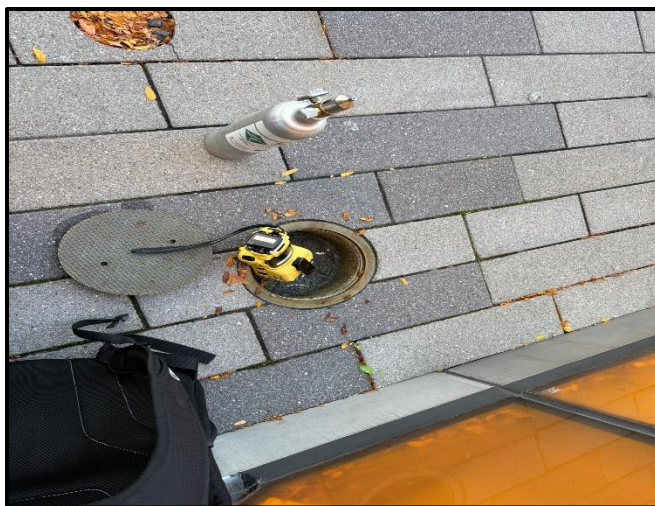


Photo 1. SSDS inspection: vapor monitoring point MP-2

September 18, 2025

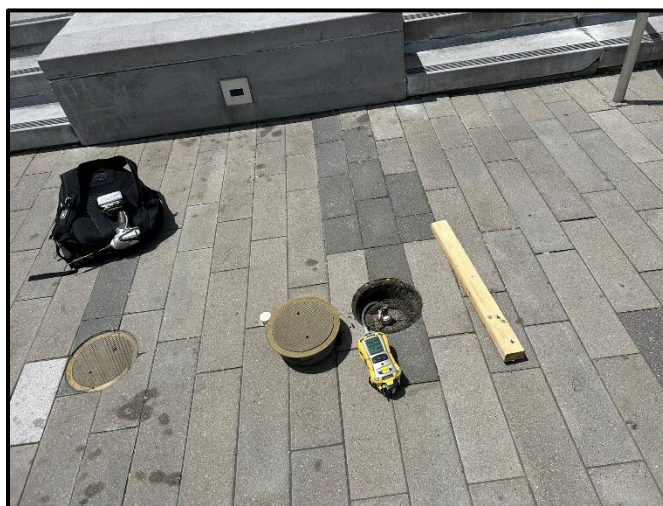


Photo 2. SSDS inspection: vapor monitoring points MP-3 and MP-4

September 18, 2025

Appendix B – Photo Log
Quarterly Inspection Report
Empire Outlets
55 Richmond Terrace, Staten Island, New York

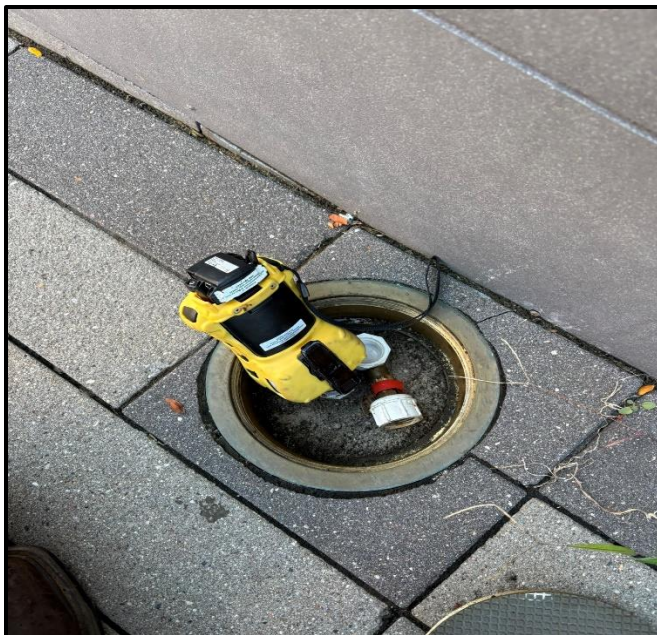


Photo 3. SSDS inspection: vapor monitoring point MP-5

September 18, 2025



Photo 4. SSDS inspection: vapor monitoring point MP-6.

September 18, 2025

Appendix B – Photo Log
Quarterly Inspection Report
Empire Outlets
55 Richmond Terrace, Staten Island, New York



Photo 5. View of methane sensor and calibration.

September 18, 2025

IC/EC CERTIFICATION FORM



Site Details

Box 1

Site No. V00228

Site Name Ballpark at St. George Station (Empire Outlets South Site 2)

Site Address: Between North Ramp and Jersey St., Block 2, Lot 15 Zip Code: 10301

City/Town: Staten Island

County: Richmond

Site Acreage: 2.2

Reporting Period: May 31, 2024 to May 31, 2025

YES NO

1. Is the information above correct? ☒ ☐

If NO, include handwritten above or on a separate sheet.

2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? ☐ ☒

3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?

4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? ☐ ☒

If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

5. Is the site currently undergoing development? ☐ ☒

Box 2

YES NO

6. Is the current site use consistent with the use(s) listed below? ☒ ☐

Commercial and Industrial

7. Are all ICs in place and functioning as designed? ☐ ☒ ☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date _____

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
2-15	New York City Economic Development Corp	Land Use Restriction Ground Water Use Restriction

- 1) Declaration of covenants shall run with the land.
- 2) Prohibition of land use for purpose other than commercial use
 - See Attachment II- Letter from New York State Department of Environmental Conservation to New York City Economic Development Corporation re: Deed Restriction Modification.
- 3) Prohibition of groundwater use
- 4) ECs - subslab methane venting system and gas monitoring system
- 5) Shall be no excavation unless prior approval by DEC:
 - In paved areas - no excavation below underlaying imported subgrade layer
 - In paved areas - no excavation below the footprint of such structures and underlying imported subgrade materials.

Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
2-15	Vapor Mitigation Cover System Subsurface Barriers Methane Monitoring System

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☒☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☒☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. V00228

Box 6


SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Isidoro Albino at 35B Richmond Terrace, SI, NY 10301,
print name print business address

am certifying as Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

 (AGENT)
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

July 8, 2025
Date

EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Gary Rozmus at GEI CONSULTANTS, INC. DBA GEI CONSULTANTS ENGINEERING,
GEOLOGY, ARCHITECTURE & LANDSCAPE ARCHITECTURE,
print name print business address

am certifying as a Professional Engineer for the EO Staten Island Property Owner LLC
(~~Owner~~ or Remedial Party)


Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification



Stamp
(Required for PE)

July 8, 2025

Date

Corrective Measures

Based on the site inspection and indoor air quality readings the Institutional and ECs implemented at the site are functioning and are protective of human health. However, maintenance is required on some components of the methane monitoring system as described below:

The system installer (Donovan Electric) will consult with their supplier and/or the manufacturer (Honeywell) regarding the four detectors (Fuel Oil Room, Wetzel's Pretzels Front of House, Wetzel's Pretzels Back of House and Haagen Dazs Back of House) that failed span calibration. These four detectors will be repaired, replaced, or reconfigured, as necessary, to restore functionality.

Following restoration of the above mentioned four methane detectors, GEI will conduct bump tests of the detectors to confirm functionality. Field calibration will be performed by GEI if bump test readings are found to be out of range.

The well cover at MP-1 should be repaired or replaced to permit future inspections. Documentation of the implementation of the maintenance activities will be reported in the September 2025 quarterly inspection report.

**GAS MONITORING SYSTEM
MAINTENANCE RECORDS**

INSTRUMART

Instrumart LLC
35 Green Mountain Drive • S. Burlington • VT • 05403 • USA
P: 802-863-0085 • F: 802-863-1193
www.instrumart.com
DUNS: 197963499 • FEIN: 03-0316999

INVOICE - PAID

Date	Sale #
11/26/2024	CS745611

THIS INVOICE HAS BEEN PAID IN FULL BY CREDIT CARD.
PLEASE USE THIS AS YOUR CREDIT CARD RECEIPT.

Sold To		Ship To				
Empire Outlets c/o JLL 35B Richmond Terrace Suite: MGMT Staten Island NY 10301 United States		Empire Outlets c/o JLL 35B Richmond Terrace Suite: MGMT Staten Island NY 10301 United States				
		(917) 532-8159				
Reference/PO#		Shipping Method		Ship Date		
		FREE SHIPPING - FedEx 2Day®		11/26/2024		
Tracking #		Memo		Payment Method		Credit Card
770259449510		01-AUG-24 Order Approved		Master Card		*****7801
Part Number	Description	Qty	Unit Price	Ext. Price	COO	
SPLCF6BMXCXNZZ	Honeywell Sensepoint XCL Gas Detector SELECTED OPTIONS: Gas: Methane (CH4), 0 to 100% LEL Output: Modbus RTU Relay Output: Not included Color: Charcoal *** Lifetime Tech Support *** Unlimited lifetime technical support via phone (800-235-8367) or email (sales@instrumart.com) for the items on this order.	6	558.00	3,348.00	United States	
Thank you for your order!		Subtotal Shipping Cost (FREE SHIPPING - FedEx 2Day®) Total (US \$)-PAID BY CREDIT CARD			3,348.00 0.00 \$3,348.00	

If order should be exempt from tax, please forward your exemption certificate to tax@instrumart.com.

To the extent applicable, the contractor and subcontractor shall abide by the requirements of 41 CFR 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status or disability.

CS745611

	Received	Size	Categories	Mention
	Wed 12/11/2024 3:57 PM	56 KB		
	Wed 12/11/2024 3:38 PM	85 KB		
	Wed 12/11/2024 3:18 PM	65 KB		
	Wed 12/11/2024 3:14 PM	82 KB		
	Wed 12/11/2024 3:08 PM	81 KB		
	Wed 12/11/2024 2:21 PM	94 KB		
	Wed 12/11/2024 2:12 PM	90 KB		
	Wed 12/11/2024 1:56 PM	88 KB		
	Wed 12/11/2024 1:41 PM	54 KB		
	Wed 12/11/2024 1:38 PM	85 KB		
	Wed 12/11/2024 12:30 ...	81 KB		
	Wed 12/11/2024 11:21 ...	82 KB		
	Wed 12/11/2024 10:36 ...	82 KB		
	Wed 12/11/2024 10:08 ...	77 KB		

...

Reply

Reply All

Forward

Wed 12/11/2024 3:56 PM

- 36
- Unread
- 36
- Inbox - Isidoro Albino@jli.com
- Inbox - EmpireOutletsAdmin
- Sent Items
- Henry mui
- Cubicles.com
- DelphiAddressBook
- Delta Fountains
- > Dempsey Landscaping
- > Dempsey Snow
- Derek Ziener AJA (MRKTPL Architect)
- > Design2147
- DMN Insulation
- Donovan (Labor)
- > Donovan Electric
- DOB Permits
- Donovan // Invoices
- > Donovan // Methane Gas
- 12/11/24 Methane Head Testing & Replacement
- Hester Installs
- > Proposals
- Drafting Services (Air Balancing)
- Dudak
- DYOPATH
- Eagle Fence
- Empire Tool Rental
- > EOB
- > ESC Federal
- > Excel
- Fairway Golf Car
- Fazio Trains (Irrigation)
- FedEx
- Filter King

Methane gas

KH

Kenneth Hersom <khersom@rdonovanelectric.com>
To: Albino, Isidoro (US)

1

This sender khersom@rdonovanelectric.com is from outside your organization.

1

You replied to this message on 1/29/2025 4:11 PM.
We removed extra line breaks from this message.

Translate message to: Spanish

Never translate from: English

Translation preferences

Caution: Message from external sender

Tested all methane gas detectors
Replaced 3
Have one new detector that doesn't calibrate All detectors are working as designed
Sent from my iPhone

Albino, Isidoro (US)

From: Kenneth Hersom <khersom@rdonovanelectric.com>
Sent: Wednesday, December 11, 2024 3:56 PM
To: Albino, Isidoro (US)
Subject: Methane gas

Caution: Message from external sender

Tested all methane gas detectors

Replaced 3

Have one new detector that doesn't calibrate All detectors are working as designed

Sent from my iPhone

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors


WALGREENS FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
K0194023261372	Zero cylinder s/n	Span cylinder s/n
100 %LEL	N/A	N/A
	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/03/20 09:35:10	53 %LEL	55 %LEL
Kenneth Hersom		
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors

WALGREENS Both


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
	Zero cylinder s/n	Span cylinder s/n
K0194024451370	N/A	N/A
100 %LEL	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 10:32:47	55 %LEL	55 %LEL
Kenneth Hersom		
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
	Zero cylinder s/n	Span cylinder s/n
K0194020221178	N/A	N/A
100 %LEL	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 12:20:46	0 %LEL	51 %LEL
Kenneth Hersom	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
	Zero cylinder s/n	Span cylinder s/n
K0194021071081	N/A	N/A
100 %LEL	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 12:25:13	0 %LEL	51 %LEL
Kenneth Hersom	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
K0194023271323	Zero cylinder s/n	Span cylinder s/n
100 %LEL	N/A	N/A
	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 13:33:26	23 %LEL	55 %LEL
Kenneth Hersom		
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
K0194023271329	Zero cylinder s/n	Span cylinder s/n
100 %LEL	N/A	N/A
	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 13:39:31	0 %LEL	55 %LEL
Kenneth Hersom		
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
K0194020221172	Zero cylinder s/n	Span cylinder s/n
100 %LEL	N/A	N/A
	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 13:52:19	0 %LEL	50 %LEL
Kenneth Hersom	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
K0194023261372	Zero cylinder s/n	Span cylinder s/n
100 %LEL	N/A	N/A
	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:02:34	0 %LEL	55 %LEL
Kenneth Hersom	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
	Zero cylinder s/n	Span cylinder s/n
K0194022411038	N/A	N/A
100 %LEL	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:12:49	0 %LEL	55 %LEL
Kenneth Hersom	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
	Zero cylinder s/n	Span cylinder s/n
K0194021071079	N/A	N/A
100 %LEL	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:17:20	0 %LEL	51 %LEL
Kenneth Hersom	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors

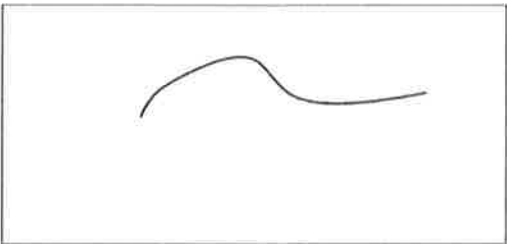
2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
100 %LEL	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
Kenneth Hersom	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors


2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
K0194023261370	Zero cylinder s/n	Span cylinder s/n
100 %LEL	N/A	N/A
	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
Kenneth Hersom		
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature



Kenneth Hersom

Detectors

2024/12/11

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
100 %LEL	Initial Zero	Final Zero
	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
Kenneth Hersom	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Guard Booth

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Guard Booth

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Guard Booth

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	55.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Guard Booth

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	50.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194020221167	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Guard Booth

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
104 vac	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221172		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:41:08	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Guard Booth

CH4 CAT

Calibration Result
Success

Concentration
50.0 %LEL

Location Tag

Gaurd booth

Serial No.

K0194021281106

Zero cylinder s/n
N/A

Span cylinder s/n
N/A

Range

100 %LEL

Initial Zero
0 %LEL

Final Zero
0 %LEL

Calibration date & time

2025/06/30 10:47:32

Initial
0 %LEL

Final
51 %LEL

Alarm levels

A1 A2
20.0 %LEL 50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Front

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	55.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Front

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Front

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Front

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194020221167	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Front

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
104 vac	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221172		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:41:08	0 %LEL	50 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Front

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Gaurd booth	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021281106		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:47:32	0 %LEL	51 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Front

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271323	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:54:22	0 %LEL	57 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Back

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Back

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Back

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	55.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Back

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194020221167	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Back

CH4 CAT

Calibration Result
Success

Concentration
50.0 %LEL

Location Tag

104 vac

Zero cylinder s/n
N/A

Span cylinder s/n
N/A

Serial No.

K0194020221172

Range

100 %LEL

Initial Zero
0 %LEL

Final Zero
0 %LEL

Calibration date & time

2025/06/30 10:41:08

Initial
0 %LEL

Final
50 %LEL

Alarm levels

A1 A2
20.0 %LEL 50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Bake Culture Back

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Gaurd booth	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021281106		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:47:32	0 %LEL	51 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Bake Culture Back

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271323	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:54:22	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Bake Culture Back

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271329	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:58:36	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Wetzel Pretzel Front

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Wetzel Pretzel BOH

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	55.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Wetzel Pretzel BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Wetzel Pretzel BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Wetzel Pretzel BOH

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	50.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194020221167	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Wetzel Pretzel BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
104 vac	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221172		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:41:08	0 %LEL	50 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Wetzel Pretzel BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Gaurd booth	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021281106		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:47:32	0 %LEL	51 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Wetzel Pretzel BOH

CH4 CAT

Calibration Result
Success

Concentration
55.0 %LEL

Location Tag

Zero cylinder s/n
N/A

Span cylinder s/n
N/A

Serial No.

K0194023271323

Range

100 %LEL

Initial Zero
0 %LEL

Final Zero
0 %LEL

Calibration date & time

2025/06/30 10:54:22

Initial
0 %LEL

Final
57 %LEL

Alarm levels

A1 A2

20.0 %LEL 50.0 %LEL

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Detectors Wetzel Pretzel BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271329	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:58:36	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Wetzel Pretzel BOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel Fr	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221178		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:05:33	48 %LEL	47 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194024451374		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221167		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
104 vac	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221172		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:41:08	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT

Calibration Result

Concentration

Success

50.0 %LEL

Location Tag

Gaurd booth

Zero cylinder s/n

Span cylinder s/n

Serial No.

N/A

N/A

K0194021281106

Range

Initial Zero

Final Zero

100 %LEL

0 %LEL

0 %LEL

Calibration date & time

Initial

Final

2025/06/30 10:47:32

0 %LEL

51 %LEL

Alarm levels

A1

A2

20.0 %LEL 50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT

Calibration Result

Concentration

Success

55.0 %LEL

Location Tag

Zero cylinder s/n

Span cylinder s/n

Serial No.

N/A

N/A

K0194023271323

Range

Initial Zero

Final Zero

100 %LEL

0 %LEL

0 %LEL

Calibration date & time

Initial

Final

2025/06/30 10:54:22

0 %LEL

57 %LEL

Alarm levels

A1

A2

20.0 %LEL 50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271329	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:58:36	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel Fr	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221178		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:05:33	48 %LEL	47 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel BOH	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021071081		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:16:18	0 %LEL	41 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271330	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:22:31	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194023271328		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	55.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194024451374		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	50.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194020221167	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
104 vac	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221172		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:41:08	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT

Calibration Result
Success

Concentration
50.0 %LEL

Location Tag

Gaurd booth

Serial No.

K0194021281106

Zero cylinder s/n
N/A

Span cylinder s/n
N/A

Range

100 %LEL

Initial Zero
0 %LEL

Final Zero
0 %LEL

Calibration date & time

2025/06/30 10:47:32

Initial
0 %LEL

Final
51 %LEL

Alarm levels

A1	A2
20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271323	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:54:22	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271329	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:58:36	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel Fr	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221178		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:05:33	48 %LEL	47 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel BOH	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021071081		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:16:18	0 %LEL	41 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194023271330		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:22:31	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Starbucks BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:31:34	0 %LEL	59 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194023261370		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221167		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors

Lids BOH

CH4 CAT

Calibration Result
Success

Concentration
50.0 %LEL

Location Tag

104 vac

Zero cylinder s/n
N/A

Span cylinder s/n
N/A

Serial No.

K0194020221172

Range

100 %LEL

Initial Zero
0 %LEL

Final Zero
0 %LEL

Calibration date & time

2025/06/30 10:41:08

Initial
0 %LEL

Final
50 %LEL

Alarm levels

A1 A2
20.0 %LEL 50.0 %LEL

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Gaurd booth	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021281106		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:47:32	0 %LEL	51 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271323	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:54:22	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271329	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:58:36	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel Fr	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221178		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:05:33	48 %LEL	47 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel BOH	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021071081		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:16:18	0 %LEL	41 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Lids BOH

CH4 CAT

Calibration Result
Success

Concentration
55.0 %LEL

Location Tag

Zero cylinder s/n
N/A

Span cylinder s/n
N/A

Serial No.

K0194023271330

Range

100 %LEL

Initial Zero
0 %LEL

Final Zero
0 %LEL

Calibration date & time

2025/06/30 11:22:31

Initial
0 %LEL

Final
57 %LEL

Alarm levels

A1 A2

20.0 %LEL 50.0 %LEL

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:31:34	0 %LEL	59 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:36:00	0 %LEL	70 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Lids BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194023261370		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:42:05	0 %LEL	62 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194024451374		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194020221167	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
104 vac	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221172		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:41:08	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Gaurd booth	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021281106		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:47:32	0 %LEL	51 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271323	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:54:22	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT

Calibration Result
Success

Concentration
55.0 %LEL

Location Tag

Zero cylinder s/n
N/A

Span cylinder s/n
N/A

Serial No.

K0194023271329

Range

100 %LEL

Initial Zero
0 %LEL

Final Zero
0 %LEL

Calibration date & time

2025/06/30 10:58:36

Initial
0 %LEL

Final
55 %LEL

Alarm levels

A1	A2
20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel Fr	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221178		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:05:33	48 %LEL	47 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel BOH	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021071081		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:16:18	0 %LEL	41 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271330	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:22:31	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:31:34	0 %LEL	59 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:36:00	0 %LEL	70 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:42:05	0 %LEL	62 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Walgreens FOH & BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194024451370		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:52:42	0 %LEL	58 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194023271328		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194020221167	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
104 vac	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221172		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:41:08	0 %LEL	50 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Gaurd booth	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021281106		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:47:32	0 %LEL	51 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271323	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:54:22	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271329	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:58:36	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel Fr	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221178		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:05:33	48 %LEL	47 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel BOH	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021071081		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:16:18	0 %LEL	41 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271330	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:22:31	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:31:34	0 %LEL	59 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:36:00	0 %LEL	70 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:42:05	0 %LEL	62 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:52:42	0 %LEL	58 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz FOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194022411038	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:59:40	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221167		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
104 vac	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221172		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:41:08	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Gaurd booth	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021281106		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:47:32	0 %LEL	51 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271323	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:54:22	0 %LEL	57 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271329	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:58:36	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel Fr	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221178		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:05:33	48 %LEL	47 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel BOH	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021071081		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:16:18	0 %LEL	41 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271330	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:22:31	0 %LEL	57 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	55.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:31:34	0 %LEL	59 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:36:00	0 %LEL	70 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:42:05	0 %LEL	62 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194024451370		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:52:42	0 %LEL	58 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Haagen Daz BOH

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194022411038	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:59:40	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 14:57:01	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:09:39	53 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	55.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:14:11	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	50.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194020221167	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2024/12/11 15:33:31	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
104 vac	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194020221172		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:41:08	0 %LEL	50 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Signature

Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	50.0 %LEL
Location Tag		
Gaurd booth	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021281106		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:47:32	0 %LEL	51 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	55.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271323	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:54:22	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271329	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 10:58:36	0 %LEL	55 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT

Calibration Result

Concentration

Failure

50.0 %LEL

Location Tag

Wetzel Fr

Zero cylinder s/n

Span cylinder s/n

Serial No.

N/A

N/A

K0194020221178

Range

Initial Zero

Final Zero

100 %LEL

0 %LEL

0 %LEL

Calibration date & time

Initial

Final

2025/06/30 11:05:33

48 %LEL

47 %LEL

Alarm levels

A1

A2

20.0 %LEL 50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Failure	50.0 %LEL
Location Tag		
Wetzel BOH	Zero cylinder s/n	Span cylinder s/n
Serial No.	N/A	N/A
K0194021071081		
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:16:18	0 %LEL	41 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271330	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:22:31	0 %LEL	57 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451374	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:31:34	0 %LEL	59 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023271328	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:36:00	0 %LEL	70 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
Location Tag	Success	55.0 %LEL
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:42:05	0 %LEL	62 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194024451370	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:52:42	0 %LEL	58 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194022411038	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 11:59:40	0 %LEL	55 %LEL
	Alarm levels	
	A1	A2
	20.0 %LEL	50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT

Calibration Result

Concentration

Failure

50.0 %LEL

Location Tag

Zero cylinder s/n

Span cylinder s/n

Serial No.

N/A

N/A

K0194021071079

Range

Initial Zero

Final Zero

100 %LEL

0 %LEL

0 %LEL

Calibration date & time

Initial

Final

2025/06/30 12:06:53

49 %LEL

49 %LEL

Alarm levels

A1

A2

20.0 %LEL 50.0 %LEL

R Donovan & Son Electric - Calibration Report Summary

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Detectors Vacant102

CH4 CAT	Calibration Result	Concentration
	Success	55.0 %LEL
Location Tag		
Serial No.	Zero cylinder s/n	Span cylinder s/n
K0194023261372	N/A	N/A
Range	Initial Zero	Final Zero
100 %LEL	0 %LEL	0 %LEL
Calibration date & time	Initial	Final
2025/06/30 12:17:01	0 %LEL	73 %LEL
	Alarm levels	
	A1 A2	
	20.0 %LEL 50.0 %LEL	

INVOICE

R. DONOVAN & SON ELECTRIC
CO., INC.
75 Mill Pond Rd
Jackson, NJ 08527

aschoenstein@rdonovanelectric.com
+1 (718) 358-1710

Bill to
Jones Lang LaSalle
55 Richmond Terrace
Staten Island, NY 10301

Ship to
Empire Outlets
35 Richmond Terrace
Staten Island, NY 10301

Invoice details
Invoice no.: 8267
Terms: Net 30
Invoice date: 12/12/2024
Due date: 01/11/2025

Job Completed: 12/11/24
Sales Rep: KH

#	Product or service	SKU	Description	Qty	Rate	Amount
1.	METHANE GAS DETECTOR		SERVICE AND REPLACEMENT OF METHANE GAS DETECTORS. WALGREENS, STARBUCKS, BAKE CULTURE, VACANT 102, VACANT 104, HAGGEN DAZ, LIDS, AND THE OIL TANK ROOM. LABOR: 12/11/24 ONE MAN 8 HOURS EACH AT \$125.00 PER HOUR PER DAY. 8X125.00=\$1,000.00 TOTAL LABOR - \$1,000.00,	1	\$1,000.00	\$1,000.00
Total						\$1,000.00



Order Confirmation

Instrumart LLC
35 Green Mountain Drive • S. Burlington • VT • 05403 • USA
P: (802) 863-0085 • instrumart.com
DUNS: 197963499 • FEIN: 03-0316999

Date: **7/2/2025**
Order #: **SO702574**

This is not an invoice. Actual shipping date and charges will be determined at the time of invoicing.

Bill To (Accounts Payable)	Ship To	TOTAL - USD \$
Empire Outlets c/o JLL 83 St Marks Pl Staten Island NY 10301 United States	Empire Outlets c/o JLL 35B Richmond Terrace Suite: MGMT Staten Island NY 10301 United States (917) 532-8159	\$6,784.80

Quote #	PO #	Est. Ship Date	Shipping Method	Collect #
Quote #Q1427015	Verbal Izzy Albino	8/13/2025	FREE SHIPPING - UPS GROUND	

Sales Rep	Contact Name	Contact Phone	Tracking #	Payment Terms	Credit Card #
Alex Andors	Izzy Albino	(917) 532-8159			*****7801

Memo

02-JUL-25 Order Approved

Qty	Part Number	Unit Price	Ext. Price	COO
8	<u>SPLCF6BMXCXNZZ</u> Honeywell Sensepoint XCL Gas Detector SELECTED OPTIONS: Gas: Methane (CH4), 0 to 100% LEL Output: Modbus RTU Relay Output: Not included Color: Charcoal	\$771.00	\$6,168.00	United States
	Surcharge - Honeywell 10% Effective 04/30/25, Honeywell has added a 10% surcharge for this product. The surcharge will appear as a separate line item on each sales order.	10%	\$616.80	
	*** Lifetime Tech Support *** Unlimited lifetime technical support via phone ((802) 863-0085) or email (support@instrumart.com) for the items on this order.			
	Prices are subject to change or adjustment for the imposition of new tariffs, duties, taxes, or similar charges, or the increase in existing tariffs, duties, or charges result in an increase to the Company's cost for the goods or products. The Company is not obligated to accept an order or, for accepted orders, to deliver the goods and/or services until an agreement on a new price has been reached.			

If you have any questions please don't hesitate to contact me.
Regards, Alex Andors
aandors@instrumart.com
(800) 235-8367

Subtotal	\$6,784.80
Shipping Cost	\$0.00
Tax (0%)	\$0.00
Total - USD \$	\$6,784.80



SO702574



Order Confirmation

Instrumart LLC
35 Green Mountain Drive • S. Burlington • VT • 05403 • USA
P: (802) 863-0085 • instrumart.com
DUNS: 197963499 • FEIN: 03-0316999

Date: **7/2/2025**

Order #: **SO702574**

INSTRUMART'S SALES TERMS & CONDITIONS APPLY TO THIS ORDER AND MAY BE ACCESSED BY CLICKING HERE

If order should be exempt from tax, please forward your exemption certificate to tax@instrumart.com.

To the extent applicable, the contractor and subcontractor shall abide by the requirements of 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take action to employ individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status or disability.



SO702574

APPENDIX G

CORRECTIVE MEASURES WORK PLAN



CORRECTIVE MEASURES WORK PLAN

Ballpark at St. George Station Staten Island, New York

Prepared for

**New York City
Economic Development Corporation**
New York, New York

Prepared by

TRC Environmental Corporation
Windsor, Connecticut

April 2013



CORRECTIVE MEASURES WORK PLAN

Ballpark at St. George Station Staten Island, New York

Prepared for
New York City Economic Development Corporation
New York, New York

Prepared by
TRC Environmental Corporation
Windsor, Connecticut

TRC Project No. 177603.0050
April 2013

TRC Environmental Corporation
21 Griffin Road North
Windsor, Connecticut 06095
Telephone 860-298-9692
Facsimile 860-298-6399

CORRECTIVE MEASURES WORK PLAN

Ballpark at St. George Station Staten Island, New York

Prepared for
New York City Economic Development Corporation
New York, New York

Prepared by
TRC Environmental Corporation
Windsor, Connecticut

TRC Project No. 177603.0050
April 2013

TRC Environmental Corporation
21 Griffin Road North
Windsor, Connecticut 06095
Telephone 860-298-9692
Facsimile 860-298-6399

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2.2 Concrete Retaining/Breasting Wall Underpinning and Replacement.....	2-2
2.3 Shoreline Stone Revetment	2-2
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3.0 HEALTH AND SAFETY	3-1
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FIGURES

- 1-1 Site Location
- 1-2 Stadium Development Plan

APPENDICES

- A OM&M Excerpts
- B Institutional and Engineering Controls Certification Form
- C Shoreline Rehabilitation Design Drawings (95% Set)
- D Materials Management Specification
- E Environmental Health, Safety and Emergency Response Specification
- F NYSDEC General Permit for Storm Repair Work in New York City, within Freshwater Wetlands, Tidal Wetlands, and Coastal Areas, GP-2-12-002
- G In-Situ Soil Characterization Report
- H Deed Restriction

1.0 INTRODUCTION

This Corrective Measures Work Plan (CMWP) presents the corrective measures planned to ensure the long-term integrity of engineering controls associated with the environmental remediation activities previously completed at the Ballpark at St. George Station site on Staten Island, New York. The location of this site is shown on Figure 1-1 in Appendix A from the project Operation, Maintenance, and Monitoring (OM&M) Plan dated March 2006. The subject property is located in the northeastern St. George section of Staten Island. The subject site consists of approximately 52 acres of shoreline property, of which 26 acres comprise upland area and the remaining 26 acres are located under water. The site parcel is identified on Tax Map Nos. 16 and 17 as Lot 20 of Block 2, excluding the railroad right-of-way.

The subject site was historically utilized as a railroad locomotive and railcar servicing and maintenance facility and a railcar switchyard from 1883 to 1994. The New York City Economic Development Corporation (NYCEDC) purchased the site in November 1998 for the development of a minor league baseball stadium and accessory public parking facility. The stadium development plan is provided as Figure 1-2 in Appendix A.

On December 1, 1999, the New York State Department of Environmental Conservation (NYSDEC) and the NYCEDC entered into a Voluntary Cleanup Agreement (VCA) (Index Number W2-0852-99-10) that required the completion of the site investigation and any appropriate remediation activities. Remediation activities completed and approved by NYSDEC included the removal of an arsenic hot spot in the surface soil, the removal of lead hot spots in the shoreline sediments, the capping of soils containing polycyclic aromatic hydrocarbons (PAH) and metals with clean soil, pavement or structures, and the installation of a passive sub-slab gas (methane) venting system below the concrete slab-covered ground level areas of the new baseball stadium building, along with an interior continuous combustible gas monitoring system on the first floor ground level stadium of the stadium building.

An OM&M Plan dated March 2006 was prepared that summarizes the completed site remediation activities as well as the remedial measures that require long-term maintenance to ensure adequate protection of public health and the environment. The remedial areas that require continued maintenance include the open soil-covered areas, paved surfaces, stone rip-rap covered shoreline areas, the stadium building ground-level concrete floor slab, and the stadium building sub-slab gas venting and monitoring systems.

Annual site inspections are completed by an independent State of New York-licensed Professional Engineer to verify the continued integrity of the remedial measures, thereby ensuring continued protection of public health and environment. For the most recent 2012 annual monitoring period, a Periodic Review Report (PRR) along with the Institutional and Engineering Controls Certification Form (Appendix B) was completed to document compliance with the OM&M Plan. Based on the findings of the 2012 inspections, the Owner/Designated Representative (NYCEDC) and Professional Engineer (TRC) could not certify the engineering controls or the site's compliance with the OM&M Plan during the 2012 reporting period for the following reasons:

- Storm-related damage/erosion to shoreline elements of the soil cover and stone rip-rap shoreline protection system; and
- Construction activities undertaken on a portion of the east end of the site (associated with a ramp reconstruction project taking place on the adjacent St. George Ferry Terminal) by the New York City Department of Transportation (NYCDOT) that were not preapproved by NYSDEC or overseen by the remedial Engineer of Record (TRC).

Since the time that TRC conducted the initial and follow-up 2012 annual inspections, TRC has collected information on the NYCDOT project that has been included in the PRR. This CMWP has been prepared for submittal to NYSDEC to provide the details and schedule for performing the corrective measures necessary to address the damage to the site remedy. For ease of reference and completeness, this CWMP is provided as an appendix to the PRR.

2.0 CORRECTIVE MEASURES

Planned corrective measures primarily include those required to repair storm damage to the site shoreline protection features and adjacent inland soil cover. Several figures from the OM&M Plan are provided in Appendix A to support the following description of planned corrective measures.

To address the storm damage to the site shoreline and associated site engineering controls, including shoreline stone riprap and clean soil cover, the following shoreline rehabilitation measures are planned:

- Shoreline debris collection and offsite disposal,
- Concrete retaining/breasting wall repairs/replacement and underpinning,
- Installation of armor stone revetment along shoreline, and
- Backfill and cover of soil eroded areas with clean soil and grass seeding.

Design drawings (95% progress set) that present the detailed engineering specifications (Sheets 2 through 4) and plans for the shoreline rehabilitation project are presented in Appendix C. Two technical specifications from the OM&M Plan, Materials Management and Environmental Health and Safety and Emergency Response, are incorporated into the specifications provided in the drawings and current versions of both of these specifications are provided in Appendices D and E.

TRC understands that the shoreline repairs will be completed under the NYSDEC General Permit for Storm Repair Work in New York City, within Freshwater Wetlands, Tidal Wetlands, and Coastal Areas, GP-2-12-002. This general permit is in effect until October 31, 2013. A copy of this general permit is provided in Appendix F.

The following provides details on the planned corrective measures.

2.1 Shoreline Debris Cleanup and Disposal

Existing natural stones and stone riprap along the shoreline work area will be recovered and reused as much as possible. The remedial contractor (Contractor) will clear the shoreline stone riprap installation area of concrete, timbers, pile stubs, and other large debris that meet the definition of construction and demolition (C&D) debris. The locations and types of debris along the area are shown on the Existing Debris Removal and Site Plan design drawing (Sheet 5). As indicated on Note 3 of Sheet 5, the Contractor will retain a New York State licensed land

surveyor to verify and update the topographic survey and existing site conditions at the start of work.

The recovered C&D debris will be collected and segregated for separate offsite disposal at an appropriately permitted C&D landfill or processing facility pre-approved by the Owner and NYSDEC. Any on-site stockpiling of recovered debris will be conducted in accordance with the stockpiling requirements indicated in the design drawings, specifications, approved plans and as summarized below in Section 2.3.

2.2 Concrete Retaining/Breasting Wall Underpinning and Replacement

Damaged portions of the existing shoreline concrete retaining/breasting wall will be replaced as indicated on the design drawings (Sheets 6, 7, 8 and 17). In addition, any other existing concrete wall sections identified as damaged during the new site survey will be replaced as appropriate. A specification for the concrete and steel reinforcing is provided in the drawings (Sheets 5 and 8). Details of the planned new concrete breasting wall section and construction joints at the existing wall are provided in the drawings (Sheet 18). As part of the new concrete breasting wall construction, existing inland soils will be excavated. The management of the excavated soils will be conducted in accordance with the design drawings, specifications, and approved plans and as summarized below in Section 2.3. Low-pressure injection lightweight concrete underpinning will be completed along the existing and new concrete breasting wall in accordance with the drawings. A detail of the wall underpinning is provided in the drawings (Sheet 18).

2.3 Shoreline Stone Revetment

In accordance with the design drawings, armor stone revetment will be installed along approximately 2,025 feet of site shoreline to repair those areas where previously located revetment was damaged. As indicated by the typical armor stone revetment cross section in the drawings (Sheet 18), the cross section will consist of an 11-inch thick bedding stone layer overlain by a 3'-10" thick armor stone layer ranging in size from 667 pounds/19 inches to 2,500 pounds/30 inches. A woven geotextile filter fabric will be placed below the bedding stone layer.

The shoreline sediment remedy SD-4 location is located along the planned limits of the new shoreline rehabilitation work; however, the actual SD-4 location is beyond the toe of the new stone revetment slope planned along the shoreline. The SD-4 location including the latitude

and longitude coordinates for the area are indicated the stadium development plan on Figure 2-1. Under the completed site remedy, the top 3 feet of soil/sediment was removed from this area, a black nonwoven geotextile fabric was placed over the bottom and sides of the excavation and the area was backfilled with 2 feet of sand overlain by 1 foot of gravel. The area was then covered by an approximately 1 foot thick layer of 15-pound natural stone riprap. A cross section of this area is shown on Figure 2-2. To date, nearly all of the armor stone cover layer installed at this location as part of the site remedy has been washed away and requires replacement. As a result, a layer of the armor stone revetment planned for the shoreline rehabilitation project will also be placed over the SD-4 area. The stone layer will be placed over the existing grade at this location.

As part of the stone revetment placement, shoreline soils will be removed to provide for the installation of new armor stone revetment along the site shoreline. Soils excavated as part of this work must be managed in accordance with the OM&M Plan Materials Management specification incorporated into the design drawings (Sheets 2 and 3 and Appendix D). An estimated 5,500 cubic yards of soil will be generated from the shoreline construction activities.

Under contract to NYCEDC, a soil boring investigation was completed by TRC in July 2012 across the planned shoreline construction area to characterize excavation area soils for waste management purposes. The site investigation included the sampling of soils from fifteen locations along the waterside of the concrete retaining wall and three locations along the inland side of the wall, for a total of eighteen soil samples. A copy of the report from this investigation is provided in Appendix G. The soil boring investigation conclusions indicated the following:

- No evidence of potential petroleum contamination was observed in the soil samples (i.e., no staining, odors).
- Metals and/or pesticides were detected above Unrestricted Use soil cleanup objectives (SCOs) in all of the samples,
- Three soil samples from three shoreline locations contained metals at concentrations above Commercial Use SCOs.
- The three samples exhibiting high total lead or chromium levels were also analyzed according to the toxicity characteristic leaching procedure (TCLP), but exhibited no lead or chromium levels above TCLP regulatory hazardous waste characterization criteria.

Prior site investigation findings and the recent soil boring investigation results indicate that the inland soil chemical characteristics may differ from that of the shoreline soils (i.e., waterside of the breasting wall). Therefore, depending upon the soil testing and acceptance

criteria for the approved soil treatment/disposal facility selected for this project, excavated shoreline soils may need to be segregated and stockpiled separately from other excavated materials (e.g., inland soils) for further waste characterization chemical testing, to determine if these materials must be managed separately. Furthermore, excavation and soil handling will be performed in a manner that limits mixing of materials with different levels and types of contamination to the greatest extent possible. In addition, the transfer of potentially-contaminated and contaminated materials from an excavation to a stockpile area will be conducted in such a manner as to prevent the spread of potentially-contaminated or contaminated materials across the site.

In accordance with the specifications, the Contractor shall be responsible for the monitoring of the excavated shoreline sediments/soils to ensure the appropriate segregation of excavated materials into separate stockpiles. However, the Owner's Representative may inspect and direct the Contractor's segregation means and methods at any time. Excavated materials will be stockpiled in accordance with the project specifications, approved plans, and the following conditions:

- Materials shall be stockpiled at on-site locations approved by the Owner's Representative.
- Differing materials including but not limited to riprap, debris, contaminated soils (e.g., petroleum odors, staining) shall be stockpiled separately to prevent mixing.
- Surface water shall be directed away from stockpile sites to prevent erosion or deterioration of materials.
- Excavated stockpiled materials shall be placed on a base lined with 40 mil. (or greater) high-density polyethylene (HDPE).
- Stockpiles shall not exceed 35 feet in height with maximum side slopes of 2:1 (horizontal:vertical).
- Excavated material stockpiles shall be securely covered with 10 mil plastic sheeting when not in use.
- The HDPE shall be bermed around the edges to prevent any infiltration of stormwater or exfiltration of leachate. The berm height shall be a minimum of 12 inches.
- The HDPE and 10 mil plastic sheeting shall be adequately secured to prevent damage or loss by wind or other weather elements.
- Sediments and contaminated soils shall be suitably dewatered prior to stockpiling, to prevent free water from adversely impacting working conditions on-site and from developing during transport of contaminated soils to an off-site disposal facility.
- Shoreline soils/sediment dewatering liquids shall not be discharged directly or indirectly by overland flow into surface water bodies, including the adjacent New York Harbor.

Materials screened from the soil or other debris (e.g., wood timbers, concrete, large rocks) during excavation and stockpiling that meet the definition of C&D debris will be stockpiled separately for disposal at an approved, permitted C&D landfill or other approved facility. The Contractor will maintain a current written record of on-site stockpiled materials including locations and volume estimates of excavated and stockpiled materials and associated source locations. This record shall be made available in the field to the Owners Representative upon request.

After completion of the work, the Contractor will complete and submit an as-built topographic survey prepared by a NYS-licensed land surveyor. The survey shall show all final contours, grades, utilities, walls, revetments, vegetation, and other topographic features for the completed work site. The as-built survey and drawings shall be completed in accordance with the design drawings and specifications.

2.4 Soil Cover and Backfill

In accordance with the site remedy, open areas of the site addressed by the corrective actions described herein and not covered by structures or paving will be covered with at least 18 inches of clean soil, except for an open area in the western part of the site, where the existing mature native tree growth was maintained. In the western wooded area, a minimum of 6-inches of topsoil cover was placed in the area except for immediately adjacent to the existing tree trunks where 6-inches of bark mulch was placed to cover exposed roots and soil. The topsoil supports the seeding of grass in the area and the mulch provides erosion control without harming the trees and their exposed root systems. At those locations where the soil cover has been eroded, damaged or requires replacement and is located outside the western wooded area, a clean soil cover having a minimum thickness of at least 18 inches shall be installed. No underlying demarcation fabric is required at the locations outside the western wooded area. Cross sections of these two soil covers are provided on Figure 2-3. At those locations within the western wooded area (i.e., where 6 to less than 18 inches of clean soil cover is present), the presence of an underlying demarcation fabric shall be verified and replaced where absent prior to any backfilling or repair of erosion or damage. The replacement clean soil cover thickness in the western wooded area shall be at least equal to the existing adjacent clean soil cover thickness. The existing soil cover types for the site area including the limits of the western wooded area

that has a soil cover less than 18-inches thick and an underlying demarcation fabric are shown on the attached Figure 1 (orange-colored area) in Appendix A (from Appendix E of OM&M Plan).

At the former arsenic-contaminated soil removal location SS-7 at the far western end of the site, a 12-inch thick clean soil cover was installed after the removal of the soil. The 12-inch thickness of the clean soil cover at this location will be verified and supplemented as necessary. The grass vegetation in this area will also be reestablished as necessary for erosion control. The location (including the latitude and longitude coordinates) of the SS-7 soil cover location is indicated on Figure 2-1.

As part of the remedial measure, a permeable filter fabric was placed as a demarcation layer below the soil cover layer in areas not covered by buildings, pavement, or less than 18 inches of clean soil cover. This includes the western shoreline area and the far western end of the site (i.e., SS-7 area), where the existing demarcation fabric is now visible at several locations due to storm damage erosion of the soil cover. For any soil corrective measures in the open wooded/grassed area at the western end of the site, as indicated on Figure 1 (orange-colored area on figure), Figure 2-1A, and Figure 2-1B in Appendix A, the area in which the filter fabric was placed for the remedy must be maintained or replaced, as appropriate. The filter fabric liner was not placed within the drip line of existing and new trees or shrubs in this area, due to concerns regarding plant mortality. Any newly installed demarcation fabric shall be white- or orange-colored, nonwoven, needle-punched geotextile made of 100% polypropylene staple fibers meeting the requirements of Mirafi 140NC as manufactured by Tencate Mirafi Construction Products; GT140N as manufactured by SKAPS Industries; or equal approved by the Owners Representative.

Off-site borrow soils used for clean soil cover material or structural fill shall be sampled and analyzed to ensure that they meet the clean soil criteria approved by NYSDEC for the site. The sample data shall be recent laboratory test data representative of the current source soil stockpiles. In accordance with 6 NYCRR Section 375-6.7(d) Remedial Program Soil Cleanup Objectives and NYSDEC CP-51 Soil Cleanup Guidance, any soil covers and backfill must meet the lower of the protection of groundwater or the protection of public health SCOs for restricted use, restricted-commercial (applicable to intended passive recreational uses with limited potential for soil contact) established in Section 375-6.8(b). In addition, the off-site borrow soils must meet the soil and borrow material conditions indicated in the project specifications.

However, the above-indicated SCOs are the allowable chemical constituent levels applicable to all soils imported for use on this project.

At a minimum, the following documentation shall be submitted by the Contractor for offsite borrow sources at least two weeks prior to proposed delivery of the material to the project site: the name(s), address(es), contact name(s) and phone number(s) of the source(s) and actual origination of material (e.g., sand mine, quarry, dredge project); any associated local or state permits/registrations/approvals; documentation of NYSDEC's beneficial use determination (per 6 NYCRR Part 360, if applicable); and associated existing representative geotechnical and chemical test data. The sources of all proposed borrow soil and fill material must be pre-approved by the Owners Representative and NYSDEC prior to delivery to the project site.

After review and approval of proposed sources, the Owners Representative will sample and analyze proposed soil borrow material to assess compliance with the above-specified SCOs. Soil samples will be collected at a minimum frequency of one sample per 1,000 cubic yards of soil. More frequent sampling/testing of soil may be conducted, based on the source and observed soil characteristics. The representative soil samples will be collected from soil stockpiles at the source location that are designated specifically for this project. The soil samples will be analyzed for full target compound list (TCL) volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides/PCBs, and target analyte list (TAL) metals according to current USEPA methods for the NYS Part 375-6.8 constituent list. All soil testing will be completed by a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) approved laboratory.

A complete, signed, and legible Bill of Lading record will be provided for all borrow soil and fill materials shipped to the site. The record will identify the source name and address, the type and amount of material, and shipment date.

After completion of the work, the Contractor shall complete and submit an as-built topographic survey prepared by a NYS licensed land surveyor. The survey shall show all final contours, grades, utilities, walls, revetments, vegetation, and other topographic features for the completed work site. The as-built survey and drawings shall be completed in accordance with the design drawings and specifications.

3.0 HEALTH AND SAFETY

The elevated PAHs and metals levels in the subsurface soils and fill materials on the site are considered to pose a potential health and safety hazard to site workers and the surrounding community during site excavation or other ground disturbance activities that expose the subsurface soils and fill. In addition, low levels of pesticides and polychlorinated biphenyls (PCBs) were detected in some site soils/fill during investigation and remediation of the site. Therefore, a site-specific environmental Health and Safety Plan (HASP) shall be developed by the Contractor for the soil excavation and disturbance activities to reduce the potential exposure of site construction workers and surrounding community to site-related contaminants during this work. An Environmental Health, Safety and Emergency Response specification detailing the site-specific safety requirements was adapted from the OM&M plan and incorporated into the shoreline rehabilitation design drawings (Sheet 2).

Based on the findings of previous site investigations, site construction activities that involve contact with site soils and fill materials shall be initiated in a minimum of NIOSH/EPA Level D personal protection equipment, consisting of work clothes, gloves, and steel-toed boots. Hard hats shall also be worn by site workers during any investigation and construction activities involving the use of heavy equipment (e.g., drill rig, excavator, backhoe). Any site personnel exposed to site ground water shall avoid direct contact with the water and wear safety glasses and chemically-resistant gloves. Safety levels should be upgraded or downgraded as determined by a qualified safety professional, based on observed or changed site conditions.

The presence of elevated PAHs and metals in site soils are a potential concern with respect to the incidental inhalation or ingestion of wind-blown soil particles. Prior to land-disturbing activities, the Contractor shall submit and obtain approval from the Owner's Representative and NYSDEC a Community Air Monitoring Plan (CAMP) to be implemented during the work, in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 1A.

Dust monitoring shall be performed during the planned soil excavation/ground disturbance activities to ensure that respirable dust levels (10 μm diameter or less) are maintained below the 150 $\mu\text{g}/\text{m}^3$ 15-minute TWA standard established by the NYSDOH community air monitoring guidance. Background sampling (upwind and downwind) shall be conducted prior to any ground disturbance construction activities. The dust monitoring shall be performed with a portable, real-time, light-scattering photometer type device known as a

nephelometer. The dust monitor should be periodically calibrated (typically at the start and in the middle of each day) to ensure its accuracy.

The results of the dust monitoring shall be used to determine the need for dust control measures or additional personal protection (e.g., particulate cartridge-type respirators). Visible observations of any continuous dust emissions (i.e., blowing for at least 5 minutes) and an action level of $100 \mu\text{g}/\text{m}^3$ (15 minute TWA) shall be used to indicate the need for dust control measures in the work area.

The Contractor shall keep dust to a minimum during construction activities. The Contractor will be required to maintain all excavations, material and waste stockpiles, and all other work areas to minimize dust that would cause a hazard or nuisance to others. The Contractor shall be required to implement adequate dust controls consisting of wetting down the exposed soil surfaces with potable water and/or covering the stockpiles with a tarp. Soils, roads and other disturbed areas may be sprinkled or treated with dust suppressants in accordance with 29 CFR 1910.1000, DER-10, and the NYSDEC Technical and Administrative Guidance Memorandum #4031 – Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites (TAGM 4031), and all applicable federal, state and local requirements. The use of oil or other petroleum products for dust suppression is prohibited. Dry power brooming/sweeping is not permitted.

4.0 RECORDKEEPING AND REPORTING

Recordkeeping is important to document the continued proper operation and maintenance of the remedial measures. Reporting activities include those required under the property deed restriction. In accordance with the site-specific deed restriction (see Appendix H), written approval shall be obtained from NYSDEC prior to any excavation activities on the site below the clean soil cover and underlying white filter fabric demarcation layer. If excavation occurs on the property, any soil or fill materials excavated and not reused in accordance with the project specifications must be managed, characterized and properly disposed of off-site in an approved and permitted facility in accordance with applicable regulations and directives, or re-deposited onsite and covered with filter fabric and clean soil cover in accordance with this plan and the project specifications, unless it is demonstrated to the satisfaction of the NYSDEC that such soil is not contaminated with any substance that will pose a risk to human health and can be reused/recycled offsite elsewhere. Copies of all submittals to NYSDEC and associated approvals for any excavations activities and soil reuse or disposal must be provided to NYCEDC and the Owners Representative.

The clean soil cover materials and management of any excavated soils or fill materials during any construction activities shall meet the requirements specified in this plan, including the Materials Management specification provided in Appendix D and in the design drawings (Sheets 2 and 3). This plan and the specification require that all offsite borrow, including the clean soil cover material, meet the site-specific SCOs indicated in Section 2.4. In addition, the off-site borrow soils must meet the soil and borrow material conditions indicated herein and in the project specifications. All soil test data required to demonstrate compliance with these criteria shall be submitted to the NYSDEC and the Owners Representative. This submittal shall include a copy of the laboratory chemical soil test results and a tabular comparison of the soil data to the site-specific clean soil criteria. In addition, the Contractor shall provide as-built drawings showing the locations of any new on-site soil cover materials and underlying demarcation fabric to NYCEDC and the Owners Representative.

Documentation of the appropriate waste determination testing (e.g., sampling protocol, laboratory test reports) specified herein and in the project specifications for wastes shipped offsite shall be provided by the Contractor to NYCEDC and the Owners Representative. In addition, appropriate offsite waste shipment records (e.g., hazardous or nonhazardous manifest, bill of lading) shall be provided by the Contractor for all wastes and soils shipped offsite. At a

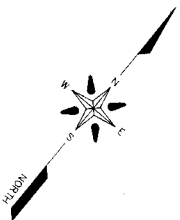
minimum, the records shall identify the transporter and treatment/disposal/recycling facility, including the name, address, phone number, and permit number; the type and amount of material; and shipment date. Copies of signed manifests from the receiving facility shall also be provided. Certified truck scale tickets shall be provided for all offsite waste shipments. Completed Certificates of Disposal/ Treatment/Recycling shall be provided by the Contractor from the receiving facility for all contaminated soils disposed off site.

5.0 SCHEDULE

NYCEDC has received proposals for the shoreline rehabilitation work but has not yet awarded a contract for this work. NYCEDC will award the contract once the required funding is provided by grants through the U.S. Federal Emergency Management Agency (FEMA) and the funding is released by the NYC Office of Management and Budget (OMB). NYCEDC expects to receive FEMA funding and OMB authorization by summer 2013. Once funding is authorized, the construction is estimated to be completed by December 2013.

A PRR will be prepared and an Institutional and Engineering Controls Certification will be completed and submitted to NYSDEC within 60 days of completion of the work. The PRR will include copies of the final as-built drawings and all other project submittals indicated in this plan.

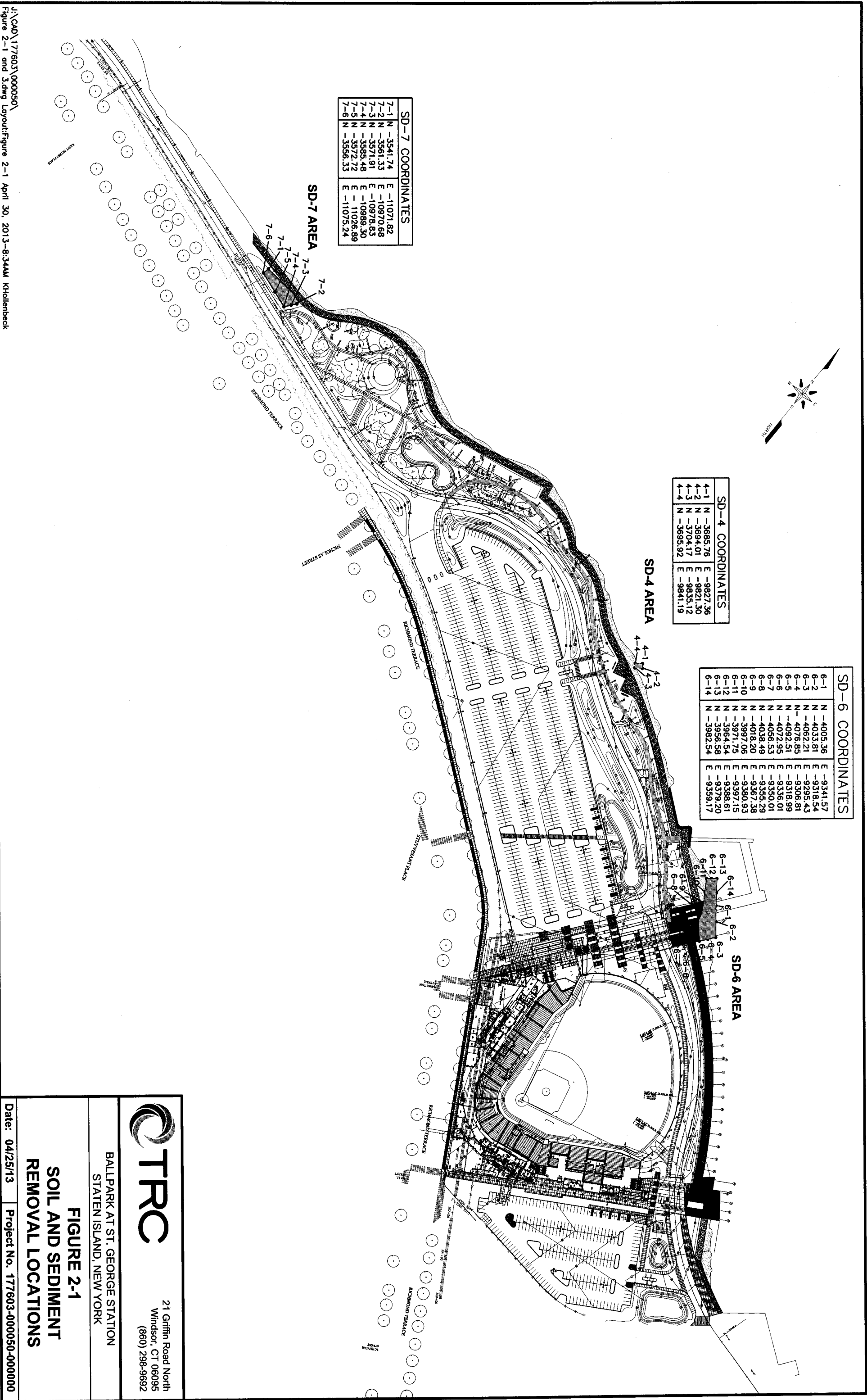
FIGURES



SD-4 COORDINATES			
4-1	N -3685.76	E -9827.36	
4-2	N -3694.01	E -9821.30	
4-3	N -3704.17	E -9835.12	
4-4	N -3695.92	E -9841.19	

SD-6 COORDINATES			
6-1	N -4005.36	E -9341.57	
6-2	N -4033.81	E -9318.54	
6-3	N -4082.21	E -9295.43	
6-4	N -4076.85	E -9306.81	
6-5	N -4092.51	E -9318.99	
6-6	N -4072.95	E -9336.01	
6-7	N -4056.53	E -9350.01	
6-8	N -4038.49	E -9355.29	
6-9	N -4018.20	E -9367.38	
6-10	N -3997.06	E -9380.93	
6-11	N -3971.75	E -9397.15	
6-12	N -3964.54	E -9388.61	
6-13	N -3956.58	E -9379.20	
6-14	N -3982.54	E -9359.17	

SD-7 COORDINATES			
7-1	N -3541.74	E -11071.82	
7-2	N -3561.33	E -10970.68	
7-3	N -3571.91	E -10978.83	
7-4	N -3583.48	E -10989.30	
7-5	N -3572.72	E -11026.89	
7-6	N -3556.33	E -11075.24	

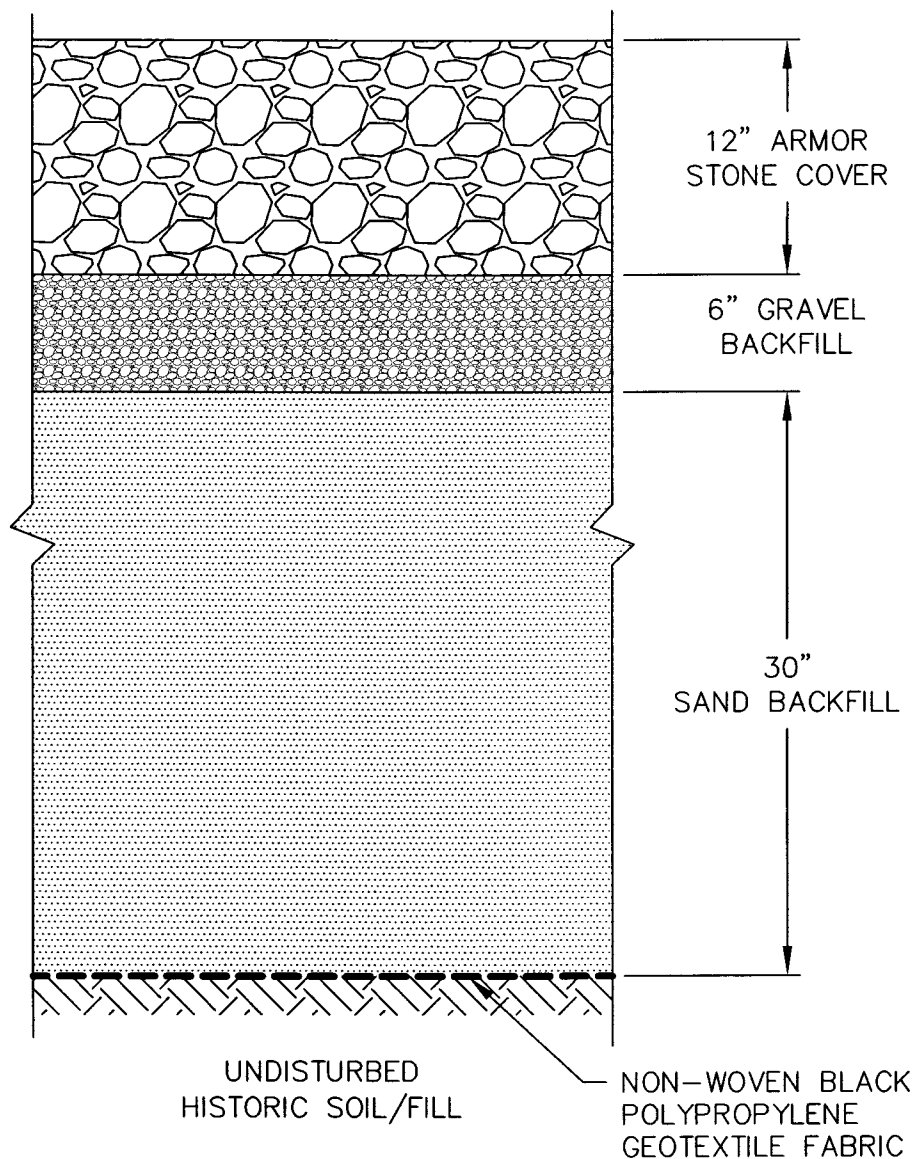


21 Griffin Road North
Windsor, CT 06095
(860) 298-9692

BALLPARK AT ST. GEORGE STATION
STATEN ISLAND, NEW YORK

FIGURE 2-1
SOIL AND SEDIMENT
REMOVAL LOCATIONS

Date: 04/25/13 Project No. 177603-000050-000000



**SD-4 AND SD-6 SHORELINE
SEDIMENT/SOIL REMEDY AREAS
BACKFILL AND COVER TYPICAL SECTION**

NTS



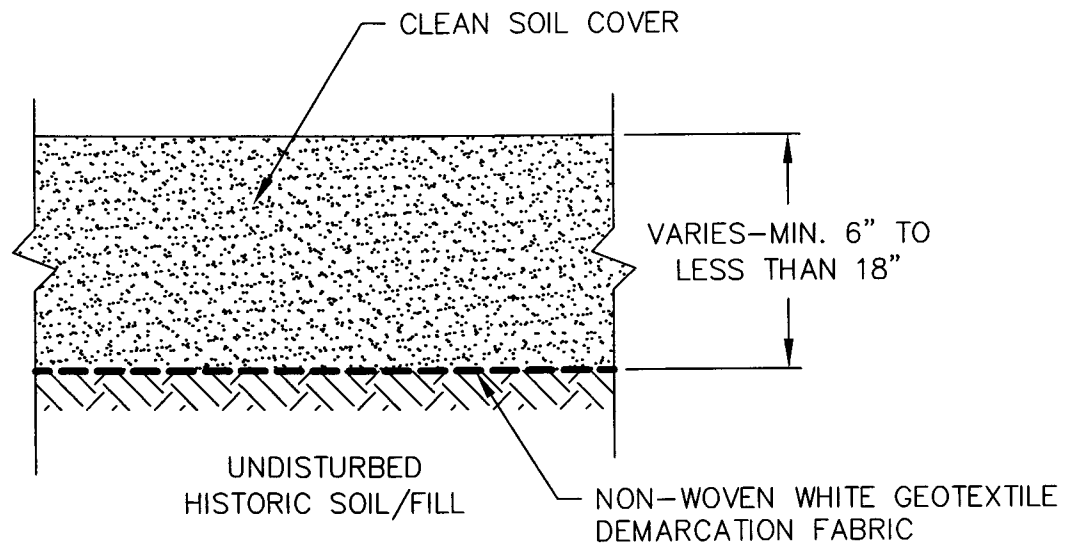
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(860) 298-9692

BALLPARK AT ST. GEORGE STATION
STATEN ISLAND, NEW YORK

**FIGURE 2-2
SHORELINE SEDIMENT/SOIL REMEDY
LOCATION TYPICAL CROSS SECTION**

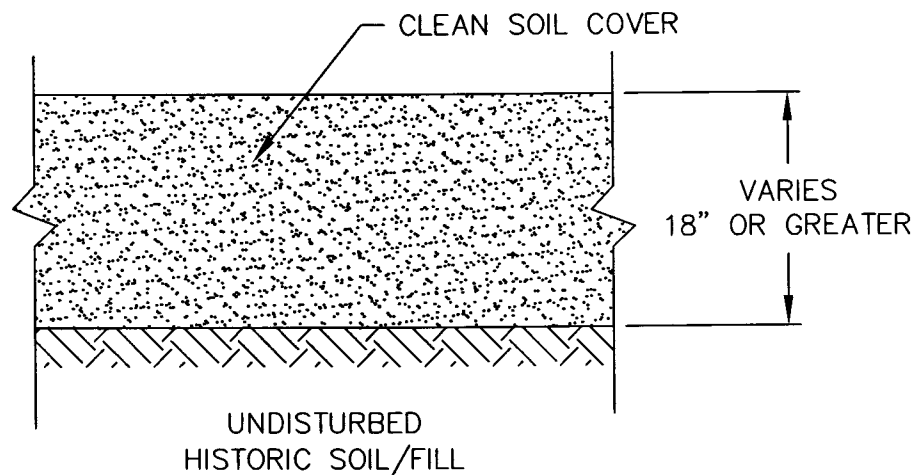
Date: 04/26/13

Project No. 177603-000050-000000



WESTERN WOODED AREA **CLEAN SOIL COVER TYPICAL SECTION**

NTS



OPEN LANDSCAPE AREAS **CLEAN SOIL COVER TYPICAL SECTION** **(OUTSIDE WESTERN WOODED AREA)**

NTS



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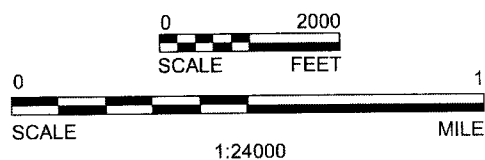
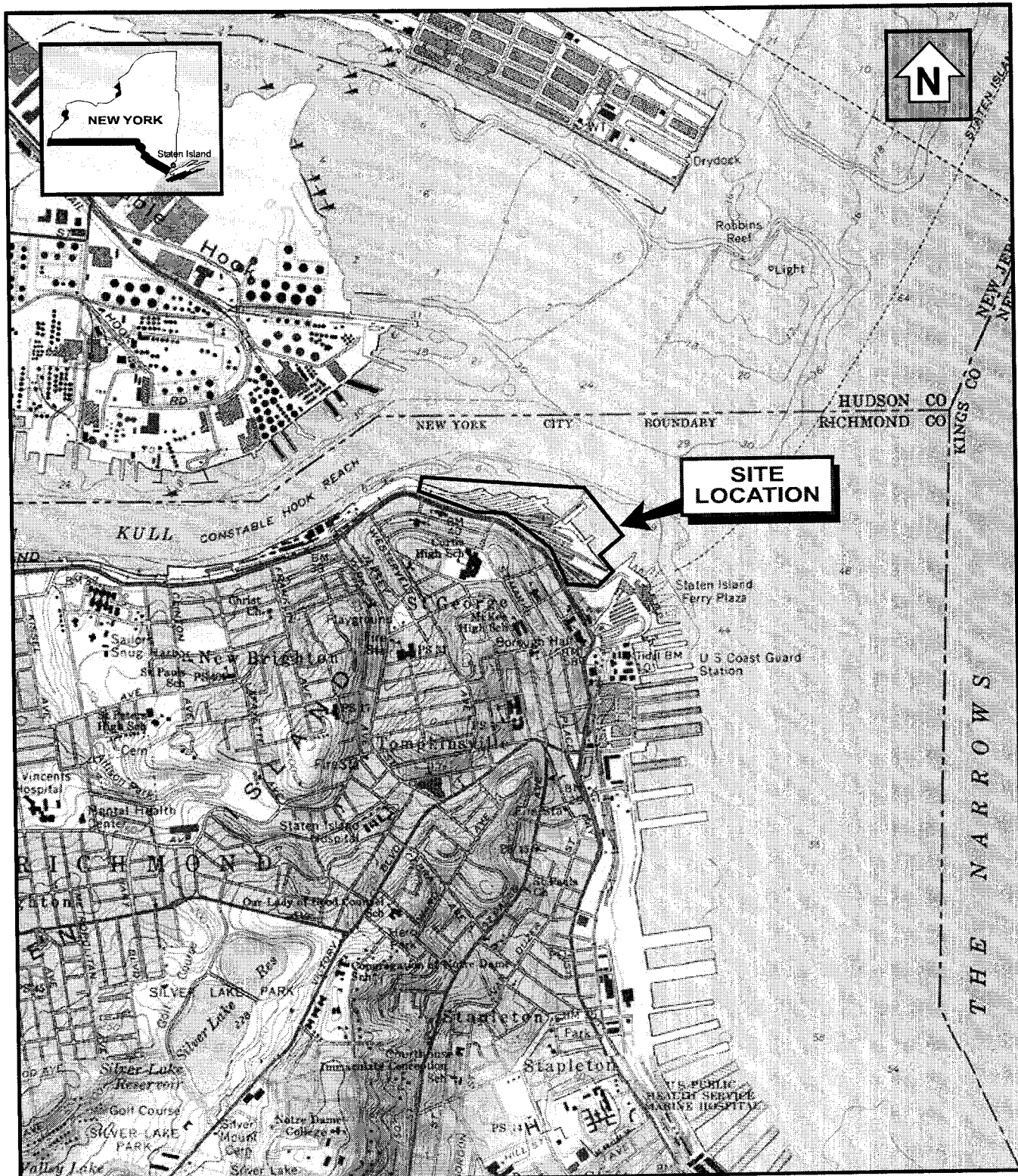
BALLPARK AT ST. GEORGE STATION
STATEN ISLAND, NEW YORK

FIGURE 2-3 **CLEAN SOIL COVER** **TYPICAL CROSS SECTIONS**

Date: 04/26/13

Project No. 177603-000050-000000

APPENDIX A



BASE CREATED WITH TOPO™ © 1996 WILDFLOWERS PRODUCTIONS, www.topo.com
7.5' USGS TOPOGRAPHIC MAP

TRC

Customer-Focused Solutions

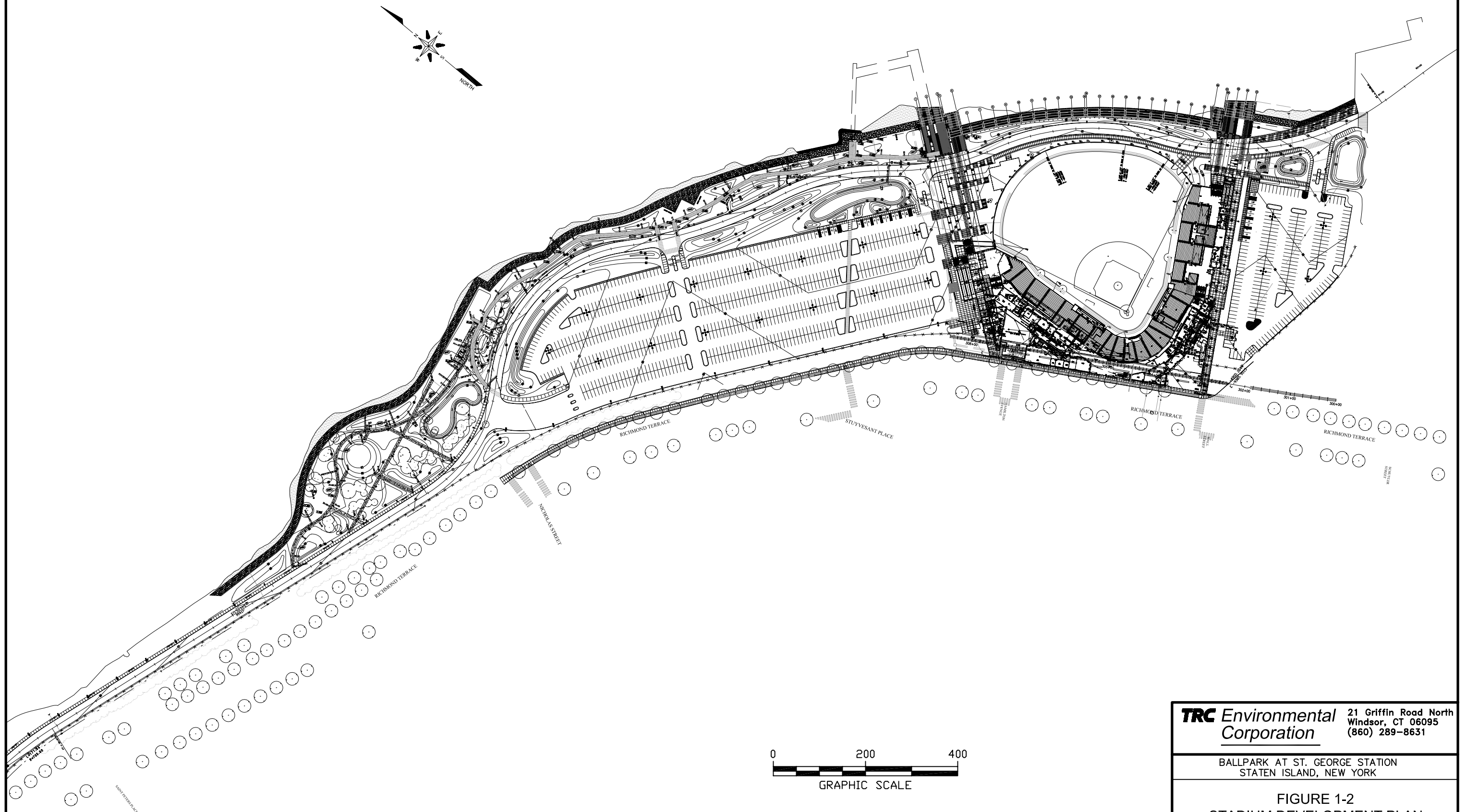
21 Griffin Road North
Windsor, CT 06095
(860) 298-9692

BALLPARK AT ST. GEORGE STATION
STATEN ISLAND, NEW YORK

**FIGURE 1-1
SITE LOCATION MAP**

Date: 03/06

Project No. 31193-0020



TRC Environmental Corporation 21 Griffin Road North
Windsor, CT 06095
(860) 289-8631

BALLPARK AT ST. GEORGE STATION
STATEN ISLAND, NEW YORK

FIGURE 1-2
STADIUM DEVELOPMENT PLAN

Date: 03/03/06



Project No. 31193-0020-00020

APPENDIX B



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details		Box 1
Site No.	V00228	
Site Name Ballpark at St. George Station		
Site Address: Between North Ramp and Jersey St., Block 2, Lot 20		Zip Code: 10301
City/Town: Staten Island		
County: Richmond		
Site Acreage: 52.0		
Reporting Period: December 31, 2009 to December 31, 2012		
		YES NO
1. Is the information above correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Box 2
		YES NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.		
A Corrective Measures Work Plan must be submitted along with this form to address these issues.		
 Signature of Owner, Remedial Party or Designated Representative		 Date

SITE NO. V00228

Box 3

Description of Institutional Controls

Parcel

Owner

Institutional Control

2-20

Kay Zlas, NYC EDC

Ground Water Use Restriction
Landuse Restriction

Box 4

Description of Engineering Controls

Parcel

Engineering Control

2-20

Cover System
Subsurface Barriers
Vapor Mitigation

Engineering Control Details for Site No. V00228

Parcel: 2-20

- 1) Declaration of Covenants shall run with the land
- 2) Prohibition of land use for purpose other than sports stadium, parking lots, esplanade
- 3) Prohibition of groundwater use
- 4) ECs - sub-slab methane venting system and gas monitoring system
- 5) Shall be no excavation unless prior approval by DEC:
 - deeper than 18 inch clean soil
 - No excavation deeper than 18 inch to prevent damage to demarcation layer
 - In paved areas - no excavation below underlying imported subgrade layer
 - In areas covered by buildings - no excavation below the footprint of such structures and underlying imported subgrade materials.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☐ ☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☐ ☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. V00228

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____
print name print business address

am certifying as _____ (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

Date

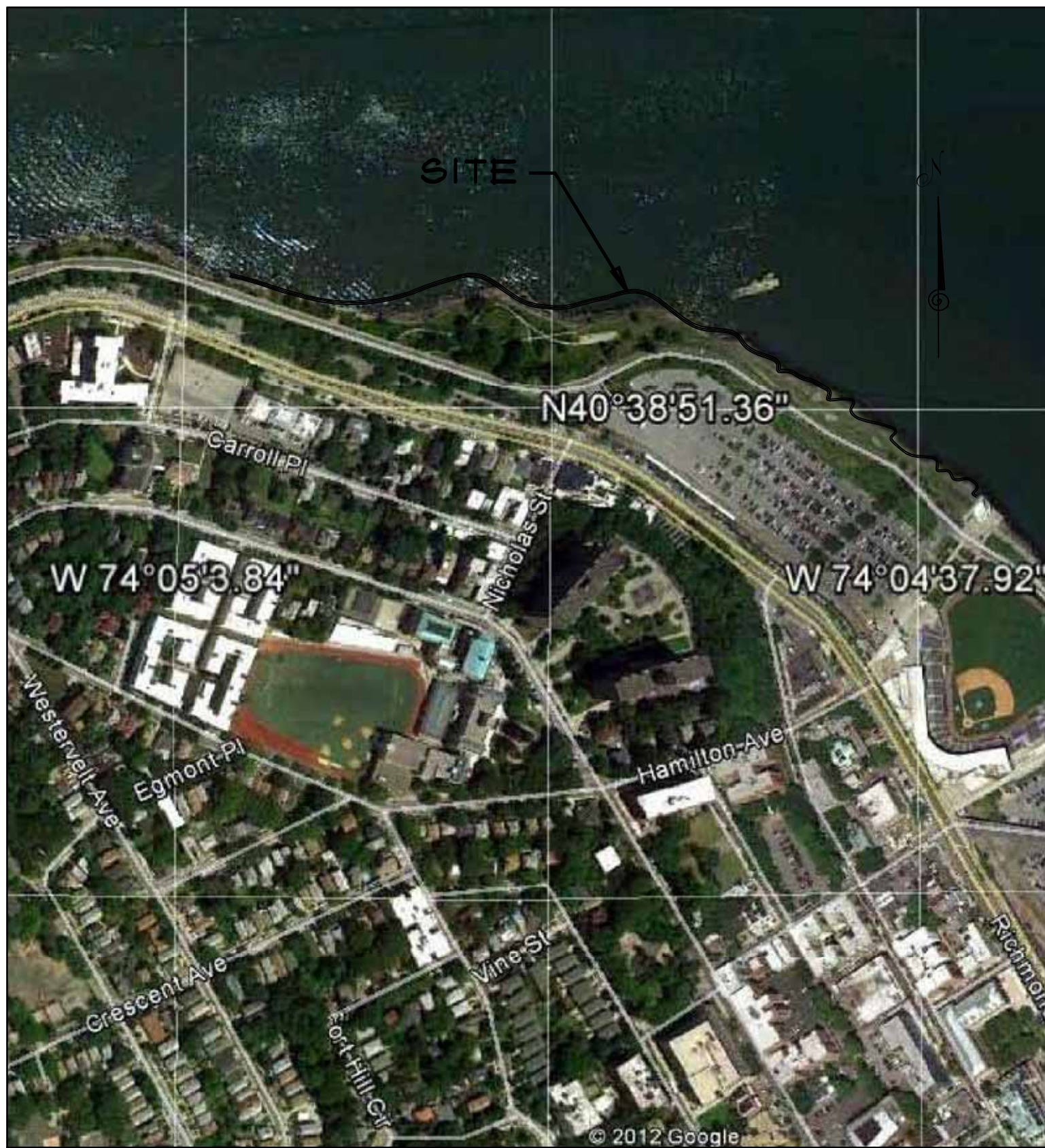
APPENDIX C

EMERGENCY SHORELINE REHABILITATION
AT SEPTEMBER 11, 2001 MEMORIAL, ST. GEORGE STATION

STATEN ISLAND, NEW YORK

PENNMAX ENGINEERING, PLLC

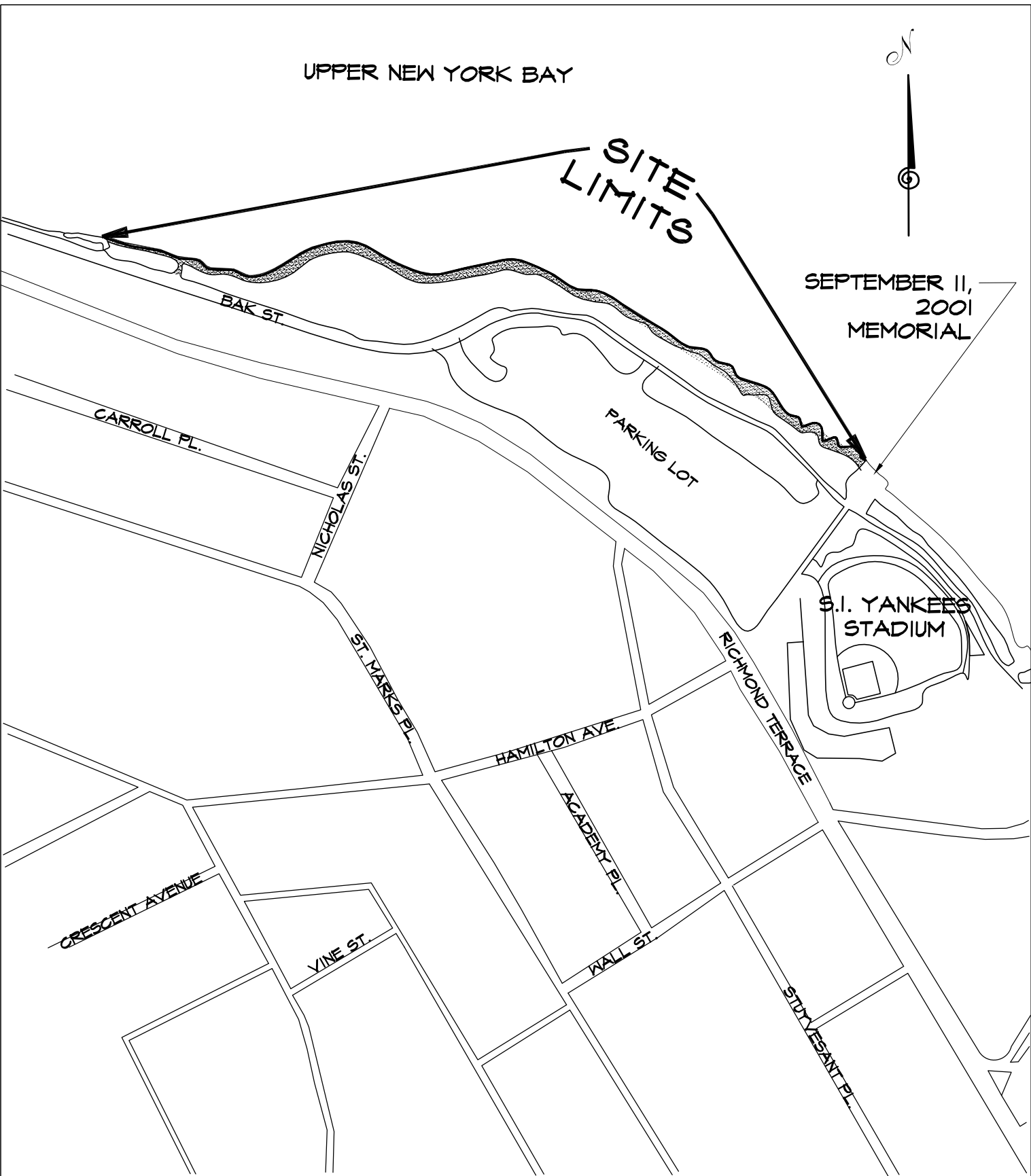
JUNE 2012



ADAPTED FROM GOOGLE EARTH

VICINITY MAP
SCALE: N.T.S.

LIST OF DRAWINGS		
SHEET NO.	DRAWING NO.	TITLE
1 OF 18	T-001.00	TITLE SHEET
2 OF 18	C-001.00	GENERAL NOTES AND SPECIFICATIONS (SHEET 1 OF 3)
3 OF 18	C-002.00	GENERAL NOTES AND SPECIFICATIONS (SHEET 2 OF 3)
4 OF 18	C-003.00	GENERAL NOTES AND SPECIFICATIONS (SHEET 3 OF 3)
5 OF 18	C-100.00	EXISTING DEBRIS REMOVAL AND SITE PLAN
6 OF 18	C-101.00	PROPOSED PART SITE PLAN (SHEET 1 OF 3)
7 OF 18	C-102.00	PROPOSED PART SITE PLAN (SHEET 2 OF 3)
8 OF 18	C-103.00	PROPOSED PART SITE PLAN (SHEET 3 OF 3)
9 OF 18	C-200.00	TRANSSECTIONS STA. 0+00 TO 2+50 (SHEET 1 OF 8)
10 OF 18	C-201.00	TRANSSECTIONS STA. 2+75 TO 5+00 (SHEET 2 OF 8)
11 OF 18	C-202.00	TRANSSECTIONS STA. 5+25 TO 8+00 (SHEET 3 OF 8)
12 OF 18	C-203.00	TRANSSECTIONS STA. 8+25 TO 10+50 (SHEET 4 OF 8)
13 OF 18	C-204.00	TRANSSECTIONS STA. 10+75 TO 13+00 (SHEET 5 OF 8)
14 OF 18	C-205.00	TRANSSECTIONS STA. 13+25 TO 15+50 (SHEET 6 OF 8)
15 OF 18	C-206.00	TRANSSECTIONS STA. 15+75 TO 18+25 (SHEET 7 OF 8)
16 OF 18	C-207.00	TRANSSECTIONS STA. 18+50 TO 20+25 (SHEET 8 OF 8)
17 OF 18	C-208.00	PLAN AREAS 1 & 2
18 OF 18	C-300.00	SECTIONS AND DETAILS



SITE MAP
SCALE: NTS

Pennmax Engineering, PLLC
CONSULTING ENGINEERS

OWNER:
NYC ECONOMIC DEVELOPMENT CORP.
110 WILLIAM STREET
NEW YORK, NY 10038
CONTRACTOR/CLIENT:
HUNTER ROBERTS CONSTRUCTION GROUP
2 WORLD FINANCIAL CENTER, 6TH FL.
NEW YORK, N.Y.

ENGINEER:
Pennmax Engineering, PLLC
35 Horseshoe Hill Road
Pound Ridge, NY 10576
T: 914.764.8400
F: 914.764.0515

LEGEND:

95% PROGRESS SET

CONDITIONS
ALL IDEAS, DESIGNS, ARRANGEMENTS AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY, AND ARE THE PROPERTY OF PENNMAX ENGINEERING, PLLC, AND WERE CREATED, EVOLVED AND DEVELOPED FOR USE ON, AND IN CONNECTION WITH THE SPECIFIED PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE USED BY OR DISCLOSED TO ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF PENNMAX ENGINEERING, PLLC.
ALL INSTRUMENTS PREPARED BY PENNMAX CONTAINED HEREIN SHALL REMAIN THE PROPERTY OF PENNMAX. PENNMAX SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THEREIN.
WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
CONTRACTORS SHALL VERIFY, AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND MUST NOTIFY PENNMAX ENGINEERING, PLLC OF ANY DEVIATION FROM DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS.
SHOP DETAILS MUST BE SUBMITTED TO PENNMAX ENGINEERING, PLLC FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.

REVISIONS		
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.
SHEET TITLE

TITLE SHEET

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	N.T.S.
	CAD FILE No.	02.23.12-001
	DRAWING No.	T-001.00
		SHEET No. 1 OF 18

SCOPE OF WORK

THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT FOR THE COMPLETE INSTALLATION OF NEW WORK AS CALLED FOR WITHIN THE CONTRACT DOCUMENTS. THE PROPOSED WORK ENTAILS THE FOLLOWING ELEMENTS:

- (A) MOBILIZATION AND COORDINATION OF STORAGE AND STAGING AREAS
- (B) SITE PROTECTION AND ENVIRONMENTAL CONTROLS
- (C) DEBRIS COLLECTION, REMOVAL, AND LEGAL DISPOSAL
- (D) EXCAVATION, STOCKPILING, AND DISPOSAL OF EXCAVATED MATERIALS
- (E) CONCRETE INJECTION/PLACEMENT OF UNDERPINNING AND BREASTING WALL CONSTRUCTION
- (F) INSTALLATION OF ARMOR STONE REVETMENT STRUCTURE
- (G) BACKFILLING, CONFACTION, GRADING, AND SEEDING
- (H) RESTORATION OF AFFECTED UTILITIES AND CULVERTS
- (I) SITE CLEANUP AND DEMOBILIZATION

FINAL UPLAND SURFACES SHALL BE FINISHED WITH TOPSOIL, TRUE-AND-LEVEL TO MATCH EXISTING GRADES, AND SEEDED, OR AS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE, TO MATCH EXISTING GRASSES, PLANTS, SHRUBS, BUSHES, AND/OR TREES.

GENERAL NOTES AND CONDITIONS

1. WORK SHALL CONFORM TO FEDERAL, STATE, COUNTY, AND LOCAL PROVISIONS AND CODES HAVING JURISDICTION OVER SUCH WORK. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THAT PORTION OF THE WORK.
2. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT TO INSTALL THE WORK INDICATED HEREIN. ALL MATERIALS SHALL BE NEW AND UNUSED.
3. THE CONTRACTOR SHALL COORDINATE ALL WORK ACTIVITIES THROUGH THE OWNER OR HIS REPRESENTATIVE AND SHALL NOTIFY THE USER FOR ALL WORK ON OR IN THE WATER. THE CONTRACTOR SHALL ISSUE A DAILY NOTICE TO MARINERS THROUGHOUT THE COURSE OF THE WORK.
4. THE CONTRACTOR SHALL COORDINATE ALL WORK ACTIVITIES SO AS NOT TO DISRUPT, HINDER OR IMPEDE TENANT OR OTHER ACTIVITIES ON-GOING AT THE SITE. ALL COORDINATION SHALL BE MADE THROUGH THE OWNER'S REPRESENTATIVES.
5. THE CONTRACTOR SHALL MAKE NO CLAIM FOR WORK CONDUCTED OUTSIDE OF NORMAL BUSINESS HOURS, INCLUDING WEEKENDS, HOLIDAYS, AND/OR NIGHT HOURS. CONTRACTORS SHALL PROVIDE HIGH VOLTAGE ELECTRIC POWER, WATER, AND SANITARY FACILITIES TO THE SITE SUCH PROVISIONS SHALL BE IN ACCORDANCE WITH OSHA REGULATIONS.
6. CONTRACTOR SHALL PROVIDE HIS OWN ELECTRIC POWER, WATER, AND SANITARY FACILITIES TO THE SITE IN ACCORDANCE WITH OSHA REGULATIONS.

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS, AND SHALL TAKE THE NECESSARY PRECAUTIONS TO ENSURE SITE SAFETY. ALL WORK AREAS SHALL BE RESTRICTED FROM PEDESTRIAN AND VEHICULAR ACCESS.

2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND SAFETY PROCEDURES TO ENSURE PERSONNEL HEALTH AND SAFETY. THE CONTRACTOR SHALL MAINTAIN A SAFE AND CLEAN WORKING ENVIRONMENT AND SHALL PROVIDE ALL PERSONNEL WITH THE APPROPRIATE SAFETY EQUIPMENT.

3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF HIS OPERATIONS AND SHALL TAKE PRECAUTIONS FOR THE SAFETY OF PERSONS NEARBY THAT MAY BE AFFECTED BY THE CONTRACTOR'S OPERATIONS. OR WORK. THE CONTRACTOR SHALL PROVIDE REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY, LOSS TO PERSONS EMPLOYED BY THE CONTRACTOR IN PERFORMANCE OF THE WORK.

4. THE PRESENCE OF THE ENGINEER OR OWNER'S REPRESENTATIVES AT THE CONSTRUCTION SITE SHALL NOT CHANGE THE CONTRACTOR'S RESPONSIBILITY FOR THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION INCLUDING ALL SAFETY PRECAUTIONS AT THE JOBSITE.

5. ALL DIMENSIONAL INFORMATION, CLEARANCES, ELEVATIONS, AND ANY OTHER INFORMATION DEPICTED HEREIN SHALL BE VERIFIED IN THE FIELD PRIOR TO ORDERING OR FABRICATING MATERIALS, INCLUDING ANY FABRICATIONS, OR PERFORMING ANY CONSTRUCTION ACTIVITY.

6. DIMENSIONS AND CONDITIONS SHOWN IN THESE DRAWINGS ARE BASED ON FIELD SURVEYS, OBSERVATIONS, AND AVAILABLE RECORD DOCUMENTS. THESE DRAWINGS ILLUSTRATE THE LOCATION OF KNOWN CONDITIONS, STRUCTURES, AND ELEMENTS WITHIN THE IMMEDIATE VICINITY OF THE WORKSITE, WHERE DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

7. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL BECOME FAMILIAR WITH ALL GENERAL CONDITIONS, ENVIRONMENTAL CONSTRAINTS, AND/OR WORK RESTRICTIONS, AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY OBSTRUCTIONS, UTILITIES, STRUCTURES, OR ANY OTHER ELEMENTS WHICH MAY IMPEDE OR RESTRICT HIS WORK.

8. THE CONTRACTOR SHALL TAKE HIS OWN MEASUREMENTS AT THE SITE, VERIFYING THE SAME WITH CONTRACTOR DRAWINGS AND EXISTING FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FIT AND ALIGNMENT OF ALL CONTRACTED WORK IN FINAL POSITION.

9. TOPOGRAPHIC SURVEY INFORMATION HAS BEEN REPRODUCED ONLY TO ASSIST THE CONTRACTOR DURING BIDDING AND SUBSEQUENT CONSTRUCTION. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE, AND SHALL CONFIRM THE INFORMATION AND PRESENTED TO THE CONTRACTOR SHALL MAKE REFERENCE TO THE MOST RECENT TOPOGRAPHIC SURVEY DRAWING PREPARED BY MONROISIE SURVEYING CO., LLP, LOCATED AT 11620 METROPOLITAN AVE, BUCHANAN HILL, NY 14818, (716) 849-0600. THE CONTRACTOR IS CAUTIONED THAT ACTUAL FIELD CONDITIONS MAY VARY FROM THAT REPRESENTED HEREIN. KEEPING THIS IN MIND, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FIT AND ALIGNMENT OF ALL CONTRACTED WORK IN FINAL POSITION.

10. PROFESSIONAL LAND SURVEYOR REGISTERED IN NY TO ESTABLISH ALL BASELINES, BENCH MARKS, STATIONING WORK LIMITS, AND UTILITIES IN THE XY PLANE. TOPOGRAPHIC SURVEYS SHALL BE TIED INTO THE NY'S PLANE COORDINATE SYSTEM AND THE CONTRACTOR SHALL FURNISH SIGNED AND SEALED AS-BUILT TOPOGRAPHIC SURVEY DRAWINGS UPON COMPLETION OF THE WORK.

11. UTILITY AND STRUCTURE RELOCATIONS, IF NECESSARY, SHALL BE COORDINATED THROUGH THE OWNER. EXISTING UTILITIES SHALL BE IDENTIFIED, MARKED, AND PROTECTED OR RE-ROUTED, AS REQUIRED BY EXCAVATION. THE CONTRACTOR SHALL MAKE PROVISIONS FOR ALL ACTIVE UTILITIES INCLUDING WATER, ELECTRIC, GAS, DRAINAGE, TELEPHONE, SANITARY SEWER, ETC. BEFORE EXCAVATIONS. RE-ROUT ALL ACTIVE UTILITIES AS NECESSARY SO THAT NO INTERRUPTION IN SERVICE WILL BE ENCOUNTERED. ALL SUCH WORK SHALL BE INCLUDED IN THE CONTRACTOR'S PRICE.

12. THE CONTRACTOR SHALL EXERCISE EXTREME CARE SO AS NOT DAMAGE OR WEAKEN ANY STRUCTURES, ELEMENTS, OR FUNCTIONAL UTILITIES IMMEDIATELY ADJACENT TO THE PROPOSED CONSTRUCTION WORK. ANY DAMAGE OR WEAKENING OF THE CONSTRUCTION ACTIVITY INCLUDING BUT NOT LIMITED TO SHEETING, SHORING, BRACING, CONNECTIONS, FORMWORK, FALSEWORK, SEQUENCING, USE OF EQUIPMENT, AND OTHER CONSTRUCTION PROCEDURES, REVIEW BY THE OWNER, OWNER'S REPRESENTATIVE, OR ENGINEER IS ONLY FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. LACK OF COMMENT BY THE OWNER, OWNER'S REPRESENTATIVE, OR ENGINEER SHALL NOT BE INTERPRETTED AS APPROVAL OR ACCEPTANCE OF CONSTRUCTION PROCEDURES.

13. EXCAVATED MATERIAL AND DEBRIS SHALL BE LEGALLY DISPOSED OFF-SITE. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR FOR THE INSTALLATION OF THE COMPLETED WORK INDICATED HEREIN.

14. DEFECTIVE WORK SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE, AS DETERMINED BY THE OWNER'S REPRESENTATIVE.
15. ANY SUBSTITUTIONS OR ALTERNATIVE DESIGNS MAY BE USED IF SUCH SUBSTITUTIONS OR ALTERNATIVE DESIGNS ARE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW AND ACCEPTANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL MATERIALS, EQUIPMENT, OR DESIGN OF SUCH SUBSTITUTIONS OR ALTERNATIVE DESIGNS.
16. THE OWNER RESERVES THE RIGHT TO BACKCHARGE THE CONTRACTOR FOR ADDITIONAL SERVICES IF REQUIRED DUE TO THE CONTRACTOR'S IMPROPER, ERRONEOUS, OR NEGLIGENT ACTIONS OR INACTIONS.

17. NO RESPONSIBILITY, LIABILITY, WARRANTY, OR GUARANTEE, EXPRESSED OR IMPLIED, IS ASSUMED BY PENNMAX ENGINEERING, HUNTER ROBERTS CONSTRUCTION GROUP, THE CITY OF NEW YORK, THE NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION, OR APPLE INDUSTRIAL DEVELOPMENT CORP. FOR ANY PROPRIETARY SYSTEM, METHOD, OR COMPONENT THAT WAS NOT SPECIFICALLY DESIGNED AND DETAILED BY PENNMAX ENGINEERING.

18. THE CONTRACTOR SHALL GUARANTEE TO THE OWNER ALL MATERIALS AND WORKMANSHIP AGAINST DEFECTS, OR AGAINST INJURY FROM NORMAL WEAR AND TEAR AS USED FOR THEIR INTENDED PURPOSE FOR TWELVE MONTHS AFTER THE WORK IS COMPLETE. THE CONTRACTOR SHALL MAINTAIN ALL ELEMENTS IN PERFECT CONDITION DURING THE PERIOD OF GUARANTEE. DEFECTS OR DEFICIENCIES APPEARING DURING THE PERIOD OF GUARANTEE SHALL BE MADE GOOD BY THE CONTRACTOR AT HIS EXPENSE UPON REQUEST BY THE OWNER. IN THE EVENT OF DEFAULT BY THE CONTRACTOR, THE OWNER SHALL HAVE THE RIGHT TO MAKE GOOD ALL DEFECTS AND BILL THE CONTRACTOR FOR THE WORK PLUS 10 PERCENT ADMINISTRATIVE FEES.

19. THE CONTRACTOR SHALL IDENTIFY, DEFEND, AND HOLD HARMLESS PENNMAX ENGINEERING, HUNTER ROBERTS CONSTRUCTION GROUP, THE CITY OF NEW YORK, THE NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION, AND APPLE INDUSTRIAL DEVELOPMENT CORPORATION FROM AND AGAINST ALL LOSSES AND ALL CLAIMS, DEMANDS, PAYMENTS, SUITS, ACTIONS, RECOVERIES, AND JUDGMENTS OF EVERY NATURE AND DESCRIPTION, INCLUDING INJURY TO DEATH, BROUGHT OR RECEIVED AGAINST PENNMAX ENGINEERING, HUNTER ROBERTS CONSTRUCTION GROUP, THE CITY OF NEW YORK, THE NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION, AND APPLE INDUSTRIAL DEVELOPMENT CORPORATION BY REASON OF ANY ACT OR OMISSION OF THE CONTRACTOR, OR ANY OF HIS SUBCONTRACTORS, OR ANY PERSONS EMPLOYED BY THE CONTRACTOR, OR ANY SUCH SUBCONTRACTOR, IN THE PERFORMANCE OF ANY WORK, OR THE RENDERING OF ANY SERVICES TO THE OWNER.

20. ANY TERM OR PROVISION OF ANY CLAUSE OR SENTENCE IN ANY NOTE OR INFORMATION CONTAINED HEREIN OR CONTAINED IN THE CONSTRUCTION DOCUMENTS TO BE INVALID UNDER ANY APPLICABLE STATUTE OR RULE OF LAW SHALL BE DEEMED OMITTED AND THE REMAINDER SHALL REMAIN IN FULL FORCE AND EFFECT.

21. NOTWITHSTANDING COMPLETION OR TERMINATION OF THE PROJECT, FOR ANY REASON PENNMAX ENGINEERING'S RESERVES ALL RIGHTS AND OBLIGATIONS HEREIN WHICH SHALL SURVIVE INDEFINITELY. ACCEPTANCE AND USE OF THESE DRAWINGS BY ANY PERSON, PARTY OR ENTITY, IN WHOLE OR IN PART, SHALL CONSTITUTE FULL AND COMPLETE AGREEMENT AND ACCEPTANCE OF THE TERMS AND CONDITIONS STATED HEREIN.

STAGING AND SEQUENCING

1. THE CONTRACTOR SHALL SUBMIT A STAGING AND SEQUENCING PLAN ALONG WITH A WORK SCHEDULE FOR APPROVAL. CONTRACTOR SHALL NOT COMMENCE WORK WITHOUT APPROVAL OF THE STAGING PLAN AND SCHEDULE. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF STAGING AREAS THROUGH THE OWNER'S REPRESENTATIVES. THE CONTRACTOR SHALL NOT MOVE OR WITHOUT WRITTEN AUTHORIZATION. THE PLAN SHALL INCLUDE THE LOCATION OF MOBILIZATION AREAS, TRAILERS, STOCK PILE AREAS, EQUIPMENT STAGING AREAS, STORAGE AREAS, WORKER ACCESS AREAS, PARKING AREAS, SECURITY BARRIERS, TRAFFIC CONTROL DEVICES, AND SEQUENCING OF THE WORK. THE PLAN SHALL ALSO INCLUDE THE LOCATION AND TYPE OF TEMPORARY ENVIRONMENTAL CONTROL DEVICES, EROSION CONTROL DEVICES, TRAFFIC CONTROL DEVICES, AND SEQUENCING OF THE WORK.

2. THE CONTRACTOR SHALL SUBMIT A BRIEF DESCRIPTION OF THE PLANNED APPROACH TO THE PROJECT, SIZE OF CREW, EQUIPMENT, SEQUENCING, PRODUCTION RATES, SITE PROTECTION, ENVIRONMENTAL CONTROLS, AND MEANS OF WORKER ACCESS.

3. THE WORK SITE SHALL BE PROTECTED PRIOR TO START OF WORK. THE WORK AREAS SHALL BE CORDONED OFF AND DIVIDED INTO STAGING AREAS ON BASIS TO PREVENT UNAUTHORIZED ACCESS BY ANY PERSONS OR VEHICLES TO THE SITE. THE CONTRACTOR SHALL FURNISH TEMPORARY CHAIN LINK FENCING, BARRIERS, SIGNAGE, TRAFFIC CONTROL DEVICES, ETC., AS NECESSARY TO PROTECT THE SITE FROM UNAUTHORIZED ACCIDENTAL ACCESS BY ANY PERSON OR VEHICLE. SUCH DEVICES AND SIGNAGE SHALL COMPLY WITH OSHA REGULATIONS, NYC DOT PROJECT RULES, AND SHALL CONFORM TO THE NATIONAL AND STATE PERMITTING REQUIREMENTS OF THE CLEAN WATER ACT.

4. THE CONTRACTOR SHALL PRESERVE THE NATURAL RESOURCES WITHIN THE PROJECT'S EXISTING BOUNDARIES. ANY CONSTRUCTION OR PERMANENT WORK, DO NOT DISTURB FISH AND WILDLIFE. DO NOT ALTER WATER FLOWS OR OTHERWISE SIGNIFICANTLY DISTURB THE NATIVE HABITAT OF THE PROJECT AND CRITICAL TO THE SURVIVAL OF FISH AND WILDLIFE.

5. WHERE DISRUPTION TO NATURAL CONDITIONS OCCURS, THE CONTRACTOR SHALL RESTORE THE DISRUPTED AREAS TO AN EQUIVALENT OR IMPROVED CONDITION UPON COMPLETION OF WORK. CONFINED CONSTRUCTION ACTIVITIES TO WITHIN THE LIMITS OF THE WORK. THE CONTRACTOR SHALL CONFORM TO THE NATIONAL AND STATE PERMITTING REQUIREMENTS OF THE CLEAN WATER ACT.

6. THE CONTRACTOR SHALL BE PERFORMED IN PHASES SO AS TO LIMIT DISTURBED AREAS TO 5,000 SQ. FT. AT ANY TIME. WORK SHALL BE COMPLETED AND RE-INSTALLED PRIOR TO RELOCATING THE WORK TO A SUBSEQUENT PHASE.

7. THE CONTRACTOR SHALL PREVENT OILY OR OTHER HAZARDOUS SUBSTANCES FROM ENTERING THE UPLANDS, DRAINAGE AREAS, OR LOCAL BODIES OF WATER. ALL MACHINERY AND EQUIPMENT SET ATOP PAVEMENT OR EARTH SHALL BE SET ON PROTECTIVE TWO SHEETS OF HEAVY GAGE PLASTIC THERBANES TO PREVENT DAMAGE OR STAINING OF THE EXISTING SURFACES. ANY OILS, FUELS, LIQUIDS, ETC., THAT ARE DISPOSED SHALL BE CAPTURED AND DISPOSED IN AN APPROPRIATE MANNER. SPILLS SHALL BE THOROUGHLY CLEANED USING APPROPRIATE SOLVENTS/ABSORBENTS AND LEGALLY DISPOSED. THERBANES SHALL BE REPLACED DAILY.

8. ALL EXCAVATIONS UPLAND AND WITHIN TIDAL WETLANDS SHALL BE PROTECTED USING THE APPROPRIATE TEMPORARY ENVIRONMENTAL CONTROL DEVICES INCLUDING TARKPS, SILT FENCES, HAY BALES, FLOATING DEBRIS BOOMS, FLOATING TURBIDITY CURTAINS, OR OTHER DEVICES INTENDED TO PROTECT THE ENVIRONMENT DURING CONSTRUCTION. OTHER REQUIREMENTS MAY BE STIPULATED BY THE GOVERNING ENVIRONMENTAL REGULATORY AGENCIES CLAIMING JURISDICTION. REFER TO THE MATERIALS HANDLING SPECIFICATIONS BELOW FOR ADDITIONAL REQUIREMENTS.

9. INSTALL FLOATING TURBIDITY CURTAINS TO CONTAIN EXCESSIVE SUSPENDED SILTATION DURING SHORELINE EXCAVATIONS. TURBIDITY CURTAINS SHALL COMPLETELY CONTAIN THE WORK AREA AND REMAIN IN PLACE UNTIL ALL SUSPENDED SOLIDS HAVE SETTLED AFTER THE WORK IS COMPLETE. BOOMS FOR TURBIDITY CURTAINS SHALL MAINTAIN A FREEBOARD OF 6 IN. DRAFT OF 12 IN. AND SHALL BE CAPABLE OF 11 POUNDS PER FOOT OF BUOYANCY. FABRIC TENILE STRENGTH SHALL BE 3,000 LBS.

10. INSTALL EROSION CONTROL DEVICES ALONG THE BASE OF EXCAVATION LIMITS AND AROUND THE PERIMETER OF UPLAND STOCK PILES TO PREVENT EROSION RUN-OFF OF SOIL INTO THE LOCAL WATER BODIES OR EXISTING AQUEOUS DRAINAGE SYSTEMS. EROSION CONTROL DEVICES SHALL INCLUDE THE INSTALLATION OF SILT FENCES, HAY BALES, AND TARP COVERS OVER 100 PERCENT OF EXCAVATION AREAS AND STOCK PILES.

11. RECENT EXPLORATORY BORINGS AND SOIL SAMPLING PROVIDE ADDITIONAL INFORMATION REGARDING THE NATURE AND CONTENT OF THE SPECIFIC SOIL MATERIALS TO BE EXCAVATED AT THE SITE. EXISTING BORING LOGS AND SOIL ANALYTICAL RESULTS ARE AVAILABLE FOR REVIEW BY THE CONTRACTOR. THE INFORMATION WAS OBTAINED FOR USE IN ASSESSING SUBSURFACE CHEMICAL QUALITY AND SOIL CONDITIONS BUT THE CONTRACTOR MAY DRAW HIS OWN CONCLUSIONS THEREFROM. NO RESPONSIBILITY IS ASSUMED BY THE OWNER AND OWNER'S REPRESENTATIVE FOR SUBSURFACE CONDITIONS OTHER THAN AT THE LOCATIONS, AND AT THE TIME, THE EXPLORATIONS WERE MADE.

12. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT ALL DEBRIS FROM THE CONSTRUCTION FROM FALLING INTO THE WATER. ANY DEBRIS FALLING INTO THE WATER SHALL BE IMMEDIATELY AND LEGALLY DISPOSED. IN THE EVENT OF A SPILL, IMMEDIATELY NOTIFY THE OWNER. FULL RESPONSE SHALL BE IN ACCORDANCE WITH 40 CFR 150.000 AND APPLICABLE STATE AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL IMMEDIATELY MOBILIZE AN EMERGENCY SPILL RESPONSE CREW IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENVIRONMENTAL REGULATORY AGENCIES CLAIMING JURISDICTION. REFER TO TEMPORARY ENVIRONMENTAL CONTROLS BELOW.

13. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT ALL DEBRIS FROM THE CONSTRUCTION FROM FALLING INTO THE WATER. ANY DEBRIS FALLING INTO THE WATER SHALL BE IMMEDIATELY AND LEGALLY DISPOSED. IN THE EVENT OF A SPILL, IMMEDIATELY NOTIFY THE OWNER. FULL RESPONSE SHALL BE IN ACCORDANCE WITH 40 CFR 150.000 AND APPLICABLE STATE AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL IMMEDIATELY MOBILIZE AN EMERGENCY SPILL RESPONSE CREW IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENVIRONMENTAL REGULATORY AGENCIES CLAIMING JURISDICTION. REFER TO TEMPORARY ENVIRONMENTAL CONTROLS BELOW.

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16. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT ALL DEBRIS FROM THE CONSTRUCTION FROM FALLING INTO THE WATER. ANY DEBRIS FALLING INTO THE WATER SHALL BE IMMEDIATELY AND LEGALLY DISPOSED. IN THE EVENT OF A SPILL, IMMEDIATELY NOTIFY THE OWNER. FULL RESPONSE SHALL BE IN ACCORDANCE WITH 40 CFR 150.000 AND APPLICABLE STATE AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL IMMEDIATELY MOBILIZE AN EMERGENCY SPILL RESPONSE CREW IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENVIRONMENTAL REGULATORY AGENCIES CLAIMING JURISDICTION. REFER TO TEMPORARY ENVIRONMENTAL CONTROLS BELOW.

17. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT ALL DEBRIS FROM THE CONSTRUCTION FROM FALLING INTO THE WATER. ANY DEBRIS FALLING INTO THE WATER SHALL BE IMMEDIATELY AND LEGALLY DISPOSED. IN THE EVENT OF A SPILL, IMMEDIATELY NOTIFY THE OWNER. FULL RESPONSE SHALL BE IN ACCORDANCE WITH 40 CFR 150.000 AND APPLICABLE STATE AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL IMMEDIATELY MOBILIZE AN EMERGENCY SPILL RESPONSE CREW IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENVIRONMENTAL REGULATORY AGENCIES CLAIMING JURISDICTION. REFER TO TEMPORARY ENVIRONMENTAL CONTROLS BELOW.

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21. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR COMMENCE ANY WORK WITHOUT A PERMIT FOR THE PROPOSED ACTIVITIES. ALL WORK SHALL BE IN FULL COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL PERMIT REQUIREMENTS. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR DEViate FROM THE PERMIT REQUIREMENTS. THE ENGINEER SHALL BE RESPONSIBLE FOR ANY ADDITIONAL MATERIALS, EQUIPMENT, OR DESIGN OF SUCH SUBSTITUTIONS OR ALTERNATIVE DESIGNS.
22. THE OWNER RESERVES THE RIGHT TO BACKCHARGE THE CONTRACTOR FOR ADDITIONAL SERVICES IF REQUIRED DUE TO THE CONTRACTOR'S IMPROPER, ERRONEOUS, OR NEGLIGENT ACTIONS OR INACTIONS.
23. NO RESPONSIBILITY, LIABILITY, WARRANTY, OR GUARANTEE, EXPRESSED OR IMPLIED, IS ASSUMED BY PENNMAX ENGINEERING, HUNTER ROBERTS CONSTRUCTION GROUP, THE CITY OF NEW YORK, THE NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION, OR APPLE INDUSTRIAL DEVELOPMENT CORP. FOR ANY PROPRIETARY SYSTEM, METHOD, OR COMPONENT THAT WAS NOT SPECIFICALLY DESIGNED AND DETAILED BY PENNMAX ENGINEERING.

24. THE CONTRACTOR SHALL GUARANTEE TO THE OWNER ALL MATERIALS AND WORKMANSHIP AGAINST DEFECTS, OR AGAINST INJURY FROM NORMAL WEAR AND TEAR AS USED FOR THEIR INTENDED PURPOSE FOR TWELVE MONTHS AFTER THE WORK IS COMPLETE. THE CONTRACTOR SHALL MAINTAIN ALL ELEMENTS IN PERFECT CONDITION DURING THE PERIOD OF GUARANTEE. DEFECTS OR DEFICIENCIES APPEARING DURING THE PERIOD OF GUARANTEE SHALL BE MADE GOOD BY THE CONTRACTOR AT HIS EXPENSE UPON REQUEST BY THE OWNER. IN THE EVENT OF DEFAULT BY THE CONTRACTOR, THE OWNER SHALL HAVE THE RIGHT TO MAKE GOOD ALL DEFECTS AND BILL THE CONTRACTOR FOR THE WORK PLUS 10 PERCENT ADMINISTRATIVE FEES.
25. THE CONTRACTOR SHALL IDENTIFY, DEFEND, AND HOLD HARMLESS PENNMAX ENGINEERING, HUNTER ROBERTS CONSTRUCTION GROUP, THE CITY OF NEW YORK, THE NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION, AND APPLE INDUSTRIAL DEVELOPMENT CORPORATION FROM AND AGAINST ALL LOSSES AND ALL CLAIMS, DEMANDS, PAYMENTS, SUITS, ACTIONS, RECOVERIES, AND JUDGMENTS OF EVERY NATURE AND DESCRIPTION, INCLUDING INJURY TO DEATH, BROUGHT OR RECEIVED AGAINST PENNMAX ENGINEERING, HUNTER ROBERTS CONSTRUCTION GROUP, THE CITY OF NEW YORK, THE NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION, AND APPLE INDUSTRIAL DEVELOPMENT CORPORATION BY REASON OF ANY ACT OR OMISSION OF THE CONTRACTOR, OR ANY OF HIS SUBCONTRACTORS, OR ANY PERSONS EMPLOYED BY THE CONTRACTOR, OR ANY SUCH SUBCONTRACTOR, IN THE PERFORMANCE OF ANY WORK, OR THE RENDERING OF ANY SERVICES TO THE OWNER.

26. ANY TERM OR PROVISION OF ANY CLAUSE OR SENTENCE IN ANY NOTE OR INFORMATION CONTAINED HEREIN OR CONTAINED IN THE CONSTRUCTION DOCUMENTS TO BE INVALID UNDER ANY APPLICABLE STATUTE OR RULE OF LAW SHALL BE DEEMED OMITTED AND THE REMAINDER SHALL REMAIN IN FULL FORCE AND EFFECT.
27. NOTWITHSTANDING COMPLETION OR TERMINATION OF THE PROJECT, FOR ANY REASON PENNMAX ENGINEERING'S RESERVES ALL RIGHTS AND OBLIGATIONS HEREIN WHICH SHALL SURVIVE INDEFINITELY. ACCEPTANCE AND USE OF THESE DRAWINGS BY ANY PERSON, PARTY OR ENTITY, IN WHOLE OR IN PART, SHALL CONSTITUTE FULL AND COMPLETE AGREEMENT AND ACCEPTANCE OF THE TERMS AND CONDITIONS STATED HEREIN.

28. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT ALL DEBRIS FROM THE CONSTRUCTION FROM FALLING INTO THE WATER. ANY DEBRIS FALLING INTO THE WATER SHALL BE IMMEDIATELY AND LEGALLY DISPOSED. IN THE EVENT OF A SPILL, IMMEDIATELY NOTIFY THE OWNER. FULL RESPONSE SHALL BE IN ACCORDANCE WITH 40 CFR 150.000 AND APPLICABLE STATE AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL IMMEDIATELY MOBILIZE AN EMERGENCY SPILL RESPONSE CREW IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENVIRONMENTAL REGULATORY AGENCIES CLAIMING JURISDICTION. REFER TO TEMPORARY ENVIRONMENTAL CONTROLS BELOW.

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OWNER: NYC ECONOMIC DEVELOPMENT CORP. 110 WILLIAM STREET NEW YORK, NY 10038	
CONTRACTOR/CIENT: HUNTER ROBERTS CONSTRUCTION GROUP 2 WORLD FINANCIAL CENTER, 6TH FL. NEW YORK, N.Y.	
ENGINEER: Pennmax Engineering, PLLC 35 Horseshoe Hill Road Pound Ridge, NY 10576 T: 914.764.8400 F: 914.764.0515	
LEGEND:	
95% PROGRESS SET	
CONDITIONS ALL IDEAS, DESIGNS, ARRANGEMENTS AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY, AND ARE THE PROPERTY OF PENNMAX ENGINEERING, PLLC, AND WERE CREATED, EVOLVED AND DEVELOPED FOR USE ON, AND IN CONNECTION WITH THE SPECIFIED PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE USED BY OR DISCLOSED TO ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF PENNMAX ENGINEERING, PLLC. ALL INSTRUMENTS PREPARED BY PENNMAX CONTAINED HEREIN SHALL REMAIN THE PROPERTY OF PENNMAX. PENNMAX SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THEREON. WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY, AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND MUST NOTIFY PENNMAX ENGINEERING, PLLC, OF ANY DEVIATION FROM DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. SHOP DETAILS MUST BE SUBMITTED TO PENNMAX ENGINEERING, PLLC FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.	
REVISIONS	
REVISION NUMBER	DATE REVISION DESCRIPTION
TITLE	
EMERGENCY SHORELINE REHABILITATION AT SEPTEMBER 11, 2001 MEMORIAL ST. GEORGE STATION	
STATEN ISLAND N.Y.	
SHEET TITLE	
GENERAL NOTES AND SPECIFICATIONS (SHEET 2 OF 3)	
SEAL & SIGNATURE	DATE: JUNE 14 2012 PROJECT NO.: 11022 DRAWING BY: F.M. CHECKED BY: J.P. SCALE: N.T.S. CAD FILE No. 02-23-12-001 DRAWING No. C-002.00

[illegible]

- 1.2 REINFORCEMENT: SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING AND PLACEMENT OF CONCRETE REINFORCEMENT. COMPLY WITH ACI 318 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" SHOWING BAR SCHEDULES, STRONG ROOM DRAWINGS OF BENT BARS, AND ARRANGEMENT OF CONCRETE REINFORCEMENT. INCLUDE SPECIAL REINFORCEMENT REQUIRED AND OPENINGS THROUGH CONCRETE STRUCTURES.
- 1.3 CONTRACTOR SHALL COORDINATE AND LOCATE ALL PENETRATIONS TO BE FORMED, AND LOCATE SAME ON REINFORCING SHOP DRAWINGS FOR ENGINEER'S ACCEPTANCE. SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ANY ERROR OR FOR FURNISHING MATERIAL OF THE PROPER SIZE, QUANTITY OR QUALITY.
- 1.4 SAMPLES: SUBMIT SAMPLES OF MATERIALS AS SPECIFIED AND AS OTHERWISE REQUESTED BY ENGINEER, INCLUDING NAMES, SOURCES AND DESCRIPTIONS.
- 1.5 LABORATORY TEST REPORTS: SUBMIT LABORATORY TEST REPORTS FOR CONCRETE MATERIALS AND MIX DESIGN AS SPECIFIED:

- A. PRELIMINARY DESIGN MIX TEST REPORTS (ACI-308) OR VERIFICATION OF MIX DESIGNS BASED ON STANDARD DESIGN ANALYSIS.
- B. AIR ENTRAINMENT TESTING (ASTM C173) FOR NORMAL AND LIGHTWEIGHT CONCRETE AND ASTM C231 FOR NORMAL WEIGHT CONCRETE.

- 1.6 MATERIAL CERTIFICATES: PROVIDE MATERIAL CERTIFICATES IN LIEU OF MATERIALS LABORATORY TEST REPORTS WHEN PERMITTED BY THE ENGINEER. MATERIAL CERTIFICATES SHALL BE SIGNED BY MANUFACTURER AND CONTRACTOR CERTIFYING THAT EACH MATERIAL ITEM COMPLIES WITH, OR EXCEEDS, SPECIFIED REQUIREMENTS. THIS DOES NOT PRECLUDE THE REQUIREMENT THAT THE DESIGN MIX TEST MUST BE REPRODUCED AND RESULTS SUBMITTED TO THE ENGINEER SHOWING WATER-REDUCING RATIO CURVES.

- 1.7 PRODUCT HANDLING: COMPLY WITH ACI-301, CHAPTER 5.
- 1.8 ENVIRONMENTAL CONDITIONS: REFER TO CONCRETE NOTE 15A FOR COLD WEATHER AND HOT WEATHER CONCRETING.

PART 2 - PRODUCTS

- 2.1 PORTLAND CEMENT: ASTM C-150, TYPE II. USE ONLY ONE BRAND OF CEMENT FROM ONE PLANT THROUGHOUT THE WORK, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 2.2 WATER-REDUCING ADMIXTURE: THE ADMIXTURE SHALL CONFORM TO ASTM C494, TYPE A AND SHALL NOT CONTAIN MORE CHLORIDE IONS THAN ARE PRESENT IN POTABLE DRINKING WATER. PROVIDE ONE OF THE FOLLOWING:

- A. "ELCON UR-75 OR UR-89" (THE ELCON CHEMICAL CO.)
- B. "FOZZOLITH 200" (MASTER BUILDERS)
- C. "FLASTEMENT" (81KA CHEMICAL CORP.)
- D. "URDOL WITH HYCOL" BY (W.R. GRACE & CO.)

- 2.3 WATER-REDUCING RETARDING ADMIXTURE: THE ADMIXTURE SHALL CONFORM TO ASTM C494, TYPE D AND NOT CONTAIN MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. PROVIDE ONE OF THE FOLLOWING:

- A. "ELCON RETARDER-2" (THE ELCON CHEMICAL CO.)
- B. "FOZZOLITH 100V" (MASTER BUILDERS)
- C. "FLASTEMENT" (81KA CHEMICAL CORP.)
- D. "DARATARD II" (W.R. GRACE & CO.)

- 2.4 HIGH-RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER): THE ADMIXTURE SHALL CONFORM TO ASTM C494, TYPE C OR E, AND NOT CONTAIN MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. PROVIDE ONE OF THE FOLLOWING:

- A. "ELCON 3T" (THE ELCON CHEMICAL CO.)
- B. "RHEOBUILD 1000" (MASTER BUILDERS)
- C. "BICKAPENT" (81KA CHEMICAL CORP.)
- D. "DARACEM 18 OR DARACEM 100" (W.R. GRACE & CO.)

- 2.5 NON-CORROSIVE, NON-CHLORIDE ACCELERATOR: THE ADMIXTURE SHALL CONFORM TO ASTM C494, TYPE C OR E, AND NOT CONTAIN MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. THE ADMIXTURE MANUFACTURER MUST HAVE CONDUCTED NON-CORROSIVE TEST DATE FROM AN INDEPENDENT TESTING LABORATORY (OF AT LEAST A YEAR'S DURATION) USING AN ACCEPTABLE ACCELERATION TEST METHOD SUCH THAT USING ELECTRICAL POTENTIAL MEASURES. PROVIDE ONE OF THE FOLLOWING:

- A. "ACCELGUARD 80" (THE ELCON CHEMICAL CO.)
- B. "POLARSET" (W.R. GRACE & CO.)

- 2.6 AIR-ENTRAINING ADMIXTURE: CONFORM TO ASTM C-260. PROVIDE ONE OF THE FOLLOWING:

- A. "AIR-MIX" (THE ELCON CHEMICAL CO.)
- B. "DARAVAIR" (W.R. GRACE CO.)
- C. "MB-VR OR MICRO-AIR" (MASTER BUILDERS CO.)
- D. "81KA-AER" (81KA CHEMICAL CORP.)

- 2.7 SILICA FUME ADMIXTURES: PROVIDE ONE OF THE FOLLOWING:

- A. "FORCE 10,000" (W.R. GRACE CO.)
- B. "ELCON HSA" (THE ELCON CHEMICAL CO.)
- C. "81KACORETE 950" (81KA CHEMICAL CO.)

- 2.8 ALL DESIGN MIXES SHALL INCORPORATE A CEMENTITIOUS CHEMICAL ADMIXTURE BY KRYTON INTERNATIONAL INC. THE ADMIXTURE SHALL BE KIM-K3000 AND SHALL BE ADDED TO THE CONCRETE MIX IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. CONTACT INFORMATION: WWW.KRYTON.COM / (604) 324-8820.

- 2.9 PROHIBITED ADMIXTURES: CALCIUM CHLORIDE, THIOCYANATES OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS ARE NOT PERMITTED. NO ADMIXTURE SHALL CAUSE AN INCREASE IN SHRINKAGE WHEN TESTED IN ACCORDANCE WITH ASTM C494 AND ASTM C157.

- 2.10 CERTIFICATION: WRITTEN CONFORMANCE TO THE ABOVE-MENTIONED REQUIREMENTS AND THE CHLORIDE ION CONTENT OF THE ADMIXTURE WILL BE REQUIRED FROM THE ADMIXTURE MANUFACTURER PRIOR TO MIX DESIGN REVIEW BY THE ENGINEER.

- 2.11 WATER: CONFORM TO ACI-301, CHAPTER 4, PARAGRAPH 4.2.1.3.
- 2.12 FINE AGGREGATE: CONFORM TO REQUIREMENTS OF ASTM C-33.

- A. IT SHALL NOT CONTAIN MORE THAN 3% CLAY.
- B. IT SHALL NOT SHOW DARKER THAN LIGHT AMBER WHEN TESTED BY THE CALORIMETRIC METHOD.
- C. THE GRADATION OF THE SAND SHALL BE CONSTANT AND THE FINENESS MODULUS SHALL NOT VARY MORE THAN 0.2.
- D. IT SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS:

sieve	3/8"	No. 4	No. 16	No. 30	No. 100
% PASSING	100	95-100	50-65	10-30	0-10

- 2.13 COARSE AGGREGATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-33 SIZE NUMBER 61 AND SHALL CONSIST OF STONE OR GRAVEL, FREE FROM SHALE OR DECOMPOSED OR THIN, LAMINATED PIECES. IT SHALL BE UNCOATED AND CLEAN. IT SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS:

sieve	3/4"	1 1/2"	3/8"	No. 4	No. 8
% PASSING	100	90-100	20-55	0-10	0-5

- 2.14 WATER: POTABLE, CLEAN, FRESH.

- 2.15 STEEL REINFORCEMENT: ASTM A-615, GRADE 60, NEW DEFORMED BILLET STOCK, OR ASTM A-615, MINIMUM YIELD STRENGTH 60,000 PSI, FOR FABRICATION. TOLERANCES CONFORM TO ACI-301, CHAPTER 5, PARAGRAPH 5.4.

- 2.16 ALL REINFORCING BARS HAVING ASSIGNED POSITIONS SHALL HAVE DISTINGUISHING MARKS PLAINLY INDICATED THEREON, WHICH MARKS SHALL AGREE WITH THOSE GIVEN ON THE SHOP DRAWINGS RELATED TO OR CALLING BARS.
- 2.17 WELDED WIRE FABRIC: ASTM A-185, SIZE SHOWN ON DRAWINGS.

- 2.18 EPOXY COATING: ALL REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH ASTM A775, LATEST EDITION. REINFORCING BARS TO BE COATED SHALL CONFORM TO SECTION 1.3.2 (A). PROVIDE RUBBER BONDED EPOXY COATING ON WELDED WIRE FABRIC REINFORCEMENT CONFORMING TO ASTM A884, TYPE I, CLASS B. ALL DAMAGED COATING SHALL BE REPAIRED (TOUCH-UP) USING 81KA ARIMATECH EPOXY OR EQUIVALENT AS ACCEPTED BY THE ENGINEER.

- 2.19 REINFORCING STEEL SHALL BE STORED OFF THE GROUND AND PROTECTED FROM OIL, OR OTHER DELETERIOUS MATERIALS. EPOXY-COATED REINFORCING BARS SHALL BE STORED ON PROTECTIVE CRUSHED AGGREGATE. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN IN THE CONTRACT DOCUMENTS OR WHEN PERMITTED BY THE ENGINEER. WHEN EPOXY-COATED REINFORCING BARS ARE FIELD BENT, COATING DAMAGE SHALL BE REPAIRED. WHEN EPOXY-COATED REINFORCING BARS ARE CUT IN THE FIELD, THE ENDS OF THE BARS SHALL BE COATED WITH THE SAME MATERIAL USED FOR REPAIR OF COATING DAMAGE.

- 2.20 NON-SHRINK, NON-METALLIC GROUT: PROVIDE 81KAGROUT 212 (81KA CHEMICAL CORP.). CONTRACTOR MAY USE ALTERNATIVE MATERIAL WITH WRITTEN APPROVAL BY THE ENGINEER. GROUT SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

- 2.21 BONDING AGENT: PROVIDE 81KA ARIMATEC 10 EPOCHEM (81KA CHEMICAL CORP.). CONTRACTOR MAY USE ALTERNATIVE MATERIAL WITH WRITTEN APPROVAL BY THE ENGINEER. BONDING AGENT SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

- 2.22 FORMWORK: FOR EXPOSED SURFACES, USE SPECIAL TYPE Douglas Fir, GRADE A-B FLYWOOD, CONFORMING TO NBS F84. MINIMUM 3/4 INCH THICK AND CONSTRUCTED SO THAT FINISHED CONCRETE WILL BE STRAIGHT, SMOOTH, DENSE, FREE FROM HONEYCOMBS, BULGES, OR DEPRESSIONS. KEEP JOINTS BETWEEN SECTIONS TO A MINIMUM AND MAKE TIGHT AND STRONGLY BACKED SO THAT ADDING EDGES REMAIN FLUSH AND TRUE. UNWIGHTLY JOINT MARKS WILL NOT BE PERMITTED. COVER JOINTS ON EXPOSED SURFACES WITH SMOOTH-FACED VINYL TAPE.

- 2.23 FORM TIES: FOR SECURING FORMS WHERE SURFACES WILL BE EXPOSED IN THE FINISHED WORK USE TIES FOR SUCH TYPE THAT WHEN FORMS ARE REMOVED, NO METAL IS CLOSER THAN 3 INCHES FROM THE FINISHED CONCRETE SURFACE.

- 2.24 FORM COATINGS: PROVIDE COMMERCIAL FORMULATION FORM-COATING COMPOUNDS THAT WILL NOT BOND WITH, STAIN NOR ADVERSELY EFFECT CONCRETE SURFACES, AND WILL NOT IMPAIR SUBSEQUENT TREATMENTS OF CONCRETE SURFACES.

- 2.25 PROPORTIONING OF CONCRETE: ASSUME FULL RESPONSIBILITY FOR THE STRENGTH, CONSISTENT RATIO, AND HANDLING OF EACH ACCURATE CONCRETE DESIGN MIXES IN ACCORDANCE WITH ACI-211.1/212 AND ASTM C-94. USE THE MINIMUM AMOUNT OF WATER NECESSARY TO PRODUCE A MIX THAT CAN BE PUMPED READILY INTO CORNERS OF FORMS AND AROUND REINFORCEMENT WITHOUT PERMITTING SEGREGATION OF MATERIALS OR FREE WATER TO COLLECT ON SURFACES.

- 2.26 ADJUST THE CONSISTENCY OF ANY MIX TO ALLOW FOR SPECIFIC PLACING CONDITIONS. THE SLUMP OF CONCRETE FILLING SHALL, THIN, COMPLICATED FORMS SHALL BE GREATER THAN FOR LARGE MASSES. THE DEGREE OF SLUMP BEING GOVERNED BY THE LEAST DIMENSIONS OF THE FORMS. MAXIMUM SLUMP FOR CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM C-143.

- 2.27 MEASURE MATERIALS FOR CONCRETE BY WEIGHING. SEPARATELY WEIGH EACH SIZE OF AGGREGATE AND THE CEMENT. EACH ACCURATE WITHIN 1%. CEMENT IN BAGS OF NINETY-FOUR (94) POUNDS NEED NOT BE WEIGHED, BUT WEIGH BULK CEMENT AND FRACTIONAL PACKAGE. MEASURE MIXING WATER BY WEIGHT OR VOLUME TO A TOLERANCE OF 1%. MEASUREMENTS SHALL BE MEASURED BY VOLUME TO A TOLERANCE OF 3%.

- 2.28 PREPARE DESIGN MIXES, PRIOR TO THE BEGINNING OF THE WORK, IN ACCORDANCE WITH ACI-301, SECTION 4.2.3, "PROPORTIONING" ON THE BASIS OF FIELD DATA OR TRIAL MIXTURES.

- 2.29 AIR ENTRAIN AIR, CONCRETE EXPOSED TO THE ENVIRONMENT IN ACCORDANCE WITH ACI-308, CHAPTER 4, PARAGRAPH 4.2, DETERMINED BY VOLUME AS PER ASTM C-173 OR ASTM C-231.

- 2.30 REJECTED CONCRETE: CONCRETE IN READY-MIX TRUCKS REJECTED FOR EXCESS WATER SHALL BE REMOVED FROM THE SITE. NO MATERIALS SHALL BE ADDED FOR CORRECTION.

- 2.31 ALL CONCRETE MUST CONTAIN THE SPECIFIED WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER). ALL CONCRETE PLACED AT AIR TEMPERATURES BELOW 50 DEGREES F SHALL CONTAIN THE SPECIFIED NON-CORROSIVE, NON-CHLORIDE ACCELERATOR. ALL CONCRETE REQUIRED TO BE AIR ENTRAINMENT SHALL CONTAIN AN APPROVED AIR ENTRAINING ADMIXTURE.

- 2.32 PROVIDE NORMAL WEIGHT CONCRETE HAVING A UNIT WEIGHT OF 145 PSE. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS OR MORE.

- 2.33 WATER/CEMENTITIOUS MATERIAL (W/C/M) RATIO: ALL REINFORCED CONCRETE SHALL HAVE A MAXIMUM WATER/CEMENTITIOUS MATERIAL (W/C/M) RATIO OF 0.40 (5,000 PSI AT 28 DAYS OR MORE). USE HIGH-RANGE WATER-REDUCING ADMIXTURE IN PUMPED CONCRETE.

- 2.34 ALL CONCRETE CONTAINING THE HIGH-RANGE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER) SHALL HAVE A MAXIMUM SLUMP OF 8" UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE CONCRETE SHALL BE PLACED AT THE JOBSITE AT A RATE THAT WILL NOT EXCEED THEN THE WATER-REDUCING ADMIXTURE. THE MAXIMUM SLUMP TO THE APPROVED LEVEL IMMEDIATELY BEFORE PLACEMENT. ALL OTHER CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4".
- 2.35 THE CONCRETE MIX SHALL CONTAIN A MINIMUM OF 675 POUNDS PER CUBIC YARD AND 805 POUNDS PER CUBIC YARD OF CEMENTITIOUS MATERIAL AND PORTLAND CEMENT RESPECTIVELY. THE MIX SHALL CONTAIN 6% PLUS OR MINUS 1% ENTRAINMENT AIR IN ACCORDANCE WITH ACI 301, SUBMIT DESIGN MIX FOR APPROVAL BY THE ENGINEER.

PART 3 - EXECUTION

- 3.1 FORMS SHALL CONFORM TO THE LINES, DIMENSIONS AND SHAPES OF CONCRETE SHOWN PROVIDING FOR OPENINGS, PROJECTIONS, PENETRATIONS AS REQUIRED. MAKE FORMS CLEAN AND FREE OF FOREIGN MATERIAL BEFORE PLACING CONCRETE.

- 3.2 ALL LOOSE, SOFT, OR LATENT CONCRETE SHALL BE REMOVED BY MECHANICAL CHIPPING AND/OR HIGH-PRESSURE WATER BLASTING DOWN TO SOUND CONCRETE. ALL EXISTING PROTRUDING ELEMENTS, DOUBLS, BOLTS, EMBEDDED ITEMS, FENDER REMNANTS, ETC. SHALL BE REMOVED BY CUTTING. THE EXISTING CONCRETE SHALL BE CLEAN AND FREE OF ALL DIRT, GREASE, OIL, OR OTHER DETRIMENTAL SUBSTANCES.

- 3.3 DESIGN OF FORMWORK SHALL BE BY A LICENSED PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR, WITH FORMWORK DRAWINGS BEARING THE SEAL OF THE LICENSED ENGINEER. COMPLY WITH ACI-301 CHAPTER 3, PARAGRAPH 3.2.2.

- 3.4 PROVIDE FORMS SO THAT NO DISCREMINABLE IMPERFECTION IS IN EVIDENCE IN FINISHED CONCRETE SURFACES DUE TO DEFORMATION, BULGING, JOINTING, OR LEAKAGE OF FORMS.

- 3.5 PROVIDE FORMS OF SUFFICIENT STRENGTH TO WITHSTAND A FLUID CONCRETE PUMPED UNDER PRESSURE FROM THE BOTTOM OF THE FORM. DESIGN OF FORMS AND SEALS TO PREVENT BLOW-OUT. SUBMIT FORMWORK DRAWINGS BEARING THE SEAL OF THE LICENSED ENGINEER. COMPLY WITH ACI-301 CHAPTER 2, PARAGRAPH 2.2.2.

- 3.6 FORM CONNECTORS, STRAPS, OR OTHER FASTENERS SHALL BE MADE FROM STAINLESS STEEL TYPE 316. VERTICAL SEAMS SHALL BE WATER-TIGHT.

- 3.7 READY MIXED CONCRETE: COMPLY WITH ASTM C-94. ADD MIXING WATER ONLY AT THE SITE. DISCHARGE THE CONCRETE COMPLETELY AT THE SITE WITHIN ONE AND ONE-HALF HOURS AFTER THE DELIVERY OF THE CEMENT TO THE AGGREGATES. IN HOT WEATHER REDUCE THIS TIME LIMIT SO THAT NO STIFFENING OF THE CONCRETE SHALL OCCUR UNTIL AFTER IT HAS BEEN PLACED. BEGIN THE MIXING OPERATION WITHIN THIRTY MINUTES AFTER THE CEMENT HAS BEEN INTRODUCED TO THE AGGREGATES.

- 3.8 WHERE CONSTRUCTION JOINTS ARE REQUIRED, OBTAIN BOND BY ROUGHENING THE SURFACE OF THE CONCRETE IN A MANNER WHICH WILL EXPOSE THE AGGREGATE UNIFORMLY AND WILL NOT LEAVE LATENT LOOSEBOD PARTICLES OF AGGREGATE OR DAMAGED CONCRETE ON THE SURFACE. WHERE JOINTS OR INTERFACES ARE LOCATED ABOVE WATER, DAMPEN THE CLEANED SURFACE WITH WATER AND APPLY THE SPECIFIED BONDING COMPOUND. PLACE NEW CONCRETE WHILE THE BONDING COMPOUND IS STILL TACKY.

- 3.9 COMPLY WITH ACI 304, AND AS HEREIN SPECIFIED. DEPOSIT CONCRETE CONTINUOUSLY OR IN LAYERS OF SUCH THICKNESS THAT NO CONCRETE WILL BE PLACED ON CONCRETE WHICH HAS HARDENED SUFFICIENTLY TO CAUSE THE FORMATION OF BEAMS OR FLANGES OF UNPLANNED COLD JOINTS. IF A SECTION CANNOT BE PLACED CONTINUOUSLY, DO NOT DEPOSIT CONCRETE, OTHERWISE CONCRETE SHALL BE REMOVED AND RE-DEPOSITED IN ONE CONTINUOUS POUR. DEPOSIT CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL LOCATION TO AVOID SEGREGATION.

- 3.10 CONSOLIDATE PLACED CONCRETE BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, RODDING OR TAMPING. USE EQUIPMENT AND PROCEDURES FOR CONSOLIDATION OF CONCRETE IN ACCORDANCE WITH ACI-309, "RECOMMENDED PRACTICES FOR CONSOLIDATION OF CONCRETE."

- 3.11 DO NOT USE VIBRATORS TO TRANSPORT CONCRETE INSIDE FORMS. THE FORMS MAY BE VIBRATED LIGHTLY ON THE OUTSIDE OF FORMS TO ENSURE COMPLETE FILLING. AT EACH POINT, LIMIT DURATION OF VIBRATION TO TEN SECONDS. DO NOT OVERVIBRATE. VIBRATE AND COMPLETE EMBEDMENT OF REINFORCEMENT AND OTHER EMBEDDED ITEMS WITHOUT CAUSING SEGREGATION OF MIX.

- 3.12 CONCRETE MAY BE PUMPED AND SHALL BE PLACED UNDER SUFFICIENT PRESSURE AND VIA HOSE OF SUFFICIENT SIZE TO ASSURE A SMOOTH AND CONTINUOUS FLOW. THE DISCHARGE END OF THE HOSE SHALL BE INSERTED AND LOUBERED TO THE BOTTOM OF THE FORM OR ATTACHED TO PUMP PORTS IN THE FORM BEFORE ANY CONCRETE IS PUMPED INTO THE FORM. AS THE LEVEL OF THE CONCRETE RISES 2 INCHES ABOVE THE HOSE, THE HOSE SHALL BE SLOWLY WITHDRAWN, CARE BEING TAKEN THAT THE END OF THE PIPE OR HOSE BE CONTINUOUSLY IMMERSED IN THE NEWLY PLACED CONCRETE.

- 3.13 ALL CONCRETE SHALL BE DEPOSITED IN ONE OPERATION TO THE TOP OF THE FORMS SO THAT NO COLD JOINTS WILL DEVELOP.

- 3.14 KINKING THE HOSE OR OTHER SOURCE OF FLOW INTERRUPTION SHALL BE AVOIDED INsofar AS POSSIBLE. IN GENERAL, CONCRETE SHALL BE PLACED IN A SMOOTH CONTINUOUS OPERATION AT A RATE WHICH WILL AVOID DAMAGE TO THE FORM AND PERMIT CONCRETE FLOW AROUND FILES AND REINFORCEMENT, AND IN SUCH A MANNER AS TO AVOID SEGREGATION OF SAND AND CEMENT PARTICLES.

- 3.15 ONLY APPROVED MIXERS AND PUMPING EQUIPMENT SHALL BE USED IN THE PREPARATION AND HANDLING OF PUMPED CONCRETE. ALL OIL AND RUST INHIBITORS SHALL BE REMOVED FROM MIXING DRUMS, BELT DRIVALS, MECHANISMS, AND OTHER PORTIONS OF EQUIPMENT IN CONTACT WITH CONCRETE BEFORE MIXERS ARE USED.

- 3.16 ARRANGEMENT AND DETAILS RELATED TO CONCRETE PLACING SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

- 3.17 SCRAPE OR BLOW OFF LATIENCE, FOREIGN MATERIALS, ETC. BY PRESSURE AIR BLAST AT 100 PSI. TROUPEL FINISH SURFACE SMOOTH.

- 3.18 PUMPING HOSES MAY CONSIST OF HARD PIPE OR FLEXIBLE HOSE. HARD PIPE OR TUBE SHALL BE MADE OF STEEL, NOT ALUMINUM, AND SHALL HAVE A MINIMUM THICKNESS OF 0.25 INCH. FLEXIBLE HOSE SHALL HAVE SUFFICIENT STRENGTH TO WITHSTAND PUMPING PRESSURES. HOPPERS SHALL HAVE A MINIMUM CAPACITY OF 0.5 CUBIC YARD.

- 3.19 USE OF A GO DEVEL, OR PIS- WHICH WILL NOT COLLAPSE UNDER INCIDENT PRESSURE AND WHICH PREVENTS DIRECT CONTACT BETWEEN FRESH CONCRETE AND WATER IN THE TUBE MAY BE USED TO START FLOW OF CONCRETE INTO THE TUBE. USE OF SUCH DEVICES WILL NOT BE PERMITTED FOR REMOVAL OF THE TUBE AFTER THE STRUCTURE WHILE CURING.

- 3.20 BUILD FORMS SEVERAL INCHES HIGHER THAN THE REQUIRED CONSTRUCTION AND WITH A REMOVABLE TOP SECTION TO TRAP LATIENCE. SCALP OFF THE LATIENCE AFTER THE CONCRETE HAS SET.

- 3.21 COLD WEATHER: DO NOT ALLOW CONCRETE TEMPERATURE TO DECREASE BELOW 45 DEGREES F. OBTAIN APPROVAL PRIOR TO PLACING CONCRETE WHEN THE AMBIENT TEMPERATURE IS BELOW 40 DEGREES F. WHEN CONCRETE IS LIKELY TO BE SUBJECTED TO FREEZING TEMPERATURES WITHIN 24 HOURS, COVER CONCRETE AND PROVIDE SUFFICIENT HEAT TO MAINTAIN 50 DEGREES F MINIMUM ADJACENT TO BOTH THE FORMWORK AND THE STRUCTURE WHILE CURING. LIMIT THE RATE OF COOLING TO 5 DEGREES F IN ANY 1 HOUR AND 50 DEGREES PER 24 HOURS AFTER HEAT APPLICATION.

- 3.22 HOT WEATHER: MAINTAIN REQUIRED CONCRETE TEMPERATURE USING FIGURE 2.15 IN ACI 308R TO PREVENT THE EVAPORATION RATE FROM EXCEEDING 0.2 POUNDS OF WATER PER SQUARE FOOT OF EXPOSED CONCRETE PER HOUR. COOL INGREDIENTS BEFORE MIXING OR USE OTHER SUITABLE MEANS TO CONTROL CONCRETE TEMPERATURE AND PREVENT THE RAPID CURING OF NEWLY PLACED CONCRETE. SHAPE THE FRESH CONCRETE AS SOON AS POSSIBLE AFTER PLACING. START CURING WHEN THE CURING OF THE FRESH CONCRETE IS SUFFICIENTLY HARD TO PERMIT SURFACE WITHOUT DAMAGE. PROVIDE WATER HOSES, PIPES, SPRAYING EQUIPMENT AND WATER TAPPING EQUIPMENT TO MAINTAIN A MOIST CONCRETE SURFACE THROUGHOUT THE CURING PERIOD. FOR VERTICAL SURFACES, PROTECT FORMS FROM DIRECT SUNLIGHT AND ADD WATER TO TOP OF STRUCTURE ONCE CONCRETE IS PLACED.

- 3.23 DO NOT REMOVE FALSEWORK OR FORMS UNTIL THE CONCRETE HAS THOROUGHLY HARDENED AND HAS ATTAINED SUFFICIENT STRENGTH TO SUPPORT ITS OWN WEIGHT.

- 3.24 IF IT IS DETERMINED THAT THE UNDERLYING CONCRETE CONTAINS EXCESSIVE DEFECTS IN THE FORM OF HONEYCOMBS, VOIDS, LATENCIES, OR SAND STREAKS AS JUDGED BY THE ENGINEER, IT SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S SOLE EXPENSE.

- 3.25 THE CONTRACTOR SHALL TAKE CONCRETE CORES FROM THE EXPOSED CONCRETE AT 15' AND 30' DEPTHS AFTER THE EXPOSURE OF THE CORES IS FOR LABORATORY TESTING TO QUANTIFY THE CONCRETE PROPERTIES. CORE HOLES SHALL BE FILLED SOLID WITH NON-SHRINK GROUT. ALL CORING, FILLING, AND TESTING WILL BE AT THE CONTRACTOR'S SOLE EXPENSE.

- 3.26 REPAIR FORMED SURFACES BY REMOVING MINOR HONEYCOMBS, PITS GREATER THAN 1 SQUARE INCH SURFACE AREA OR 0.25 INCH MAXIMUM DEPTH, OR OTHERWISE DEFECTIVE AREAS. PROVIDE EDGES PERPENDICULAR TO THE SURFACE AND PATCH WITH NON-SHRINK EPOXY GROUT. CONVECTIVE HONEYCOMBS INCLUDING REINFORCING EXPOSED STEEL REINFORCEMENT, COLD JOINTS, ENTRAPPED DEBRIS, SEPARATED AGGREGATE, OR OTHER DEFECTS WHICH AFFECT THE SERVICEABILITY OR STRUCTURAL STRENGTH WILL BE REJECTED, UNLESS CORRECTION OF DEFECTS IS AN APPROPRIATE AND EFFECTIVE MEANS OF CORRECTIVE ACTION PRIOR TO REPAIR. THE SURFACE OF THE CONCRETE SHALL NOT VARY MORE THAN THE ALLOWABLE TOLERANCES OF ACI 308R. CHIPPING SURFACES SHALL BE UNIFORM IN APPEARANCE AND FINISHED TO A SMOOTH FORM FINISH UNLESS OTHERWISE SPECIFIED.

- 3.27 THE CONTRACTOR SHALL RETAIN THE SERVICES OF A CERTIFIED A TESTING LABORATORY/AGENCY TO PERFORM TESTS AND TO SUBMIT TEST REPORTS. THE TESTING LABORATORY/AGENCY SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE. ALL TESTS SHALL BE RETRIEVED AT POINT IMMEDIATELY BEFORE DEPOSIT INTO FORMS, SUCH AS AT THE FAR END OF A HOSE PUMP.

- A. SAMPLING FRESH CONCRETE: ASTM C-173, EXCEPT MODIFIED FOR SLUMP TO COMPLY WITH ASTM C-94.
- B. SLUMP: ASTM C-143; ONE TEST FOR EACH CONCRETE LOAD AT POINT OF DISCHARGE, AND ONE TEST FOR EACH SET OF COMPRESSIVE STRENGTH TEST SPECIMENS.
- C. AIR CONTENT: ASTM C-231. VOLUMETRIC METHOD OR ASTM C-231 FOR NORMAL WEIGHT CONCRETE. ONE FOR EACH SET OF COMPRESSIVE STRENGTH TEST SPECIMENS. CHASE AIR INDICATOR IS NOT PERMITTED.

- D. CONCRETE TEMPERATURE: TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEGREES F AND BELOW AND WHEN 80 DEGREES F AND ABOVE. AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS MADE.
- E. COMPRESSION TEST SPECIMENS: ASTM C-193. SET OF 4 STANDARD CYLINDERS FOR EACH COMPRESSIVE STRENGTH TEST, UNLESS OTHERWISE DIRECTED. MOLD AND STROKE CYLINDERS FOR LABORATORY CURED TEST SPECIMENS EXCEPT WHEN FIELD CURE TEST SPECIMENS ARE REQUIRED.

- F. COMPRESSIVE STRENGTH TESTS: ASTM C-39. ONE SET FOR EACH 50 CYCLES OR FRACTION THEREOF OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY. 1 SPECIMEN TESTED AT 1 DAYS, 3 SPECIMENS TESTED AT 28 DAYS.
- G. COMPRESSIVE TEST RESULTS: TEST OF CONCRETE WILL BE DEEMED SATISFACTORY IF THE AVERAGE OF 3 OR 15 TESTS REPRESENTING ONE CLASS IS EQUAL TO OR GREATER THAN THE DESIGN STRENGTH, AND IF THE FOLLOWING ADDITIONAL CONDITIONS ARE MET: (A) NO SINGLE TEST SHALL BE GREATER THAN 500 PSI BELOW THE SPECIFIED DESIGN STRENGTH. (B) THE AVERAGE OF 3 OR 15 TESTS SHALL NOT BE LESS THAN 83% OF THE DESIGN STRENGTH. (C) THE AVERAGE OF ANY THREE CONSECUTIVE TESTS SHALL NOT BE LESS THAN THE DESIGN STRENGTH. (D) NO SINGLE TEST OF TESTS BELOW THE DESIGN STRENGTH SHALL NOT EXCEED 20% OF THE TOTAL NUMBER OF TESTS. AND (E) NO MORE THAN TWO CONSECUTIVE TESTS SHALL BE BELOW THE DESIGN STRENGTH.

- 3.28 QUESTIONABLE CONCRETE: FAILURE TO MEASURE UP TO ANY OF THE SPECIFIED CONDITIONS SHALL CONSTITUTE QUESTIONABLE CONCRETE. AND ADDITIONAL TESTS SHALL BE MADE AT THE EXPENSE OF THE CONTRACTOR. THE ENGINEER MAY REQUIRE CORE TESTS TO BE MADE AT THE CONTRACTOR'S EXPENSE WHEN INDIVIDUAL COMPRESSIVE TESTS BEING SPECIFIED ARE NOT OBTAINED AS HAVING BEEN TAKEN FROM CONCRETE PLACED IN POSITIONS OF CRITICAL STRUCTURAL IMPORTANCE. ADDITIONAL TESTS SHALL BE IN ACCORDANCE WITH METHODS OF SECURING, PREPARING, AND TESTING SPECIMENS FROM HARDENED CONCRETE FOR COMPRESSIVE AND FLEXURAL STRENGTH. (ASTM C-42). CORES SHALL BE 4 INCHES IN DIAMETER AND A MINIMUM OF 1 1/2 INCHES LONG BEFORE CAPPING.

- 3.29 UNACCEPTABLE CONCRETE: IF CORE TESTS FAIL TO DEMONSTRATE STRENGTHS SATISFACTORY TO ENGINEER THEN THE UNSATISFACTORY PORTION OF THE STRUCTURE SHALL BE REMOVED AND RECONSTRUCTED AT CONTRACTOR'S SOLE EXPENSE TO MEET THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.

- 3.30 INTERRUPTED CONCRETE POURS SHALL NOT BE PERMITTED (POURS WHICH HAVE PREMATURELY TERMINATED BETWEEN PRE-PLANNED FOUR STOPS). IF THIS CONDITION OCCURS, THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTOR SHALL MAKE REPAIRS AS DIRECTED BY THE ENGINEER AT HIS SOLE EXPENSE.

ARMOR STONE REVEITEMENT

1. BEDDING MATERIAL SHALL CONSIST OF WASHED CRUSHED STONE AND SHALL BE FREE OF ORGANIC MATTER, BITUMINOUS MATERIALS, AND OTHER DELETERIOUS PARTICLES.

2. ARMOR AND TOE STONE SHALL CONSIST OF QUARRIED ANGULAR STONE AND SHALL BE FREE OF ORGANIC MATTER, BITUMINOUS MATERIALS, AND OTHER DELETERIOUS PARTICLES. EACH PIECE OF STONE SHALL BE OF A HARD, STRONG, DURABLE MATERIAL THAT WILL NOT BREAK OR DEGRADE UNDER THE MECHANICAL ACTION OF WAVES IN SEAWATER.

3. ALL STONE SHALL MEET THE FOLLOWING SPECIFICATIONS:
- A. UNIT WEIGHT: ALL STONE SHALL HAVE A MINIMUM UNIT WEIGHT OF 165 LB/CU. FT BASED ON WATER HAVING A UNIT WEIGHT OF 64 PCF, AND IN ACCORDANCE WITH ASTM C 121.

- B. ABSORPTION: THE STONE SHALL HAVE ABSORPTION LESS THAN 2 PERCENT UNLESS OTHER TESTS AND SERVICE RECORDS SHOW THAT THE STONE IS SATISFACTORY.

- C. PETROGRAPHIC EXAMINATION: STONE SHALL BE EVALUATED ACCORDING TO THE INFORMATION REQUIRED IN ASTM D 4982.

- D. RESISTANCE TO FREEZING AND THAWING: STONES SHALL HAVE A MAXIMUM LOSS OF 10 PERCENT AFTER THE NUMBER OF CYCLES SPECIFIED BY ASTM D 592.
- E. RESISTANCE OF ROCK TO WEETING AND DRYING: STONE SHALL HAVE A MAXIMUM LOSS OF 1 PERCENT WHEN DETERMINING THE DURABILITY WHEN SUBJECT TO WEETING AND DRYING IN ACCORDANCE WITH ASTM D 593.

- F. SIZE AND SHAPE: STONES SHALL BE ANGULAR IN SHAPE. THE LEAST DIMENSION OF ANY STONE SHALL NOT BE LESS THAN ONE-THIRD THE GREATEST DIMENSION OF THE FRAGMENT.

4. BEDDING LAYERS SHALL BE SPREAD UNIFORMLY ON THE GEOTEXTILE LAYER. THE LINES AND GRADIES INDICATED IN THE DRAWINGS. AVOID DAMAGE TO THE GEOTEXTILE LAYER. ANY DAMAGE TO THE GEOTEXTILE SHALL BE REPAIRED OR REPLACED.

5. BEDDING SHALL BEGIN AT THE TOE AND CONTINUE UP THE SLOPE 80 AS TO CREATE A UNIFORM AND HOMOGENEOUS MASS.

6. ARMOR AND TOE STONE SHALL BE MACHINE-PLACED TO THE LINES AND GRADIES SHOWN. STONES SHALL BE PLACED FROM THE TOE AND CONTINUE UP THE SLOPE. PLACE STONES AT 10' TOE 80 AS TO ENSURE PROPER PLACEMENT AND VISIBILITY. STONES SHALL NOT BE DROPPED THROUGH AIR OVER A HEIGHT GREATER THAN 2 FT FOR STONES HEAVIER THAN 500 LBS AND 1 FT FOR STONES HEAVIER THAN 1000 LBS.

7. STONES SHALL BE PLACED TO ITS FULL CIRCLE THICKNESS AND IN SUCH A MANNER AS TO AVOID REPLACING BEDDING STONES. LARGE STONES SHALL BE WELL DISTRIBUTED TO ACHIEVE A UNIFORM AND HOMOGENEOUS MASS. THE WEBO STONE SHALL OCCUPY 50 PERCENT OF THE MASS AND SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT THE SURFACE.

8. STONES SHALL BE PLACED IN TWO PASSES, WITH THE SECOND PASS PERPENDICULAR TO THE FIRST PASS. GEOTEXTILE FABRIC AT THE TOE SHALL BE FILLED OVER THE FIRST PASS. THE GEOTEXTILE SHALL WEAR OVER THE BOTTOM LAYER AND RETURN A MINIMUM DISTANCE OF 4 FT ATOP THE LAYER.

9. THE FINISHED SLOPE SHALL NOT CONTAIN VOIDS, HOLES, POCKETS, DIPS, DEPRESSIONS, SUBSIDENCE, OR OTHER SURFACE IRREGULARITY.

10. THE CONTRACTOR SHALL NOT BE PERMITTED TO PLACE STONES BY (A) DUMPING INTO CHUTES, OR BY SOME OTHER SIMILAR METHOD LIKELY TO CAUSE SEGREGATION OF THE VARIOUS SIZES, OR (B) DUMPING AT THE TOP OF SLOPE AND PUSHING IT DOWN THE SLOPE.

11. THE CONTRACTOR SHALL SUBMIT ONE GRADATION FIELD TEST PER 10,000 TONS OF STONE IN ACCORDANCE WITH ASTM D569 AND ASTM C 136.

12. AN ENGINEERED FILTRATION GEOTEXTILE FABRIC SHALL LINE THE REVEITEMENT SLOPE BELOW THE BEDDING LAYER. PROVIDE HIRAR ION OR EQUIVALENT. THE MINIMUM PERMEABILITY INDICATED BELOW THE FABRIC SHALL BE PLACED ABOVE OF FILLING OPERATIONS. THE FABRIC SHALL BE WOVEN FABRIC OF MONOFILAMENT AND MULTIFILAMENT YARN. CONSTRUCTION, INSTALL, FABRIC IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. SUBMIT MATERIAL SAMPLE OF GEOTEXTILE FABRIC.

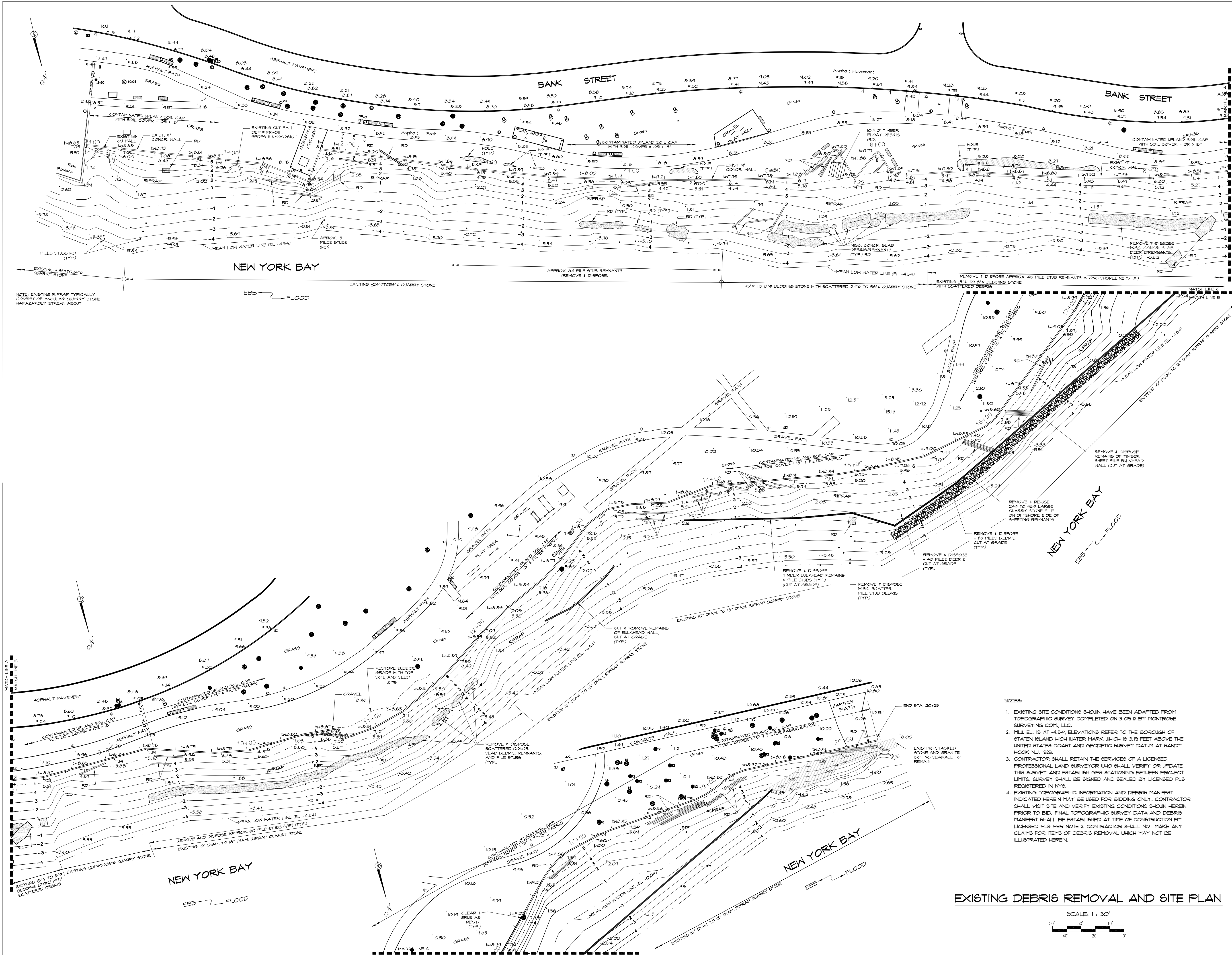
- A. PERCENT OPEN AREA: GREATER THAN 4 PERCENT
- B. APPARENT OPENING SIZE: SIEVE NO. 100 (1.5 MM)
- C. GRAB TENSILE STRENGTH: 250 LBS
- D. FRACTURE OR TEAR STRENGTH: 155 LBS
- E. PERMITTIVITY: GREATER THAN FIVE TIMES THAN THAT OF THE FILL, BUT NOT LESS THAN 1.0/SEC

FINISH WORK

1. THE CONTRACTOR SHALL LEAVE THE SITE CLEAN WITH ALL AFFURTENANCES INCLUDING FENCES, RAILINGS, GATES, PAVEMENTS, GRADES, HARDSCAPE FEATURES, ETC. INSTALLED IN-KIND, WHERE THE CONTRACTOR PERFORMS ANY AFFURTENANCES IN ORDER TO CONDUCT THE WORK, THESE SHALL BE REPLACED IN-KIND. FENCES AND GATES SHALL BE CHAIN LINK AND SHALL HAVE A MINIMUM HEIGHT OF 8 FT. THEY SHALL BE NEW AND INSTALLED AT THE SAME LOCATIONS AS PRIOR TO CONSTRUCTION WORK UNLESS OTHERWISE INDICATED.

2. ALL UTILITIES AND SERVICES DISRUPTED BY CONTRACTOR'S ACTIVITIES SHALL BE RESTORED AS REQUIRED.

3. UPON COMPLETION OF THE CONTRACT WORK, THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL AND EQUIPMENT TO REMOVE ALL TEMPORARY WORK, INCLUDING



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NEW YORK, NY 10038

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NEW YORK, N.Y.

ENGINEER:
Pennmax Engineering, PLLC
35 Horsehoe Hill Road
Pound Ridge, NY 10576
T: 914.764.9400
F: 914.764.0515

- LEGEND:
- FILE STUB - REMOVE AND DISPOSE (TYP)
 - CONCRETE DEBRIS - REMOVE AND DISPOSE (TYP)
 - TIMBER DEBRIS - REMOVE AND DISPOSE
 - RD - INDICATES REMOVE & DISPOSE
 - EXISTING HOLE TO BE FILLED
 - STATION NUMBER AS MEASURED ALONG FACE OF WALL
 - EXISTING CONTOUR ELEVATION
 - TOP OF WALL ELEVATION
 - SPOT ELEVATION
 - EXISTING TREE
 - EXISTING BENCH
 - EXISTING SHRUB

95% PROGRESS SET

CONDITIONS
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SHOP DETAILS MUST BE SUBMITTED TO PENNMAX ENGINEERING, PLLC, FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.

REVISIONS

REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE

**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

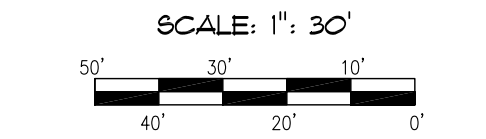
STATEN ISLAND N.Y.

SHEET TITLE

**EXISTING DEBRIS REMOVAL
AND SITE PLAN**

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	1" = 250'
	CAD FILE No.	02.23.12.001
DRAWING No.		C-100.00
SHEET No.		5 OF 18

EXISTING DEBRIS REMOVAL AND SITE PLAN



- NOTES:
- EXISTING SITE CONDITIONS SHOWN HAVE BEEN ADAPTED FROM TOPOGRAPHIC SURVEY COMPLETED ON 3-03-12 BY MONTROSE SURVEYING CO., LLC.
 - MLW ELEV. IS AT -4.54'. ELEVATIONS REFER TO THE BOROUGH OF STATEN ISLAND HIGH WATER MARK WHICH IS 3.75 FEET ABOVE THE UNITED STATES COAST AND GEODETIC SURVEY DATUM AT SANDY HOOK, N.J. 1929.
 - CONTRACTOR SHALL RETAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR WHO SHALL VERIFY OR UPDATE THIS SURVEY AND ESTABLISH GPS STATIONING BETWEEN PROJECT LIMITS. SURVEY SHALL BE SIGNED AND SEALED BY LICENSED PLS REGISTERED IN NY.
 - EXISTING TOPOGRAPHIC INFORMATION AND DEBRIS MANIFEST INDICATED HEREIN MAY BE USED FOR BIDDING ONLY. CONTRACTOR SHALL VISIT SITE AND VERIFY EXISTING CONDITIONS SHOWN HEREIN PRIOR TO BID. FINAL TOPOGRAPHIC SURVEY DATA AND DEBRIS MANIFEST SHALL BE ESTABLISHED AT TIME OF CONSTRUCTION BY LICENSED PLS PER NOTE 3. CONTRACTOR SHALL NOT MAKE ANY CLAIMS FOR ITEMS OF DEBRIS REMOVAL WHICH MAY NOT BE ILLUSTRATED HEREIN.

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ENGINEER:
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T: 914.764.8400
F: 914.764.0515

LEGEND:

STA. 5+25 STATION NUMBER AS MEASURED ALONG FACE OF WALL

7 PROPOSED CONTOUR ELEVATION

-3 EXISTING CONTOUR ELEVATION

tw 8.15 TOP OF WALL ELEVATION

9.56 TOP OF GRADE/SPOT ELEVATION

EXISTING LIGHT POLE

95% PROGRESS SET

CONDITIONS

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REVISIONS			
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TITLE

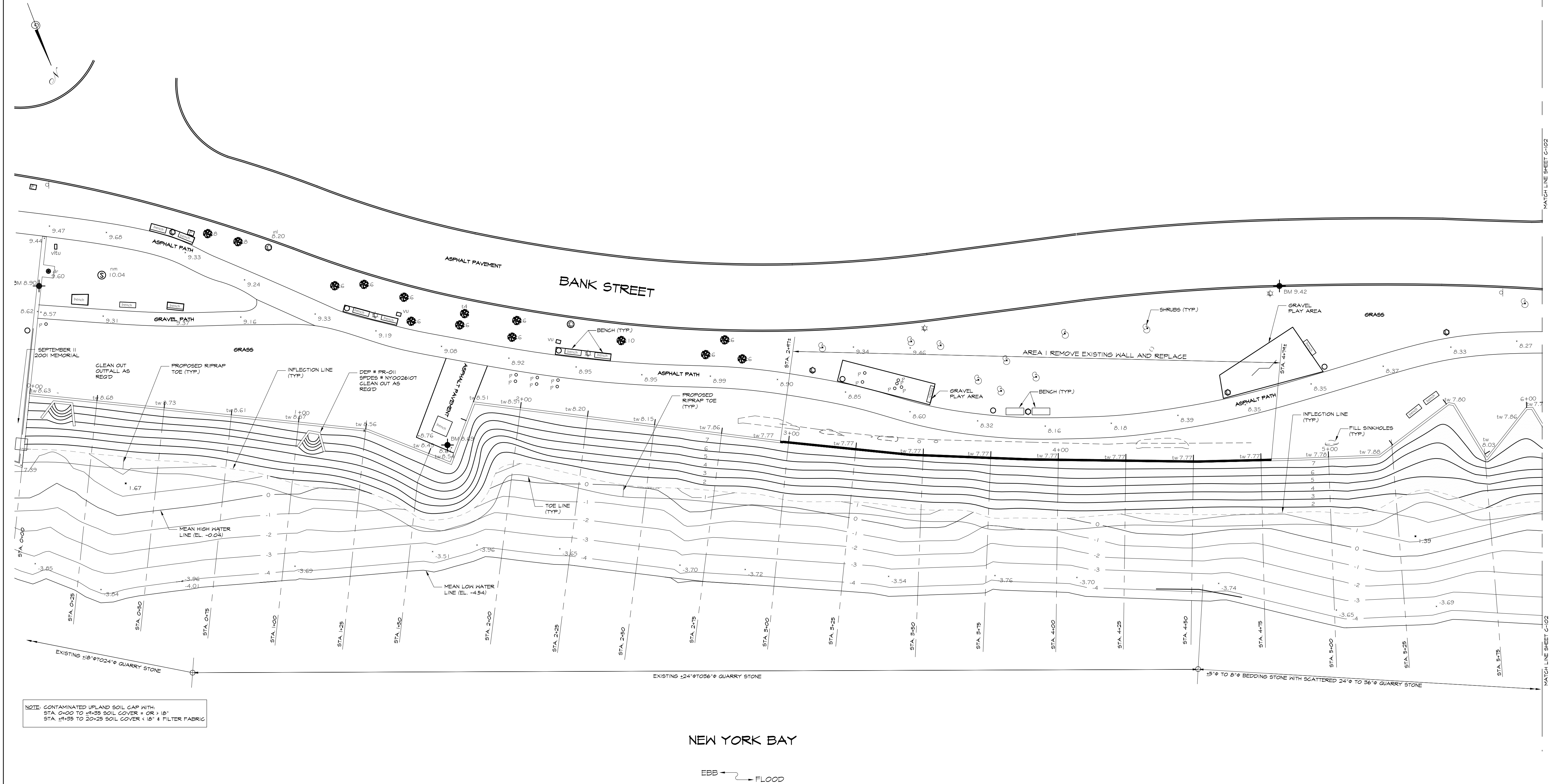
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.

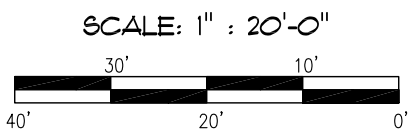
SHEET TITLE

**PROPOSED PART
SITE PLAN
(SHEET 1 OF 3)**

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	1" = 20'-0"
	CAD FILE No.	02.23.12-001
DRAWING No.	C-101.00	
	SHEET No. 6 OF 18	



PROPOSED PART SITE PLAN (1 OF 3)



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NEW YORK, N.Y.

ENGINEER:
Penmax Engineering, PLLC
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Pound Ridge, NY 10576
T: 914.764.8400
F: 914.764.0515

LEGEND:

STA. 5+25 STATION NUMBER AS MEASURED ALONG FACE OF WALL

7 PROPOSED CONTOUR ELEVATION.

-3 EXISTING CONTOUR ELEVATION.

tw 8.15 TOP OF WALL ELEVATION.

9.56 TOP OF GRADE/SPOT ELEVATION

EXISTING LIGHT POLE

95% PROGRESS SET

CONDITIONS

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REVISIONS		
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE

**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.

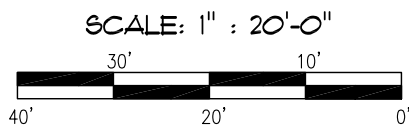
SHEET TITLE

**PROPOSED PART
SITE PLAN
(SHEET 2 OF 3)**

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	1" = 20'-0"
	CAD FILE No.	02.23.12-001
DRAWING No.		C-102.00
SHEET No.		7 OF 18



PROPOSED PART SITE PLAN (2 OF 3)



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NEW YORK, N.Y.

ENGINEER:
Penmax Engineering, PLLC
35 Horseshoe Hill Road
Pound Ridge, NY 10576
T: 914.764.8400
F: 914.764.0515

LEGEND:

STA 9+25 STATION NUMBER AS MEASURED ALONG FACE OF WALL

7 PROPOSED CONTOUR ELEVATION

-3 EXISTING CONTOUR ELEVATION

tw 6.15 TOP OF WALL ELEVATION

9.56 TOP OF GRADE/SPOT ELEVATION

EXISTING LIGHT POLE

95% PROGRESS SET

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REVISIONS			
REVISION NUMBER	DATE	REVISION DESCRIPTION	

TITLE

**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.

SHEET TITLE

**PROPOSED PART
SITE PLAN
(SHEET 3 OF 3)**

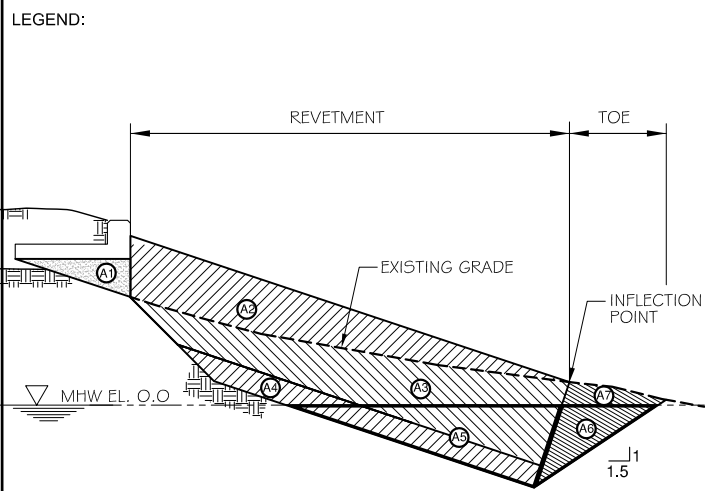
SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	1" = 20'-0"
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DRAWING No.		C-103.00
SHEET No.		8 OF 18



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TYPICAL RIPRAP SECTION

- AREAS
- A1 AREA BELOW BREASTING WALL
 - A2 AREA ARMOR STONE ABOVE GRADE TO INFLECTION POINT
 - A3 AREA ARMOR STONE BELOW GRADE TO INFLECTION POINT
 - A4 AREA BEDDING STONE BELOW GRADE TO INFLECTION POINT
 - A5 AREA EXCAVATION BELOW MHW TO INFLECTION POINT
 - A6 AREA TOE BELOW MHW
 - A7 AREA TOE ABOVE MHW
 - A2 + A3 + A6 + A7 AREA ARMOR STONE
 - A5 + A6 TOTAL AREA EXCAVATION BELOW MHW
 - A3 + A4 + A6 + A7 TOTAL EXCAVATION BELOW EXISTING GRADE

95% PROGRESS SET

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REVISIONS

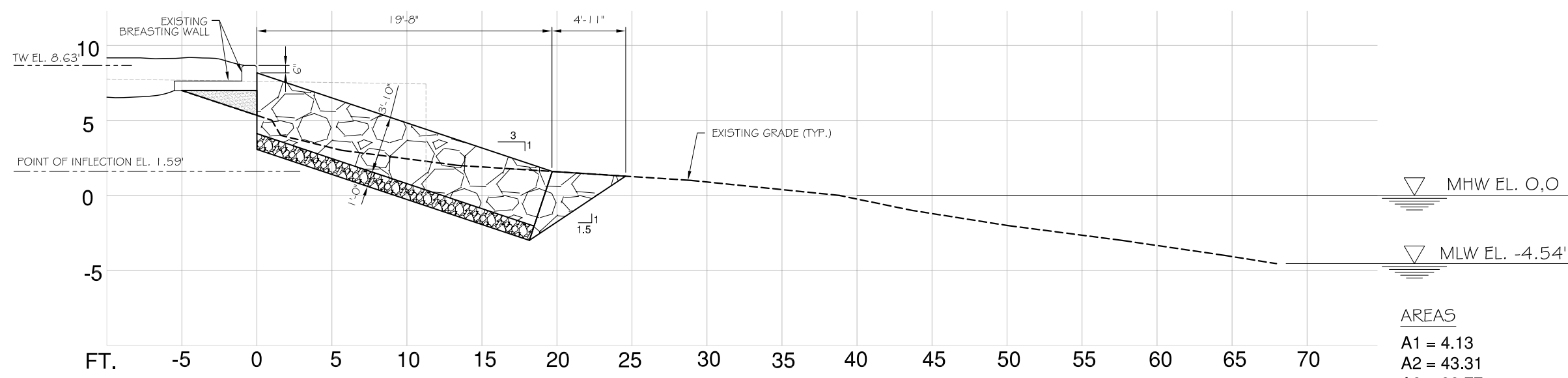
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.
SHEET TITLE

TRANSSECTIONS
STA. 0+00 TO 2+50
(SHEET 1 OF 8)

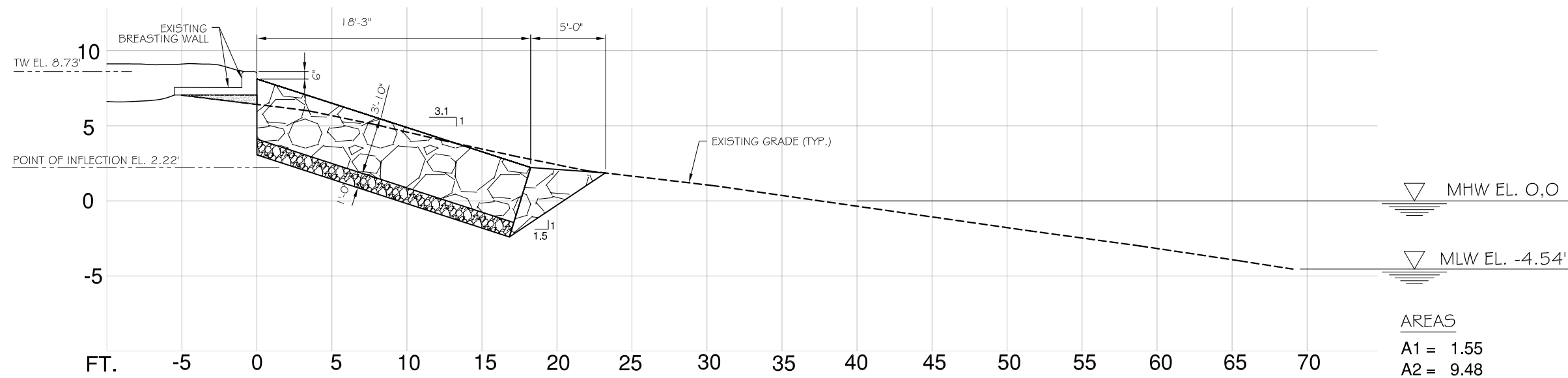
SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	AS SHOWN
	CAD FILE No.	02.23.12-001
DRAWING No.		C-200.00
SHEET No.		9 OF 18



STA. 0+00

SCALE: 1 :100

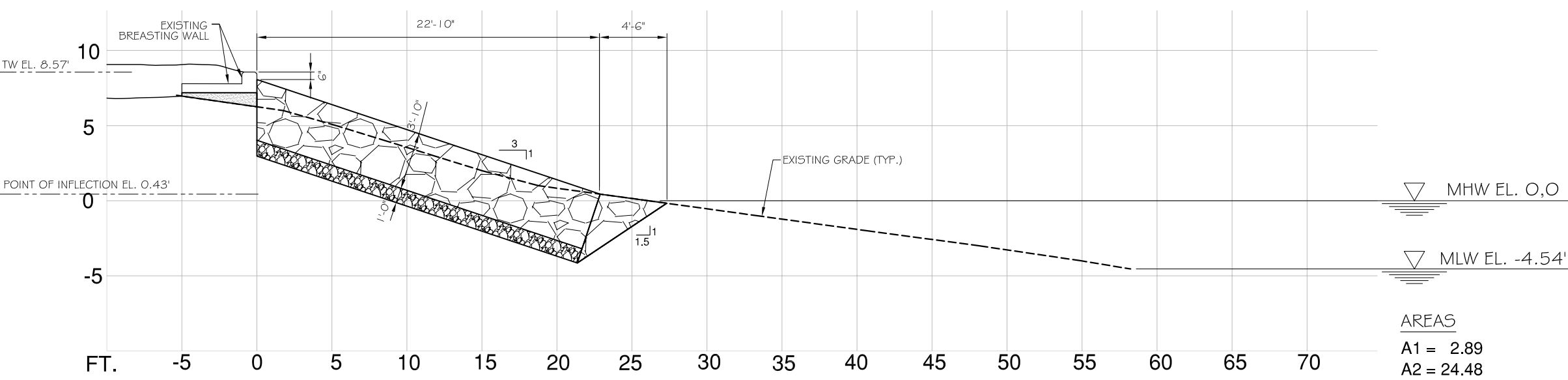
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A4 = 19.31
A5 = 14.92
A6 = 5.24
A7 = 6.20



STA. 0+50

SCALE: 1 :100

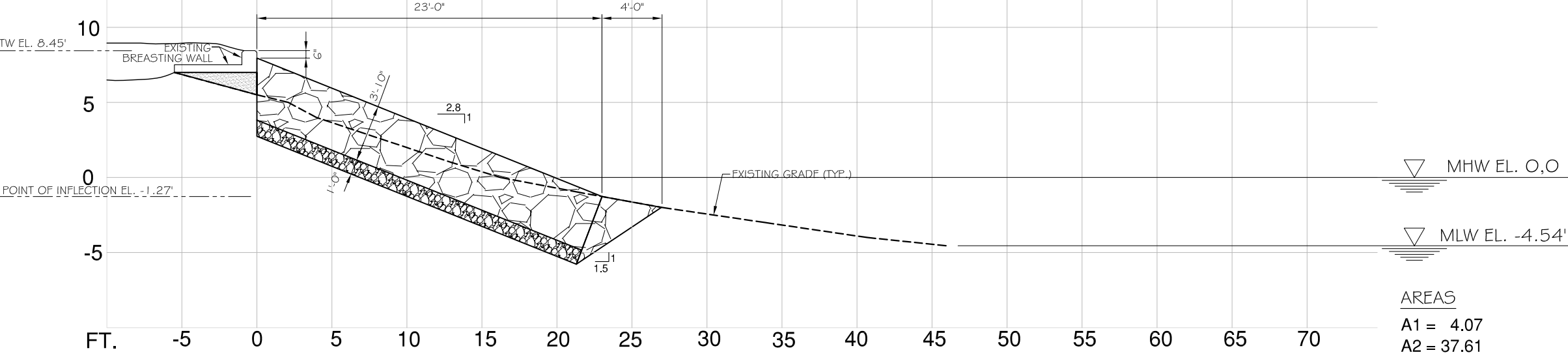
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STA. 1+00

SCALE: 1 :100

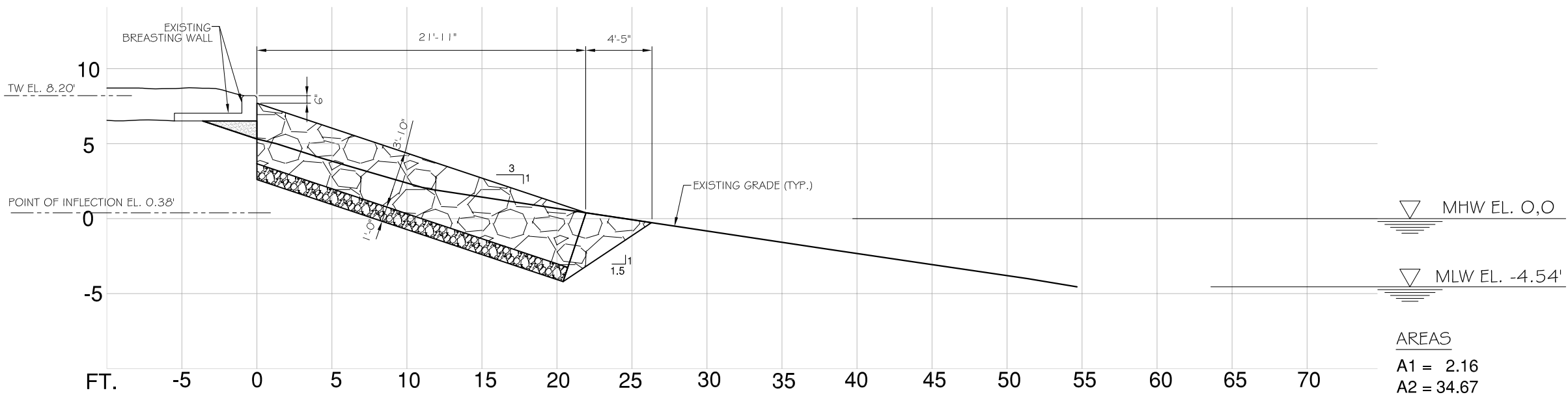
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A1 = 2.89
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A4 = 22.68
A5 = 28.67
A6 = 9.91
A7 = 0.73



STA. 1+50

SCALE: 1 :100

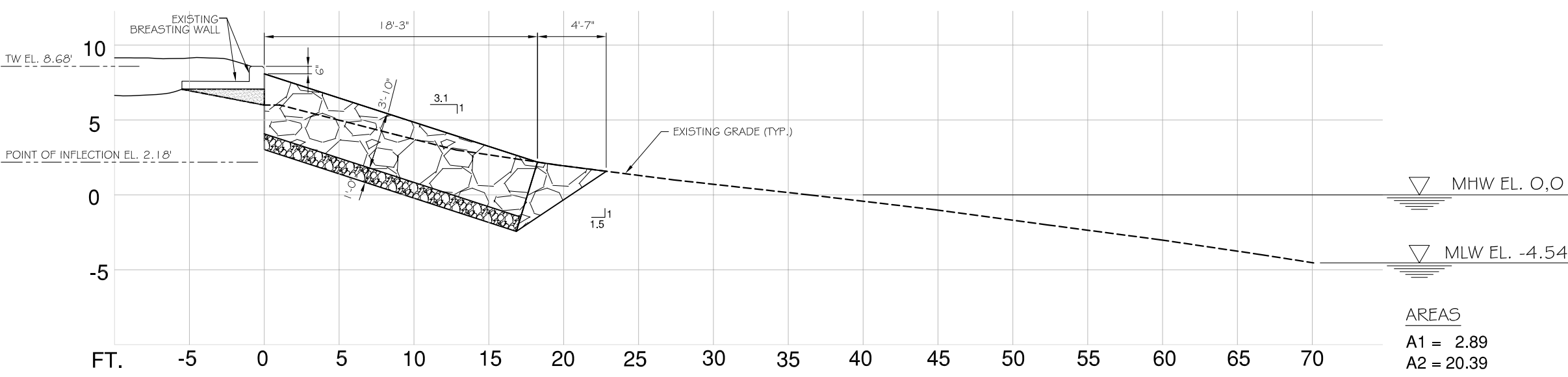
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STA. 2+25

SCALE: 1 :100

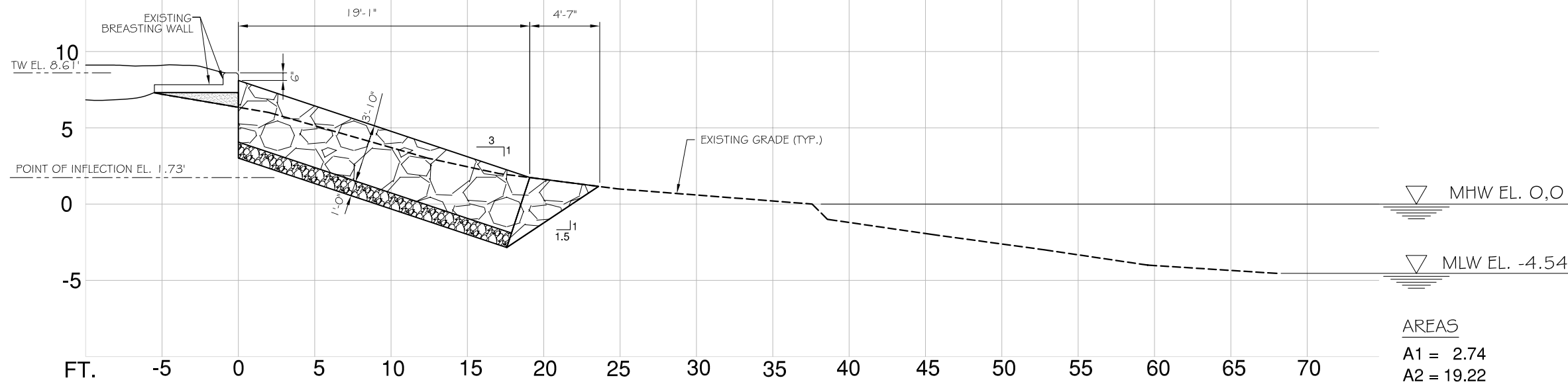
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A4 = 21.68
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A7 = 0.53



STA. 0+25

SCALE: 1 :100

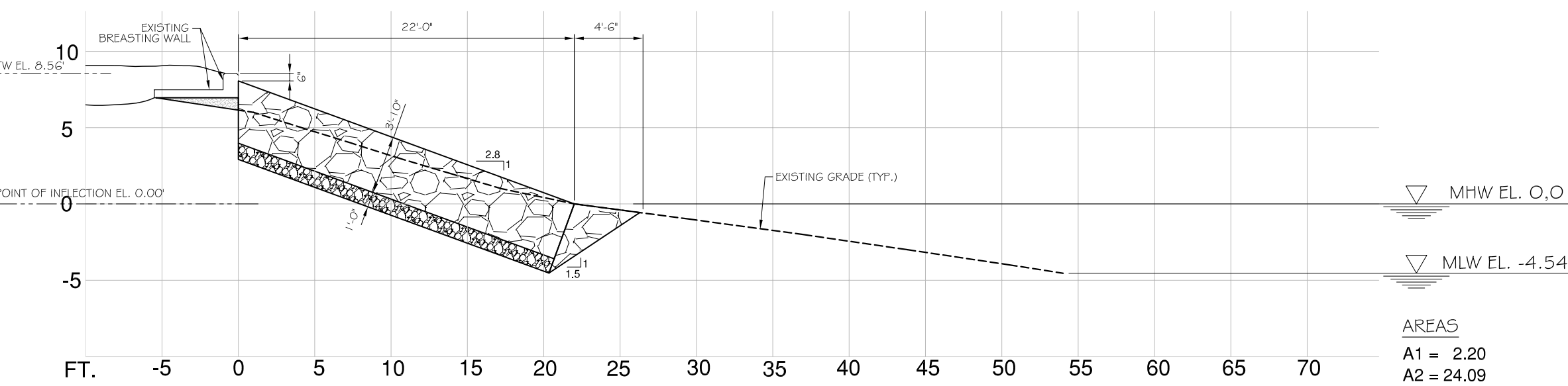
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A6 = 3.54
A7 = 7.48



STA. 0+75

SCALE: 1 :100

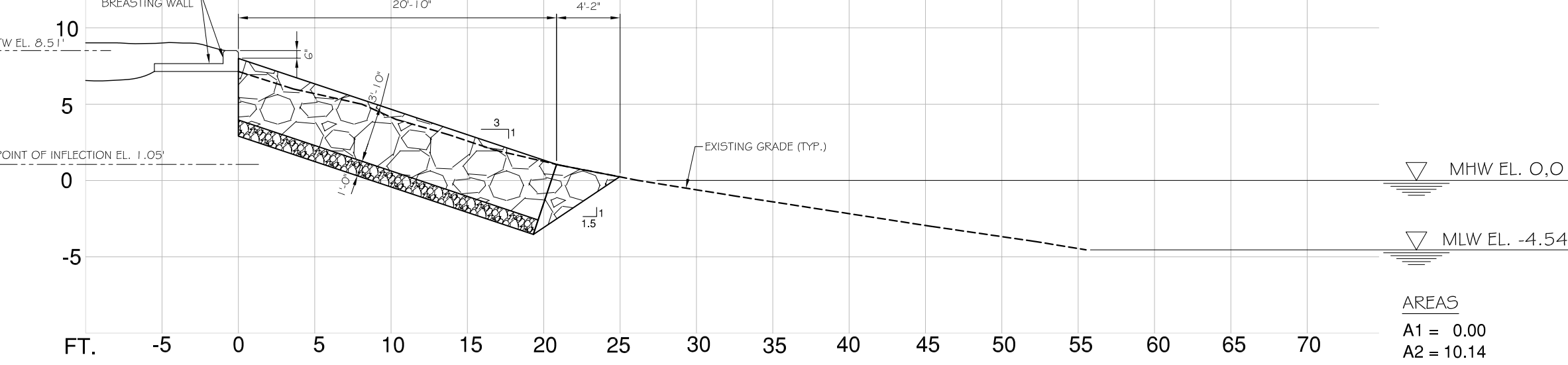
AREAS
A1 = 2.74
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A5 = 13.51
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A7 = 6.02



STA. 1+25

SCALE: 1 :100

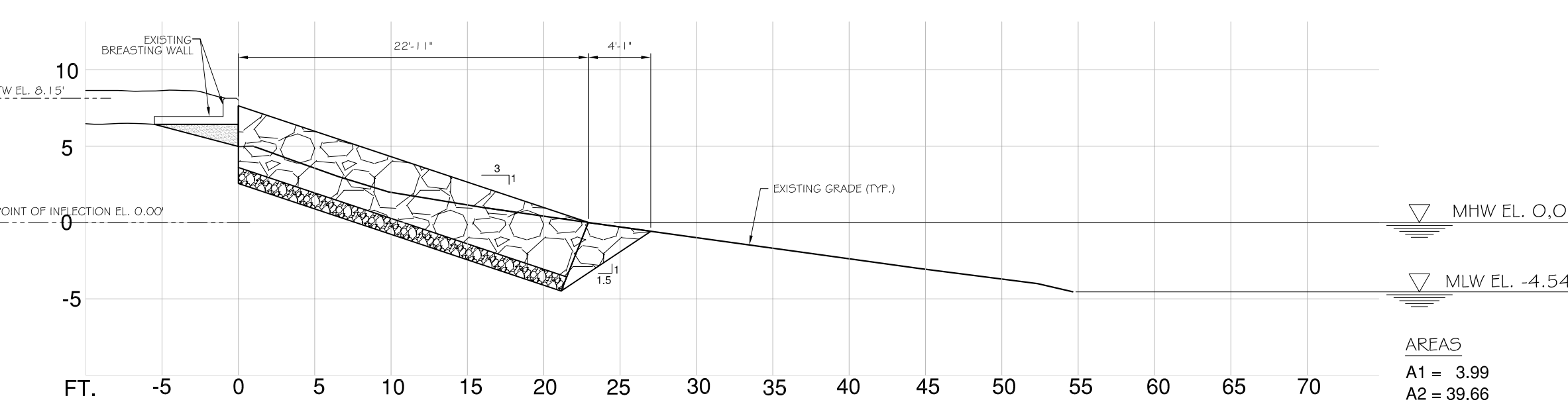
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A1 = 2.20
A2 = 24.09
A3 = 63.03
A4 = 21.84
A5 = 31.82
A6 = 10.21
A7 = 00.00



STA. 2+00

SCALE: 1 :100

AREAS
A1 = 0.00
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A3 = 71.65
A4 = 20.45
A5 = 20.81
A6 = 7.27
A7 = 2.79



STA. 2+50

SCALE: 1 :100

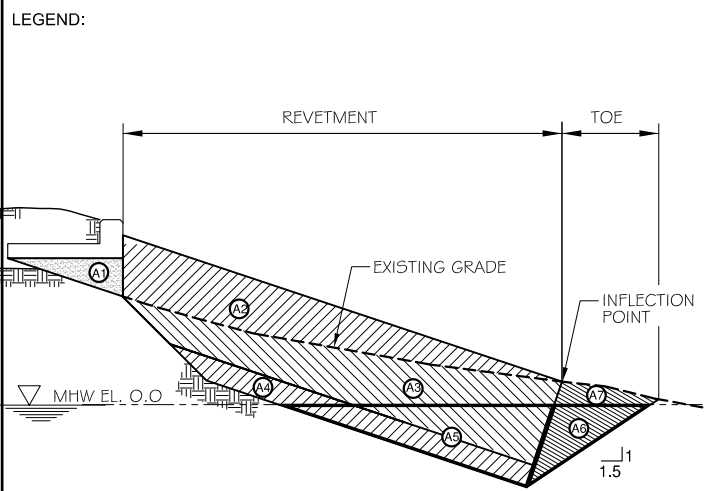
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A1 = 3.99
A2 = 39.66
A3 = 50.01
A4 = 22.44
A5 = 34.25
A6 = 9.71
A7 = 00.00

Pennmax Engineering, PLLC
CONSULTING ENGINEERS

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35 Horseshoe Hill Road
Pound Ridge, NY 10576
T: 914.764.9400
F: 914.764.0515



TYPICAL RIPRAP SECTION

- AREAS
- A1 AREA BELOW BREASTING WALL
 - A2 AREA ARMOR STONE ABOVE GRADE TO INFLECTION POINT
 - A3 AREA ARMOR STONE BELOW GRADE TO INFLECTION POINT
 - A4 AREA BEDDING STONE BELOW GRADE TO INFLECTION POINT
 - A5 AREA EXCAVATION BELOW MLW TO INFLECTION POINT
 - A6 AREA TOE BELOW MLW
 - A7 AREA TOE ABOVE MLW
- A2 + A3 + A6 + A7 AREA ARMOR STONE
A5 + A6 TOTAL AREA EXCAVATION BELOW MLW
A3 + A4 + A6 + A7 TOTAL EXCAVATION BELOW EXISTING GRADE

95% PROGRESS SET

CONDITIONS

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REVISIONS		
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE

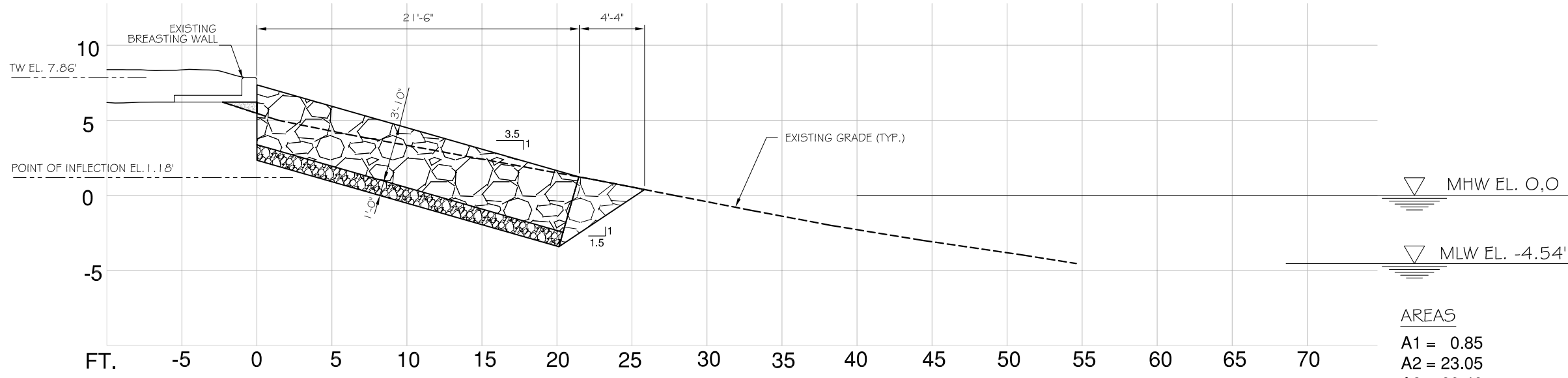
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.

SHEET TITLE

TRANS-SECTIONS
STA. 2+75 TO 5+00
(SHEET 2 OF 8)

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	AS SHOWN
	CAD FILE No.	02.23.12-001
	DRAWING No.	C-201.00
	SHEET No.	10 OF 18

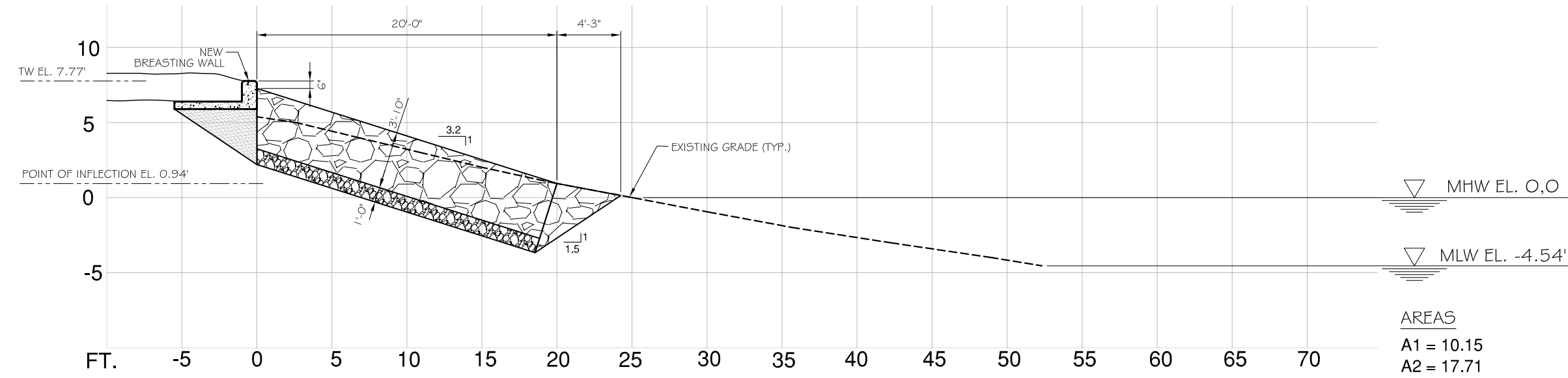


STA. 2+75

SCALE: 1:100

AREAS

A1 = 0.85
A2 = 23.05
A3 = 60.40
A4 = 21.08
A5 = 22.11
A6 = 7.09
A7 = 3.67

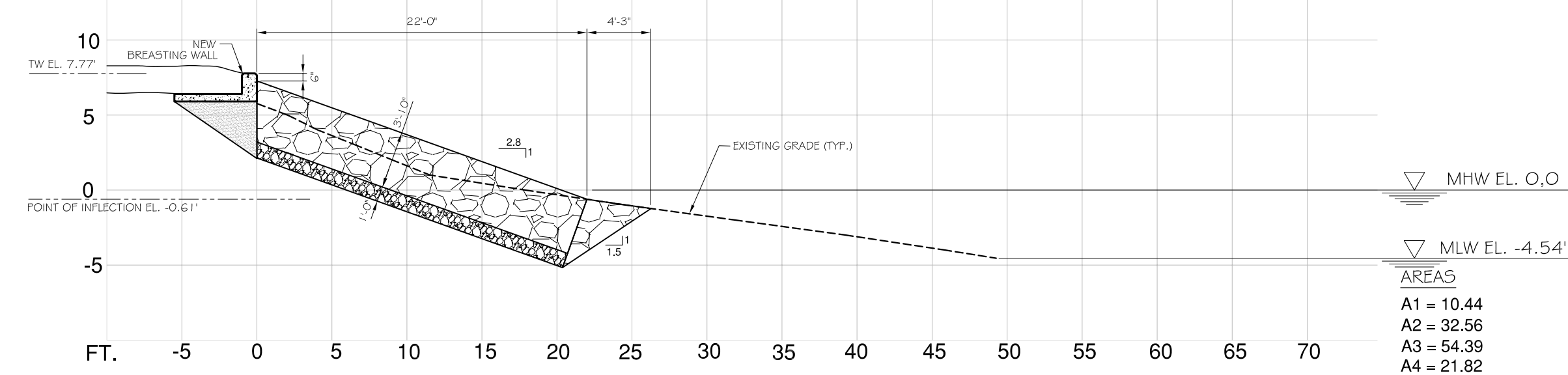


STA. 3+25

SCALE: 1:100

AREAS

A1 = 10.15
A2 = 17.71
A3 = 60.36
A4 = 19.61
A5 = 23.38
A6 = 8.00
A7 = 2.42

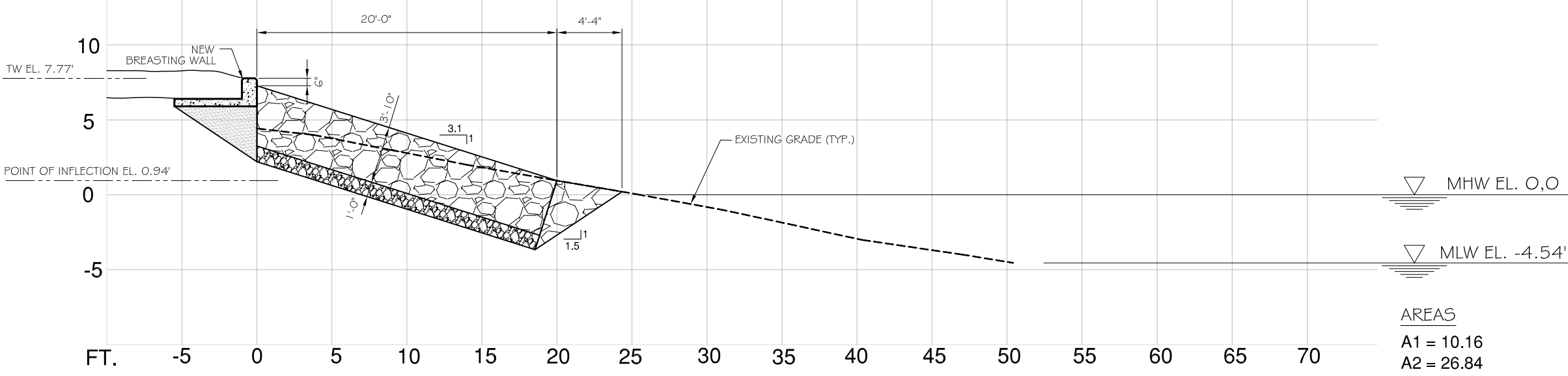


STA. 3+75

SCALE: 1:100

AREAS

A1 = 10.44
A2 = 32.56
A3 = 54.39
A4 = 21.82
A5 = 41.35
A6 = 10.21
A7 = 00.00

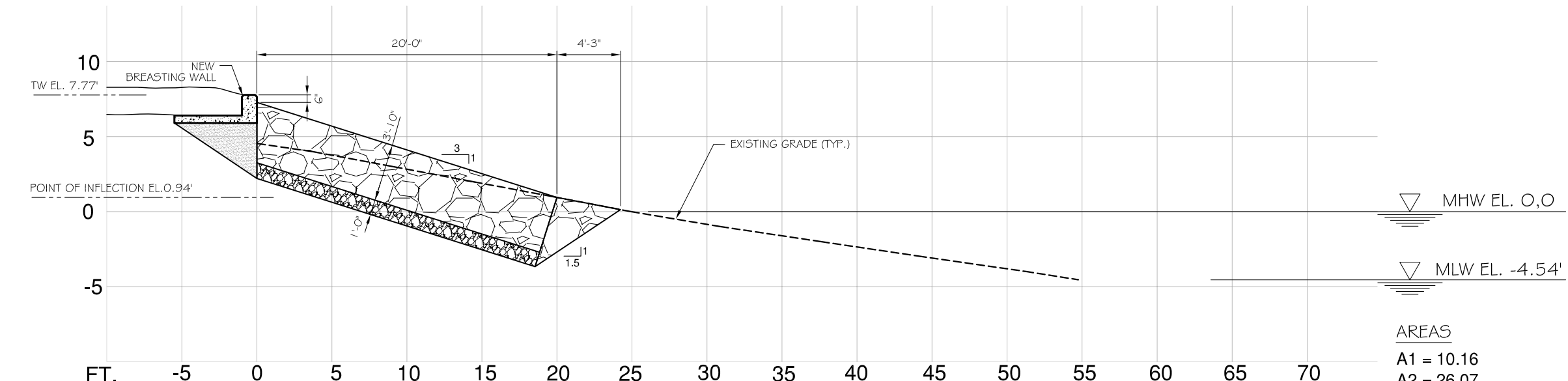


STA. 4+25

SCALE: 1:100

AREAS

A1 = 10.16
A2 = 26.84
A3 = 51.24
A4 = 19.61
A5 = 23.28
A6 = 7.92
A7 = 2.60

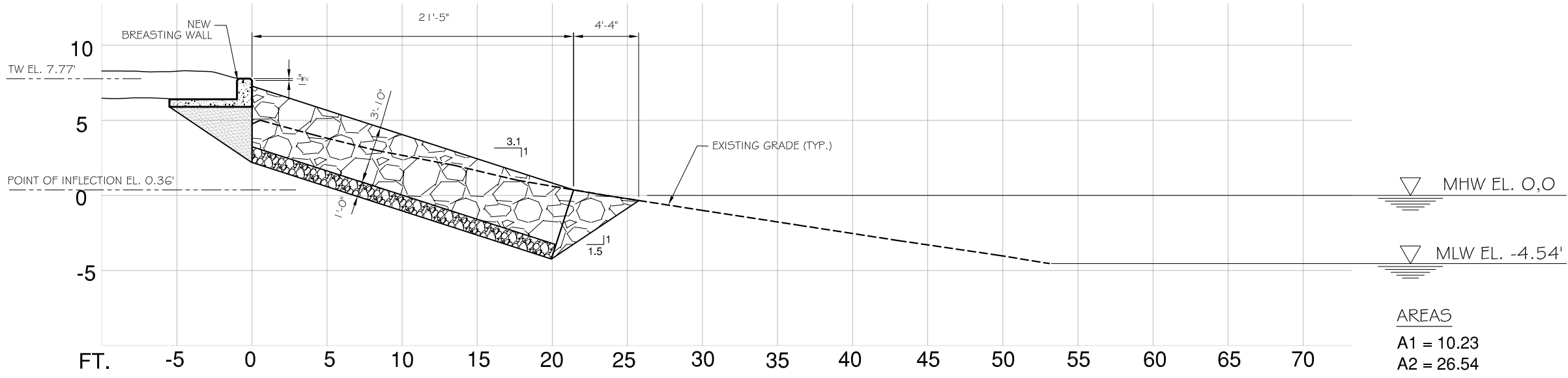


STA. 4+75

SCALE: 1:100

AREAS

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A2 = 26.07
A3 = 52.02
A4 = 19.61
A5 = 23.31
A6 = 7.94
A7 = 2.41

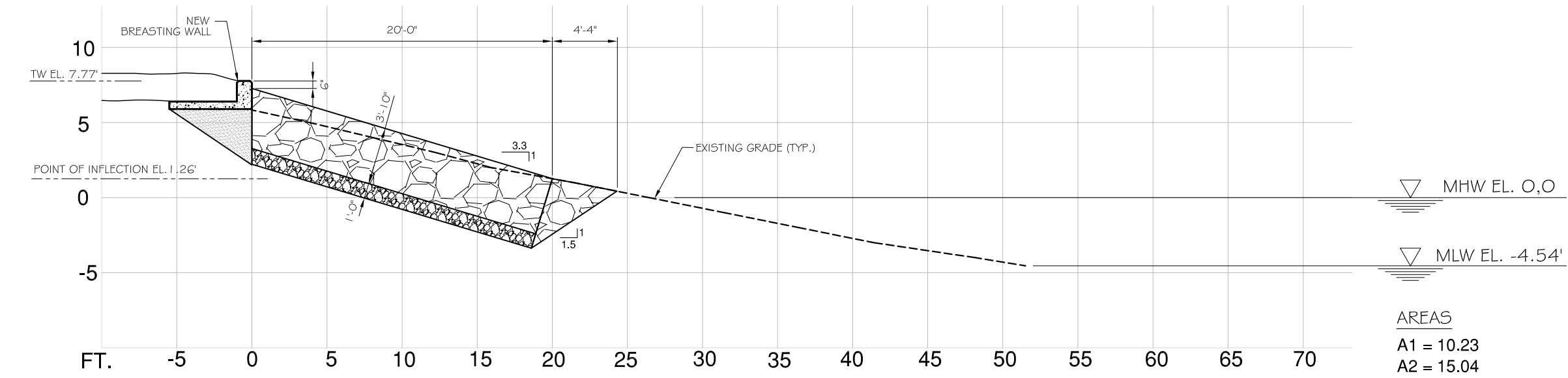


STA. 3+00

SCALE: 1:100

AREAS

A1 = 10.23
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A3 = 57.35
A4 = 21.10
A5 = 30.71
A6 = 10.04
A7 = 0.00

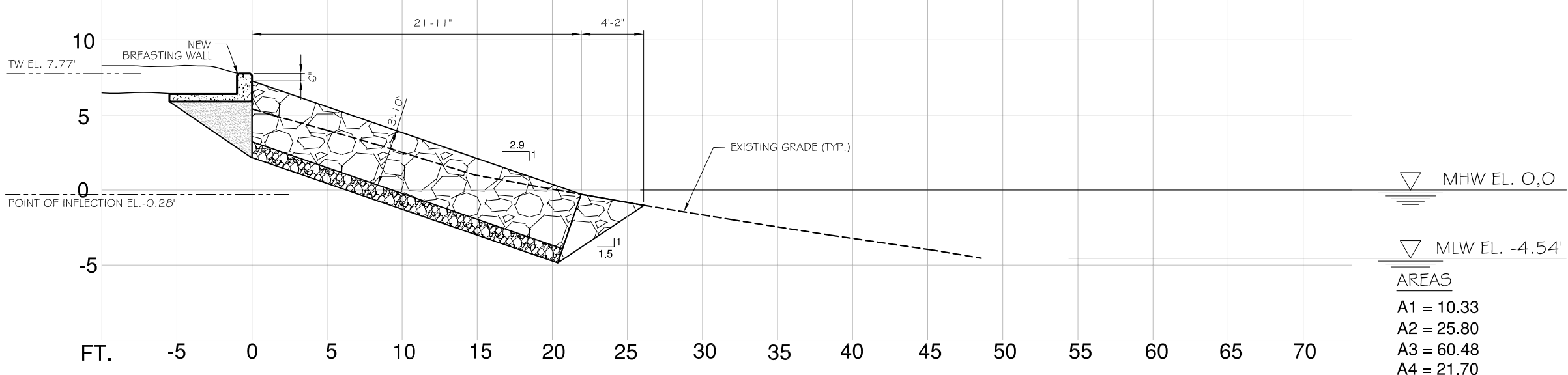


STA. 3+50

SCALE: 1:100

AREAS

A1 = 10.23
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A3 = 62.79
A4 = 19.58
A5 = 20.59
A6 = 6.81
A7 = 3.77

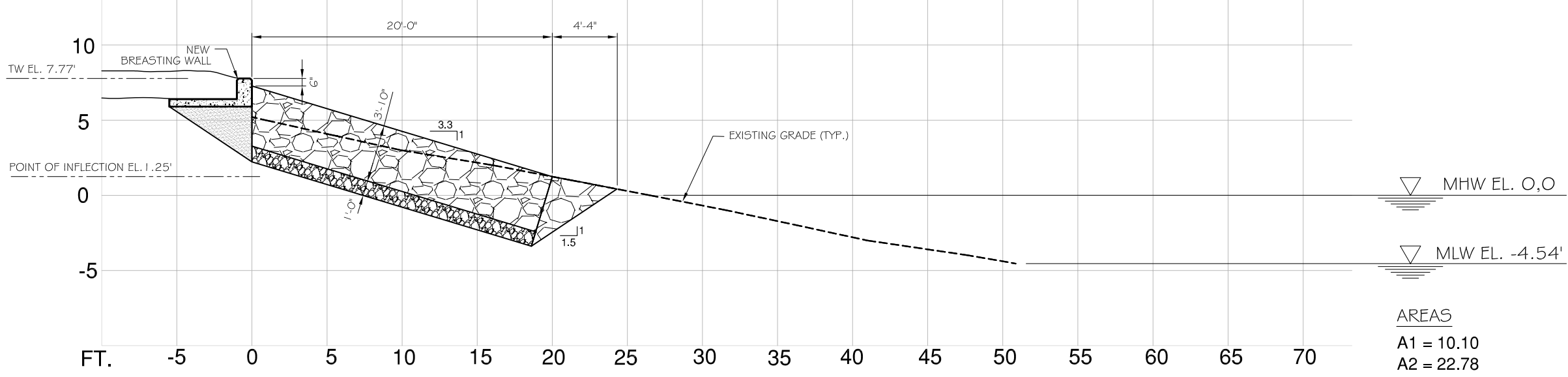


STA. 4+00

SCALE: 1:100

AREAS

A1 = 10.33
A2 = 25.80
A3 = 60.48
A4 = 21.70
A5 = 37.96
A6 = 10.18
A7 = 00.00

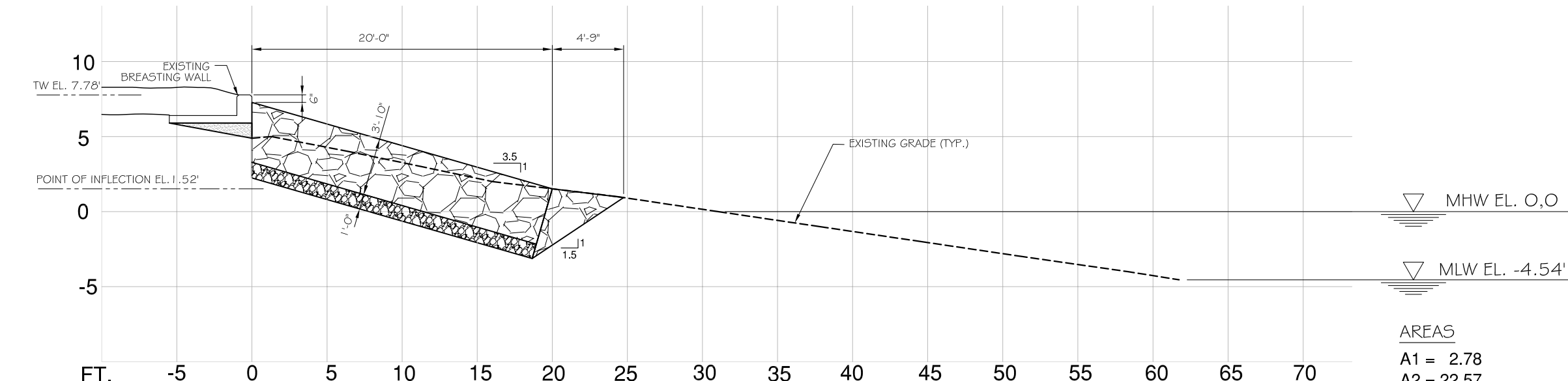


STA. 4+50

SCALE: 1:100

AREAS

A1 = 10.10
A2 = 22.78
A3 = 55.05
A4 = 19.58
A5 = 20.71
A6 = 6.86
A7 = 3.71



STA. 5+00

SCALE: 1:100

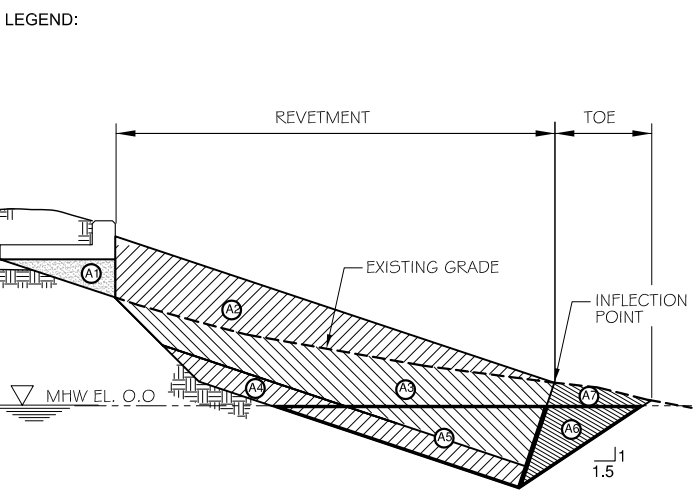
AREAS

A1 = 2.78
A2 = 22.57
A3 = 55.10
A4 = 19.56
A5 = 18.37
A6 = 5.92
A7 = 5.52

Pennmax Engineering, PLLC
CONSULTING ENGINEERS

OWNER:
NYC ECONOMIC DEVELOPMENT CORP.
110 WILLIAM STREET
NEW YORK, NY 10038
CONTRACTOR/CLIENT:
HUNTER ROBERTS CONSTRUCTION GROUP
2 WORLD FINANCIAL CENTER, 6TH FL.
NEW YORK, N.Y.

ENGINEER:
Pennmax Engineering, PLLC
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Pound Ridge, NY 10576
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F: 914.764.0515



TYPICAL RIPRAP SECTION

- AREAS
- A1 AREA BELOW BREASTING WALL
 - A2 AREA ARMOR STONE ABOVE GRADE TO INFLECTION POINT
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 - A5 AREA EXCAVATION BELOW MHW TO INFLECTION POINT
 - A6 AREA TOE BELOW MHW
 - A7 AREA TOE ABOVE MHW
- A2 + A3 + A6 + A7 AREA ARMOR STONE
A5 + A6 TOTAL AREA EXCAVATION BELOW MHW
A3 + A4 + A6 + A7 TOTAL EXCAVATION BELOW EXISTING GRADE

95% PROGRESS SET

CONDITIONS
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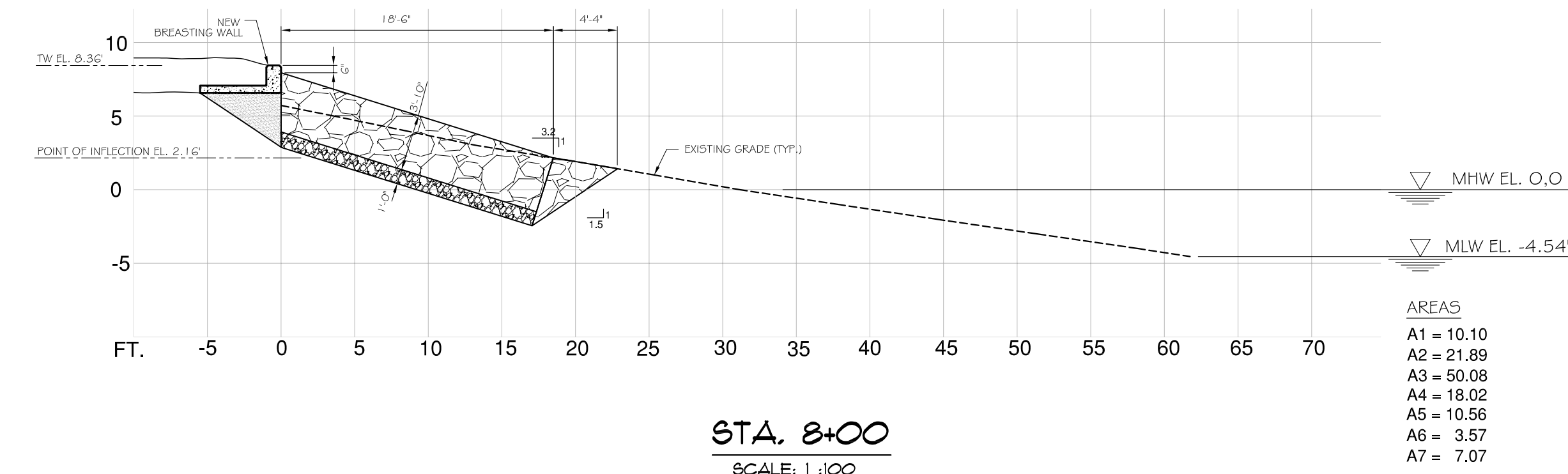
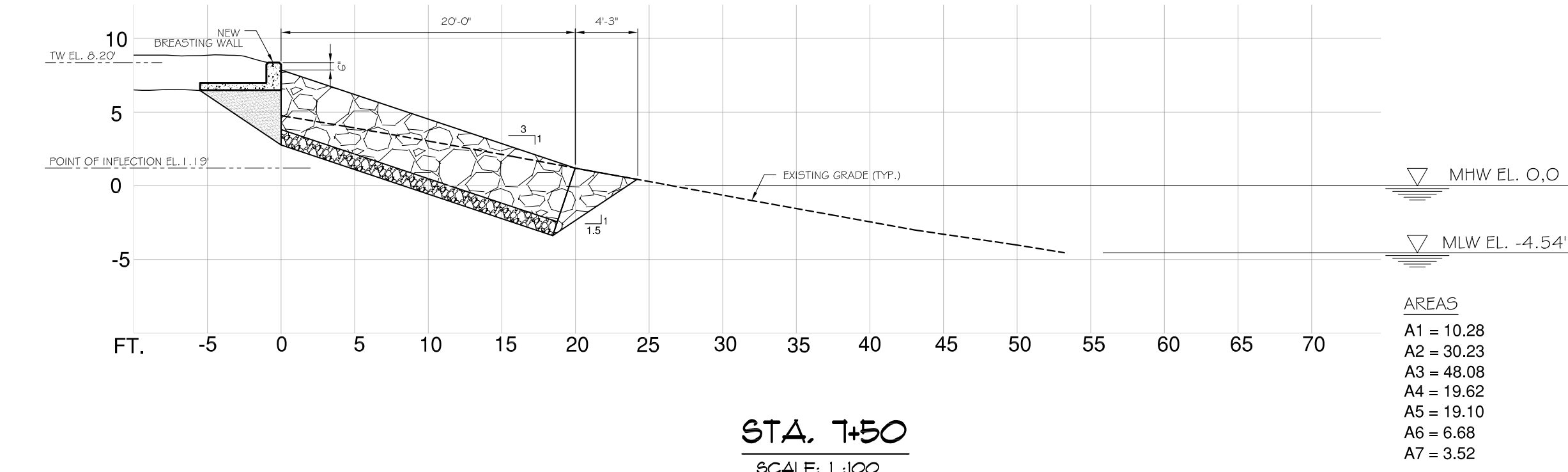
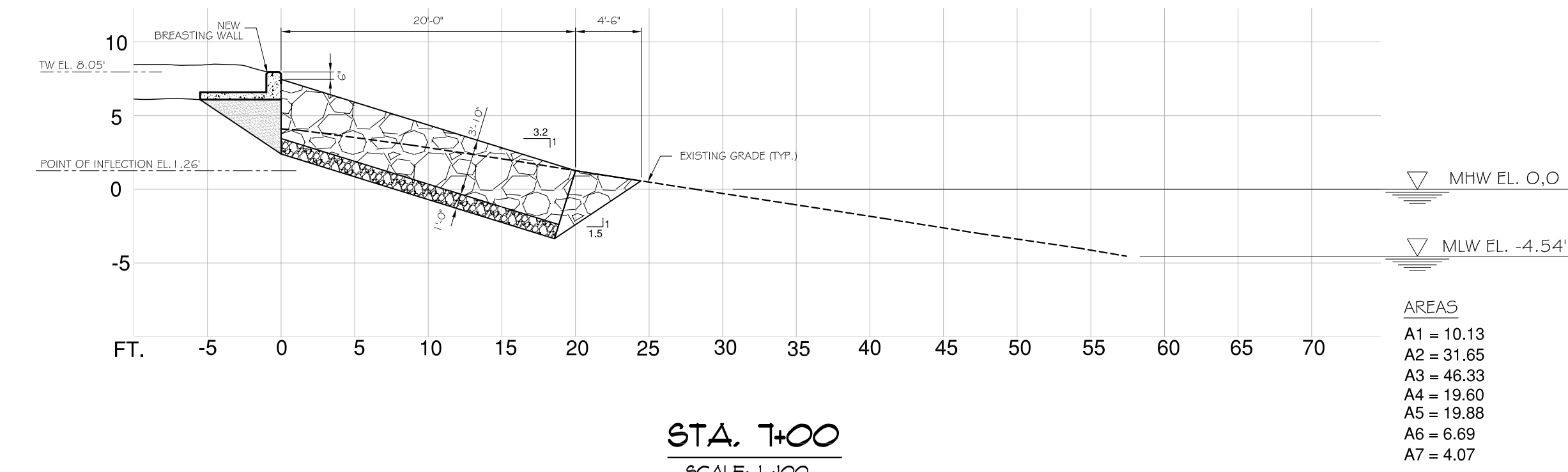
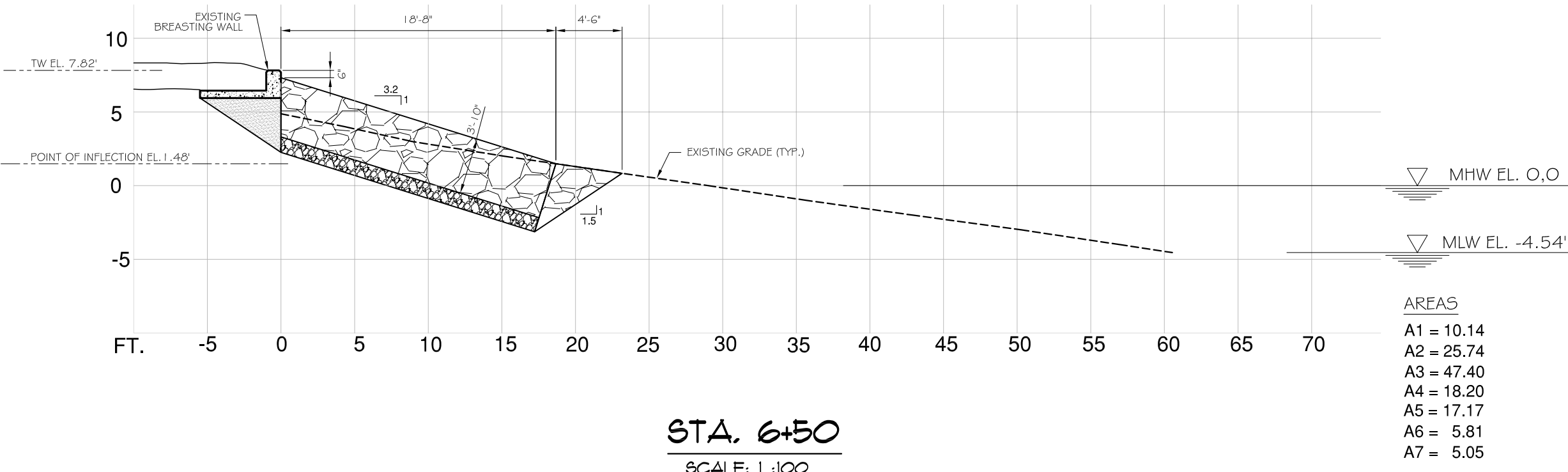
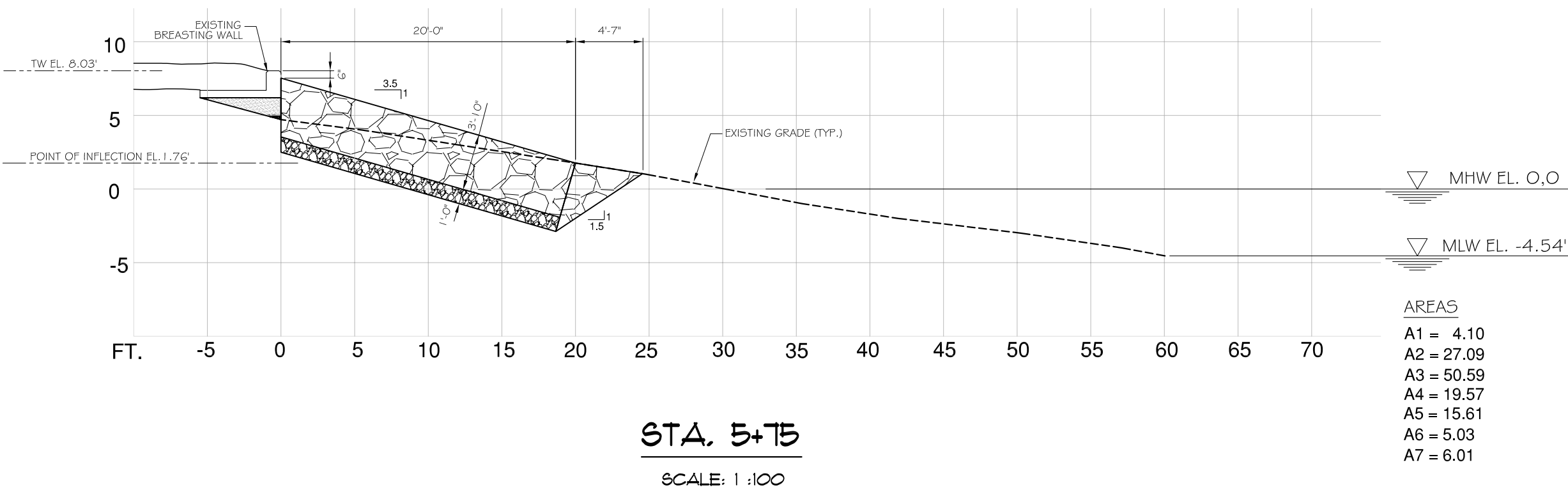
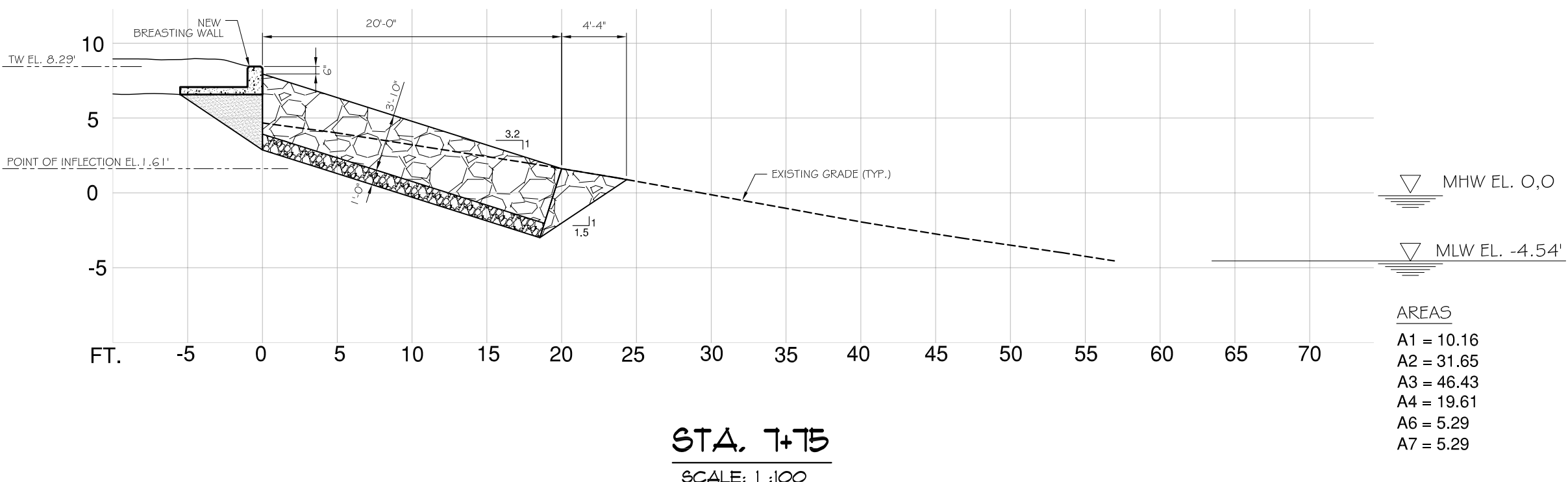
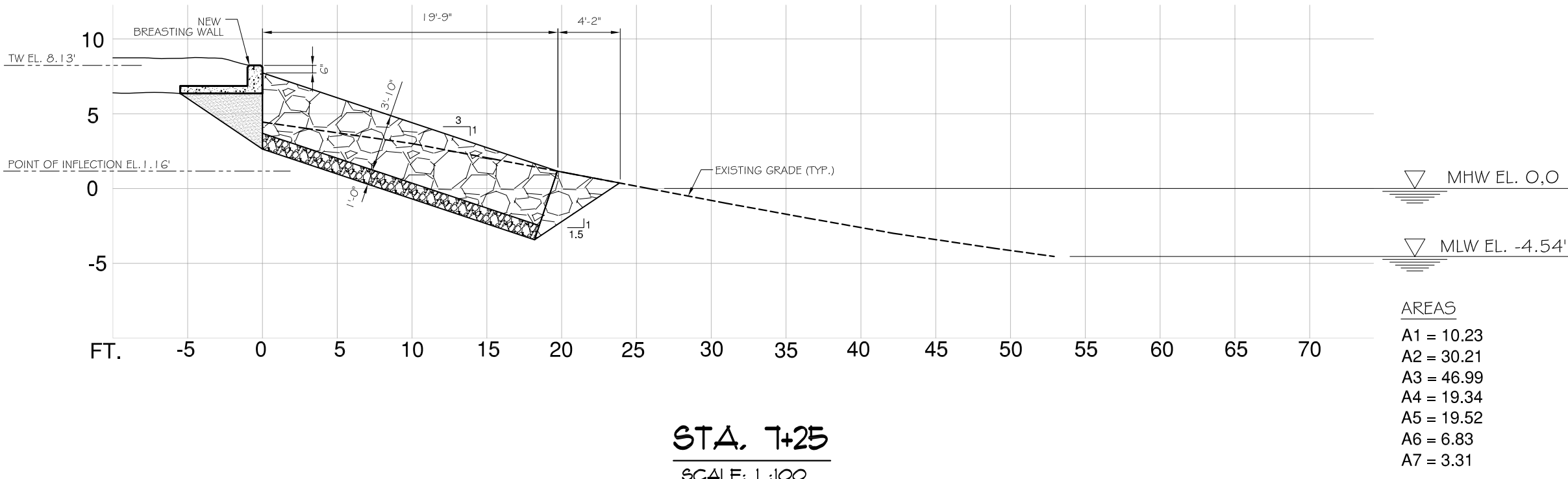
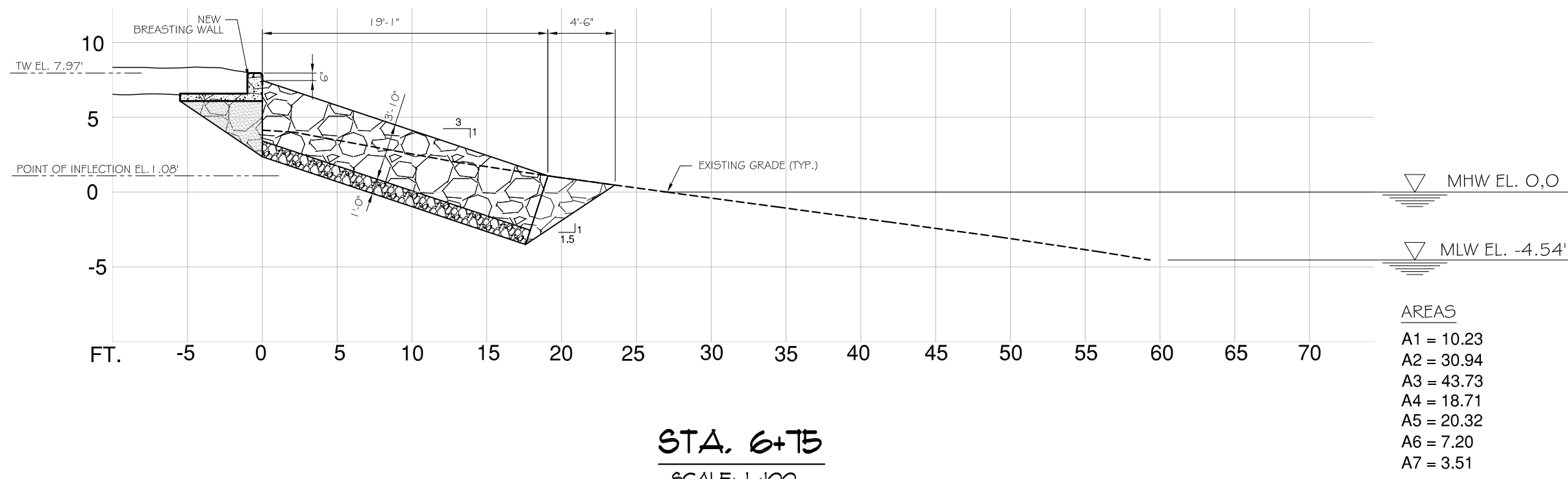
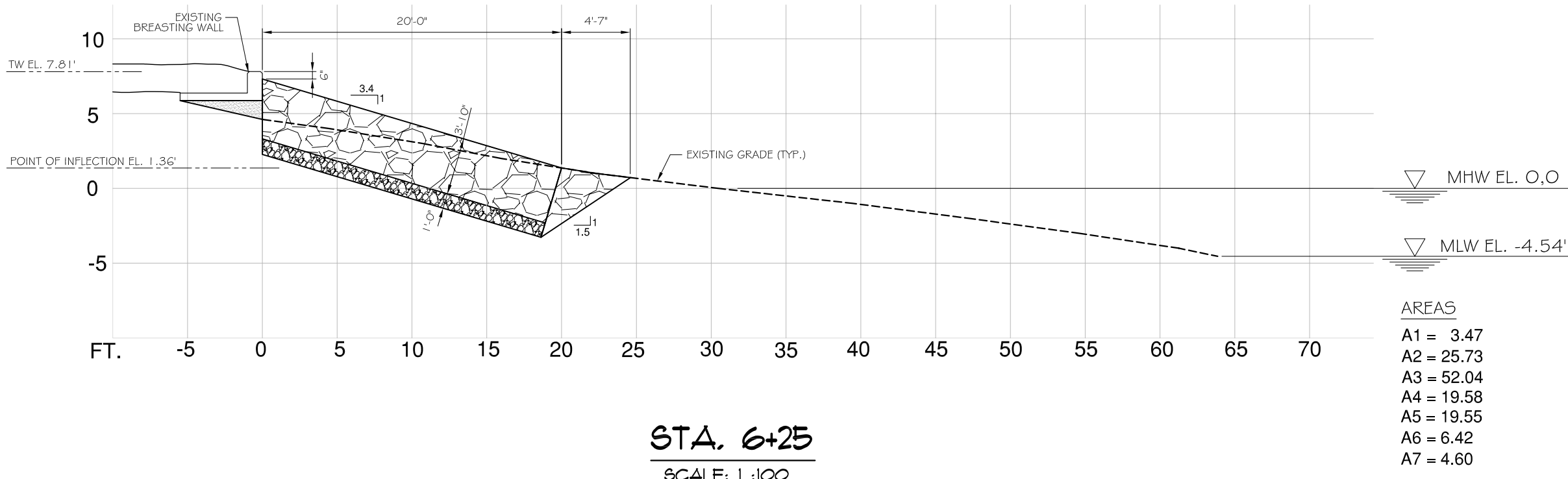
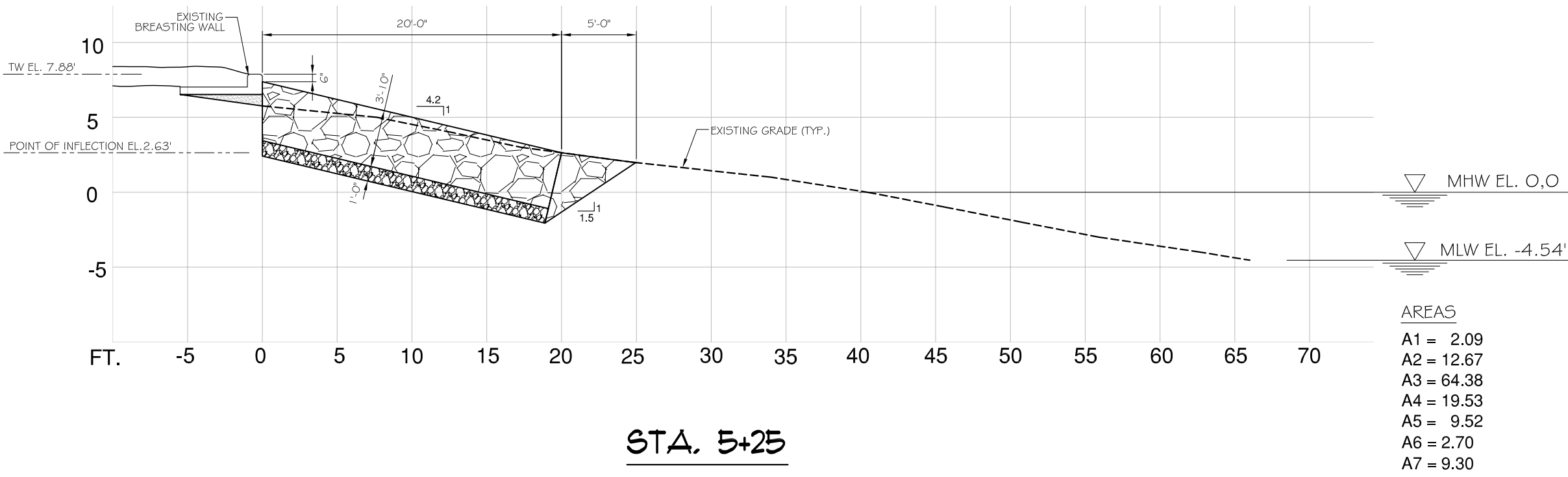
REVISIONS		
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.
SHEET TITLE

**TRANS-SECTIONS
STA. 5+25 TO 8+00
(SHEET 3 OF 8)**

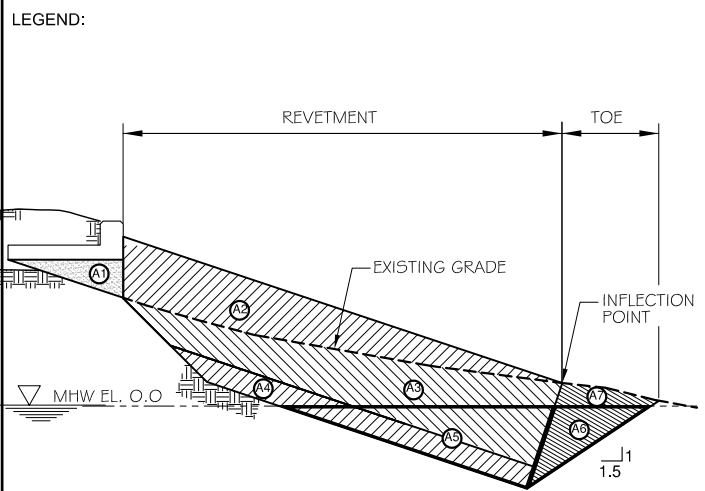
SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	AS SHOWN
	CAD FILE No.	02.23.12-001
DRAWING No.		C-202.00
SHEET No.		11 OF 18



Pennmax Engineering, PLLC
CONSULTING ENGINEERS

OWNER:
NYC ECONOMIC DEVELOPMENT CORP.
110 WILLIAM STREET
NEW YORK, NY 10038
CONTRACTOR/CLIENT:
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2 WORLD FINANCIAL CENTER, 6TH FL.
NEW YORK, N.Y.

ENGINEER:
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35 Horseshoe Hill Road
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T: 914.764.8400
F: 914.764.0515



TYPICAL RIPRAP SECTION

- AREAS
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95% PROGRESS SET

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REVISIONS

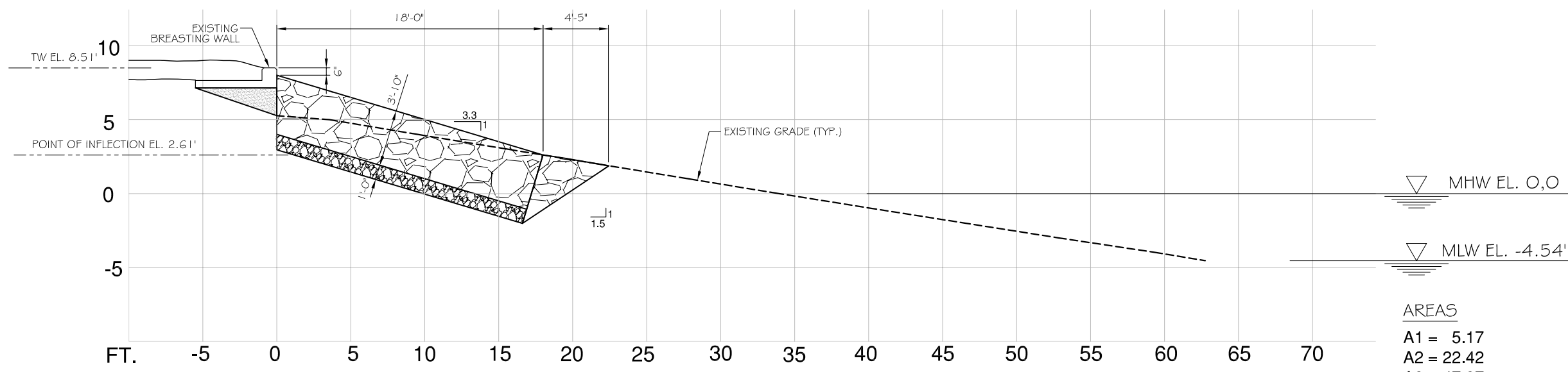
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

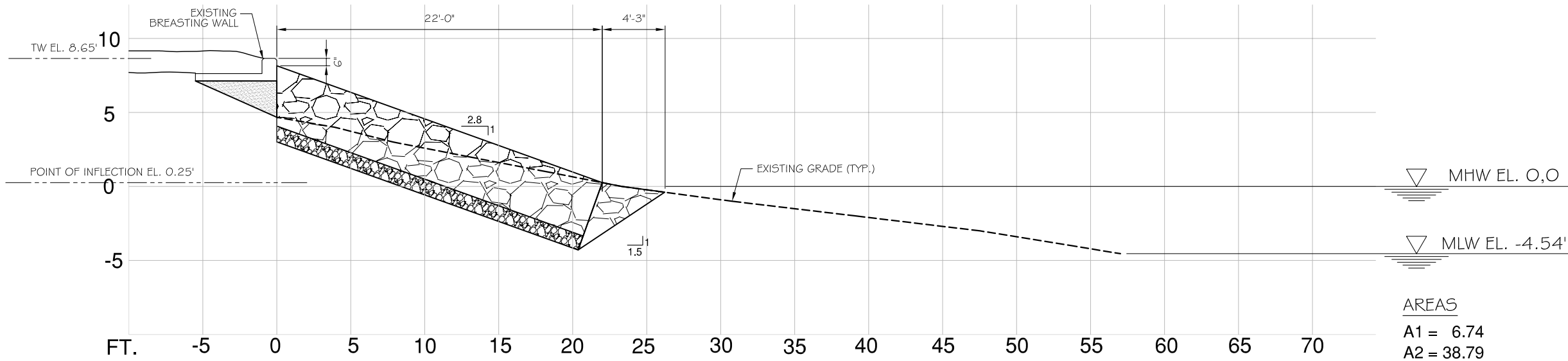
STATEN ISLAND N.Y.

SHEET TITLE
**TRANS-SECTIONS
FROM 8+25 TO 10+50
(SHEET 4 OF 8)**

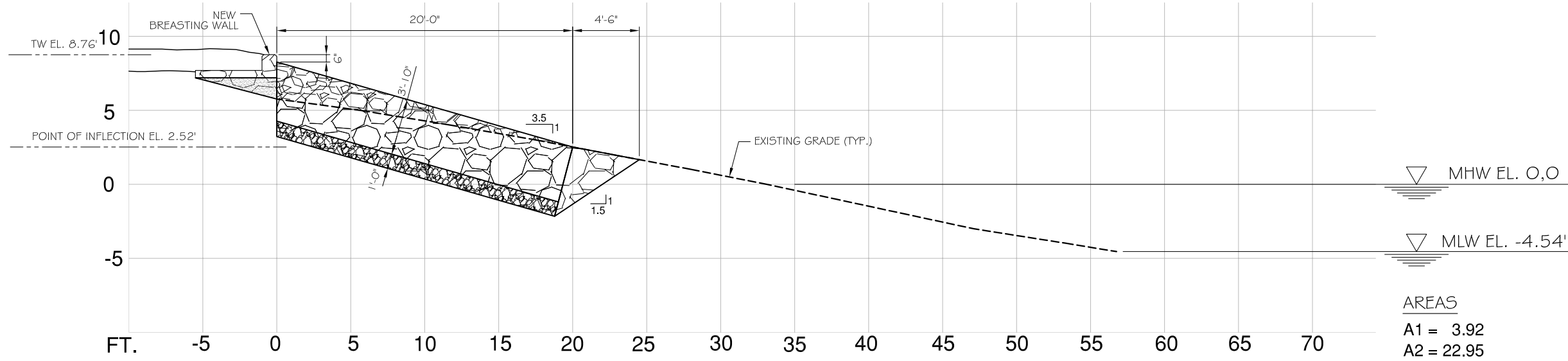
SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
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	CAD FILE No.	02.23.12-001
DRAWING No.		C-203.00
SHEET No.		12 OF 18



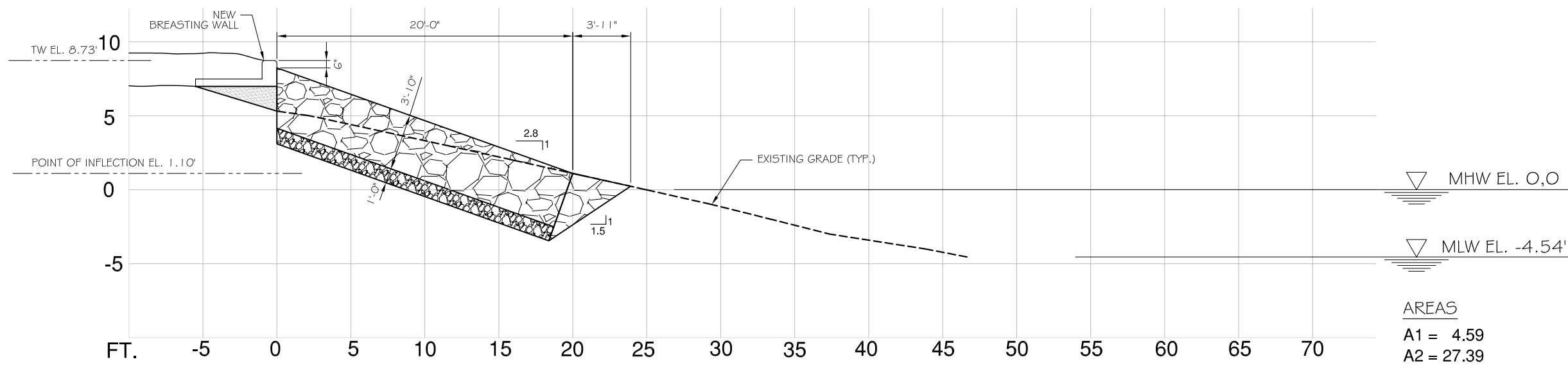
STA. 8+25
SCALE: 1 :100



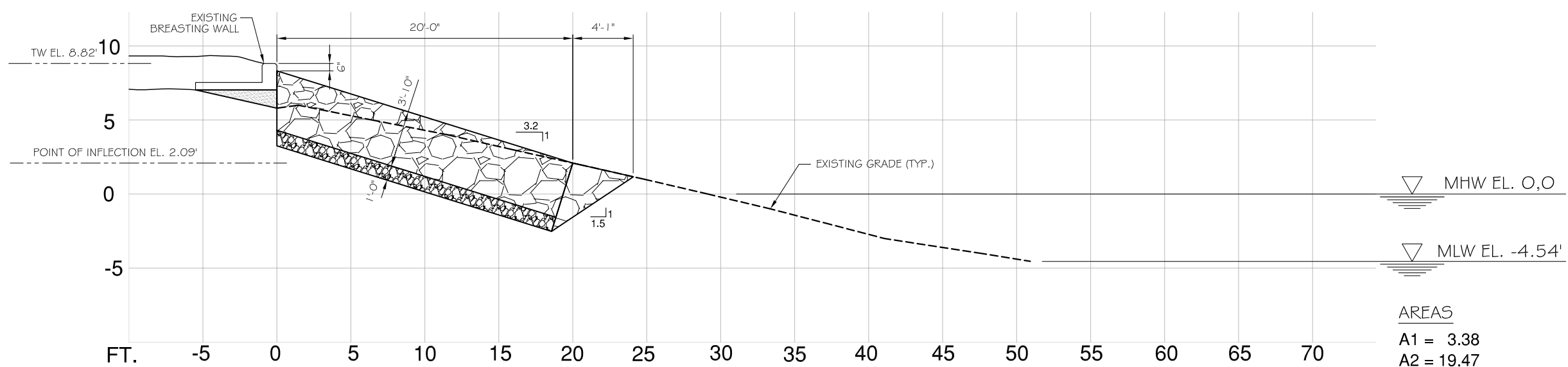
STA. 8+75
SCALE: 1 :100



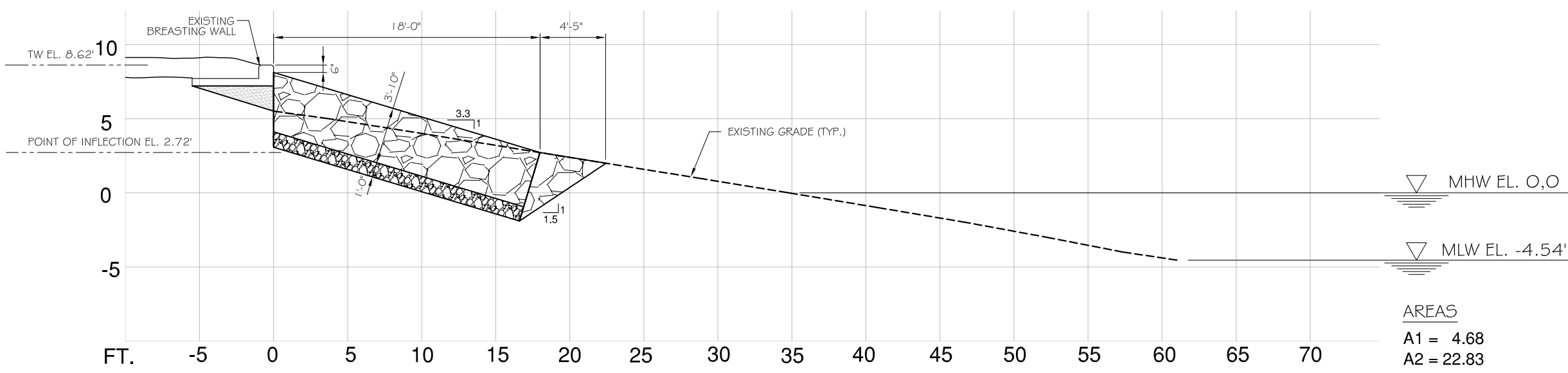
STA. 9+25
SCALE: 1 :100



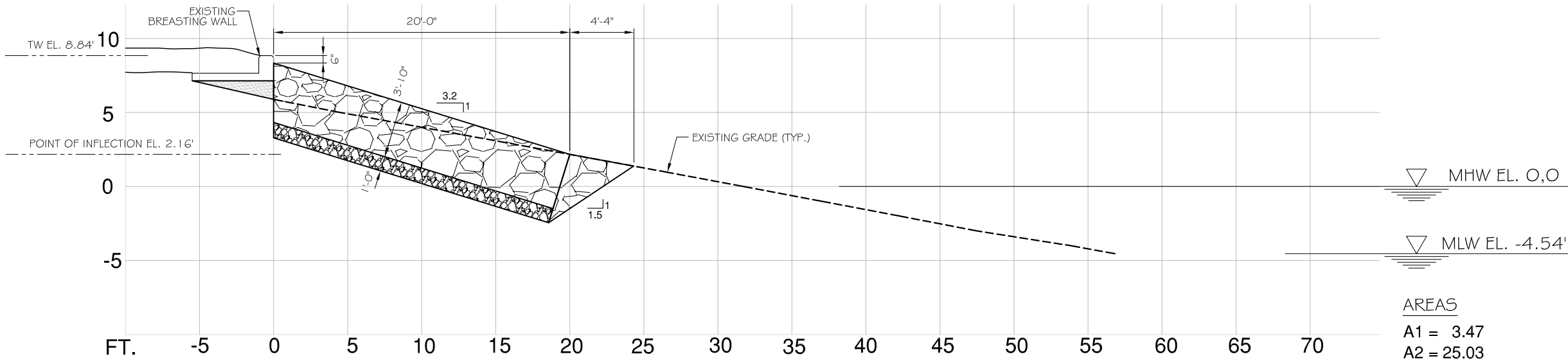
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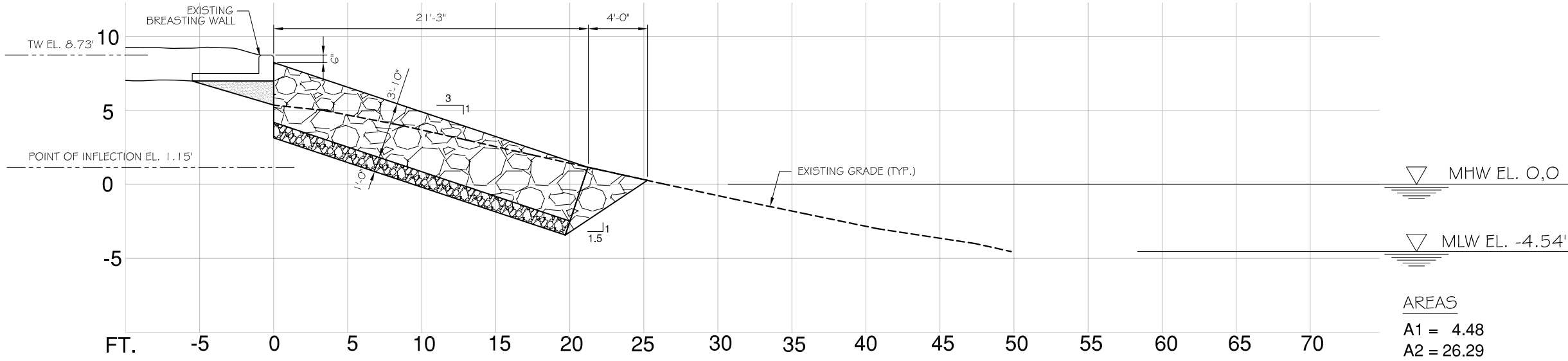
STA. 10+25
SCALE: 1 :100



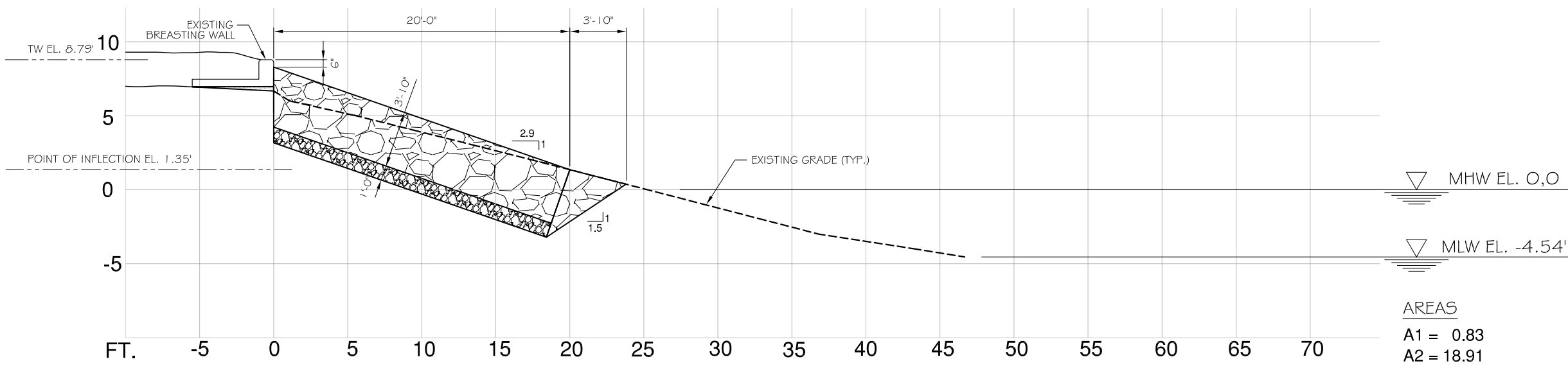
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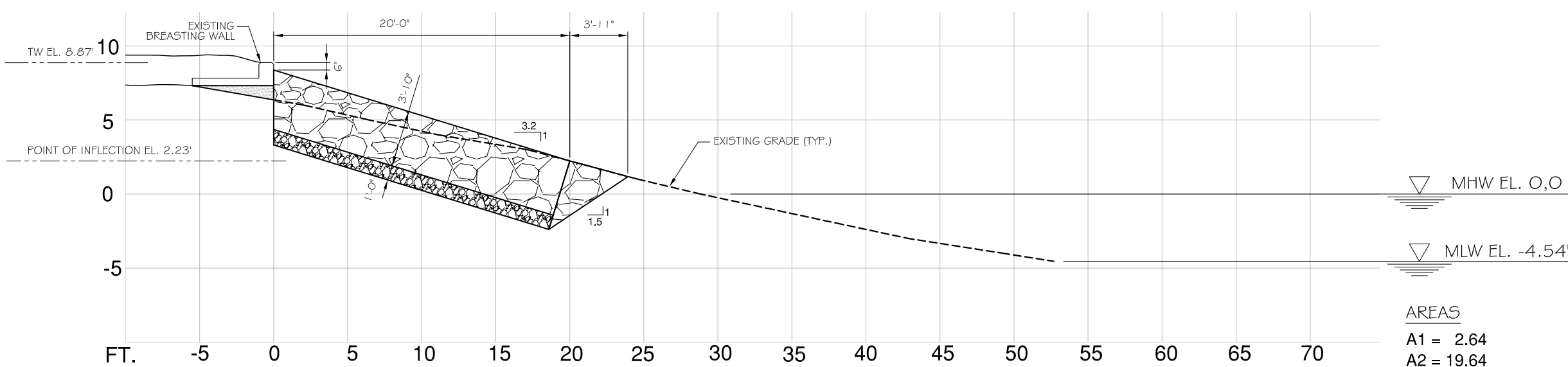
STA. 9+00
SCALE: 1 :100



STA. 9+50
SCALE: 1 :100



STA. 10+00
SCALE: 1 :100



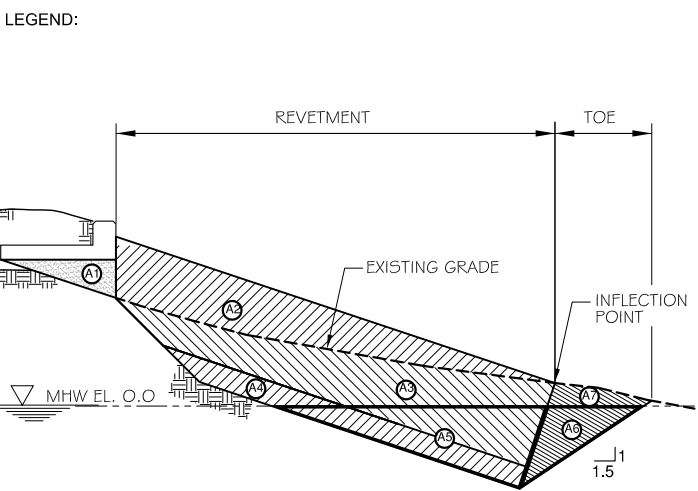
STA. 10+50
SCALE: 1 :100

Pennmax Engineering, PLLC
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110 WILLIAM STREET
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NEW YORK, N.Y.

ENGINEER:
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Pound Ridge, NY 10576
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TYPICAL RIPRAP SECTION

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 - A3 AREA ARMOR STONE BELOW GRADE TO INFLECTION POINT
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 - A5 AREA EXCAVATION BELOW MHW TO INFLECTION POINT
 - A6 AREA TOE BELOW MHW
 - A7 AREA TOE ABOVE MHW
- A2 + A3 + A6 + A7 AREA ARMOR STONE
A5 + A6 TOTAL AREA EXCAVATION BELOW MHW
A3 + A4 + A6 + A7 TOTAL EXCAVATION BELOW EXISTING GRADE

95% PROGRESS SET

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REVISIONS		
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE

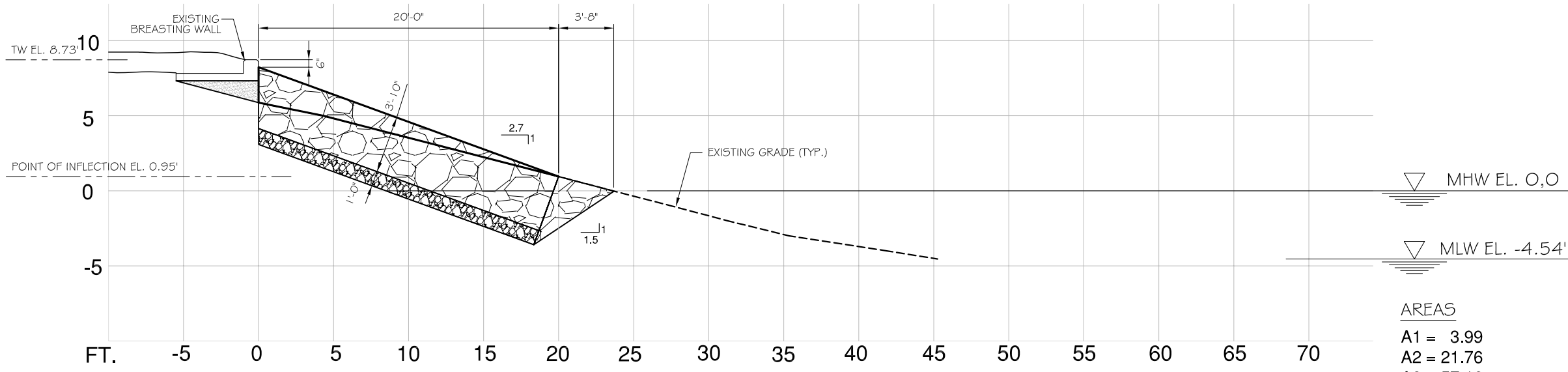
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.

SHEET TITLE

**TRANS-SECTIONS
FROM 10+75 TO 13+00
(SHEET 5 OF 8)**

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	AS SHOWN
	CAD FILE No.	02.23.12-001
	DRAWING No.	C-204.00
	SHEET No.	13 OF 18

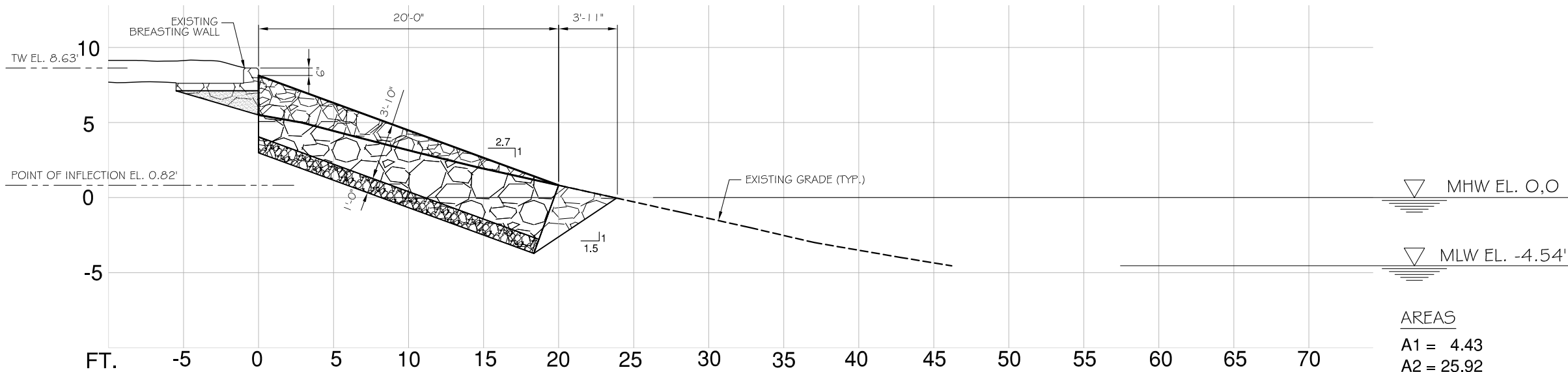


STA. 10+75

SCALE: 1 : 100

AREAS

A1 = 3.99
A2 = 21.76
A3 = 57.16
A4 = 19.71
A5 = 20.09
A6 = 7.33
A7 = 1.86

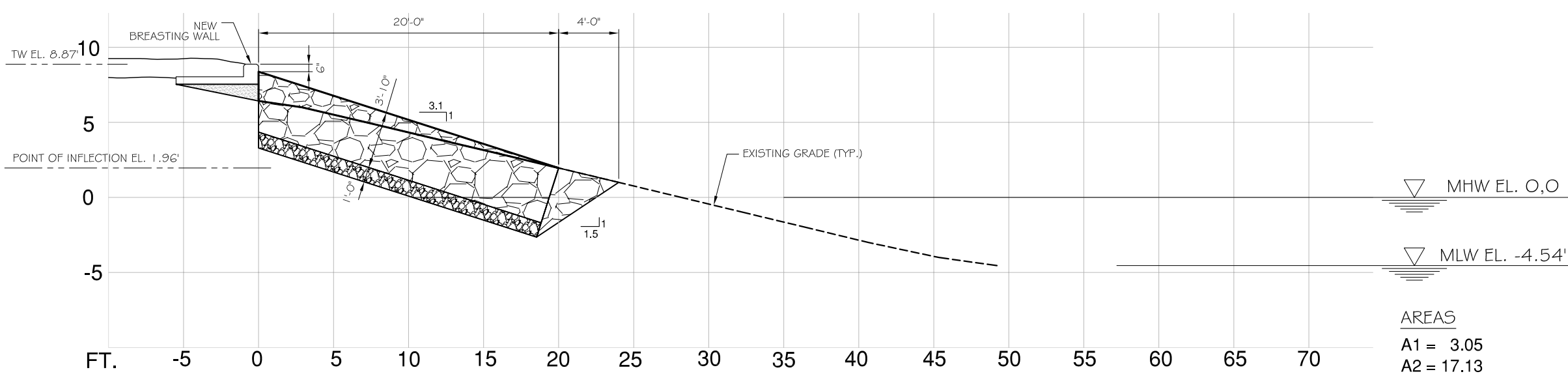


STA. 11+25

SCALE: 1 : 100

AREAS

A1 = 4.43
A2 = 25.92
A3 = 53.02
A4 = 19.71
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A6 = 7.85
A7 = 1.65

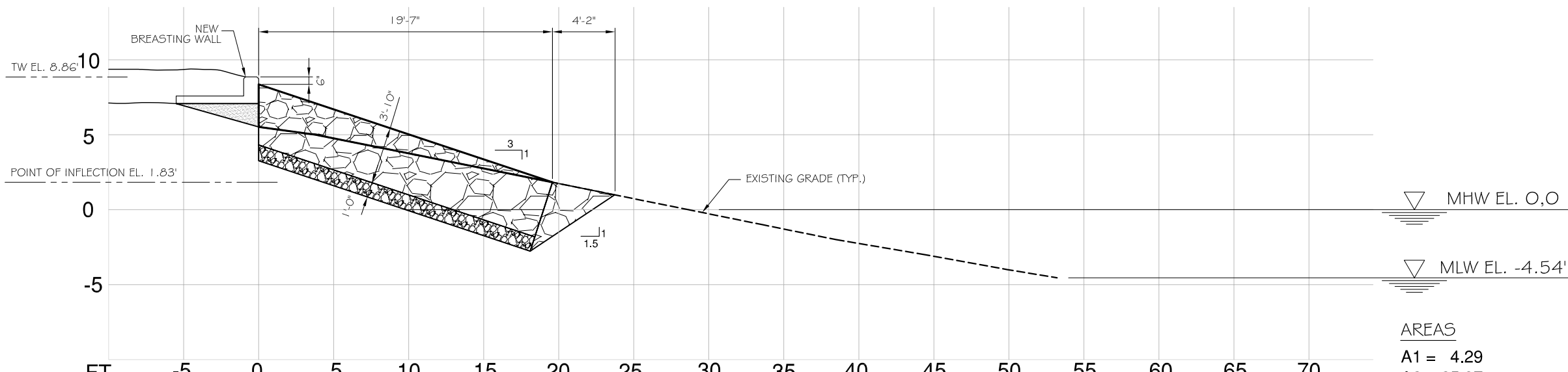


STA. 11+75

SCALE: 1 : 100

AREAS

A1 = 3.05
A2 = 17.13
A3 = 61.02
A4 = 19.61
A5 = 12.01
A6 = 4.12
A7 = 5.78

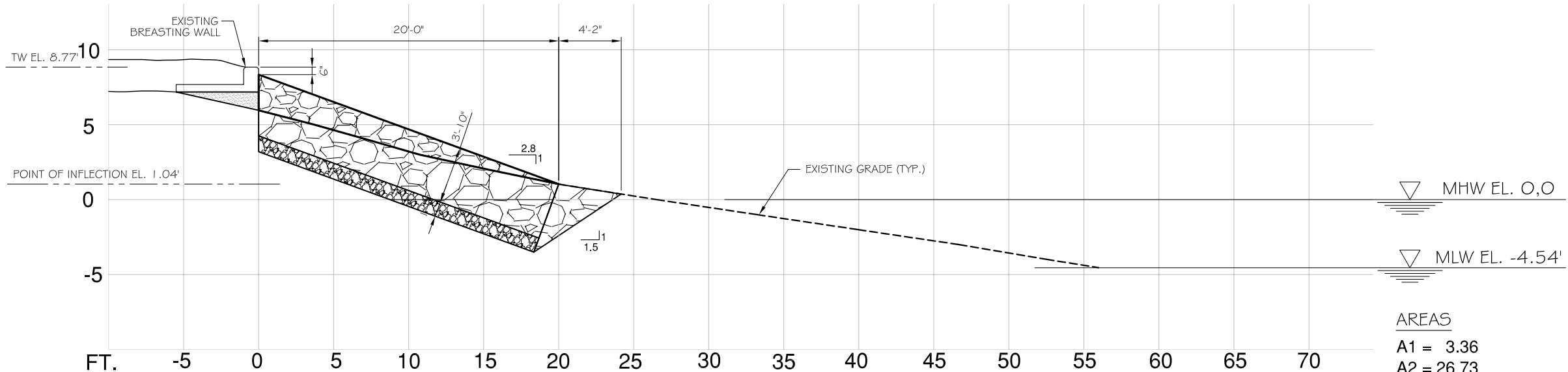


STA. 12+25

SCALE: 1 : 100

AREAS

A1 = 4.29
A2 = 25.87
A3 = 50.83
A4 = 19.13
A5 = 12.71
A6 = 4.50
A7 = 5.64

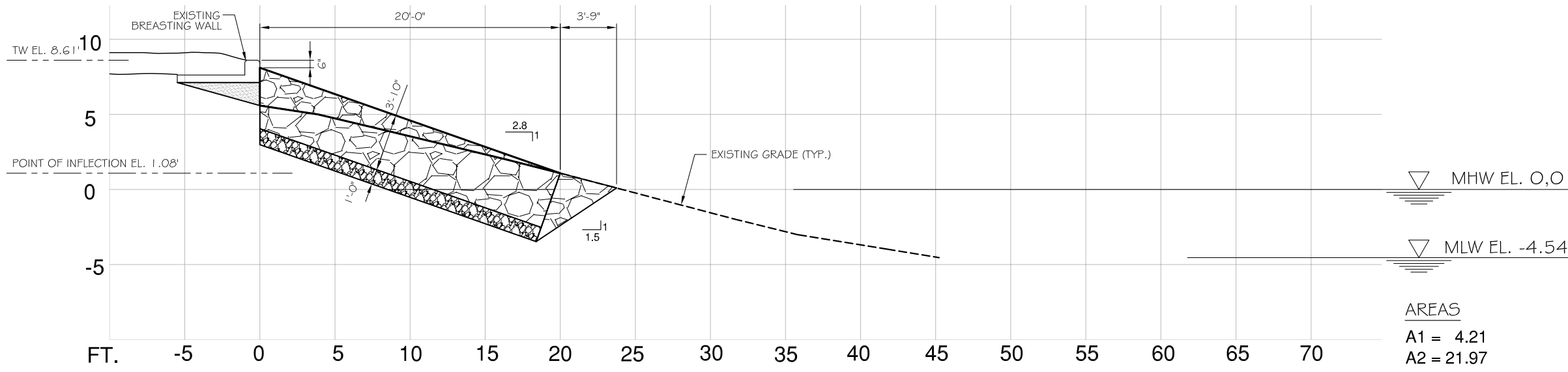


STA. 12+75

SCALE: 1 : 100

AREAS

A1 = 3.36
A2 = 26.73
A3 = 52.21
A4 = 19.71
A5 = 19.07
A6 = 6.97
A7 = 3.00

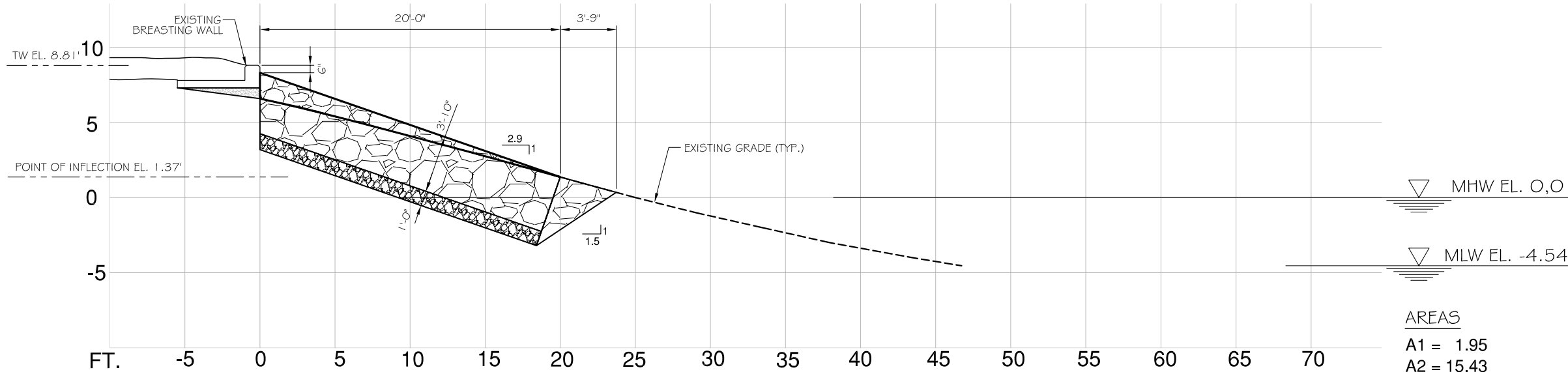


STA. 11+00

SCALE: 1 : 100

AREAS

A1 = 4.21
A2 = 21.97
A3 = 56.70
A4 = 19.68
A5 = 19.32
A6 = 6.94
A7 = 2.42

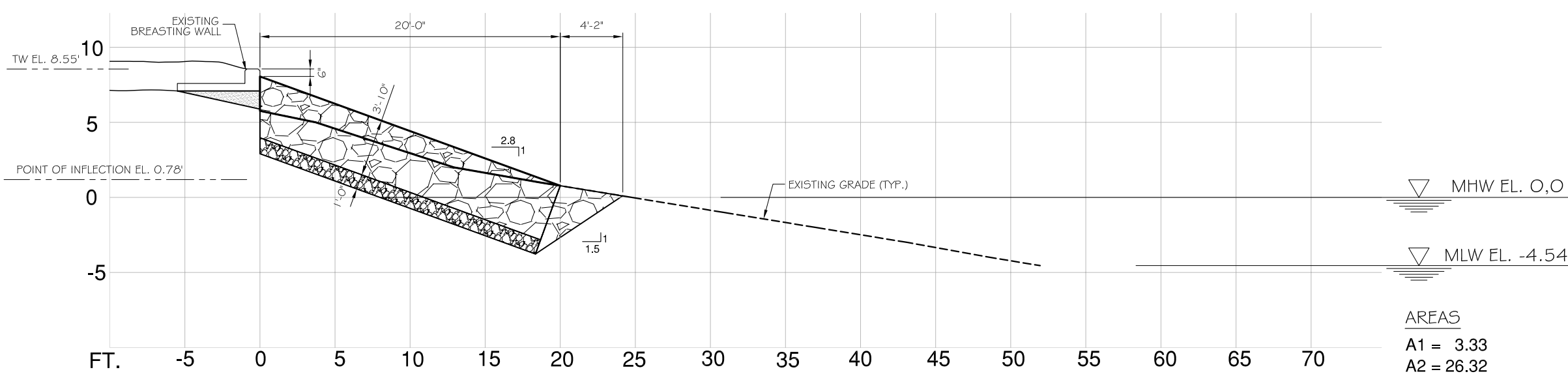


STA. 11+50

SCALE: 1 : 100

AREAS

A1 = 1.95
A2 = 15.43
A3 = 62.96
A4 = 19.67
A5 = 16.51
A6 = 5.90
A7 = 3.42

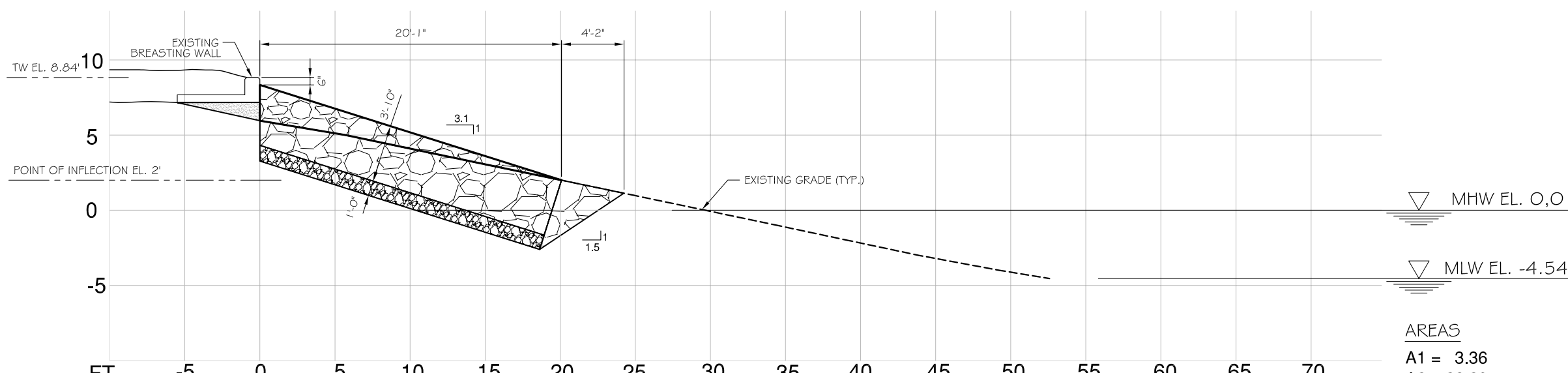


STA. 12+00

SCALE: 1 : 100

AREAS

A1 = 3.33
A2 = 26.32
A3 = 52.59
A4 = 19.71
A5 = 22.08
A6 = 8.06
A7 = 1.92

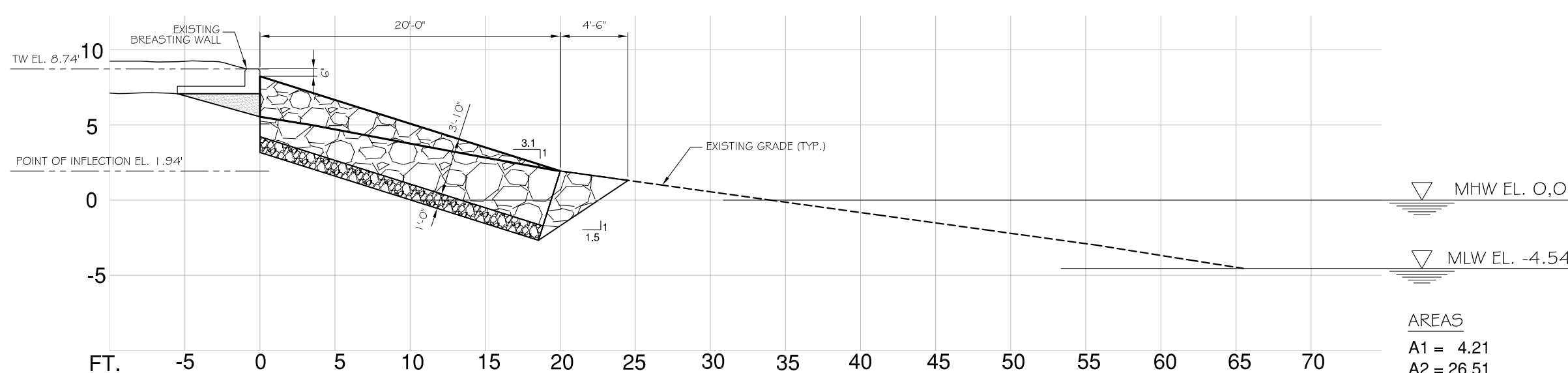


STA. 12+50

SCALE: 1 : 100

AREAS

A1 = 3.36
A2 = 22.29
A3 = 56.12
A4 = 19.69
A5 = 11.86
A6 = 4.03
A7 = 6.18



STA. 13+00

SCALE: 1 : 100

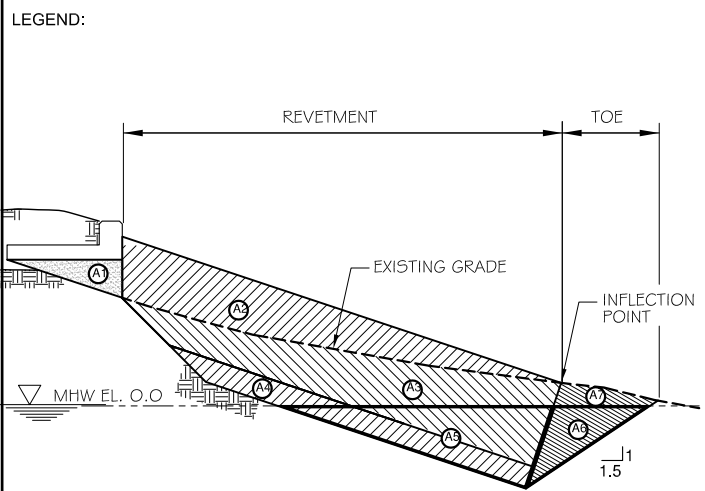
AREAS

A1 = 4.21
A2 = 26.51
A3 = 51.56
A4 = 19.60
A5 = 12.44
A6 = 4.23
A7 = 5.66

Pennmax Engineering, PLLC
CONSULTING ENGINEERS

OWNER:
NYC ECONOMIC DEVELOPMENT CORP.
110 WILLIAM STREET
NEW YORK, NY 10038
CONTRACTOR/CLIENT:
HUNTER ROBERTS CONSTRUCTION GROUP
2 WORLD FINANCIAL CENTER, 6TH FL.
NEW YORK, N.Y.

ENGINEER:
Pennmax Engineering, PLLC
35 Horseshoe Hill Road
Pound Ridge, NY 10576
T: 914.764.8400
F: 914.764.0515



TYPICAL RIPRAP SECTION

- AREAS
- A1 AREA BELOW BREASTING WALL
 - A2 AREA ARMOR STONE ABOVE GRADE TO INFLECTION POINT
 - A3 AREA ARMOR STONE BELOW GRADE TO INFLECTION POINT
 - A4 AREA BEDDING STONE BELOW GRADE TO INFLECTION POINT
 - A5 AREA EXCAVATION BELOW MHW TO INFLECTION POINT
 - A6 AREA TOE BELOW MHW
 - A7 AREA TOE ABOVE MHW
 - A2 + A3 + A6 + A7 AREA ARMOR STONE
 - A5 + A6 TOTAL AREA EXCAVATION BELOW MHW
 - A3 + A4 + A6 + A7 TOTAL EXCAVATION BELOW EXISTING GRADE

95% PROGRESS SET

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REVISIONS

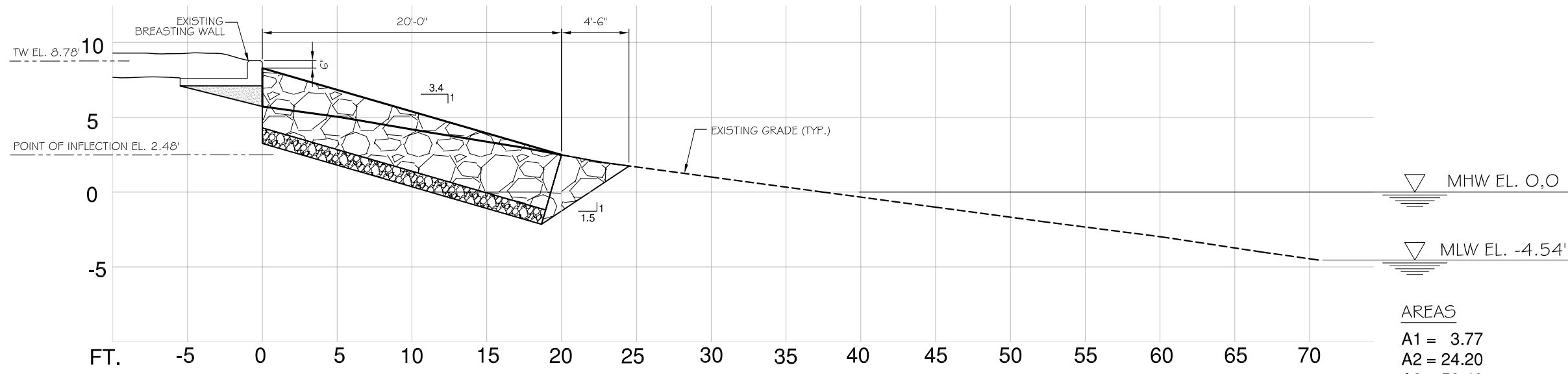
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.

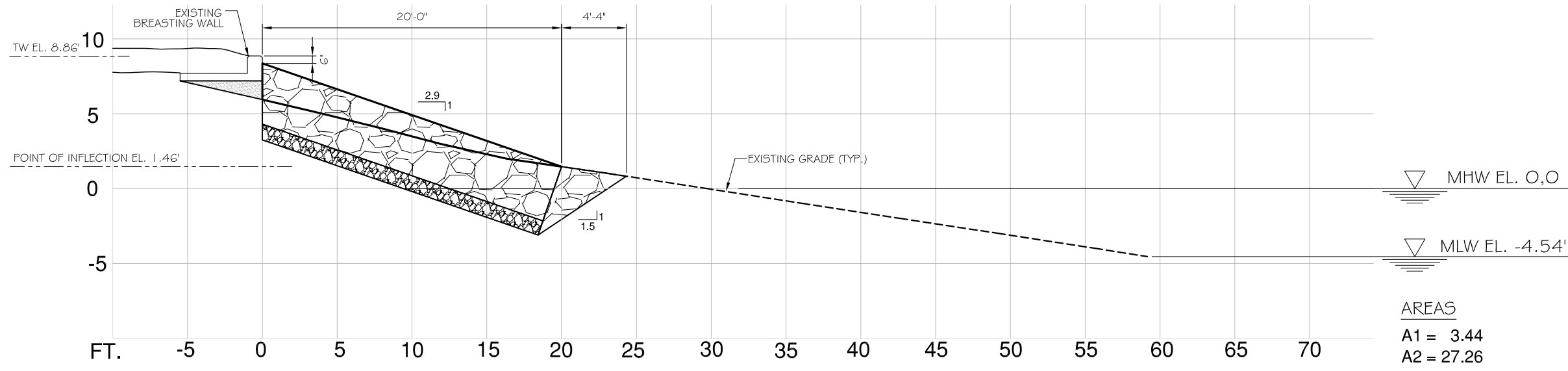
SHEET TITLE
**TRANS-SECTIONS
FROM STA. 13+25 TO 15+50
(SHEET 6 OF 8)**

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	AS SHOWN
	CAD FILE No.	02.23.12-001
DRAWING No.		C-205.00
SHEET No.		14 OF 18



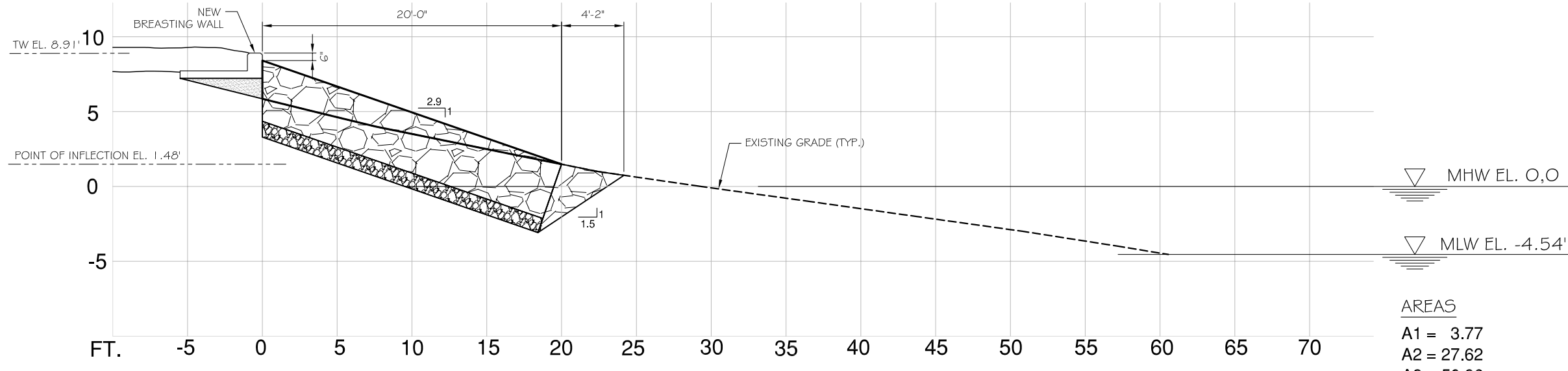
STA. 13+25

SCALE: 1 : 100



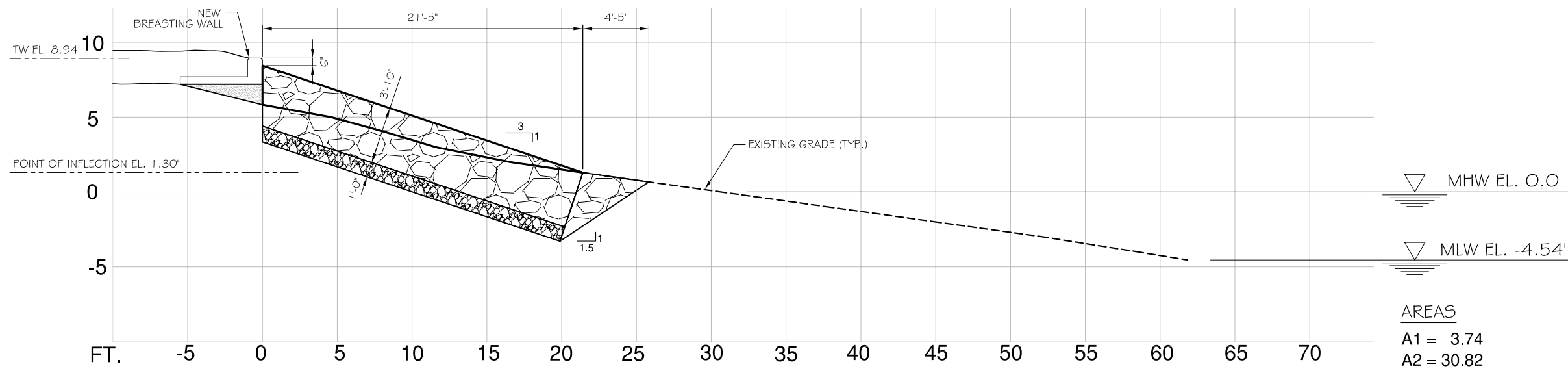
STA. 13+75

SCALE: 1 : 100



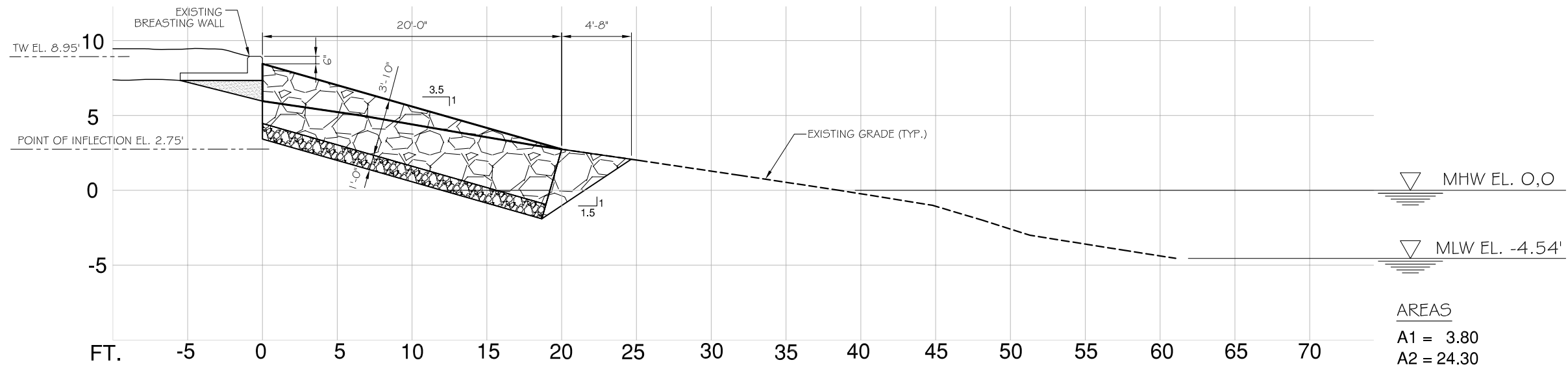
STA. 14+25

SCALE: 1 : 100



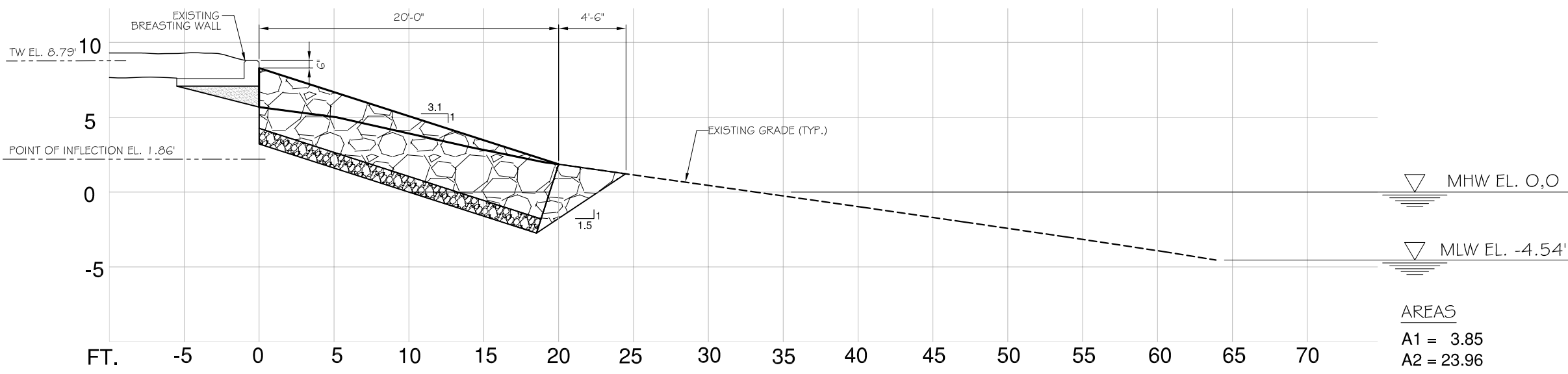
STA. 14+75

SCALE: 1 : 100



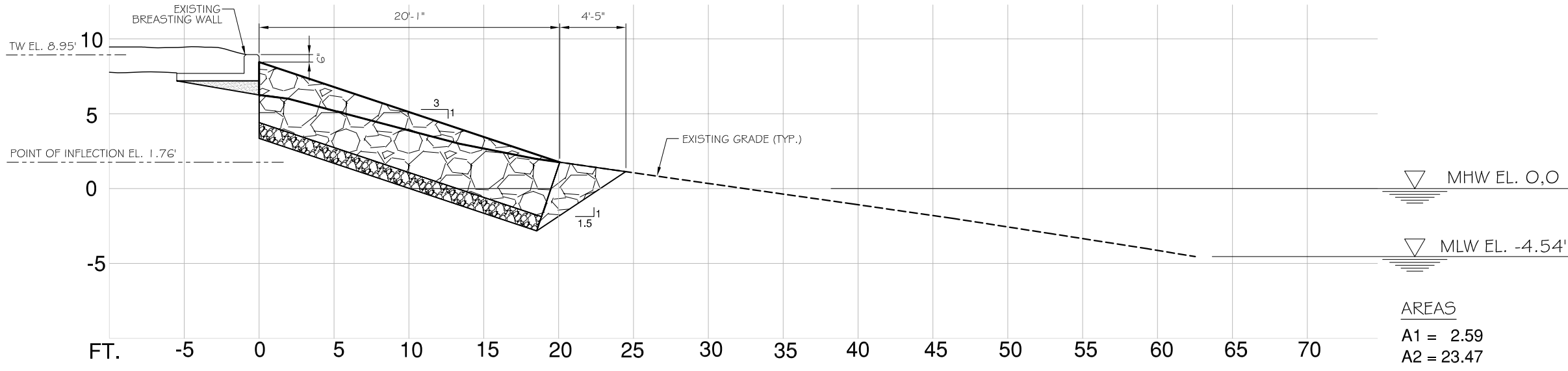
STA. 15+25

SCALE: 1 : 100



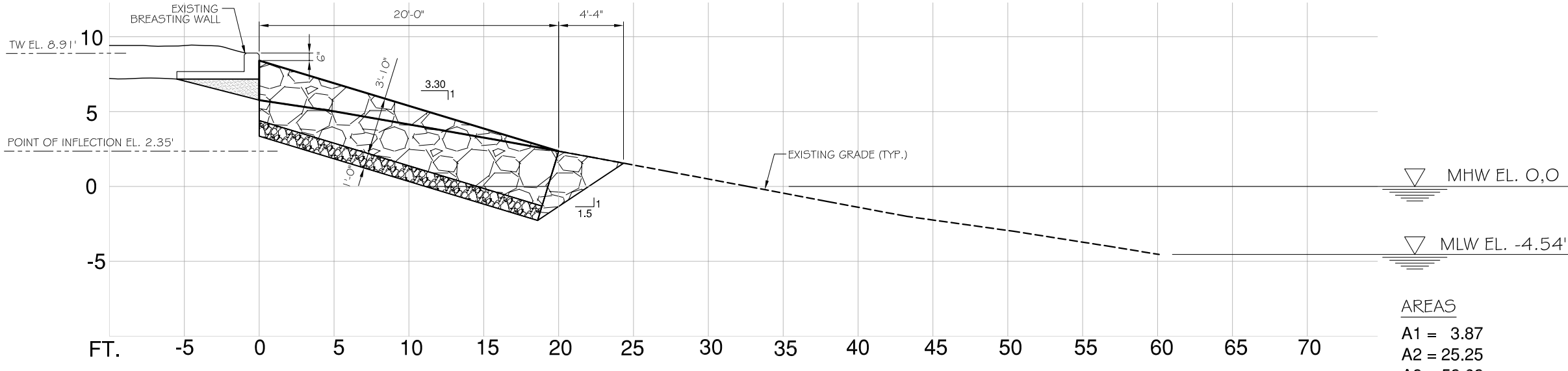
STA. 13+50

SCALE: 1 : 100



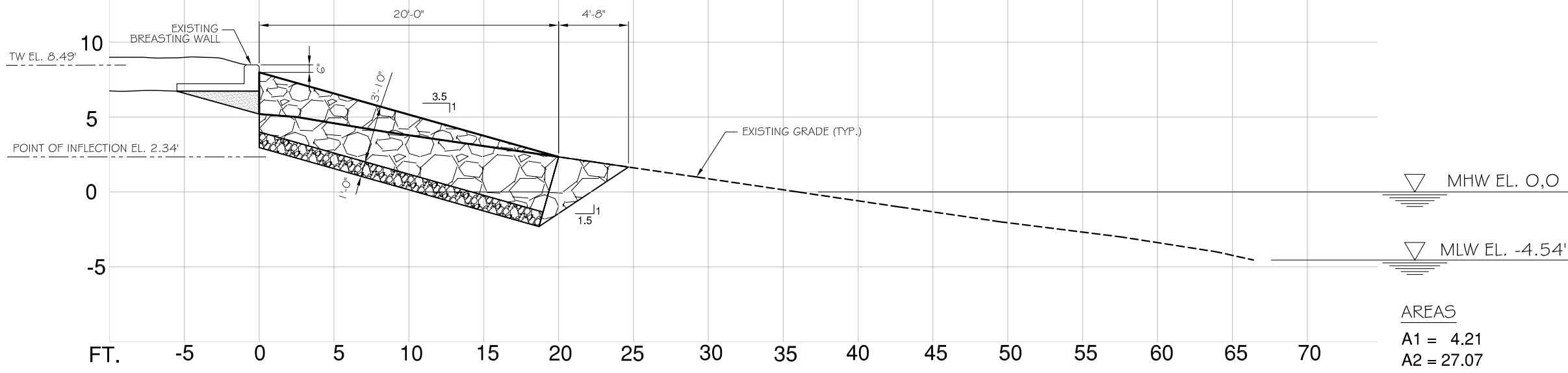
STA. 14+00

SCALE: 1 : 100



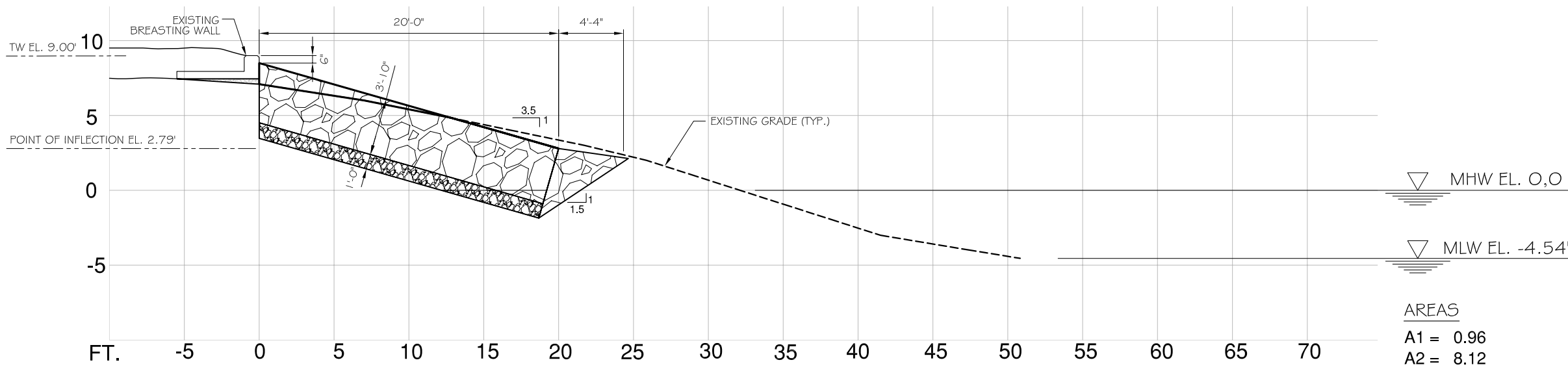
STA. 14+50

SCALE: 1 : 100



STA. 15+00

SCALE: 1 : 100



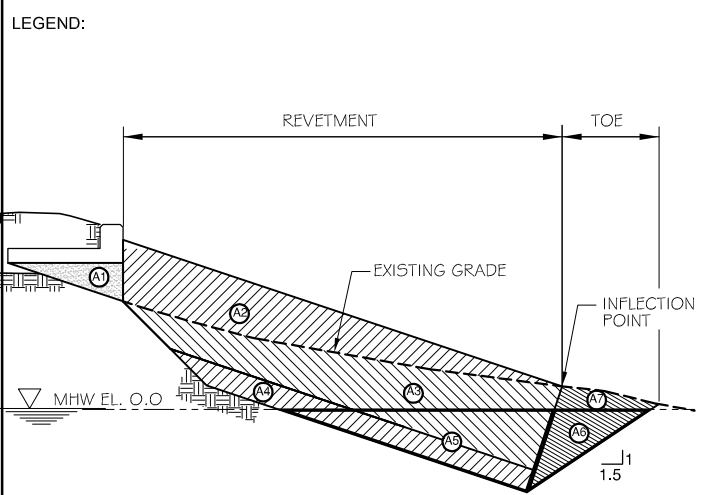
STA. 15+50

SCALE: 1 : 100

Pennmax Engineering, PLLC
CONSULTING ENGINEERS

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NEW YORK, N.Y.

ENGINEER:
Pennmax Engineering, PLLC
35 Horseshoe Hill Road
Pound Ridge, NY 10576
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F: 914.764.0515



TYPICAL RIPRAP SECTION

- AREAS
- A1 AREA BELOW BREASTING WALL
 - A2 AREA ARMOR STONE ABOVE GRADE TO INFLECTION POINT
 - A3 AREA ARMOR STONE BELOW GRADE TO INFLECTION POINT
 - A4 AREA BEDDING STONE BELOW GRADE TO INFLECTION POINT
 - A5 AREA EXCAVATION BELOW MHW TO INFLECTION POINT
 - A6 AREA TOE BELOW MHW
 - A7 AREA TOE ABOVE MHW
 - A2 + A3 + A6 + A7 AREA ARMOR STONE
 - A5 + A6 TOTAL AREA EXCAVATION BELOW MHW
 - A3 + A4 + A6 + A7 TOTAL EXCAVATION BELOW EXISTING GRADE

95% PROGRESS SET

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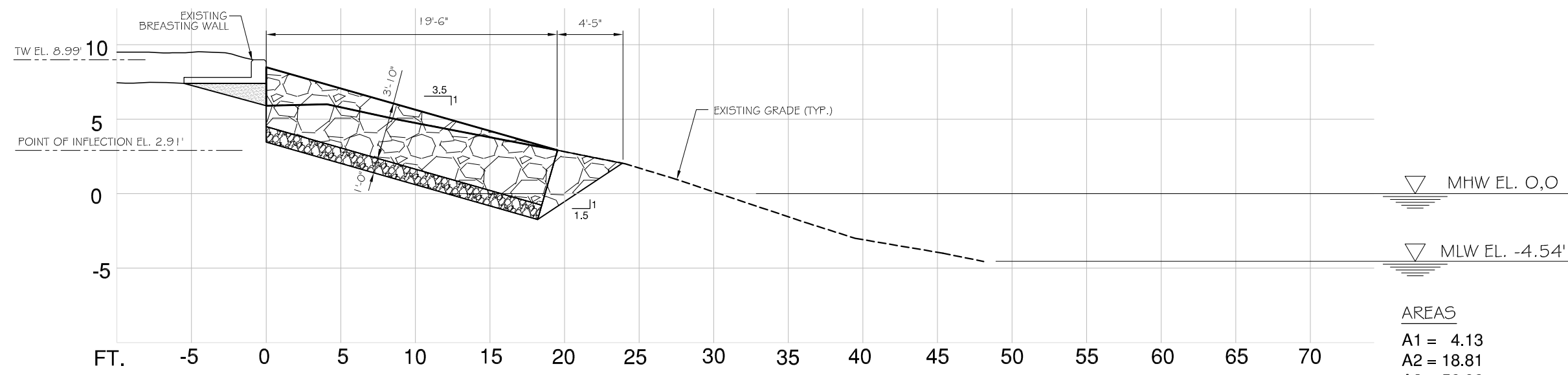
REVISIONS		
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.
SHEET TITLE

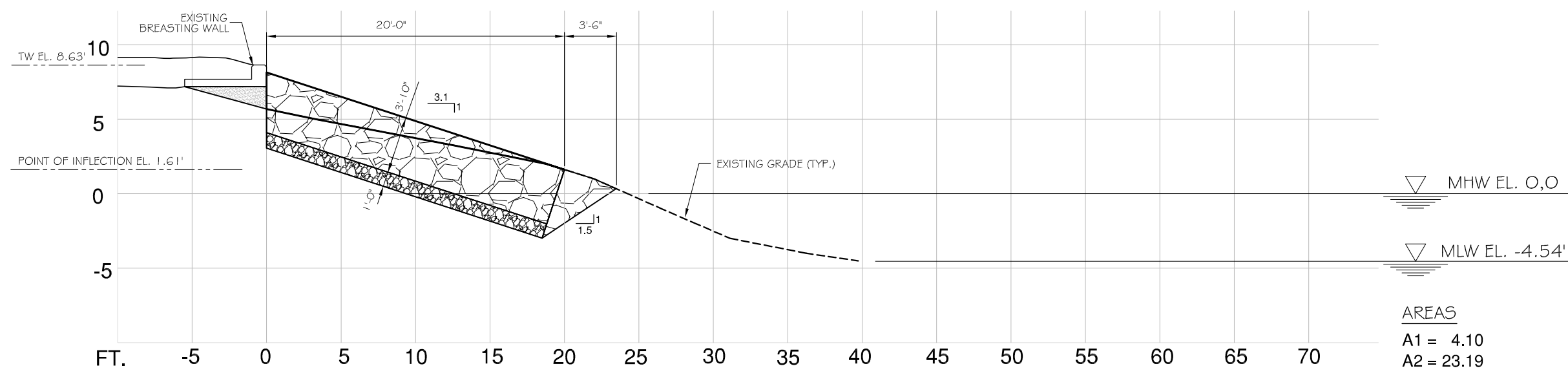
**TRANS-SECTIONS
FROM STA. 15+75 TO 18+25
(SHEET 7 OF 8)**

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	AS SHOWN
	CAD FILE No.	02.23.12-001
DRAWING No.		C-206.00
SHEET No.		15 OF 18



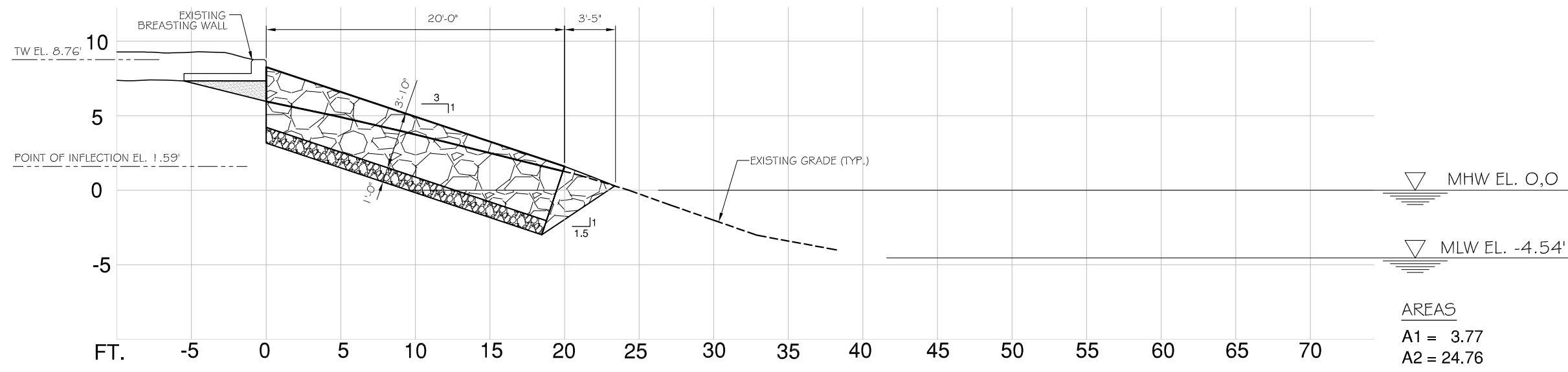
STA. 15+75
SCALE: 1 :100

- AREAS
- A1 = 4.13
 - A2 = 18.81
 - A3 = 56.96
 - A4 = 19.08
 - A5 = 5.72
 - A6 = 1.84
 - A7 = 8.85



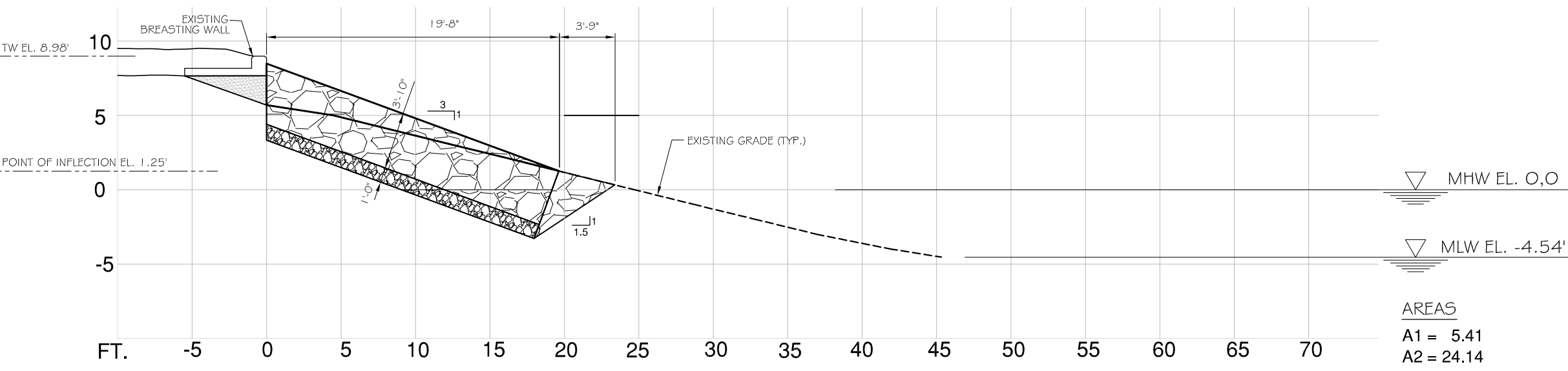
STA. 16+00
SCALE: 1 :100

- AREAS
- A1 = 4.10
 - A2 = 23.19
 - A3 = 55.04
 - A4 = 16.62
 - A5 = 15.10
 - A6 = 5.22
 - A7 = 3.93



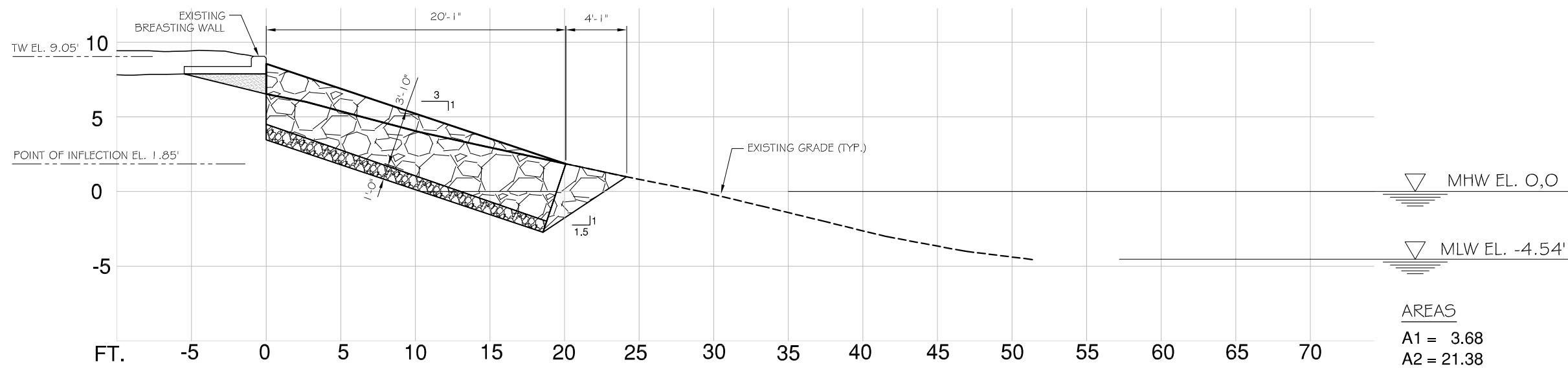
STA. 16+25
SCALE: 1 :100

- AREAS
- A1 = 3.77
 - A2 = 24.76
 - A3 = 53.61
 - A4 = 19.66
 - A5 = 14.92
 - A6 = 5.23
 - A7 = 3.01



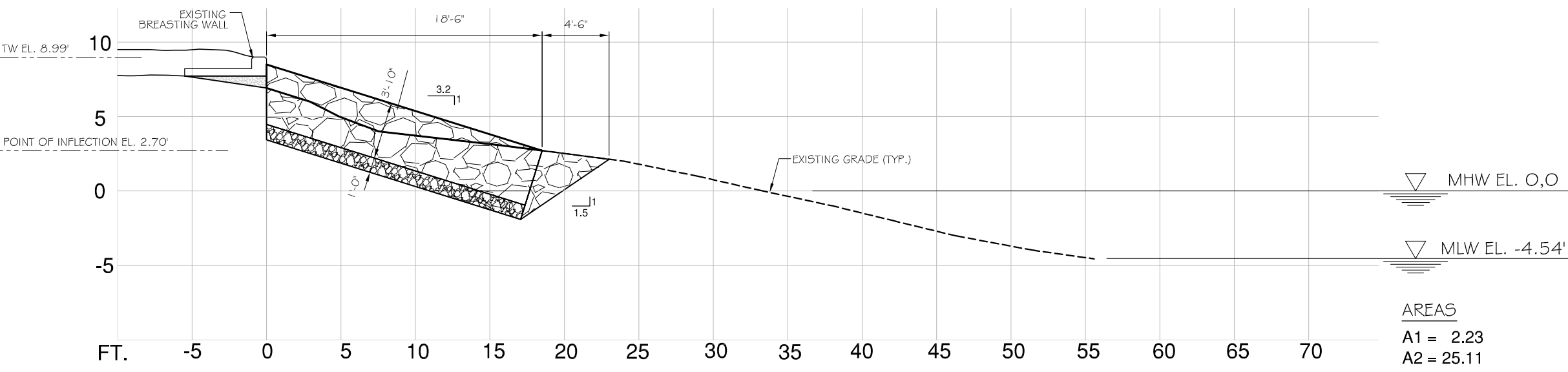
STA. 16+50
SCALE: 1 :100

- AREAS
- A1 = 5.41
 - A2 = 24.14
 - A3 = 53.35
 - A4 = 19.33
 - A5 = 16.61
 - A6 = 6.11
 - A7 = 3.17



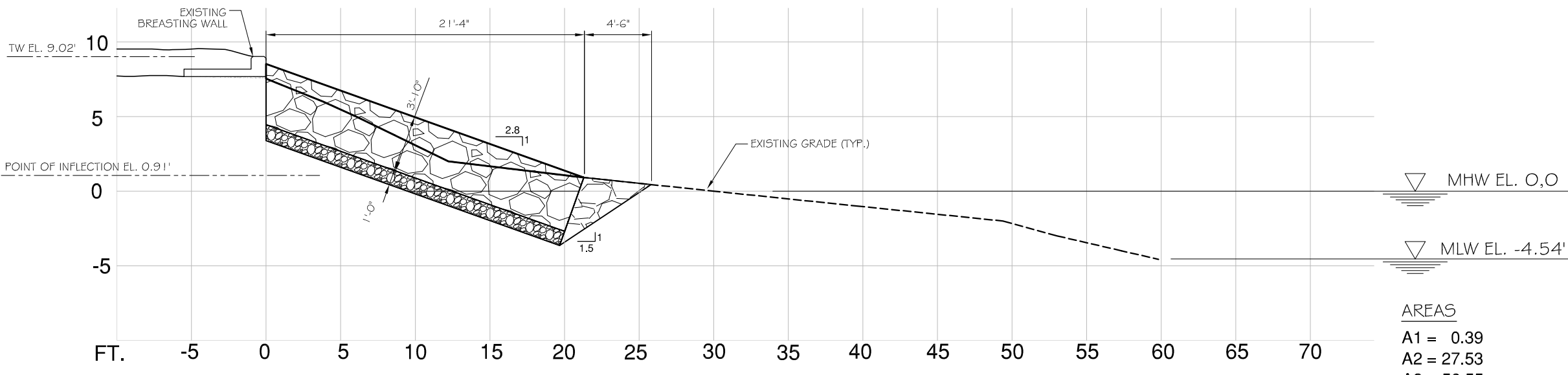
STA. 16+75
SCALE: 1 :100

- AREAS
- A1 = 3.68
 - A2 = 21.38
 - A3 = 59.88
 - A4 = 17.36
 - A5 = 12.45
 - A6 = 4.37
 - A7 = 5.60



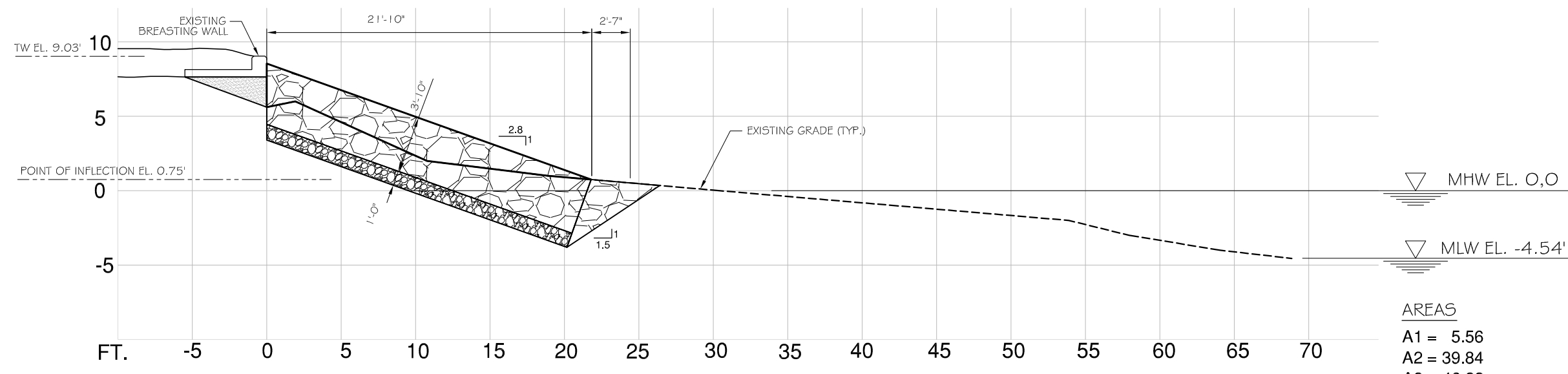
STA. 17+00
SCALE: 1 :100

- AREAS
- A1 = 2.23
 - A2 = 25.11
 - A3 = 46.90
 - A4 = 18.02
 - A5 = 6.37
 - A6 = 2.11
 - A7 = 8.88



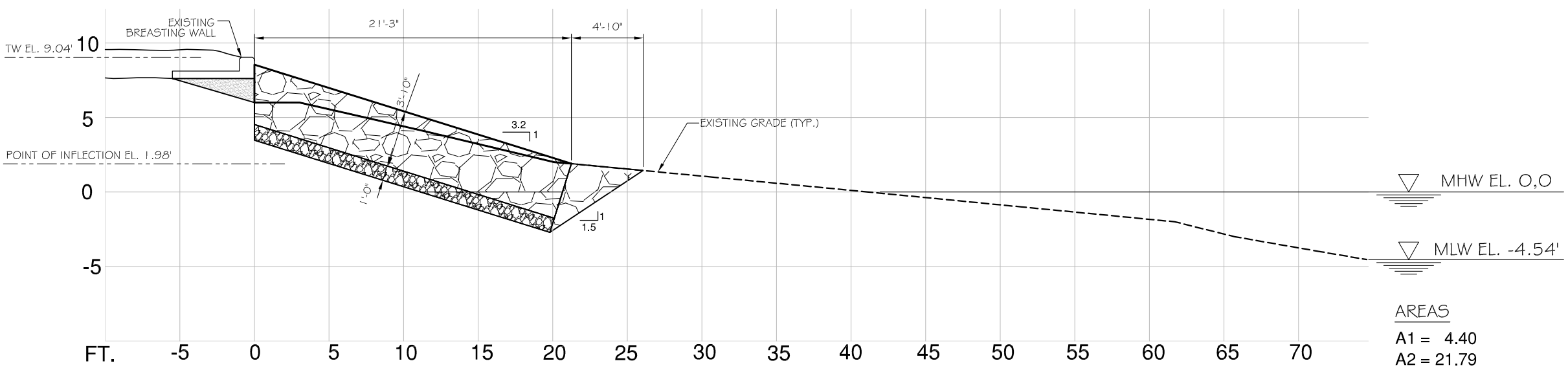
STA. 17+25
SCALE: 1 :100

- AREAS
- A1 = 0.39
 - A2 = 27.53
 - A3 = 56.55
 - A4 = 21.07
 - A5 = 20.91
 - A6 = 7.60
 - A7 = 3.05



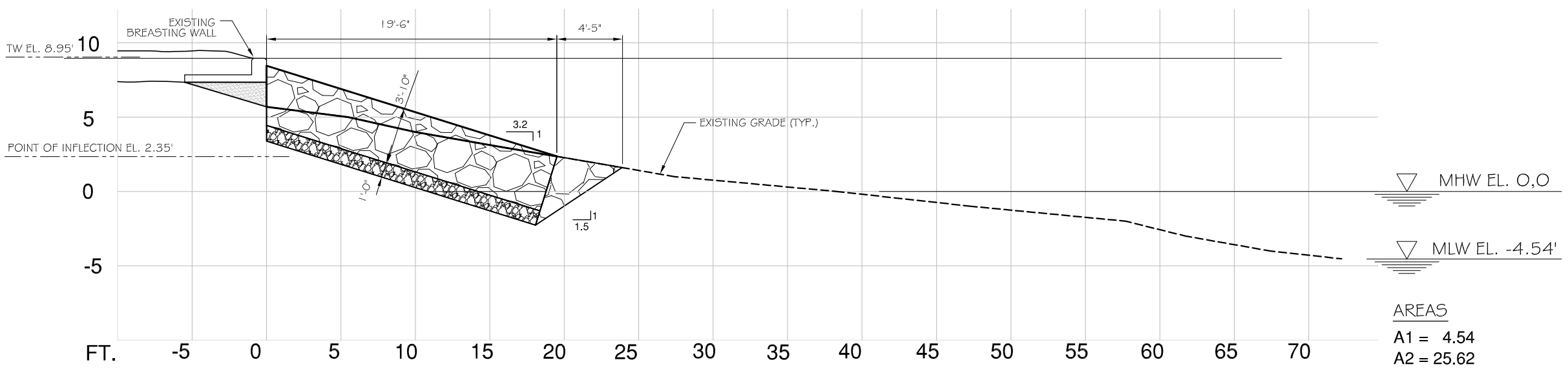
STA. 17+50
SCALE: 1 :100

- AREAS
- A1 = 5.56
 - A2 = 39.84
 - A3 = 46.22
 - A4 = 21.59
 - A5 = 22.84
 - A6 = 8.30
 - A7 = 2.53



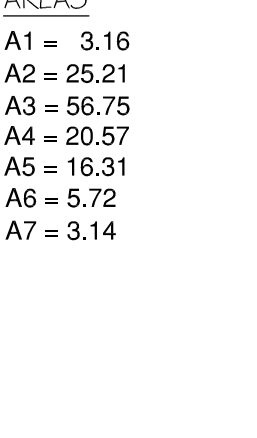
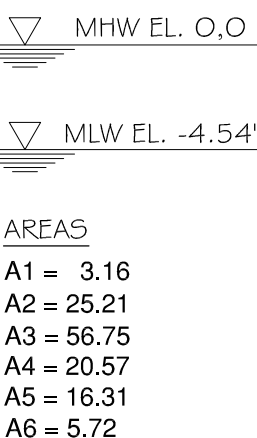
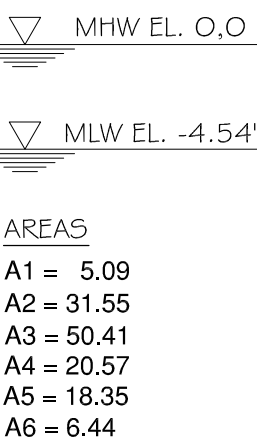
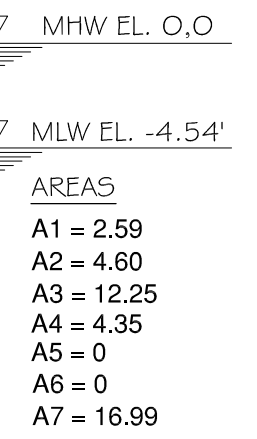
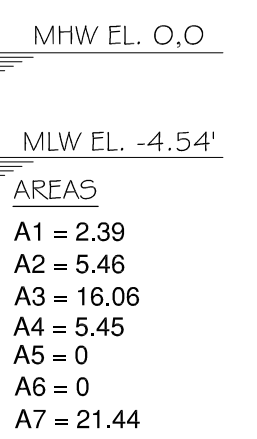
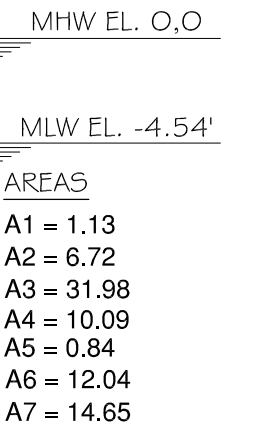
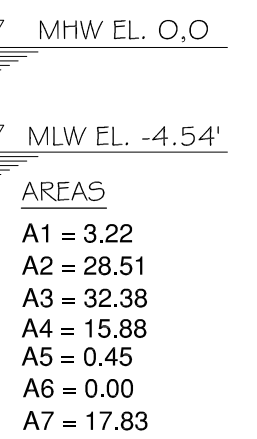
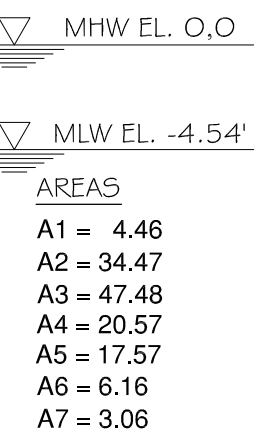
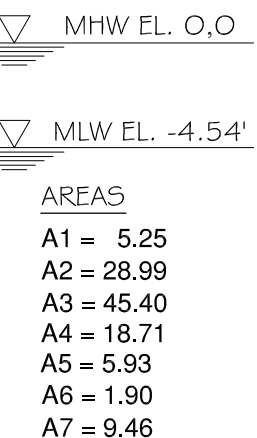
STA. 18+00
SCALE: 1 :100

- AREAS
- A1 = 4.40
 - A2 = 21.79
 - A3 = 61.27
 - A4 = 20.91
 - A5 = 12.96
 - A6 = 4.39
 - A7 = 7.00



STA. 18+25
SCALE: 1 :100

- AREAS
- A1 = 4.54
 - A2 = 25.62
 - A3 = 50.44
 - A4 = 19.09
 - A5 = 8.98
 - A6 = 3.04
 - A7 = 7.58



NOTE: ESTIMATED VOLUMES ARE BASED ON IN-SITU AREAS PRIOR TO EXCAVATION. ESTIMATED VOLUMES AFTER EXCAVATION MAY REQUIRE AN INCREASE FACTOR TO ACCOUNT FOR INCREASED VOID RATIOS DUE TO SOIL DISTURBANCE. CONTRACTOR SHALL ACCOUNT FOR THIS INCREASE IN HIS BASE BID PRICE.

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	AS SHOWN
	CAD FILE No.	02.23.12-001
	DRAWING No.	C-207.00
SHEET No.		16 OF 18

Pennmax Engineering, PLLC
CONSULTING ENGINEERS

OWNER:
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110 WILLIAM STREET
NEW YORK, NY 10038
CONTRACTOR/CLIENT:
HUNTER ROBERTS CONSTRUCTION GROUP
2 WORLD FINANCIAL CENTER, 6TH FL.
NEW YORK, N.Y.

ENGINEER:
Pennmax Engineering, PLLC
35 Horseshoe Hill Road
Pound Ridge, NY 10576
T: 914.764.8400
F: 914.764.0515

LEGEND:
STA. 5+25 STATION NUMBER AS MEASURED ALONG FACE OF WALL
-3 EXISTING CONTOUR ELEVATION
tw 7.77 TOP OF WALL ELEVATION
3.54 TOP OF GRADE/SPOT ELEVATION
EXISTING LIGHT POLE

95% PROGRESS SET

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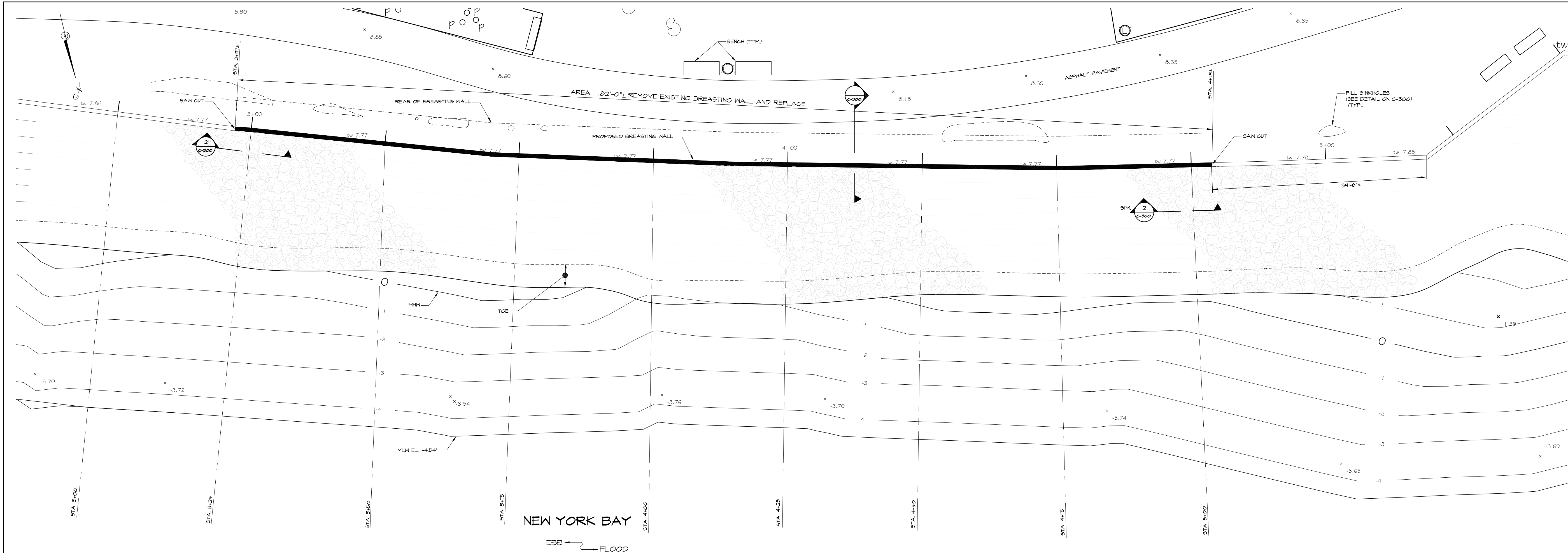
REVISIONS		
REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.
SHEET TITLE

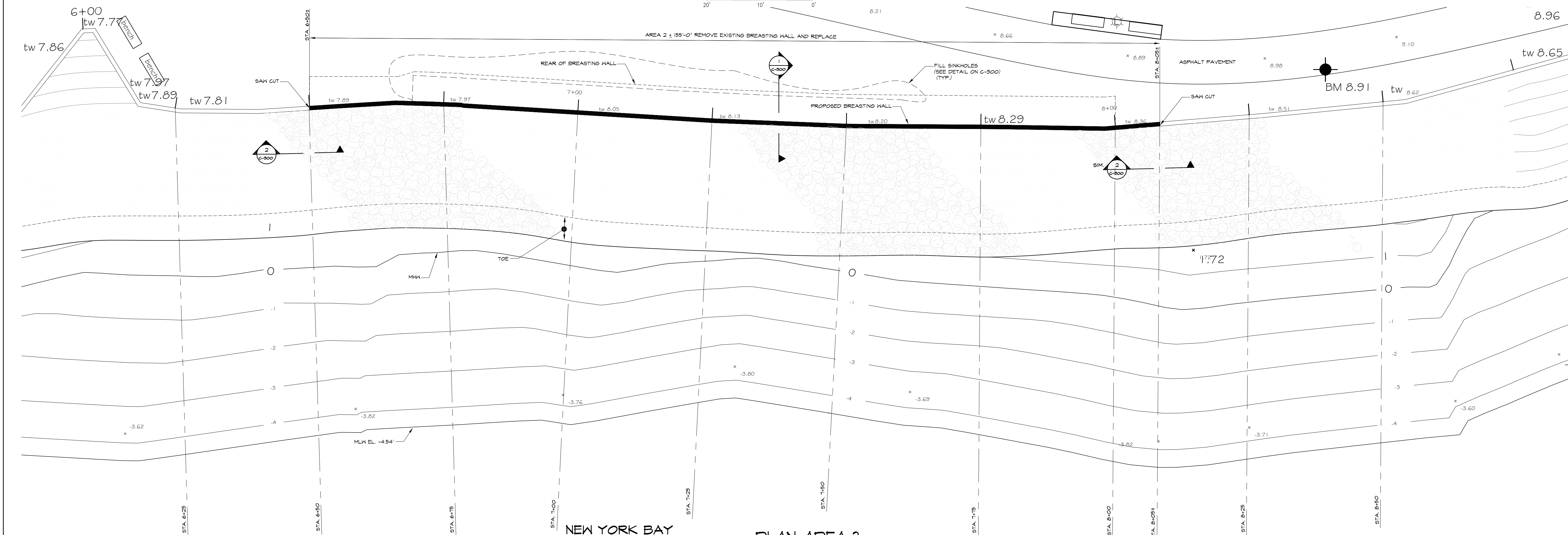
PLAN AREAS 1 & 2

SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	AS SHOWN
	CAD FILE No.	02.23.12-001
DRAWING No.		C-208.00
SHEET No.		17 OF 18



PLAN AREA 1

SCALE: 1" = 10'-0"
20' 10' 0'



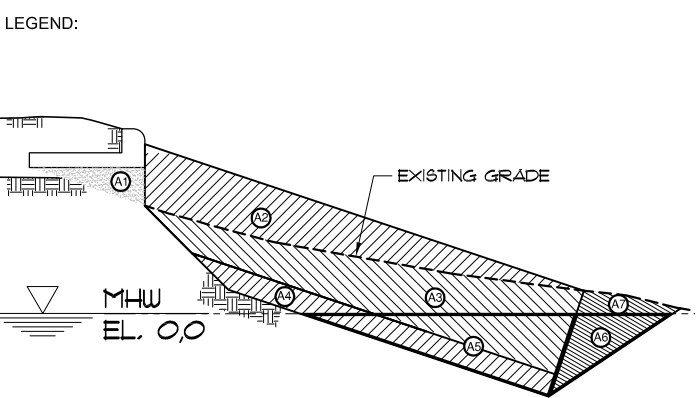
PLAN AREA 2

SCALE: 1" = 10'-0"
20' 10' 0'

Pennmax Engineering, PLLC
CONSULTING ENGINEERS

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NYC ECONOMIC DEVELOPMENT CORP.
110 WILLIAM STREET
NEW YORK, NY 10038
CONTRACTOR/CONSULTANT:
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2 WORLD FINANCIAL CENTER, 6TH FL.
NEW YORK, N.Y.

ENGINEER:
Pennmax Engineering, PLLC
35 Horseshoe Hill Road
Pound Ridge, NY 10576
T: 914.764.5400
F: 914.764.0515



TYPICAL RIPRAP SECTION

AREAS

A1 = INDICATES UNDERPINNING FILL.
A2+A3+A6+A7 = ARMOR STONE.
A4 = BEDDING STONE.
A5+A6 = FILL BELOW MHW.
A3+A4+A6+A7 = TOTAL EXCAVATION.

95% PROGRESS SET

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REVISIONS

REVISION NUMBER	DATE	REVISION DESCRIPTION

TITLE

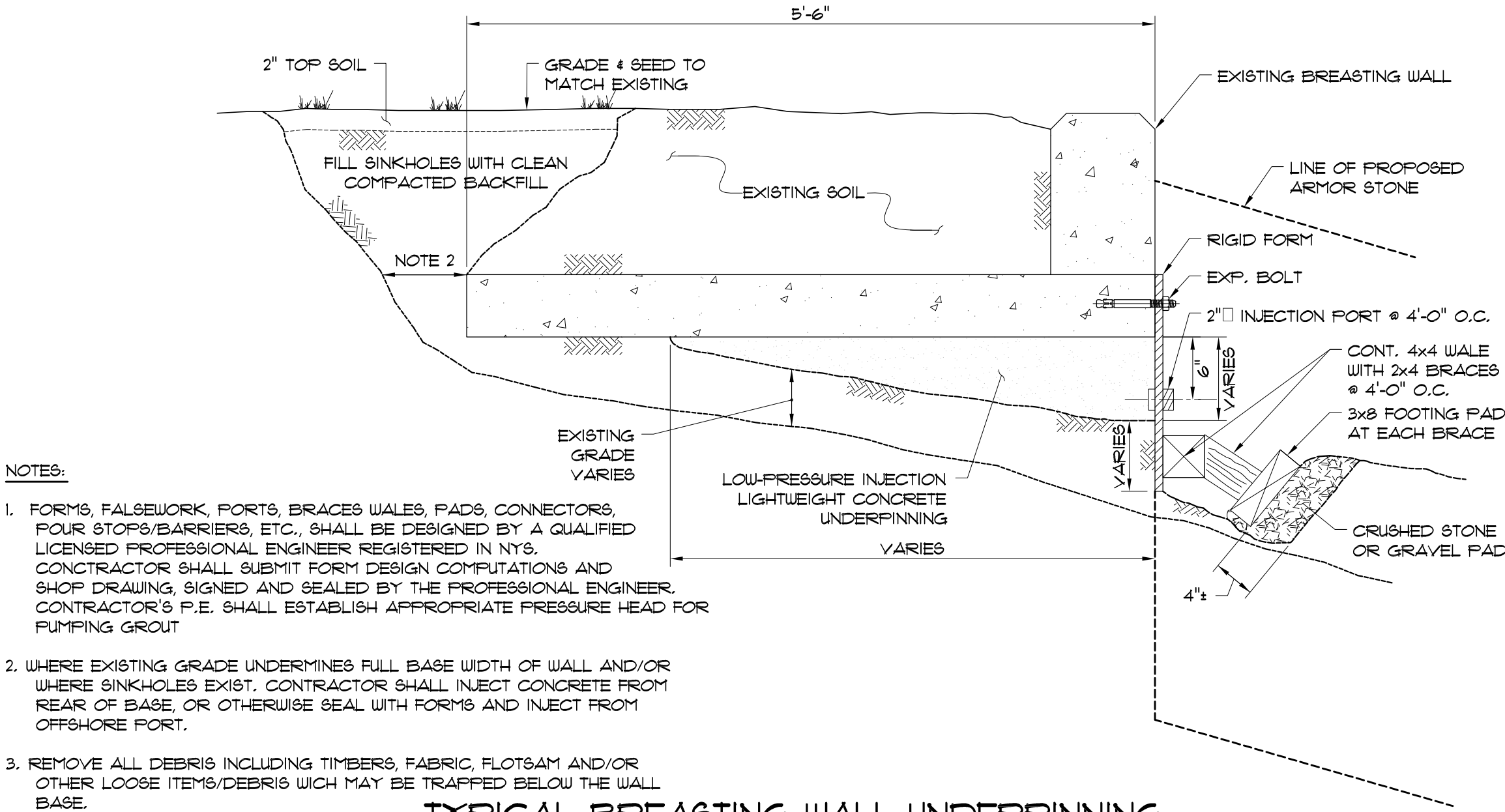
**EMERGENCY SHORELINE
REHABILITATION AT
SEPTEMBER 11, 2001 MEMORIAL,
ST. GEORGE STATION**

STATEN ISLAND N.Y.

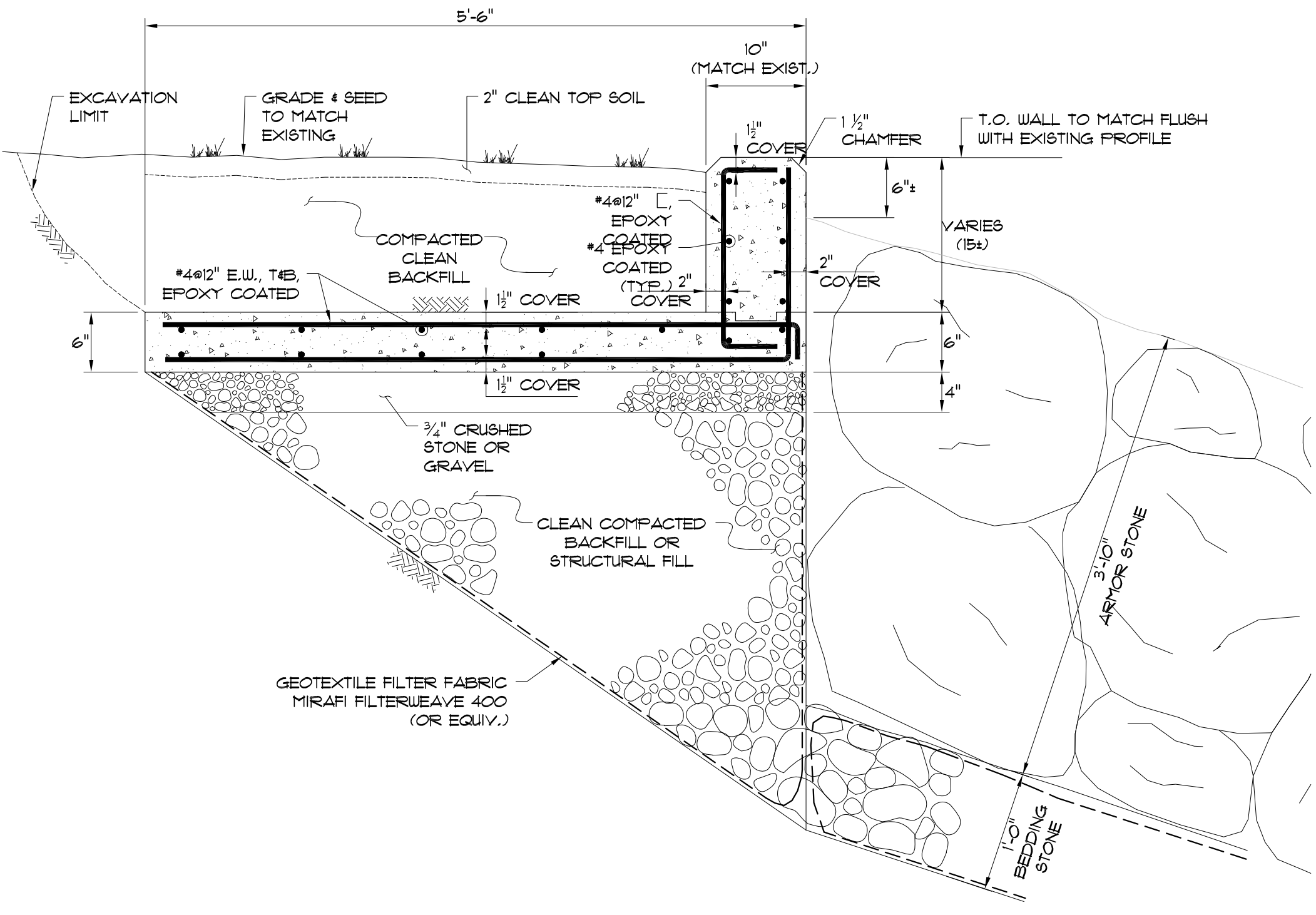
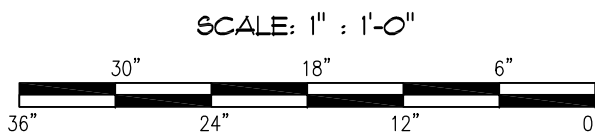
SHEET TITLE

SECTIONS AND DETAILS

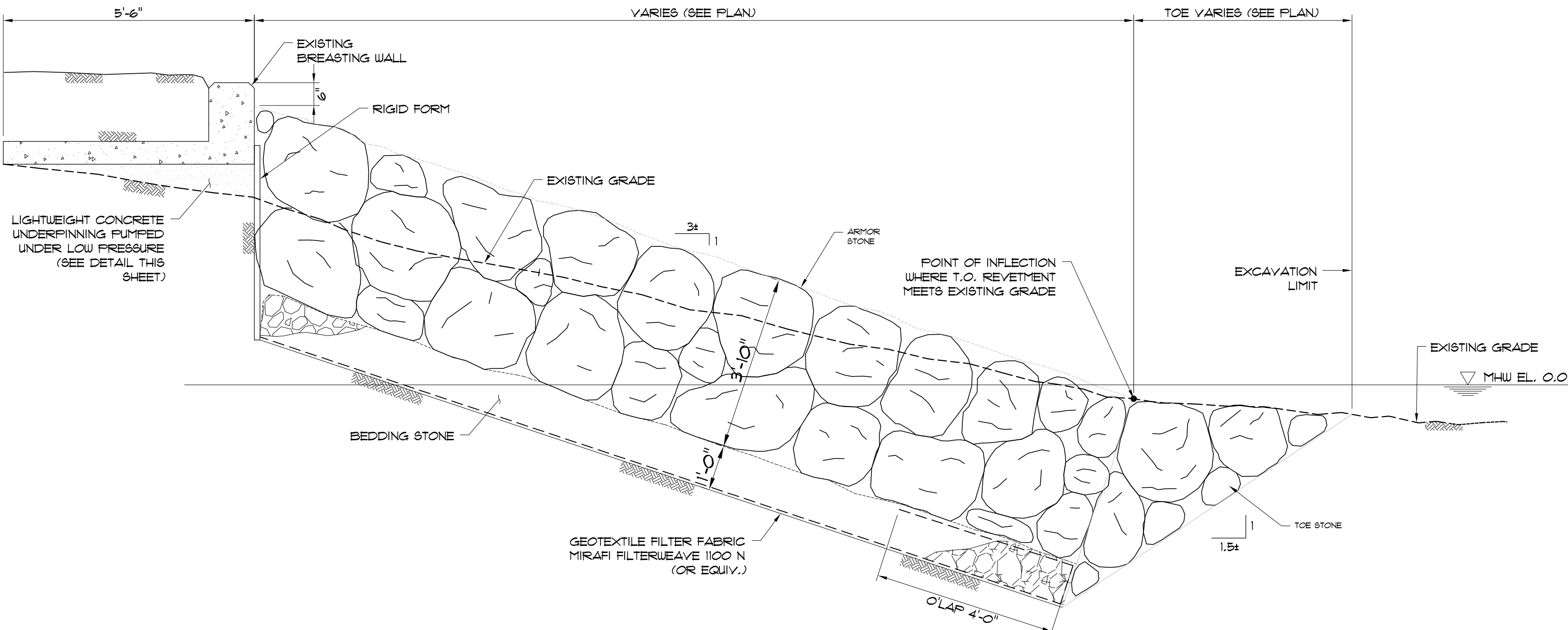
SEAL & SIGNATURE	DATE:	JUNE 14 2012
	PROJECT No.	11022
	DRAWING BY:	F.M.
	CHECKED BY:	J.P.
	SCALE:	AS SHOWN
	CAD FILE No.	02.23.12-001
DRAWING No.	C-300.00	
	SHEET No. 18 OF 18	



TYPICAL BREASTING WALL UNDERPINNING

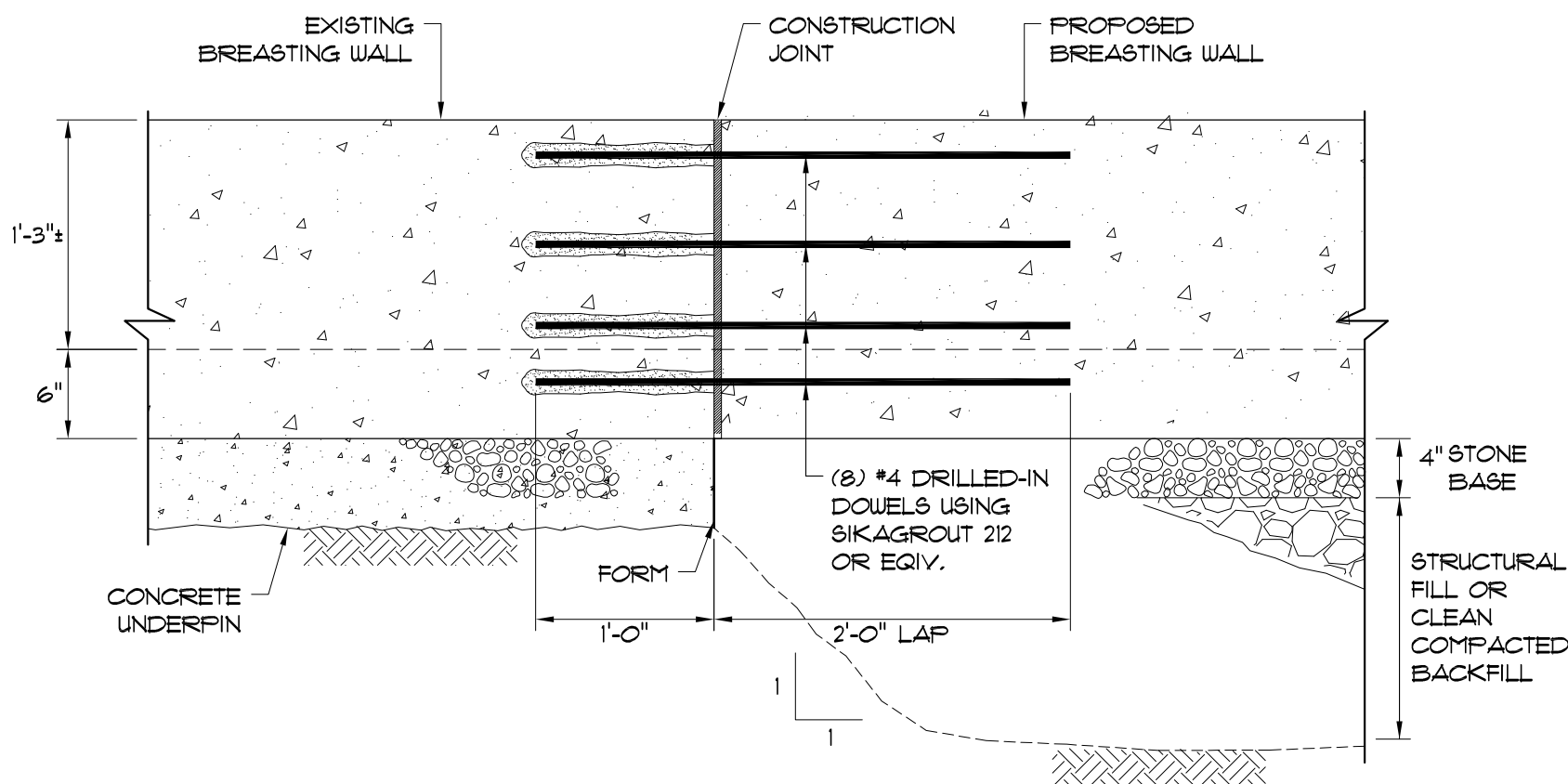
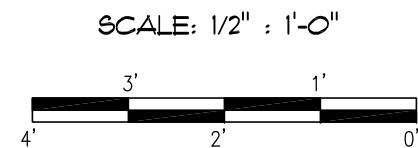


SECTION 1 - TYPICAL BREASTING WALL RECONSTRUCTION

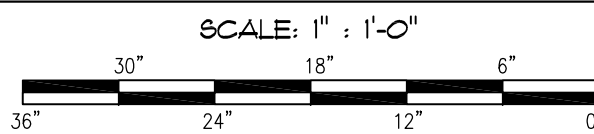


STONE GRADATION REQUIREMENTS				
PERCENT PASSING BY WEIGHT	ARMOR & TOE STONE		BEDDING STONE	
	ARMOR STONE SIZE { LBS/DIA. (IN.) }	TOE STONE SIZE { LBS/DIA. (IN.) }	PERCENT PASSING BY SIZE	EQUIV. STONE DIAM. (IN.)
W15 (MIN.)	667 lbs / 19"	625 lbs / 18"	d15 (MIN.)	3"
W15 (MAX.)	1250 lbs / 24"	-	d15 (MAX.)	5"
W50 (MIN.)	1667 lbs / 26"	1250 lbs / 24"	d50	5"
W50 (MAX.)	2500 lbs / 30"	1875 lbs / 27"		
W85 (MIN.)			d85 (MIN.)	5"
W85 (MAX.)			d85 (MAX.)	6"
W100 (MIN.)	667 lbs / 19"		d50	10"
W100 (MAX.)	1250 lbs / 24"			

TYPICAL ARMOR STONE REVETMENT CROSS - SECTION



SECTION 2 - TYPICAL CONSTRUCTION JOINT AT
RECONSTRUCTED BREASTING WALLS



APPENDIX D

SECTION 02990

MATERIALS MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Identification of excavated soil suitable for reuse on site.
2. Management of excavated soil on-site, including segregation and stockpiling of non-contaminated and contaminated soil.
3. Management of liquids collected as a result of dewatering.
4. Identification of other off-site materials suitable for use on site.
5. Decontamination of equipment and vehicles and disposal of resulting liquids and solids.
6. Management of non-contaminated and contaminated soils and wastes offsite.

B. Related Sections include the following:

1. Division 1 Section "Submittals."
2. Division 1 Section "Environmental Health, Safety and Emergency Response."

1.2 DEFINITIONS

- A. Construction and demolition debris: Uncontaminated solid waste resulting from the construction, remodeling, repair and demolition of utilities, structures and roads; and uncontaminated solid waste from land clearing. Such waste includes, but is not limited to bricks, concrete, and other masonry materials, soil, rock, wood (including painted, treated and coated wood and wood products), land clearing debris, wall coverings, plaster, drywall, plumbing fixtures, non-asbestos insulation, asphalt roofing shingles and other roof coverings, asphaltic pavement, glass, plastics that are not sealed in a manner that conceals other wastes, empty buckets ten gallons or less in size and having no more than one inch of residue remaining on the bottom, electrical wiring and components containing no hazardous liquids, and pipe and metals that are incidental to any of the above.
- B. Contaminated soil: Soils that contain concentrations of contaminants above the higher of the soil cleanup objectives (SCO), as specified under 6 NYCRR Part 375-6.8 for restricted commercial use and NYSDEC CP-51: Soil Cleanup Guidance Policy. Contaminated soil is also defined as material that exhibits hazardous waste characteristics.
- C. Decontamination water: All water generated by the Contractor as a result of cleaning equipment after equipment has been working in areas of petroleum-contaminated soil or other contaminated soil, as directed by the Construction Manager or Owner's Representative.
- D. Hazardous waste: Waste materials, including but not limited to contaminated soils, which are considered characteristic hazardous wastes because they exhibit any of the following characteristics: ignitability, corrosivity, reactivity, or toxicity, as defined in 6NYCRR Part 371, Section 371.2, or 40 CFR Section 261.
- E. Non-contaminated soils: Soils which do not meet the definition of contaminated, potentially-contaminated, or petroleum-impacted soils.
- F. Petroleum-impacted soils: Soils which exhibit significant staining and/or free product due to petroleum contamination.
- G. Potentially-contaminated soils: Soils which may be contaminated based on field screening results, odors or visual observations. Potentially-contaminated soils will require further chemical

characterization prior to determination of their ultimate classification as contaminated or non-contaminated soils.

- H. Solid waste: Any garbage, refuse, sludge from a wastewater treatment plant, water supply treatment plant or air pollution control facility, and other discarded materials including solid, liquid, semi-solid or contained gaseous material, resulting from industrial, commercial, mining and agricultural operations, and from community activities, which meets the definition set forth at 6NYCRR, Chapter IV, Subchapter B, Part 360, Subpart 360-1.2(a).

1.3 SUBMITTALS

- A. An on-site Owner's Representative will be provided by the Owner to evaluate environmental compliance requirements based on the nature of the work and environmental conditions encountered. The Contractor shall complete and submit to the Owner's Representative documentation, as necessary, regarding the volumes of soil excavated and stockpiled on-site.
- B. Unless otherwise directed by the Owner, the Contractor shall submit no site information directly to a regulatory agency or other party without the prior written approval of the Owner or Construction Manager, except as otherwise provided for at 6NYCRR Part 595.
- C. Two (2) copies of any licenses or permits the Contractor is required to obtain for performing the work of this Section.
- D. The Contractor shall provide detailed information regarding the source of any proposed offsite borrow materials. Such material shall include the full name, address, phone number, and copies of permits/registrations for the source facility. In addition, if soil is proposed for backfill the material must be sampled and tested in accordance with Table 5.4(e)10 of NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation unless another protocol is otherwise specified by the Owners Representative and approved by NYSDEC. All borrow sources must be pre-approved by the Owner's Representative prior to delivery to the site.
- E. Copies of current licenses and permits for all proposed waste transporters and treatment/storage/disposal facilities. Certificates of insurance documenting appropriate current coverage shall also be provided for the proposed transporters and facilities.

- F. The Contractor shall provide appropriate offsite waste shipment records (e.g., hazardous or nonhazardous manifest, bill of lading) for all wastes and soils shipped offsite. At a minimum, the records shall identify the transporter and treatment/disposal/recycling facility including the name, address, phone number, and permit number; the type and amount of material; and shipment date. Copies of signed manifests from receiving facility shall also be provided. Certified truck scale tickets shall be provided for all offsite waste shipments. Completed Certificates of Disposal/Treatment/Recycling shall be provided from the receiving facility for all contaminated soils/wastes within 30 days of receipt.
- G. The Contractor shall provide a completed, legible, and signed Bill of Lading record for all borrow soil materials shipped to the site. The record shall identify the source name and address, the type and amount of material, and shipment date. The bill of lading shall comply with Department of Transportation's Federal Motor Carrier Safety Administration requirements.
- H. A site-specific Health and Safety Plan (HASP) shall be developed and implemented by the Contractor for all soil excavation and disturbance activities to address potential exposure of site construction workers and surrounding community to site contaminants. The HASP shall contain a Community Air Monitoring Plan (CAMP) prepared in accordance with NYSDEC DER-10, Appendix 1A and the CAMP shall be implemented by the Contractor, including real-time continuous dust monitoring with a portable dust monitor, during all site soil disturbance activities.

1.4 PROJECT CONDITIONS

- A. The Contractor is advised of the possibility of encountering nonhazardous contaminated waste materials during construction. The Contractor shall be solely responsible for the proper management of all material excavated, including any off-site disposal of any materials meeting the definition of unsatisfactory soils or construction and demolition debris.
- B. The Contractor shall furnish all labor, material, tools and equipment necessary for excavation, segregation, handling, collection, stockpiling, and temporary storage of contaminated soil encountered and any solids and water generated during decontamination of vehicles and personnel as part of this Work.
- C. All work involving contaminated soil shall be performed in accordance with NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation, the site-specific deed restriction

conditions, and/or work-specific NYSDEC-approved work plans. All work related to the management of materials generated from the work site must be approved by the Owner and Owner's Representative.

- D. The Contractor shall be responsible for on-site monitoring of the excavated soils for signs of potential contamination (e.g., staining, odors) to direct segregation of excavated materials into appropriate stockpiles and avoid mixing non-contaminated and contaminated materials. The Owner's Representative may also inspect, monitor, and direct the Contractor's soil segregation means and methods at any time.
- E. The Contractor shall be responsible for segregating any excavated existing clean soil cover materials from the underlying soils and fill materials to provide for the onsite reuse of the clean soil cover material as much as possible.
- F. The Contractor shall implement strict health and safety precautions as warranted by the work or environmental conditions encountered and in accordance with Section 01740, Environmental Health, Safety and Emergency Response.

1.5 AVAILABLE INFORMATION

- A. The results of a subsurface soil investigation performed for the Owner along the site shoreline in July 2012 are included in the Contract Documents for the Contractor's examination. The information was obtained for use in assessing subsurface chemical quality and soil conditions but the Contractor may draw his own conclusions there from. No responsibility is assumed by the Owner and Owner's Representative for subsurface conditions other than at the locations, and at the time, the explorations were made.
- B. Elevated levels of polynuclear aromatic hydrocarbons (PAHs) and heavy metals were historically found in soils at the site. These constituents are primarily attributable to fill materials (coal pieces, coal ash, slag and asphalt shingles) in soils across the site. In addition, low levels of pesticides and polychlorinated biphenyls were detected in some site soils/fill during investigation and remediation of the site.
- C. A 6- to 18-inch thick clean soil cover that is underlain by a filter fabric demarcation layer is present across the inland site soils in the western wooded area of the site. An 18-inch thick

or greater clean soil cover (with no demarcation fabric) is present on soils located in the remaining open landscaped areas (i.e., not covered by paved surface or structure). The site cover details are presented on Figure 1 of the site-specific Operation Maintenance and Monitoring (OM&M) Plan prepared by TRC and dated March 2006

1.6 REGULATORY REQUIREMENTS

- A. The Work of this Section shall be performed in accordance with all applicable federal, state, and local regulations, laws, codes, and ordinances governing the handling, transportation, and disposal of solid wastes and hazardous wastes and materials and including but not limited to 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 268, 29 CFR 1910, 29 CFR 1926, 49 CFR 171, 49 CFR 172, 49 CFR 173, 6NYCRR 360, 6NYCRR 370, 6NYCRR 371, 6NYCRR 372, 6NYCRR 373-1, -2, -3, 6NYCRR 374-1, 6NYCRR 375, and 6NYCRR 376.

PART 2 - PRODUCTS

2.1 PERSONAL PROTECTIVE EQUIPMENT

- A. The Contractor shall provide all employees and Subcontractor(s) with personal protective equipment and protective clothing consistent with the levels of protection for this Work as indicated in Section 01740, Environmental Health, Safety and Emergency Response and the site-specific Health and Safety Plan prepared by the Contractor.

2.2 HDPE LINER AND PLASTIC SHEETING

- A. Plastic sheeting (minimum 10 mil) used to cover soil stockpiles shall be flame-retardant, ultraviolet-resistant, and comply with ASTM D 4397.
- B. 40 mil HDPE geomembrane liner used underneath soil stockpiles shall have properties as follows: Specific Gravity (ASTM D 792 or 1505) > 0.940; Melt Index (ASTM D 1238 Condition E) < 0.4 g/10 min; and Carbon Black Content (ASTM D 1603) 2 - 3 %.

2.3 DEMARCATION FILTER FABRIC

- A. The Contractor shall provide and install new demarcation filter fabric in areas where clean soil cover material is installed or replaced. The fabric shall be placed directly below the clean soil cover materials as a visual demarcation between the clean soil cover and underlying fill soil.
- B. The fabric shall be white- or orange colored, nonwoven, needle-punched geotextile made of 100% polypropylene staple fibers meeting the requirements of Mirafi 140NC or Mirafi 140NL/O as manufactured by Tencate Mirafi Construction Products; GT140N as manufactured by SKAPS Industries; or equal approved by the Owner's Representative.

2.4 SOIL MATERIALS

- A. General: Provide borrow soil materials when satisfactory soil materials are not available from on-site excavations. On-site materials will be utilized to the maximum extent possible.
- B. Satisfactory Soils:
 - 1. ASTM D 2487 soil classification groups GW, GP, GM, SW, SP and SM, or a combination of these group symbols.
 - 2. Free of rock or gravel larger than 3 inches (75 mm) in any dimension and any extraneous debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils:
 - 1. ASTM D 2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT, or a combination of these group symbols.
 - 2. Satisfactory soils not maintained within 2% of optimum moisture content at time of compaction.
 - 3. Characterized as a hazardous waste due to ignitability, corrosivity, reactivity, or toxicity, as defined in 6NYCRR Part 371, Section 371.2, or 40 CFR Section 261.
 - 4. Exhibit discernible petroleum-type, chemical or other unnatural odors or staining.

D. Backfill and soil cover/cap materials: Satisfactory soil materials which also meet the following requirements:

1. Do not exceed the lower of the protection of groundwater or the protection of public health soil cleanup objectives for restricted commercial use as described for soil covers and backfill in 6 NYCRR Part 375-6.7(d) and listed at 6 NYCRR Part 375-6.8(b)..

2.5 OFF-SITE BORROW MATERIALS

A. The Owner reserves the right to accept or reject any fill materials proposed for use at the site or brought to the site. The basis of rejection could include, but not be limited to, soils which do not meet the physical or chemical requirements for fill, backfill or soil cap materials.

B. Materials which may be considered as borrow sources for this site include, but are not limited to, the following:

- (1) non-contaminated soil which has been excavated as part of a construction project (per 6NYCRR Part 360-1.15(b)(7)); and/or
- (2) other non-contaminated soil which has received a beneficial use determination from NYSDEC and for which use at this site is acceptable to NYSDEC (as per 6NYCRR Part 360-1.15).

C. The following materials will not be considered as potential borrow sources for this site:

- (1) construction and demolition debris wastes consisting of asphalt, concrete, glass, wood, brick, metal or other waste materials, unless such material meets the beneficial use criteria defined at 6NYCRR Part 360-1.15;
- (2) petroleum-contaminated soils not remediated to the satisfaction of the NYSDEC;
- (3) soils contaminated with chemical or industrial wastes or materials, sewage treatment wastes, or solid wastes;
- (4) ash from any combustion process;
- (5) asbestos or asbestos-containing materials;
- (6) wood, wood chips, bark, stumps, logs and land-clearing debris; and

- (7) other solid or hazardous wastes not exempted by federal, state or local regulations.

- D. Information on proposed sources of borrow material, including chemical analyses and documentation of NYSDEC's beneficial use determination, if applicable, shall be provided by the Contractor to the Engineer and Owner's Representative a minimum of two weeks prior to the proposed delivery of the material on site. Borrow soil proposed for use as clean soil cover shall meet the clean soil criteria presented in Part 2.4 D. All borrow sources must be pre-approved by the Engineer and Owner's Representative prior to delivery to the site.
- E. The Owners Representative shall sample and test all proposed borrow soil sources for chemical characteristics in accordance with Table 5.4(e)10 of NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation or other site-specific protocol approved by NYSDEC. The Contractor shall assist the Owners Representative in coordinating the collection of soil samples from the proposed source for chemical testing.

2.6 DRUMS

- A. Steel, 55-gallon, DOT-approved for hazardous waste transport.

PART 3 - EXECUTION

3.1 HEALTH AND SAFETY/RIGHT TO KNOW

- A. All Contractors are required to notify their workers of the history of the site and contaminants that may be present, and to be alert for evidence of petroleum-contaminated soils. The Owner's Representative should be notified of the presence of potentially hazardous conditions, if encountered.
- B. All Contractors will be required to follow Section 01740, Environmental Health, Safety and Emergency Response for their workers at the site.
- C. All site health and safety controls shall be fully established and in operation prior to beginning any soil excavation. Site controls shall include but not be limited to work zones properly barricaded, and the provision of decontamination facilities and all support equipment and

supplies, including personal protective equipment. All site controls shall be reviewed by the Owner's Representative.

- D. A site-specific Health and Safety Plan (HASP) shall be developed and implemented by the Contractor for all soil excavation and disturbance activities to address potential exposure of site construction workers and surrounding community to site contaminants. The HASP shall contain a Community Air Monitoring Plan (CAMP) prepared in accordance with NYSDEC DER-10, Appendix 1A and the CAMP shall be implemented by the Contractor, including real-time continuous dust monitoring with portable dust monitors, during all site soil disturbance activities.

3.2 GENERAL

- A. Work will be provided in accordance with applicable federal, state and local regulations.
- B. The Contractor shall have inspected the site and satisfied himself as to actual grades and levels and true conditions under which the work will be performed.
- C. Existing underground and overhead utilities that remain shall be located, identified, and protected from damage.
- D. Benchmarks, monitoring wells, and designated structures shall be protected from damage or displacement due to excavation and/or vehicular traffic.
- E. The work area shall be dry and free of standing water or snow.
- F. Erosion control measures shall be established at the beginning of construction and maintained during the entire period of construction. All erosion controls shall be inspected at least once every 7 calendar days to ensure they are in proper working condition. In addition, inspections shall be completed during storm events, after each rainfall of one-half (1/2) inch magnitude or greater, prior to weekends, and prior to forecasted storm events. Any observed deficiencies shall be repaired or replaced immediately. A written log of the inspections and corrective actions shall be maintained at the site. On-site areas that are subject to severe erosion and off-site areas that are especially vulnerable to damage from erosion and/or sedimentation shall

be identified and protected. Surface water runoff originating from upgrade of exposed areas shall be controlled to reduce erosion and sediment loss during the period of exposure.

- G. All land-disturbing activities shall be planned and conducted to minimize the size of the area exposed at any one time and the length of the time of exposure.
- H. All land-disturbing activities shall be planned and conducted in a manner which minimizes off-site sedimentation damage.
- I. Land-disturbing activities shall be performed only after erosion and sediment controls are in place.
- J. Excavated soils and fill materials shall be stockpiled as specified in Item 3.7 of this specification.
- K. Excavated on-site soil materials may only be re-used on-site below 18 inches or greater below final grade.
- L. At those locations where the soil cover has been eroded, damaged or otherwise requires replacement and is located outside the western wooded area, a clean soil cover having a minimum thickness of at least 18 inches shall be installed. No underlying demarcation fabric is required at these locations outside the western wooded area whose limits are indicated on Figure 1 in Appendix E of the OM&M Plan.
- M. At those locations within the western wooded area (i.e., 6 to less than 18 inches of clean soil cover present), the presence of an underlying demarcation fabric shall be verified and replaced where absent prior to any backfilling or repair of erosion or damage. The replacement clean soil cover thickness in the western wooded area shall be at least equal to the existing adjacent clean soil cover thickness.
- N. The top 18 inches of soil fill shall meet the definitions of soil cap materials in Part 2.4D. Furthermore, at those locations requiring greater than 18 inches of soil fill to meet final grade, the material placed below 18 inches shall meet the definition of satisfactory soils in Part 2.4B.
- O. The Contractor shall install new white- or orange-colored demarcation filter fabric in areas within the western wooded area where clean soil cover material is installed or replaced and the

previously existing white demarcation fabric at that location is damaged or absent. The fabric shall be placed directly below the clean soil cover materials as a visual demarcation between the clean soil cover and underlying fill soil. The fabric shall be laid loosely when installed so that the placement of overlying materials will not stretch or tear it. Fabric shall be overlapped at exposed seams by at least 6 inches or otherwise securely attached (e.g., sewn, taped) to the existing adjacent exposed fabric and anchored appropriately to hold it in position without tearing or separating prior to covering with soil. The overlaying soil shall be placed within one week of filter placement. No traffic or equipment shall track directly over the fabric prior to being covered with soil.

- P. The Contractor shall keep dust down at all times, including during nonworking periods. Soils, roads and other disturbed areas shall be sprinkled or treated with dust suppressants in accordance with 29 CFR 1910.1000. The use of oil or other petroleum products for this purpose is prohibited. Dry power brooming will not be permitted. Prior to the conduct of land-disturbing activities, the Contractor shall submit and obtain approval from the Owner's Representative a Community Air Monitoring Plan (CAMP) to be implemented during the Work. The CAMP shall be prepared in accordance with NYSDEC DER-10 Appendix 1A.
- Q. The Contractor shall provide all layout field data, including ties, to the Owner's Representative. The Contractor shall maintain all required field controls throughout the performance of the Work.

3.3 PROTECTION OF NATURAL RESOURCES

- A. The Contractor shall not pollute any streams, rivers or waterways with fuels, oil, bitumens, calcium chloride, acids, insecticides, herbicides, or other harmful materials. The Contractor shall comply with all applicable federal, state, county and municipal laws concerning pollution of waterways.
- B. The Contractor shall prevent oily or other hazardous substances from entering the ground, drainage areas or adjacent waterway.
- C. The Contractor shall at all times perform all work and take such steps required to minimize interference with or disturbance to fish and wildlife. The Contractor shall not alter surface water or groundwater flows or otherwise disturb native habitat adjacent to the work area which, in the opinion of the Owner's Representative, are critical to fish and wildlife.

- D. The Contractor shall not disturb, alter, fill, affect, drain, encroach upon, or destroy any wetlands, except as otherwise approved by the Engineer or Owner's Representative. The Contractor shall not destroy upland areas adjacent to, or alter surface or ground water flows into or from wetlands. The Contractor shall not stage construction materials, supplies or equipment in wetland areas or adjacent areas (as defined at 6NYCRR 661.4).
- E. All areas having any apparent historical or archaeological interest which are discovered in the course of any construction activities shall be carefully preserved. The Contractor shall leave the archaeological find undisturbed and shall immediately report the find to the Owner's Representative so that proper authorities may be notified.
- F. The Contractor shall obtain a stormwater discharge permit for construction activity, if required by federal, state or local regulations. A state stormwater discharge general permit is required for construction activities where one or more acres of land are disturbed including disturbances of less than one acre that are part of a larger common plan of development and in accordance with the current NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity.
- G. The construction activity stormwater discharge General Permit also requires the preparation of a site-specific Stormwater Pollution Prevention Plan (SWPPP), Notice of Intent (NOI), and Notice of Termination (upon final stabilization) by the Contractor. The Contractor shall prepare the application, pay for, obtain and comply with the state stormwater discharge General Permit for construction activity. The Contractor shall submit the SWPPP to the Engineer and Owner's Representative at least 2 weeks prior to the start of construction activities and submit the NOI and NOT to NYSDEC in accordance with the General Permit.
- H. The Contractor shall not damage, disturb, or otherwise adversely impact any of the existing trees that have been identified to remain on the site.

3.4 MANAGEMENT OF DEWATERING LIQUIDS

- A. Excessive rainwater which collects in an open excavation shall be discharged onto the adjacent ground unless it has obvious signs of potential contamination (e.g., sheen, oil, odors).

- B. Groundwater which flows into an open excavation shall be discharged back to groundwater into a nearby excavation unless it has signs of potential contamination, in which case it shall be handled as described below.
- C. Dewatering liquids shall not be discharged directly or indirectly by overland flow into surface water bodies including the adjacent New York harbor.
- D. The Contractor shall collect all liquids generated as a result of dewatering efforts which appear to have signs of potential contamination (e.g., oil sheen, petroleum product). Water collected as a result of dewatering operations shall be temporarily stored in an on-site tank trailer and/or drums. The Contractor shall sample and manage the water and if analytical testing establishes that the water is contaminated, transported and disposed of off-site in accordance with applicable federal, state or local regulations.
- E. If signs of potential contamination (e.g., oily sheen or a floating layer of petroleum product) are identified in an excavation on the surface of the water table, the Owner's Representative shall be notified. The Contractor shall undertake efforts to remove such contamination prior to the initiation of dewatering activities. Such efforts could include the use of absorbent materials to soak up the sheen or product, the removal of an oil layer using a skimmer pump, or other efforts as directed by the Owner's Representative.
- F. If collected water is determined, via analytical testing, to be uncontaminated, it may be disposed of on-site under the direction of the Owner's Representative or disposed of off-site in accordance with applicable federal, state and local regulations.

3.5 GENERAL EXCAVATION

- A. The Contractor shall complete all excavation regardless of the type, nature or condition of the material encountered. The Contractor shall be solely responsible for making all excavations in a safe manner.
- B. Owner's Representative shall be notified of unexpected subsurface conditions. Work shall be discontinued in affected areas until notified to resume work by Owner's Representative.

- C. Grading in the vicinity of excavations shall be properly pitched to prevent water from running into the excavations. Excavations shall be kept free from water during performance of the work under this Contract at no expense to the Owner. Diversion berms and other devices necessary for this purpose shall be built by the Contractor.
- D. Displaced or loose soil shall be prevented from falling into excavation. The stability of soil slopes shall be maintained.
- E. Excavation shall not be performed when weather conditions or the conditions of the materials are such that, in the opinion of the Owner's Representative, work cannot be performed satisfactorily or adverse environmental impacts may occur.
- F. Appropriate measures shall be provided to retain excavation side walls and to ensure that persons working in or near the excavation are protected. Sheet piling, shoring, or bracing may be used to support the walls of excavations and to minimize seepage of ground water into the excavation. Method, design, construction, and adequacy of any required bracing shall meet the OSHA requirements of 29 CFR Part 1926 and are the responsibility of the Contractor. If an excavation support system is used, the proposed system shall be designed by an engineer licensed in the State of New York. The design and construction of the sheet piling, shoring, and bracing system shall provide means for its removal as backfill progresses.
- G. The Contractor shall excavate and segregate clean soil cover materials from underlying soil or fill materials. Clean soil cover materials shall be reused to the maximum extent possible on the site at the direction of the Engineer and Owners Representative.
- H. Excavated or otherwise recovered stone riprap materials shall be reused to the maximum extent possible on the site at the direction of the Engineer.

3.6 EXCAVATION OF CONTAMINATED MATERIAL

- A. Work and decontamination procedures in areas containing contaminated material shall be performed in accordance with standard engineering practices.
- B. Contractor shall employ methods necessary to isolate contaminated soils and other materials from non-contaminated soils.

- C. Excavated higher contaminant concentration soils and fill materials shall not be moved to on-site areas having lower contaminant concentration soils and fill materials.
- D. Excavated material proposed for onsite re-use must be sampled in accordance with Table 5.4(e)10 of NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation or other site-specific protocol approved by NYSDEC.
- E. Excavated material, suitable in the opinion of the Engineer and in accordance with this specification, shall be re-used, so far as practicable, in backfilling.
- F. Excavated on-site soil materials from below the existing clean soil cover and demarcation fabric liner may only be re-used below the clean soil cover and demarcation fabric.
- G. As necessary, excavated soil will be screened to remove unsuitable materials which prevent the soils from meeting the "satisfactory soils" definition and therefore preclude their use in backfilling.
- H. Materials screened from the soil or other debris (e.g., concrete, wood timbers) which meet the definition of construction and demolition (C&D) debris will be stockpiled separately for disposal at an appropriately permitted C&D landfill or processing facility approved by the Owner.
- I. Excavation and soil handling shall be performed in a manner which limits mixing of materials with different levels and types of contamination to the highest degree possible.
- J. Disposal of material which is contaminated as a result of the Contractor's careless or unauthorized procedures for excavation or soil handling shall be at his own expense.
- K. Transfer of potentially-contaminated and contaminated materials from the excavation to the stockpile areas shall be conducted in such a manner as to prevent the spread of potentially-contaminated or contaminated materials across the site.

3.7 STOCKPILING

- A. Materials shall be stockpiled on-site at locations proposed by the Contractor and approved by the Owner's Representative.
- B. Differing materials shall be stockpiled apart to prevent mixing.
- C. Surface water shall be directed away from stockpile sites to prevent erosion or deterioration of materials.
- D. Excavated stockpiled materials shall be placed on a base lined with 40 mil. (or higher) HDPE.
- E. Stockpiles shall not exceed 35 feet in height with maximum side slopes of 2:1 (horizontal:vertical).
- F. Excavated material stockpiles shall be covered with 10 mil plastic sheeting when not in use.
- G. The HDPE shall be bermed around the edges to prevent any infiltration of stormwater or exfiltration of leachate. The berm height shall be a minimum of 12-inches.
- H. The HDPE and 10 mil plastic sheeting shall be adequately secured to prevent damage or loss by wind or other weather elements.
- I. The stockpiles shall be located by the Contractor to prevent double handling.
- J. Any materials documented to be hazardous wastes must be stored in accordance with the requirements of 40 CFR 262.34. The hazardous wastes shall be stored within containers or a containment building in accordance with the requirements of 40 CFR 262.34(a). Hazardous wastes must be removed from the site within 90 days from the day the period of accumulation begins. The date of accumulation and hazardous waste label must be clearly indicated on the storage container.
- K. Sediments and contaminated soils shall be suitably dewatered prior to stockpiling, to prevent free water from adversely impacting working conditions on-site and from developing during transport of contaminated soils to an off-site disposal facility.

- L. All stockpiles shall be managed in accordance with applicable local, federal and state regulations to protect the health and safety of the public and the environment. Soils shall not be stockpiled within any wetlands area. Any contaminated or potentially contaminated stockpiles shall be secured from the public and shall not be stored near sensitive human health and environment areas such as within 100 feet of residential areas or wetlands.

3.8 SOIL TRACKING, STOCKPILE SAMPLING AND ANALYSIS

- A. The Contractor shall provide to the Owner's Representative, upon request, copies of a written record documenting the locations of stockpiled material, volume estimates, site source locations, and any available stockpile characterization data.
- B. The Owner's Representative shall be responsible for the collection and analysis of samples from the contaminated and potentially-contaminated soil stockpiles and the determination of the final disposition of these materials based on chemical analyses. The Contractor must obtain the approval of the Owner of proposed treatment/disposal/recycling facilities for soils prior to transportation off-site.

3.9 EQUIPMENT AND VEHICLE DECONTAMINATION

- A. Clean soil adhered to construction equipment shall be removed from the equipment using brooms and shovels prior to the equipment leaving the site.
- B. In the event that equipment comes in contact with contaminated or petroleum-impacted soils, both dry and wet decontamination methods shall be conducted by the Contractor. The Contractor shall designate an area to be used for such equipment decontamination outside of restricted areas and approved by the Owner's Representative. Initially, all soil shall be physically removed to the maximum extent possible from equipment with shovels. All contaminated soil removed from the equipment shall be stockpiled in the appropriate contaminated soil stockpile. The wet decontamination method shall use hot water steam-cleaning and all decontamination water generated shall be collected, chemically characterized and disposed off-site by the Contractor. The Contractor shall provide the drums or other containers necessary for the collection of any decontamination water associated with contaminated materials. The wet decontamination procedures must be approved by the Owner's

Representative. The use of water for decontamination purposes shall be minimized. The water used for steam cleaning shall be potable water supplied by the Contractor.

END OF SECTION

APPENDIX E

SECTION 01740

ENVIRONMENTAL HEALTH, SAFETY AND EMERGENCY RESPONSE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Safety and Health requirements in accordance with Construction Best Management Practices and applicable safety and health regulations that will apply to all contractors and employees working on site, including those involved in the following activities:
 - ii. Excavation and movement of contaminated soils and wastes.
 - iii. Handling of petroleum, chemicals, or hazardous materials.
 - iv. Generation and control of dust from soil disturbance activities.
 - v. Prevention and response to releases or spills of petroleum, hazardous materials, chemicals, and contaminated soils and wastes.

B. Related Sections include the following:

1. Division 1 Section "Submittals."
2. Division 2 Section "Materials Management."

1.2 DEFINITIONS

- A. Hazardous material: A hazardous substance which is listed as hazardous or acutely hazardous under 6NYCRR Part 597 or a mixture thereof, or which consists of petroleum products, contaminated or potentially-contaminated soils or hazardous waste.
- B. Construction Manager: The Construction Manager will be designated by the Owner.

- C. Spill: Any escape of a substance from the containers employed in the normal course of storage, transfer, processing or use. Includes both intentional and unintentional discharges of any quantity of hazardous or contaminated material.

1.3 SUBMITTALS

- A. A site-specific Health and Safety Plan (HASP), including a Community Air Monitoring Plan (CAMP) prepared in accordance with NYSDEC DER-10, Appendix 1A, shall be developed and submitted by the Contractor for all soil excavation and disturbance activities and any ground water handling to address potential exposure of site construction workers and surrounding community to site contaminants. Two bound paper copies of the HASP shall be submitted to the Owners Representative for review at least 2 weeks prior to the start of construction activities. In response to any comments received from the Owners Representative on the HASP, the Contractor shall revise and resubmit the revised HASP to the Owners Representative at least 2 days prior to the start of construction.
- B. Safety logs documenting any toolbox training sessions, first aid injuries, hazardous materials spills, recordable injuries and near-miss incidents are to be maintained by each Contractor and submitted to the Construction Manager and Owner's Representative upon request.
- C. Training logs, including, but not limited to, records of confined space training, scaffold training, and Hazard Communication training, and Hazardous Waste Operations and Emergency Response Standard (Hazwoper) training, as applicable, are to be maintained by each Contractor and submitted to the Construction Manager and Owner's Representative upon request.
- D. Daily site logs and schedules of work are to be maintained by each Contractor and made available to the Construction Manager and Owner's Representative upon request.
- E. Accident reports and documentation of corrective actions taken shall be submitted to the Construction Manager and Owner's Representative in writing within 24 hours of occurrence.

1.4 PROJECT CONDITIONS

- A. The Contractor is advised to carefully inspect the project site, prior to bid submission to become familiar with the site and site conditions.

- B. The site is located on New York Harbor and work will be conducted near the water. Contractors required to work near the water or on the shoreline must be equipped with appropriate safety gear and equipment to safely work near the water and to conduct rescue as appropriate.
- C. This is a construction project that will involve numerous contractors and associated personnel. The Contractor is required to coordinate all work with the Construction Manager and utilize safety provisions necessary to protect all personnel.
- D. The Contractor shall ultimately be responsible for the health and safety of the Contractor's own personnel.
- E. The Owner's Representative may conduct air monitoring and safety oversight above and beyond the air monitoring required to be performed by the Contractor in accordance with Community Air Monitoring Plan (CAMP) requirements specified for soil disturbance activities under NYSDEC DER-10, Appendix 1A. Safety violations will be recorded and brought to the attention of the Construction Manager and the Owner.
- F. The Contractor shall implement strict health and safety precautions as warranted by the work or environmental conditions encountered.

1.5 AVAILABLE INFORMATION

- A. Elevated levels of polycyclic aromatic hydrocarbons (PAHs) and heavy metals were historically found in soils at the site. These constituents are primarily attributable to fill materials (coal pieces, coal ash, slag and asphalt shingles) in soils across the site. In addition, low levels of pesticides and polychlorinated biphenyls were detected in some site soils/fill during investigation and remediation of the site.

1.6 REGULATORY REQUIREMENTS

- A. The Contractor shall comply, at a minimum, with the following:
 - 1. Occupational, Safety and Health Administration (OSHA), Standards Regulations, 29 CFR 1910 (General Industry)
 - 2. OSHA Safety and Health Standards, 29 CFR 1926 (Construction)
 - 3. OSHA Confined Space Entry Standard, 29 CFR 1910.146

4. ANSI, Protective Footwear, Z358.1
5. ANSI, Practice for Occupational and Educational Eye and Face Protection, Z87.1
6. New York State Department of Environmental Conservation (NYSDEC) DER-10: Technical Guidance for Site Investigation and Remediation, Appendix 1A.
7. New York State Uniform Fire Prevention and Building Code, 9 NYCRR Part 1219-1228.
8. City of New York Building Code, Title 28, Chapter 1.
9. City of New York Fire Prevention Code, Title 28, Chapter 4.

PART 2 - PRODUCTS

2.1 CONSTRUCTION AND SAFETY EQUIPMENT

- A. The Contractor shall provide all employees and Subcontractor(s) with personal protective equipment (PPE) and protective clothing consistent with the levels of protection required for this Work. A needs analysis must be performed by the Contractor to determine the proper PPE.
- B. The Contractor shall conform with the requirements of the New York State, City of New York, Federal Occupational Safety and Health Administration (OSHA), and applicable codes and regulations of federal, state and local authorities having jurisdiction over job-site safety.

PART 3 - EXECUTION

3.1 GENERAL

- A. A site-specific Health and Safety Plan (HASP) shall be developed and implemented by the Contractor for all soil excavation and disturbance activities and any ground water handling to address potential exposure of site construction workers and surrounding community to site contaminants. The HASP shall contain a Community Air Monitoring Plan (CAMP) prepared in accordance with NYSDEC DER-10, Appendix 1A and the CAMP shall be implemented by the Contractor, including real-time continuous dust monitoring with portable dust monitors, during all site soil disturbance activities.
- B. All Contractors are required to notify their workers of the history of the site and contaminants that may be present, and to be alert for evidence of contaminated soils or other hazardous materials. The Owner's Representative should be notified of the presence of potentially hazardous conditions or contaminated materials, if encountered.

- C. It may be necessary that workers who are in repeated close proximity to excavated contaminated or hazardous materials be trained in Health and Safety procedures according to the OSHA 29 CFR 1910.120 (Hazwoper) requirements and be current in their OSHA refresher course. At a minimum, those workers directly involved in the excavation and handling of contaminated soils shall have the appropriate level of Hazwoper training and proof of such current training including any refresher training shall be provided to the Owner's Representative.
- D. Areas required for execution of work shall be cleared. The work area above mean high water shall be free of standing water or snow and shall be dry.
- E. The Contractors shall keep dust to a minimum during construction activities. The Contractor shall be required to implement adequate dust controls consisting of wetting down the exposed soil surfaces with potable water and/or covering the stockpiles with a tarp in order to comply with the requirements of NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation, Appendix 1A and the project-specific CAMP.

3.2 PERSONNEL AND ORGANIZATIONAL RESPONSIBILITIES

- A. The Construction Manager shall provide a Safety Representative who will coordinate and supervise on-site safety and health.
- B. The Safety Representative shall be adequately trained in construction safety and management.
- C. The Safety Representative shall be trained according to OSHA 1910.120 Hazwoper requirements including a minimum of 40 hours of initial training.
- D. The Safety Representative will be required to meet with the Construction Manager and Owner's Representative on a regular basis.
- E. The Safety Representative will have the following responsibilities and authority to perform the following functions:
 - 1. Direct on site personnel with respect to safety issues.
 - 2. Maintain safety and training logs, as required.

3. Have the authority to enforce this specification and safety-related regulatory requirements.
 4. Have the authority to stop operations if the safety and health of personnel may be jeopardized.
 5. Effect evacuation of the site, if necessary.
 6. Evaluate monitoring data with the Owner's Representative to make field decisions regarding safety and health and dust control procedures.
 7. Respond within 24 hours of notification from the Construction Manager and Owner's Representative regarding health and safety violations and concerns.
 8. Coordinate any modifications to this specification or any corrective actions resulting from health and safety violations with the Construction Manager and Owner's Representative.
- F. Each Contractor shall have a designated employee responsible for health and safety issues. This individual shall be responsible for the health and safety of the Contractor's employees. This individual shall also work with and report to the Safety Representative, as necessary.

3.3 MOBILIZATION AND DEMOBILIZATION

- A. All site health and safety controls shall be fully established and in operation prior to beginning any Work. Site controls shall include but not be limited to work zones properly barricaded, decontamination facilities, and all support equipment and supplies including personal protective equipment. All site controls shall be reviewed by the Construction Manager and Owner's Representative in the field.
- B. Any temporary fencing or barriers must be positioned so they are compatible with the maintenance and protection of traffic requirements and the construction activities.
- C. Contractors are responsible for all materials, equipment and supplies brought to the site. Equipment must be secured, guarded or removed as necessary to prevent injury to site personnel.
- D. Hazardous materials/substances, petroleum products, and chemicals brought to the site are the responsibility of the Contractor using these materials. Materials Safety Data Sheets shall be provided to the Construction Manager and Owner's Representative for all such materials brought to the site. All such materials or generated wastes must be properly containerized, labeled,

handled, stored, and managed in accordance with the OSHA Hazard Communication Standard, best management practices, and any other applicable local, state, and federal regulations.

3.4 HAZARD ASSESSMENTS

- A. The Contractor shall perform a hazard assessment for each location and operation to be performed. The hazard assessment shall be based on the best information available regarding site conditions as well as the practices and tools available for application to the operation. It shall include but not be limited to the following:
 - 1. A preliminary evaluation of the site's characteristics.
 - 2. An evaluation of the known or suspected environmental contaminants or other conditions which may pose inhalation, skin adsorption/contact, or ingestion hazards, if any.
 - 3. An evaluation of known or potential safety hazards associated with each task.

3.5 SITE CONTROL

- A. The Contractor shall be responsible for conducting operations at the site in a safe manner so as to reduce the possibility of contact with any contamination, prevent the removal of contaminants by personnel or equipment leaving the site, and reduce the possibility of injury due to unsafe work practices.
- B. The Contractor shall comply with the Owner's Representative's directives, including but not limited to the delineation of work zones and the institution of site entry and decontamination procedures, as needed.
- C. The Construction Manager shall keep a daily log of site activities, including the following:
 - 1. Personnel visiting the site;
 - 2. Affiliation;
 - 3. Date;
 - 4. Arrival time;
 - 5. Departure time; and
 - 6. Purpose of visit.

3.6 SPILL PREVENTION AND RESPONSE

- A. The Contractor shall use appropriate equipment, vehicles and operating practices to prevent spillage or release of petroleum, hazardous or contaminated materials from occurring as a result of site work.
- B. In the event of a spill or release, the Contractor shall immediately contact the Construction Manager and Owner's Representative.
- C. For hydraulic equipment operated by the Contractor and working on or near surface water, the Contractor shall maintain adequate oil spill response supplies on the project site to respond to and contain an oil release from such equipment.
- D. If the Contractor has been trained in spill response and can do so without causing himself undo danger, the Contractor shall take whatever immediate actions are possible, given existing conditions and available equipment, to stop, control and clean up any spill or release.
- E. The Contractor shall provide the Construction Manager and Owner's Representative with all available information regarding the spill, including but not limited to the name and quantity of material involved and the nature and extent of any related injuries.
- F. The Contractor shall follow any emergency instructions provided by the Construction Manager and Owner's Representative.
- G. The Owner's Representative, or designee, or Owner shall be responsible for reporting the spill to regulatory authorities. A written record of any such spill reports to regulatory authorities must be provided to the Owner within 24 hours of the report. That written record must contain the information identified below in section 3.6 G.
- H. Under state law, all petroleum and most hazardous material spills must be reported to the NYSDEC Hotline at (800)457-7362 (within New York State) or (518)457-7362 (outside of New York State). Spills or discharges which may result in a violation of the Clean Water Act (e.g., an oil discharge that violates water quality standards or causes a sheen on navigable waters) must be reported to the National Response Center at (800)424-8802 and the USEPA Region II Response Center at (732)548-8730. Spills or discharges which present a threat to the health and safety of others, including potential explosion or fire hazards, must be reported to

the local fire or police department at 911. Notification of a spill must be immediate and in no case more than two hours after the discharge. The Owner shall be notified prior to reporting the spill. The person reporting the spill should be prepared to present the following information:

1. Name of person making report and relationship to person causing the discharge.
2. Time and date of discharge.
3. Probable source of discharge.
4. Location of discharge, both geographic and with respect to bodies of water.
5. Type of discharge.
6. Possible health or fire hazards resulting from discharge.
7. Amount of material discharged.
8. Actions taken to clean up and remove the discharge.
9. Personnel presently at the scene.
10. Other government agencies that have been or will be notified.

END OF SECTION

APPENDIX F



PERMIT
Under the Environmental Conservation Law (ECL)

GENERAL PERMIT GP-2-12-002
Hurricane Sandy NYC General Permit (includes docks)

Permittee and Facility Information

Permit Issued To:

Affected Landowner

Facility:

Location Listed on

Notice of Intent

Applicable DEC Region(s): 2

General Permit Authorized Activity: General Permit for repair of damages resulting from Hurricane Sandy.

Description of Authorized Activities:

1. Stabilization of existing functional storm-damaged dwellings, decks and walkways with temporary bracing and pilings;
2. Construction of a single 4' wide access walkway to access damaged dwellings;
3. Installation of up to four rows of sandbags or 1 cubic yard sand cubes at the toe of storm damaged structures or eroded escarpments;
4. Placement of sand and/or material equivalent to existing material at the toe of eroded escarpments;
5. Repair or reconstruction of stairways that were functional before Hurricane Sandy;
6. Re-grade eroded dunes;
7. In-kind/in-place repair or reconstruction of bulkheads and shoreline erosion structures that were functional before Hurricane Sandy;
8. Repair or reconstruction of existing public roads, bridges, utilities and other public infrastructure.
9. Repair or reconstruction of existing fences, or new temporary fences in Freshwater Wetlands or Tidal Wetlands adjacent areas.
10. Removal of debris from waterways and Tidal wetlands.
11. Storm debris removal work in the following Freshwater Wetlands and regulated adjacent areas only, which are located east of the Staten Island Rapid Transit line that have storm surge-related damage:

NA-7 (South Beach)	NA-9 (Dongan Hills)	NA-10 (Oakwood Beach)
AR-13 (Blue Heron)	AR-12 (Arbutus Lake)	AR-17 (Wolfes Pond)
AR-15 (Tottenville)	AR-22 (Wards Point)	

No other work in these wetlands are authorized by this permit.

12. In-kind/in-place repair or reconstruction of docks, catwalks and floats that were functional before Hurricane Sandy.

All work shall be done according to the permit conditions contained herein.



PERMIT
Under the Environmental Conservation Law (ECL)

GENERAL PERMIT GP-2-12-002
Hurricane Sandy NYC General Permit (includes docks)

Permittee and Facility Information

Permit Issued To:

Affected Landowner

Facility:

Location Listed on

Notice of Intent

Applicable DEC Region(s): 2

General Permit Authorized Activity: General Permit for repair of damages resulting from Hurricane Sandy.

Description of Authorized Activities:

1. Stabilization of existing functional storm-damaged dwellings, decks and walkways with temporary bracing and pilings;
2. Construction of a single 4' wide access walkway to access damaged dwellings;
3. Installation of up to four rows of sandbags or 1 cubic yard sand cubes at the toe of storm damaged structures or eroded escarpments;
4. Placement of sand and/or material equivalent to existing material at the toe of eroded escarpments;
5. Repair or reconstruction of stairways that were functional before Hurricane Sandy;
6. Re-grade eroded dunes;
7. In-kind/in-place repair or reconstruction of bulkheads and shoreline erosion structures that were functional before Hurricane Sandy;
8. Repair or reconstruction of existing public roads, bridges, utilities and other public infrastructure.
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No other work in these wetlands are authorized by this permit.

12. In-kind/in-place repair or reconstruction of docks, catwalks and floats that were functional before Hurricane Sandy.

All work shall be done according to the permit conditions contained herein.



Permit Authorizations

Coastal Erosion Management - Under Article 34

Effective Date: 12/18/2012 Expiration Date: 10/31/2013

Docks, Platforms & Moorings - Under Article 15, Title 5

Effective Date: 12/18/2012 Expiration Date: 10/31/2013

Excavation & Fill in Navigable Waters - Under Article 15, Title 5

Effective Date: 12/18/2012 Expiration Date: 10/31/2013

Freshwater Wetlands - Under Article 24

Effective Date: 12/18/2012 Expiration Date: 10/31/2013

Tidal Wetlands - Under Article 25

Effective Date: 12/18/2012 Expiration Date: 10/31/2013

Water Quality Certification - Under Section 401 - Clean Water Act

Effective Date: 12/18/2012 Expiration Date: 10/31/2013

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

General Permit Authorized by

Permit Administrator: JOHN J FERGUSON , Chief Permit Administrator

Address: NYSDEC HEADQUARTERS

625 BROADWAY

ALBANY, NY 12233

Authorized Signature:

Date: 12/17/2012

Permit Components

NATURAL RESOURCE PERMIT CONDITIONS

WATER QUALITY CERTIFICATION SPECIFIC CONDITION

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS



**NATURAL RESOURCE PERMIT CONDITIONS - Apply to the Following
Permits: WATER QUALITY CERTIFICATION; TIDAL WETLANDS;
FRESHWATER WETLANDS; EXCAVATION & FILL IN NAVIGABLE
WATERS; DOCKS, PLATFORMS & MOORINGS; COASTAL EROSION
MANAGEMENT**

- 1. Conformance With Plans** All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or applicant's agent as part of the permit application. Such approved plans were prepared by the applicant and/or an authorized representative.
- 2. NYS Owned Underwater Lands** In-kind/In-place repair or reconstruction of docks, catwalks and floats that are located over NYS-owned underwater lands must have a valid lease or permit from NYS Office of General Services.
- 3. In-kind, In-place Repair or Reconstruction** Existing docks, catwalks and floats, and bulkheads, walkways and shoreline erosion structures that were functioning at the time of the storm damage may be repaired or reconstructed in-kind and in-place of the existing structures. No expansion or seaward extension of bulkheads or shoreline structures is authorized by this permit.
- 4. Repairs to Structures** All repairs to existing structures shall be confined to replacement of existing elements with no change in design, or dimensions, unless specifically authorized by the Department.
- 5. Stairway Design** The stairs and landings shall be a maximum of 4 feet in width and constructed a minimum of 3 feet above grade over the dune/bluff face.
- 6. Backfilling** All peripheral berms, cofferdams, rock revetments, seawalls, gabions, bulkheads or other approved shoreline stabilization structures shall be completed prior to placement of any fill material behind such structures.
- 7. Equipment Operation** Equipment operation below the high tide line is strictly prohibited. The storage of construction equipment and materials shall be confined to the project work area and areas more than 100 feet from the high tide line.
- 8. Sanitary Systems** This permit does not authorize filling or re-grading of exposed sanitary systems. Landowners must apply for separate permits to perform repairs or reconstruction to sanitary systems.
- 9. Hydraulically-filled Sandbags, Sand Cubes and Geotubes** Hydraulically-filled sandbags, sand cubes and geotubes are strictly prohibited.
- 10. Beach Excavation Prohibited for Fill** Excavation of the beach or dune for the purpose of obtaining fill material is prohibited. Sandbags may not be filled using sand from the beach or dune areas. Sandbags must be filled with clean sand; no debris or deleterious materials are allowed.
- 11. Sandbag and Sand Cube Installation** Sandbags and sand cubes must be installed no more than four rows deep and a maximum of three rows high.



12. Removal of Sandbags and Sand Cubes Sandbags and sand cubes must be removed within 120 days of installation, or a separate DEC permit to allow the structures to remain permanently must be obtained.

13. Freshwater and Tidal Wetland Vegetation There shall be no disturbance or damage to freshwater wetlands, vegetated tidal wetlands or dune vegetation as a result of the work performed under this permit. All necessary precautions must be taken to prevent damage or disturbance to these vegetated areas.

14. Construction Debris All construction debris shall be cleaned up at the end of each work day and disposed properly. No debris is permitted in freshwater wetlands, tidal waters or the beach areas.

15. Asian Longhorned Beetles Any tree debris within New York City, Nassau or Suffolk counties shall be disposed of by chipping to less than 1 inch in any two dimensions, then used as mulch, erosion control, building agent, or fuel. Wood may only be moved from Asian Longhorned Beetle quarantine areas under a permit from the NYS Department of Agriculture and Markets (<http://www.agriculture.ny.gov/PI/alb.html>).

16. Least Terns and Piping Plovers All recovery and repair work occurring in open, sandy beach areas must cease on March 31, 2013 to protect potential habitat for Least Tern and Piping Plover, unless otherwise authorized in writing by the Department.

17. No Dredging or Excavation No dredging, excavating or other alteration of shoreline or underwater areas is authorized by this permit, nor shall issuance of this permit be construed to suggest that the Department will issue a permit for such activities in the future.

18. Temporary Fences New temporary fences in wetland adjacent areas are to be removed immediately upon rebuilding or demolition of the house, or in any event no later than October 31, 2013.

19. Equipment in the Wetland This permit requires the use of temporary mats and/or low pressure equipment for any activity, including debris removal, which occurs on wetland soils.

20. No Water Control or Diversion Structures This permit does not authorize the construction of any new permanent water control or water diversion structures.

21. Erosion Control Sediment shall be controlled using erosion control measures (e.g., hay bales, filter fabric, silt fence) and seeding and mulching after work completion to prevent its release into the wetland and its adjacent area.

22. Clean Fill Only Reconstruction/repair/restoration backfilling or stabilization as authorized by this permit shall consist of only clean, uncontaminated fill or stabilization material.

23. No Interference With Navigation There shall be no unreasonable interference with navigation by the work herein authorized.

24. State Not Liable for Damage The State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.



25. State May Order Removal or Alteration of Work If future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department of Environmental Conservation it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners, shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.

26. State May Require Site Restoration If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may lawfully require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.

27. Precautions Against Contamination of Waters All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.

WATER QUALITY CERTIFICATION SPECIFIC CONDITIONS

1. Water Quality Certification The NYS Department of Environmental Conservation hereby certifies that the subject project will not contravene effluent limitations or other limitations or standards under Sections 301, 302, 303, 306 and 307 of the Clean Water Act of 1977 (PL 95-217) provided that all of the conditions listed herein are met.



GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. Facility Inspection by The Department The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. Relationship of this Permit to Other Department Orders and Determinations Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. Applications For Permit Renewals, Modifications or Transfers The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator

1 Hunter's Point Plaza

47-40 21st Street

Long Island City, NY 11101-5407

4. Submission of Renewal Application The permittee must submit a renewal application at least 30 days before permit expiration for the following permit authorizations: Coastal Erosion Management, Docks, Platforms & Moorings, Excavation & Fill in Navigable Waters, Freshwater Wetlands, Tidal Wetlands, Water Quality Certification.

5. Permit Modifications, Suspensions and Revocations by the Department The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

- a. materially false or inaccurate statements in the permit application or supporting papers;
- b. failure by the permittee to comply with any terms or conditions of the permit;



- c. exceeding the scope of the project as described in the permit application;
- d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. Permit Transfer Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

APPENDIX G



1430 Broadway
10th Floor
New York, NY 10018

212.221.7822 PHONE
212.221.7840 FAX

www.TRCsolutions.com

August 7, 2012

Ms. Kay Zias
New York City Economic Development Corporation
110 William Street
New York, New York 10038

Re: In-Situ Soil Characterization Report
Emergency Shoreline Rehabilitation
at 9/11 Memorial, St. George Station
Portion of Block 2, Lot 20, Staten Island, Queens, New York
VCP Site No. V00228, VCA Index No. W2-0852-99-10
TRC Project No. 177603.0150.0000

Dear Ms. Zias:

TRC Environmental Corporation (TRC), under Retainer Contract 33630009 with the New York City Economic Development Corporation (NYCEDC), conducted in-situ soil characterization sampling at a site located north of Bank Street extending approximately 1,925 feet west of the existing September 11 Memorial in Staten Island, New York (the "Site"). Refer to Figure 1 for a Site Location Map.

The Site is a portion of the New York State Department of Environmental Conservation (NYSDEC) Voluntary Cleanup Program (VCP) Site No. V00228 and Voluntary Cleanup Agreement (VCA) Index No. W2-0852-99-10. As part of the VCP, a deed restriction was recorded for the property on August 31, 2005. According to the deed restriction, prior written approval from the NYSDEC is required for soil disturbance below 18 inches in open areas of the VCP Site. The existing Materials Management and Health and Safety Specifications were updated and submitted under separate cover.

Soil and stone will be removed from an approximately 20-foot wide strip to facilitate the reconstruction of approximately 1,925 linear feet of concrete breasting wall. Excavation will range in depth from 2 to 5 feet below ground surface (bgs). Approximately 5,500 cubic yards of

soil will be generated from the emergency rehabilitation activities. The overall objective of the work was to obtain the soil characterization data needed to properly specify project off-site soil disposal and/or recycling requirements.

In-situ soil characterization activities were performed in general accordance with TRC's Revised Scope of Work and Cost Proposal dated June 15, 2012 and drawings provided by the construction management firm contracted by NYCEDC (Hunter Roberts) for the Site.

Description of In-situ Soil Characterization Activities

The soil characterization activities were completed between July 10 and 12, 2012, and consisted of the following tasks:

Acquire and Review Available Data

TRC acquired and reviewed readily available documents generated during the investigation and remediation of the Site in the VCP and on the development and use of this portion of the VCP Site as a waterfront esplanade and memorial. The purpose of the data review was to summarize available environmental information associated with former uses of the Site.

Geophysical Survey

Prior to drilling activities on July 10, 2012, TRC's subcontracted geophysical surveyor, NOVA Geophysical Services of Forest Hills, New York, confirmed that the proposed boring locations were clear of subsurface utilities and structures. A mark out of the public utilities was requested through the New York City One Call Center by TRC's drilling subcontractor prior to drilling. The geophysical survey report is provided in *Appendix A*.

Soil Sampling and Analysis

Soil sampling was conducted on July 11 and 12, 2012. TRC divided the linear area into five (5) downslope (areas of disturbance on the water side of the breasting wall) grid boxes and one (1) upland (areas of disturbance upland from the breasting wall) area. Direct-push (Geoprobe-type) equipment was used to advance soil borings and collect soil samples for the three (3) upland samples. A stainless steel hand auger was used to collect soil samples for the 15 downslope samples. Aquifer Drilling and Testing, Inc. (ADT) was retained as a subcontractor by TRC for drilling services. *Figures 2 through 4* show the grid boxes and soil boring locations. The soil



boring logs are presented in *Appendix B*. Presented below is a description of the soil sampling program.

- Advancement of 18 soil borings (M-SB-1 through M-SB-18), each to approximately 5 feet bgs.
- As described above, direct-push equipment was used to collect the upland soil samples and a hand auger was used to collect the downslope samples. A TRC scientist screened the soil samples for organic vapors utilizing a portable photoionization detector (PID). Field observations, including evidence of potential contamination (i.e., odors, staining, separate phase hydrocarbons, etc.), PID readings, and geological descriptions of each soil sample were recorded in a field logbook.
- One discrete soil sample was selected for volatile organic compound (VOC) and total petroleum hydrocarbons - diesel range organics (TPH-DRO) and - gasoline range organics (TPH-GRO) analysis per boring location. The VOC/TPH soil samples were selected at a random interval as no evidence of contamination (i.e., odors, staining, fill material, etc.) was noted.
- A composite soil sample was also prepared by compositing material from each of the three borings advanced in the respective downslope grid box or upland area. Soil was combined using a dedicated disposable Teflon scoop and disposable aluminum pan.
- Laboratory analysis was performed by York Analytical Laboratories of Stratford, Connecticut a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory.
- The discrete soil samples were analyzed for Target Compound List and NYSDEC Commissioner Policy (TCL/CP-51) listed VOCs, TPH-DRO and TPH-GRO. The composite soil samples were analyzed for TCL/CP-51 semivolatile organic compounds (SVOCs), target analyte list (TAL) metals (including hexavalent chromium), TCL pesticides and herbicides, and TCL polychlorinated biphenyls (PCBs). Due to the total concentrations of metals, TCLP analysis was performed on two (2) samples (M-SB-1-3 and M-SB-13-15) for lead and one (1) sample (M-SB-7-9) for chromium. The laboratory reports are included in *Appendix C*.

After completion of each boring, the soil cuttings were returned to their original location, as prescribed in DER-10, paragraph 3.3(e)(1). Used disposable personal protection equipment



(PPE) and sampling equipment (e.g., gloves, tubing, tape, etc.) were placed in heavy-duty plastic bags and disposed of properly off-site.

Site Characterization Results

This section presents a discussion of the results of the site characterization activities.

Results of Data Review

TRC acquired and reviewed documents generated during the investigation and remediation of the Site in the VCP and on the development and use of this portion of the VCP Site as a waterfront esplanade and memorial. The Site was historically utilized as a railroad service and maintenance facility until 1994. Prior subsurface investigations identified elevated levels of polycyclic aromatic hydrocarbons (PAHs) and heavy metals in on-site soils. These constituents were attributable to fill materials (e.g., coal, ash, slag, and asphalt shingles) encountered across the Site. In addition, low levels of pesticides and polychlorinated biphenyls (PCBs) were detected.

As part of the remedial design, site-specific soil cleanup objectives (SCOs) were accepted by NYSDEC. After the excavation and removal of on-site soils not meeting the site-specific SCOs, the installation of a filter fabric liner and the placement of at least 18 inches of imported clean fill material were completed. As stated above, the NYSDEC must approve any disturbance of material below the liner/imported clean fill. Additionally, a community air monitoring plan (CAMP) must be implemented in accordance with DER-10 during soil disturbance.

Results of Soil Sampling

There was no evidence of potential contamination observed in the soil samples. In general, brown and gray sand with gravel along with small pieces of concrete, brick and asphalt was observed in the soil borings. Groundwater is tidally influenced and was encountered at approximately 1 to 3 feet bgs in the downslope soil borings. Groundwater was not encountered in the upland soil borings.



Summaries of the results of the analyses of the soil samples are presented in *Tables 1* through *7*. The complete laboratory analytical data reports are presented in *Appendix C*. A review of the results of the analyses of the ten soil samples is presented below.

- *Volatile Organic Compounds (VOCs) in Soil* – There were no VOCs detected at concentrations greater than the unrestricted use SCOs or commercial use SCOs found in 6 NYCRR 375 or site-specific SCOs. Acetone and methylene chloride were detected in the laboratory method blank and the concentrations listed in the table are not representative of the samples.
- *Semivolatile Organic Compounds (SVOCs) in Soil* – There were no SVOCs detected at concentrations greater than the unrestricted use or commercial use SCOs or site-specific SCOs.
- *Metals in Soil* – Metal(s) were detected above unrestricted use SCOs in all of the six (6) samples. Samples M-SB-1-3 and M-SB-7-9 contained concentrations of cadmium above the site-specific SCO. Samples M-SB-7-9 and M-SB-10-12 contained concentrations of nickel above the commercial use SCO and sample M-SB-1-3 contained arsenic and copper at concentrations greater than the commercial use SCOs. There were no exceedances of TCLP regulatory limits for the three (3) samples analyzed.
- *Polychlorinated Biphenyls (PCBs) in Soil* – There were no PCBs detected above the laboratory reporting limits.
- *Pesticides in Soil* – One pesticide (4,4'-DDT) was detected at a concentration above the unrestricted use SCO in sample M-SB-16-18. There were no pesticides detected at concentrations above the commercial use SCOs or site-specific SCOs.
- *Total Petroleum Hydrocarbons (DRO and GRO) in Soil* – Total Petroleum Hydrocarbons Gasoline Range Organics (GRO) was not detected above the laboratory reporting limits. TPH Diesel Range Organics (DRO) concentrations ranged from non-detect to 401 mg/kg. There are no SCOs for TPH.

Conclusions

In summary, the Site is in the NYSDEC Volunteer Cleanup Program and soil disturbance must be completed in accordance with the deed restriction and DER-10. No evidence of potential petroleum-contamination was observed in the soil samples. PCBs and TPH GRO were not detected above the laboratory reporting limit and no VOCs or SVOCs were detected at a concentration exceeding the unrestricted use SCOs or site-specific SCOs. TPH DRO was



detected in six (6) of the 18 soil samples analyzed. Metals and/or pesticides were detected at concentrations above unrestricted use SCOs in all of the samples. Two (2) samples contained metals at concentrations above the site-specific SCOs and three (3) samples contained metals at concentrations above the commercial use SCOs. There were no exceedances of TCLP regulatory limits for the three (3) samples analyzed. Excavated soil, which meets the site-specific SCOs, may be acceptable for re-use at a depth 18 inches or greater below final grade. Further sampling is required in accordance with NYSDEC DER-10 Table 5.4(e)10 prior to any on-site re-use.

Sincerely,

TRC ENVIRONMENTAL CORPORATION



Jennifer Miranda
Senior Project Manager

cc: J. Peronto, TRC
D. Glass, TRC

Attachments:

Figures

Figure 1 – Site Location Map

Figures 2, 3 and 4 – Soil Boring Locations

Tables

Table 1 – Summary of Results of Analysis of Soil Samples for Volatile Organic Compounds

Table 2 – Summary of Results of Analysis of Soil Samples for Semivolatile Organic Compounds

Table 3 – Summary of Results of Analysis of Soil Samples for Metals

Table 4 – Summary of Results of Analysis of Soil Samples for Polychlorinated Biphenyls

Table 5 – Summary of Results of Analysis of Soil Samples for Pesticides

Table 6 – Summary of Results of Analysis of Soil Samples for Gasoline and Diesel Range Organics

Table 7 – Summary of Results of Analysis of Soil Samples for Toxicity Characteristic Leaching Procedure Metals

Appendices

Appendix A – Geophysical Survey Report

Appendix B – Soil Boring Logs

Appendix C – Laboratory Analytical Data Reports



FIGURES

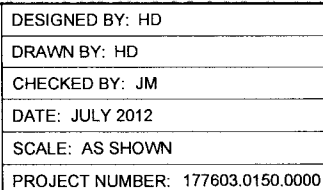


NEW JERSEY

COMMUNICATIONS

JERSEY CITY, N. J. - N. Y.
 140375-4 WISCONSIN
 1007
 140375-4 WISCONSIN
 140375-4 WISCONSIN

MAP OBTAINED THROUGH USE OF MAPTECH TERRAIN NAVIGATOR PRO SOFTWARE.

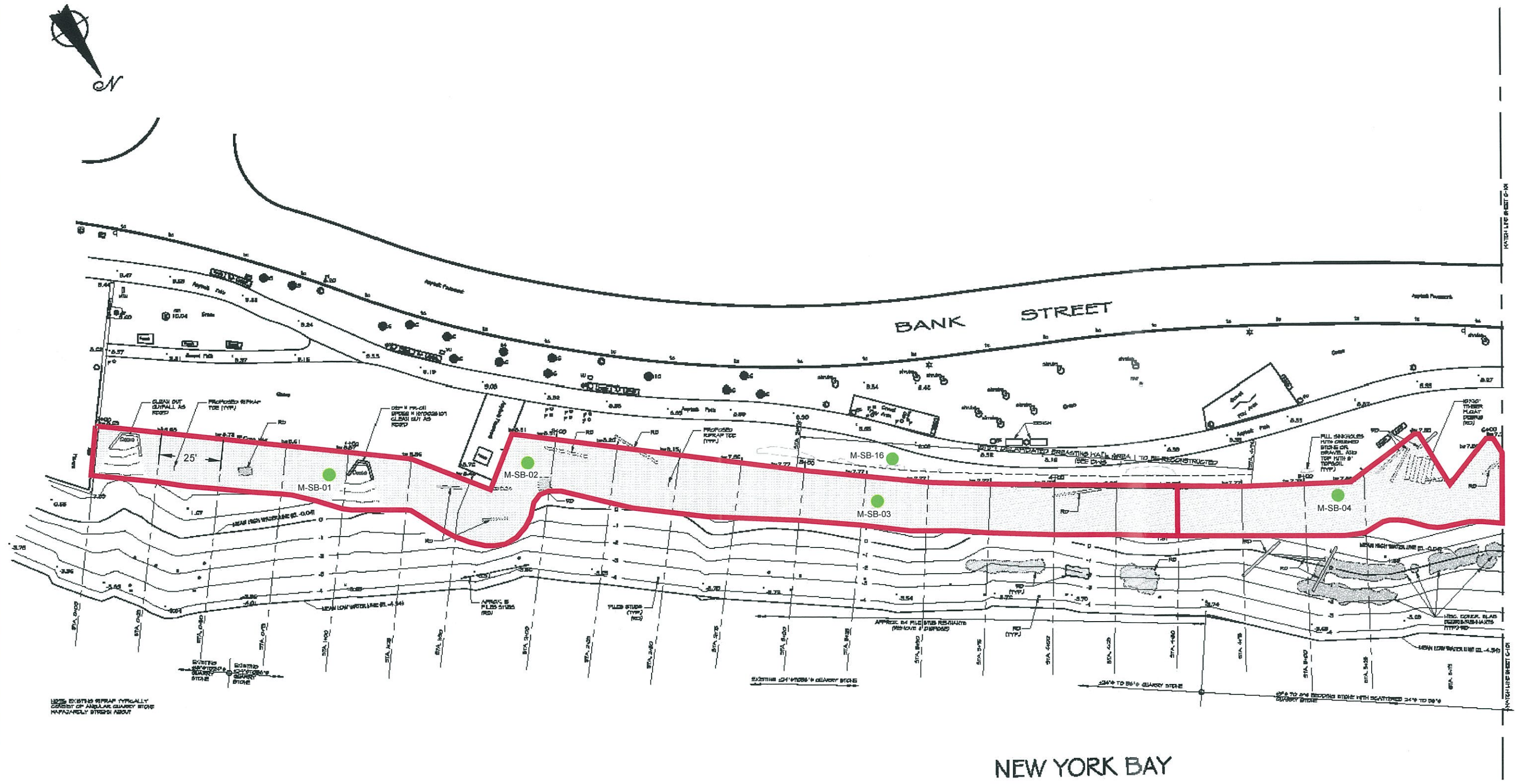


PROJECT NAME:
NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION
SOIL CHARACTERIZATION FOR STATEN ISLAND EMERGENCY
BULKHEAD REHAB
STATEN ISLAND, NEW YORK

DRAWING TITLE:

SITE LOCATION MAP

FIGURE
1



LEGEND:

- SOIL CHARACTERIZATION GRIDS
- PROPOSED SOIL BORING LOCATION AND IDENTIFICATION NUMBER
- M-SB-01

NOTE:

SOIL BORINGS M-SB-16 THROUGH M-SB-18 WERE ADVANCED IN UPLAND AREAS TO CHARACTERIZE SOIL TO BE REMOVED AS PART OF BREASTING WALL RECONSTRUCTION.

NO.	DESCRIPTION	BY	DATE

0 40 80 FT.
APPROXIMATE SCALE: 1"=40'
PAPER SIZE: 11" x 17"



DESIGNED BY: --
DRAWN BY: HD
CHECKED BY: JM
DATE: JULY 2012
SCALE: AS SHOWN
PROJECT NUMBER: 177603.0150.0000

PROJECT NAME: NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION SOIL CHARACTERIZATION FOR STATEN ISLAND EMERGENCY BULKHEAD REHAB STATEN ISLAND, NEW YORK
DRAWING TITLE: PROPOSED SOIL BORING LOCATIONS (SHEET 1 OF 3)



LEGEND:

— SOIL CHARACTERIZATION GRIDS

● SOIL BORING LOCATION AND IDENTIFICATION NUMBER

M-SB-01

NOTE:

SOIL BORINGS M-SB-16 THROUGH M-SB-18 WERE ADVANCED IN UPLAND AREAS TO CHARACTERIZE SOIL TO BE REMOVED AS PART OF BREASTING WALL RECONSTRUCTION.

NO.	DESCRIPTION	BY	DATE

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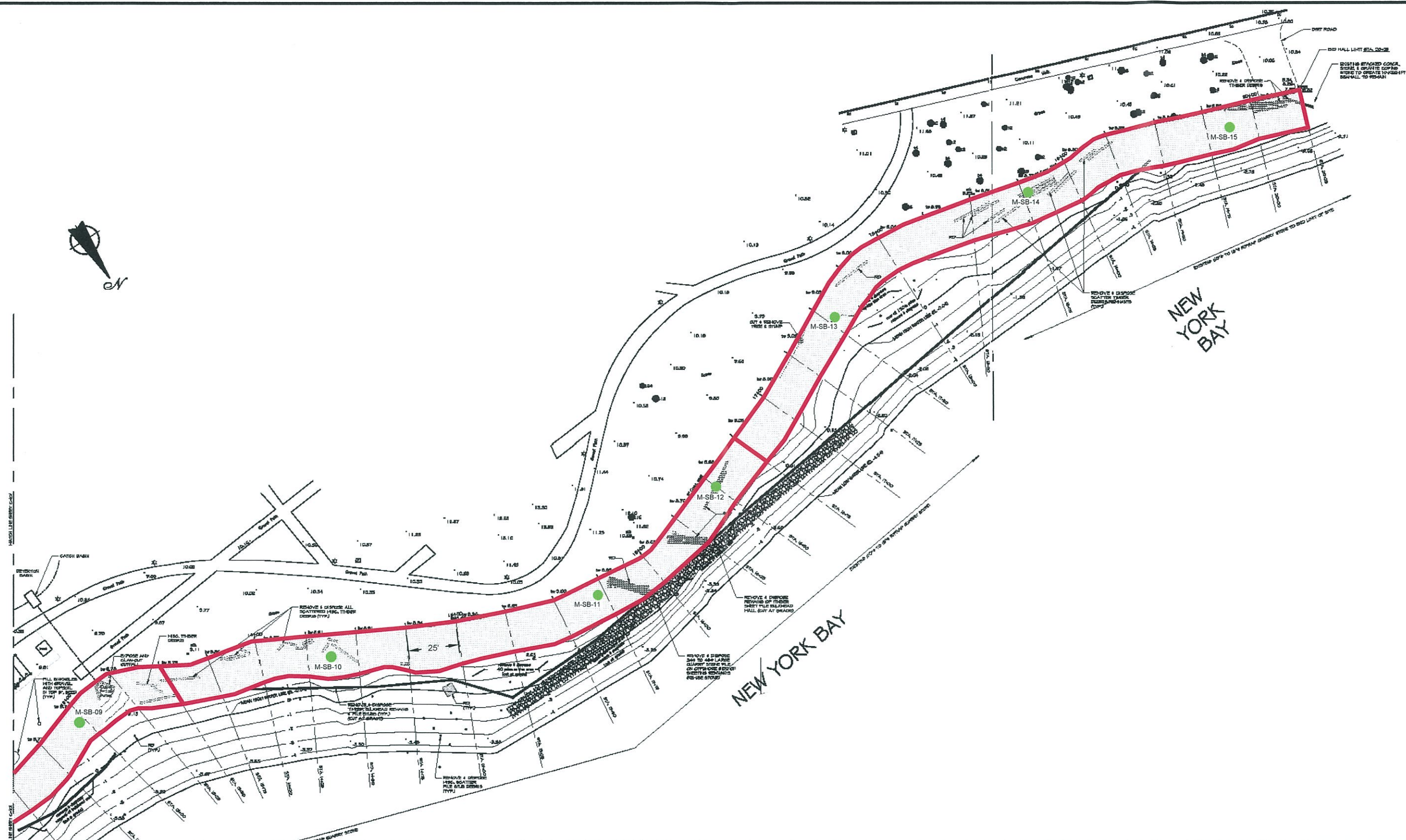
APPROXIMATE SCALE: 1"=40'

PAPER SIZE: 11" x 17"



DESIGNED BY: --
DRAWN BY: HD
CHECKED BY: JM
DATE: JULY 2012
SCALE: AS SHOWN
PROJECT NUMBER: 177603.0150.0000

PROJECT NAME: NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION SOIL CHARACTERIZATION FOR STATEN ISLAND EMERGENCY BULKHEAD REHAB STATEN ISLAND, NEW YORK
DRAWING TITLE: PROPOSED SOIL BORING LOCATIONS (SHEET 2 OF 3)



LEGEND:

— SOIL CHARACTERIZATION GRIDS

● SOIL BORING LOCATION AND IDENTIFICATION NUMBER

M-SB-01

NOTE:

SOIL BORINGS M-SB-16 THROUGH M-SB-18 WERE ADVANCED IN UPLAND AREAS TO CHARACTERIZE SOIL TO BE REMOVED AS PART OF BREASTING WALL RECONSTRUCTION.

NO.	DESCRIPTION	BY	DATE

0 50 100 FT.

APPROXIMATE SCALE: 1"=50'

PAPER SIZE: 11" x 17"



DESIGNED BY: --
DRAWN BY: HD
CHECKED BY: JM
DATE: MAY 2012
SCALE: AS SHOWN
PROJECT NUMBER: 177603.0000.0000

PROJECT NAME: NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION SOIL CHARACTERIZATION FOR STATEN ISLAND EMERGENCY BULKHEAD REHAB STATEN ISLAND, NEW YORK
DRAWING TITLE: PROPOSED SOIL BORING LOCATIONS (SHEET 3 OF 3)

TABLE 1
NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION
9/11 MEMORIAL, ST. GEORGE STATION
STATEN ISLAND, NEW YORK
IN-SITU SOIL CHARACTERIZATION
SUMMARY OF RESULTS OF ANALYSIS OF SOIL SAMPLES FOR VOLATILE ORGANIC COMPOUNDS

Sample ID	M-SB-1	M-SB-2	M-SB-3	M-SB-4	M-SB-5	M-SB-6	M-SB-7	M-SB-8	M-SB-9	M-SB-10	M-SB-10	M-SB-10	M-SB-10	M-SB-10	M-SB-10	M-SB-10	M-SB-10	M-SB-10	M-SB-10
Lab Sample ID	12G0390-33	12G0390-34	12G0390-35	12G0390-36	12G0390-37	12G0390-38	12G0390-39	12G0390-40	12G0390-41	12G0390-42	12G0390-42	12G0390-42	12G0390-42	12G0390-42	12G0390-42	12G0390-42	12G0390-42	12G0390-42	12G0390-42
Sampling Date	7/11/2012	7/11/2012	7/11/2012	7/11/2012	7/11/2012	7/11/2012	7/12/2012	7/12/2012	7/11/2012	7/9/2012	7/9/2012	7/9/2012	7/9/2012	7/9/2012	7/9/2012	7/9/2012	7/9/2012	7/9/2012	7/9/2012
Matrix	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Dilution Factor	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
VOLATILE ORGANIC COMPOUNDS (VOCs) ug/kg	Unrestricted Use SCO	Commercial Use SCO	Site-Specific Clean Soil Criteria	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
1,2,4-Trimethylbenzene	3,600	3,600	NC	1.5 U	1.4 U	1.5 U	1.4 U	1.3 U	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
1,3,5-Trimethylbenzene	8,400	8,400	NC	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	0.94 U	0.99 U	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
n-Butylbenzene	12,000	12,000	NC	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	0.92 U	0.98 U	1.1 U	0.99 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	3,900	3,900	NC	1.2 U	1.1 U	1.1 U	1 U	1 U	0.88 U	0.93 U	1 U	0.94 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
sec-Butylbenzene	11,000	11,000	NC	1.3 U	1.2 U	1.3 U	1.2 U	1.2 U	0.98 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
tert-Butylbenzene	5,900	5,900	NC	1.3 U	1.2 U	1.3 U	1.2 U	1.2 U	0.99 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
1,1,1,2-Tetrachloroethane	NC	NC	NC	1.9 U	1.8 U	1.9 U	1.8 U	1.7 U	1.5 U	1.6 U	1.7 U	1.6 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,1,1-Trichloroethane	880	500,000	NC	0.35 U	0.33 U	0.35 U	0.32 U	0.31 U	0.27 U	0.28 U	0.31 U	0.29 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,1,2,2-Tetrachloroethane	NC	NC	NC	2.8 U	2.5 U	2.7 U	2.5 U	2.4 U	2.1 U	2.2 U	2.4 U	2.2 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon)	NC	NC	NC	0.91 U	0.84 U	0.89 U	0.82 U	0.81 U	0.69 U	0.73 U	0.8 U	0.74 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U
1,1,2-Trichloroethane	NC	NC	NC	2.1 U	1.9 U	2.1 U	1.9 U	1.9 U	1.6 U	1.7 U	1.9 U	1.7 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
1,1-Dichloroethane	270	240,000	NC	1.4 U	1.3 U	1.4 U	1.3 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,1-Dichloroethylene	330	500,000	NC	1.1 U	1.1 U	1.1 U	1 U	1 U	0.86 U	0.92 U	1 U	0.93 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
1,2,4-Trichlorobenzene	NC	NC	NC	1.9 U	1.7 U	1.8 U	1.7 U	1.7 U	1.4 U	1.5 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
1,2-Dibromo-3-chloropropane	NC	NC	NC	3.7 U	3.4 U	3.7 U	3.4 U	3.3 U	2.8 U	3 U	3.3 U	3 U	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U
1,2-Dibromoethane	NC	NC	NC	1.1 U	1 U	1.1 U	0.99 U	0.97 U	0.83 U	0.88 U	0.97 U	0.89 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
1,2-Dichlorobenzene	1100	500,000	NC	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	0.91 U	0.97 U	1.1 U	0.98 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	20	30,000	NC	1.4 U	1.3 U	1.4 U	1.3 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,2-Dichloropropane	NC	NC	NC	1.1 U	1 U	1.1 U	1 U	0.99 U	0.84 U	0.9 U	0.99 U	0.91 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
1,3-Dichlorobenzene	2400	280,000	NC	1.6 U	1.5 U	1.6 U	1.5 U	1.4 U	1.2 U	1.3 U	1.4 U	1.3 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,4-Dichlorobenzene	1,800	130,000	NC	2 U	1.8 U	2 U	1.8 U	1.8 U	1.5 U	1.6 U	1.8 U	1.6 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
2-Butanone	120	500,000	NC	2.4 U	4.3 JD	6.2 JD	2.2 U	2.2 U	1.9 U	2 U	2.2 U	2 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
2-Hexanone	NC	NC	NC	1.9 U	1.8 U	1.9 U	1.7 U	1.7 U	1.5 U	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
4-Methyl-2-pentanone	NC	NC	NC	1.7 U	1.6 U	1.7 U	1.6 U	1.5 U	1.3 U	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Acetone	50	500,000	NC	18 U	26 D	36 D	18 JD	16 U	14 U	15 U	16 U	15 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U
Acrolein	NC	NC	NC	6.7 U	6.2 U	6.6 U	6.1 U	6 U	5.1 U	5.4 U	6 U	5.5 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U	5.8 U
Acrylonitrile	NC	NC	NC	2.2 U	2 U	2.2 U	2 U	2 U	1.7 U	1.8 U	2 U	1.8 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Benzene	80	44,000	NC	1.4 U	1.3 U	1.3 U	1.2 U	1.2 U	1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Bromodichloromethane	NC	NC	NC	2.1 U	1.9 U	2 U	1.9 U	1.8 U	1.6 U	1.7 U	1.8 U	1.7 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Bromoform	NC	NC	NC	1.3 U	1.2 U	1.3 U	1.2 U	1.2 U	0.99 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Bromomethane	NC	NC	NC	3.1 U	2.8 U	3 U	2.8 U	2.7 U	2.3 U	2.5 U	2.7 U	2.5 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
Carbon disulfide	NC	NC	NC	1 U	0.93 U	0.99 U	2.2 JD	0.89 U	0.76 U	0.81 U	0.89 U	0.82 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U
Carbon tetrachloride	760	22,000	NC	1.4 U	1.3 U	1.3 U	1.2 U	1.2 U	1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Chlorobenzene	1100	500,000	NC	1.4 U	1.3 U	1.3 U	1.2 U	1.2 U	1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Chloroethane	NC	NC	NC	1.5 U	1.4 U	1.5 U	1.4 U	1.4 U	1.2 U	1.2 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Chloroform	370	350,000	NC	1.4 U	1.3 U	1.4 U	1.3 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Chloromethane	NC	NC	NC	1.5 U	1.4 U	1.5 U	1.4 U	1.4 U	1.2 U	1.2 U	1.3 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
cis-1,2-Dichloroethylene	250	500,000	NC	0.8 U	0.74 U	0.79 U	0.73 U	0.72 U	0.61 U	0.65 U	0.71 U	0.66 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
cis-1,3-Dichloropropylene	NC	NC	NC	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	0.96 U	1 U	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Dibromochloromethane	NC	NC	NC	1.6 U	1.5 U	1.6 U	1.5 U	1.4 U	1.2 U	1.3 U	1.4 U	1.3 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
Dibromomethane	NC	NC	NC	1.8 U	1.6 U	1.7 U	1.6 U	1.6 U	1.3 U	1.4 U	1.6 U	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Dichlorodifluoromethane	NC	NC	NC	1.3 U	1.2 U	1.3 U	1.2 U	1.1 U	0.97 U	1 U	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Ethyl Benzene	1000	390,000	NC	0.81 U	0.75 U	0.8 U	0.73 U	0.72 U	0.61 U	0.65 U	0.71 U	0.66 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Hexachlorobutadiene	NC	NC	NC	1.9 U	1.7 U	1.9 U	1.7 U	1.7 U	1.4 U	1.5 U	1.7 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Isopropylbenzene	NC	NC	NC	1.5 U	1.4 U	1.4 U	1.3 U	1.3 U	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Methyl acetate	NC	NC	NC	3.9 U	3.6 U	3.9 U	3.5 U	3.5 U	3 U	3.1 U	3.5 U	3.2 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
Methyl tert-butyl ether (MTBE)	930	500,000	NC	1 U	0.94 U	1 U	0.92 U	0.91 U	0.78 U	0.82 U	0.9 U	0.83 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
Methylene chloride	50	500,000	NC	9.7 JBD	11 JBD	9.5 JBD	8.5 JBD	11 JBD	6.8 JBD	10 JBD	7.9 JBD	13 JBD	8.2 JBD	8.2 JBD	8.2 JBD	8.2 JBD	8.2 JBD	8.2 JBD	8.2 JBD
o-Xylene	NC	NC	NC	1 U	0.94 U	1 U	0.92 U	0.91 U	0.77 U	0.82 U	0.9 U	0.83 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
p- & m- Xylenes	NC	NC	NC	2.6 U	2.7 JD	2.5 U	2.3 U	2.3 U	2 U	2.1 U	2.3 U	2.1 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
p-Isopropyltoluene	NC	NC	NC	0.85 U	0.78 U	0.83 U	0.77 U	0.75 U	0.64 U	0.68 U	0.75 U	0.69 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U
Styrene	NC	NC	NC	0.92 U	0.85 U	0.9 U	0.83 U	0.82 U	0.7 U	0.74 U	0.81 U	0.75 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
tert-Butyl alcohol (TBA)	NC	NC	NC	71 U	66 U	70 U	64 U	63 U	54 U	57 U	63 U	58 U	61 U	61 U	61 U	61 U	61 U	61 U	61 U
Tetrachloroethylene	1,300	150,000	NC	1.5 U	1.4 U	1.5 U	1.3 U	1.3 U	1.1 U	1.2 U	1.3 U	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Toluene	700	500,000	NC	1.1 U	0.99 U	1.1 U	0.97 U	0.95 U	0.81 U	0.86 U	0.95 U	0.87 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
trans-1,2-Dichloroethylene	NC	NC	NC	1.4 U	1.3 U	1.4 U	1.3 U	1.3 U	1.1 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
trans-1,3-Dichloropropylene	NC	NC	NC	1.4 U	1.3 U	1.4 U	1.3 U	1.3 U	1.1 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Trichloroethylene	470	200,000	NC	1.4 U	1.3 U	1.3 U	1.2 U	1.2 U	1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Trichlorofluoromethane	NC	NC	NC	0.98 U	0.91 U	0.97 U	0.89 U	0.87 U	0.75 U	0.79 U	0.87 U	0.8 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
Vinyl Chloride	20	13,000	NC	0.76 U	0.7 U	0.75 U	0.69 U	0.67 U	0.58 U	0.61 U	0.67 U	0.62 U	0.65 U	0.65 U					

TABLE 2
NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION
9/11 MEMORIAL, ST. GEORGE STATION
STATEN ISLAND, NEW YORK
IN-SITU SOIL CHARACTERIZATION
SUMMARY OF RESULTS OF ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILE ORGANIC COMPOUNDS

Sample ID	M-SB-1-3		M-SB-4-6		M-SB-7-9		M-SB-10-12		M-SB-13-15		M-SB-16-18	
Lab Sample ID	12G0390-24		12G0390-25		12G0390-26		12G0390-27		12G0390-28		12G0390-32	
Sampling Date	7/11/2012		7/11/2012		7/12/2012		7/12/2012		7/11/2012		7/12/2012	
Matrix	Solid		Solid		Solid		Solid		Solid		Solid	
Dilution Factor	1		1		1		1		1		1	
Units	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs) µg/kg	Unrestricted Use SCO	Commercial Use SCO	Site-Specific Clean Soil Criteria	Results	Results	Results	Results	Results	Results	Results	Results	Results
1,1'-Biphenyl	NC	NC	NC	117 U	90 U	93 U	98 U	89 U	87 U	87 U	87 U	87 U
1,2,4-Trichlorobenzene	NC	NC	NC	87 U	67 U	69 U	72 U	66 U	64 U	64 U	64 U	64 U
1,2-Dichlorobenzene	1,100	500,000	NC	157 U	120 U	124 U	131 U	119 U	116 U	116 U	116 U	116 U
1,2-Diphenylhydrazine (as Azobenzene)	NC	NC	NC	48 U	36 U	38 U	40 U	36 U	35 U	35 U	35 U	35 U
1,3-Dichlorobenzene	2,400	280,000	NC	79 U	58 U	60 U	63 U	57 U	56 U	56 U	56 U	56 U
1,4-Dichlorobenzene	1,800	130,000	NC	148 U	113 U	117 U	123 U	112 U	110 U	110 U	110 U	110 U
2,4,5-Trichlorophenol	NC	NC	NC	186 U	143 U	147 U	155 U	141 U	138 U	138 U	138 U	138 U
2,4,6-Trichlorophenol	NC	NC	NC	122 U	93 U	96 U	101 U	92 U	90 U	90 U	90 U	90 U
2,4-Dichlorophenol	NC	NC	NC	196 U	150 U	155 U	163 U	148 U	145 U	145 U	145 U	145 U
2,4-Dimethylphenol	NC	NC	NC	168 U	129 U	133 U	140 U	127 U	125 U	125 U	125 U	125 U
2,4-Dinitrophenol	NC	NC	NC	201 U	154 U	159 U	168 U	152 U	150 U	150 U	150 U	150 U
2,4-Dinitrotoluene	NC	NC	NC	106 U	81 U	84 U	88 U	80 U	79 U	79 U	79 U	79 U
2,6-Dinitrotoluene	NC	NC	NC	123 U	94 U	98 U	103 U	93 U	92 U	92 U	92 U	92 U
2-Chloronaphthalene	NC	NC	NC	130 U	99 U	102 U	108 U	98 U	96 U	96 U	96 U	96 U
2-Chlorophenol	NC	NC	NC	79 U	61 U	63 U	66 U	60 U	59 U	59 U	59 U	59 U
2-Methylnaphthalene	NC	NC	NC	184 U	141 U	146 U	153 U	139 U	137 U	137 U	137 U	137 U
2-Methylphenol	330	500,000	NC	91 U	70 U	72 U	76 U	69 U	68 U	68 U	68 U	68 U
2-Nitroaniline	NC	NC	NC	209 U	160 U	165 U	174 U	158 U	155 U	155 U	155 U	155 U
2-Nitrophenol	NC	NC	NC	65 U	50 U	52 U	54 U	49 U	48 U	48 U	48 U	48 U
3,3'-Dichlorobenzidine	NC	NC	NC	104 U	80 U	82 U	87 U	79 U	77 U	77 U	77 U	77 U
3- & 4-Methylphenols	NC	NC	NC	126 U	96 U	99 U	105 U	95 U	93 U	93 U	93 U	93 U
3-Nitroaniline	NC	NC	NC	238 U	183 U	188 U	199 U	180 U	177 U	177 U	177 U	177 U
4,6-Dinitro-2-methylphenol	NC	NC	NC	302 U	231 U	239 U	252 U	229 U	224 U	224 U	224 U	224 U
4-Bromophenyl phenyl ether	NC	NC	NC	116 U	89 U	91 U	96 U	88 U	86 U	86 U	86 U	86 U
4-Chlorophenyl phenyl ether	NC	NC	NC	141 U	108 U	111 U	117 U	106 U	104 U	104 U	104 U	104 U
4-Nitroaniline	NC	NC	NC	99 U	76 U	79 U	83 U	75 U	73 U	73 U	73 U	73 U
4-Nitrophenol	NC	NC	NC	90 U	69 U	71 U	75 U	68 U	67 U	67 U	67 U	67 U
Acenaphthene	20,000	500,000	NC	87 U	67 U	69 U	72 U	66 U	64 U	64 U	64 U	64 U
Acenaphthylene	NC	500,000	NC	115 U	88 U	91 U	96 U	88 U	85 U	85 U	85 U	85 U
Acetophenone	NC	NC	NC	96 U	74 U	76 U	80 U	73 U	71 U	71 U	71 U	71 U
Anthracene	100,000	500,000	NC	282 U	100 U	104 U	109 U	99 U	97 U	97 U	97 U	97 U
Atrazine	NC	NC	NC	129 U	99 U	102 U	107 U	98 U	96 U	96 U	96 U	96 U
Benzaldehyde	NC	NC	NC	190 U	145 U	150 U	158 U	144 U	141 U	141 U	141 U	141 U
Benzidine	NC	NC	NC	43 U	33 U	34 U	36 U	33 U	32 U	32 U	32 U	32 U
Benzo(a)anthracene	1,000	5,600	NC	502 U	70 U	80 U	75 U	151 U	195 U	195 U	195 U	195 U
Benzo(a)pyrene	1,000	1,000	NC	360 U	82 U	109 U	79 U	158 U	199 U	199 U	199 U	199 U
Benzo(b)fluoranthene	1,000	5,600	NC	299 U	154 U	159 U	167 U	152 U	149 U	149 U	149 U	149 U
Benzo(g,h,i)perylene	100,000	500,000	NC	80 U	61 U	63 U	66 U	60 U	59 U	59 U	59 U	59 U
Benzo(k)fluoranthene	800	56,000	NC	364 U	184 U	190 U	200 U	181 U	198 U	198 U	198 U	198 U
Benzoic acid	NC	NC	NC	164 U	126 U	130 U	137 U	124 U	122 U	122 U	122 U	122 U
Benzyl butyl phthalate	NC	NC	NC	132 U	101 U	105 U	110 U	100 U	98 U	98 U	98 U	98 U
Bis(2-chloroethoxy)methane	NC	NC	NC	83 U	63 U	65 U	69 U	62 U	61 U	61 U	61 U	61 U
Bis(2-chloroethyl)ether	NC	NC	NC	122 U	94 U	97 U	102 U	93 U	91 U	91 U	91 U	91 U
Bis(2-chloroisopropyl)ether	NC	NC	NC	84 U	65 U	67 U	70 U	64 U	63 U	63 U	63 U	63 U
Bis(2-ethylhexyl)phthalate	NC	NC	NC	165 U	127 U	131 U	138 U	125 U	123 U	123 U	123 U	123 U
Caprolactam	NC	NC	NC	79 U	61 U	63 U	66 U	60 U	59 U	59 U	59 U	59 U
Carbazole	NC	NC	NC	166 U	127 U	131 U	138 U	126 U	123 U	123 U	123 U	123 U
Chrysene	10,000	56,000	NC	455 U	128 U	129 U	132 U	183 U	215 U	215 U	215 U	215 U
Dibenzo(a,h)anthracene	330	NC	NC	96 U	74 U	76 U	80 U	73 U	72 U	72 U	72 U	72 U
Dibenzofuran	7,000	NC	NC	112 U	86 U	88 U	93 U	85 U	83 U	83 U	83 U	83 U
Diethyl phthalate	NC	560	NC	151 U	115 U	119 U	125 U	114 U	112 U	112 U	112 U	112 U
Dimethyl phthalate	NC	350,000	NC	107 U	82 U	85 U	89 U	81 U	79 U	79 U	79 U	79 U
Di-n-butyl phthalate	NC	NC	NC	97 U	75 U	77 U	81 U	74 U	72 U	72 U	72 U	72 U
Di-n-octyl phthalate	NC	NC	NC	240 U	184 U	190 U	200 U	181 U	178 U	178 U	178 U	178 U
Fluoranthene	100,000	500,000	NC	1,030 U	327 U	203 U	117 U	308 U	415 U	415 U	415 U	415 U
Fluorene	30,000	500,000	NC	115 U	88 U	91 U	96 U	87 U	85 U	85 U	85 U	85 U
Hexachlorobenzene	330	6,000	NC	141 U	108 U	112 U	118 U	107 U	105 U	105 U	105 U	105 U
Hexachlorobutadiene	NC	NC	NC	81 U	62 U	64 U	68 U	61 U	60 U	60 U	60 U	60 U
Hexachlorocyclopentadiene	NC	NC	NC	178 U	137 U	141 U	149 U	135 U	132 U	132 U	132 U	132 U
Hexachloroethane	NC	NC	NC	69 U	53 U	54 U	57 U	52 U	51 U	51 U	51 U	51 U
Indeno(1,2,3-cd)pyrene	500	5,600	NC	109 U	84 U	87 U	91 U	83 U	81 U	81 U	81 U	81 U
Isophorone	NC	NC	NC	83 U	63 U	65 U	69 U	62 U	61 U	61 U	61 U	61 U
N-nitroso-di-n-propylamine	NC	NC	NC	59 U	45 U	47 U	49 U	45 U	44 U	44 U	44 U	44 U
N-Nitrosodimethylamine	NC	NC	NC	71 U	54 U	56 U	59 U	53 U	52 U	52 U	52 U	52 U
N-Nitrosodiphenylamine	NC	NC	NC	98 U	75 U	78 U	88 U	74 U	73 U	73 U	73 U	73 U
Naphthalene	12,000	500,000	NC	80 U	61 U	63 U	67 U	61 U	60 U	60 U	60 U	60 U
Nitrobenzene	NC	NC	NC	108 U	83 U	86 U	90 U	82 U	81 U	81 U	81 U	81 U
Pentachlorophenol	800	6,700	NC	181 U	138 U	143 U	151 U	137 U	134 U	134 U	134 U	134 U
Phenanthrene	100,000	500,000	NC	809 U	96 U	112 U	104 U	123 U	213 U	213 U	213 U	213 U
Phenol	330	500,000	NC	104 U	79 U	82 U	86 U	78 U	77 U	77 U	77 U	77 U
Pyrene	100,000	500,000	NC	901 U	355 U	217 U	82 U	302 U	394 U	394 U	394 U	394 U
Total Carcinogenic SVOCs	NC	NC	10,000	2,185	775	830	784	981	1,109	1,109	1,109	1,109
Total SVOCs	NC	NC	500,000	12,729	7,412	7,411	7,466	7,471	8,472	8,472	8,472	8,472

Notes:

µg/kg - micrograms per kilogram

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U - Analyte was not detected.

NC - No Criterion

Total Carcinogenic SVOCs include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene

Shading indicates result above SCO

SCO - Soil Cleanup Objective (6 NYCRR Part 375-6.8)

Site-Specific Clean Soil Criteria approved by NYSDEC in a letter from NYSDEC to TRC Environmental Corp. (J. Peronto) dated November 21, 2000

TABLE 3
NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION
9/11 MEMORIAL, ST. GEORGE STATION
STATEN ISLAND, NEW YORK
IN-SITU SOIL CHARACTERIZATION
SUMMARY OF RESULTS OF ANALYSIS OF SOIL SAMPLES FOR METALS

Sample ID	M-SB-1-3	M-SB-4-6	M-SB-7-9	M-SB-10-12	M-SB-13-15	M-SB-16-18
Lab Sample ID	12G0390-24	12G0390-25	12G0390-26	12G0390-27	12G0390-28	12G0390-32
Sampling Date	7/11/2012	7/11/2012	7/12/2012	7/12/2012	7/11/2012	7/12/2012
Matrix	Solid	Solid	Solid	Solid	Solid	Solid
Dilution Factor	10	10	10	10	10	10
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS (mg/kg)	Unrestricted Use SCO	Commercial Use SCO	Site-Specific Clean Soil Criteria	Results	Results	Results
Aluminum	NC	NC	33000	4620	1850	1760
Antimony	NC	NC	31	3.22	0.154	0.168
Arsenic	13	16	3-12	20.9	10.6	3.83
Barium	350	400	15-600	85.9	32.9	9.49
Beryllium	7.2	590	0-1.75	0.012	0.009	0.010
Cadmium	2.5	9.3	0.1-1	5.58	2.11	1.85
Calcium	NC	NC	130-35,000	12500	2710	5150
Chromium (Total)	30	NC	230(%)	30.1	23.9	33.9
Chromium (Hexavalent)	1 ⁽¹⁾	400	NC	0.504	0.386	0.419
Cobalt	NC	NC	4700	11.8	10.3	15.9
Copper	50	270	3,100	328	29.2	119
Iron	NC	NC	2000-550,000	52500	25700	25900
Lead	63	1000	200-500	299	60.0	35.9
Magnesium	NC	NC	NC	8140	15400	28600
Manganese	1,600	10000	50-5,000	1190	263	440
Mercury (Total)	0.18	2.8	0.001-0.2	0.135	0.104	0.113
Nickel	30	310	1,600	73.4	173	334
Potassium	NC	NC	8,500-43,000	1010	378	446
Selenium	3.9	1500	0.1-3.9	0.304	0.233	0.253
Silver	2	1500	390	0.130	0.099	0.108
Sodium	NC	NC	6,000-8,000	3460	1010	2300
Thallium	NC	NC	NC	0.273	0.209	0.228
Vanadium	NC	NC	1-300	28.7	11.6	10.3
Zinc	109	10000	23,000	372	87.0	99.9

Notes:

mg/kg - milligrams per kilogram

⁽¹⁾ - Hexavalent chromium SCO

U - Analyte was not detected.

NC - No Criterion

Shading indicates result above SCO.

SCO - Soil Cleanup Objective (6 NYCRR Part 375-6.8)

Site-Specific Clean Soil Criteria approved by NYSDEC in a letter from NYSDEC to TRC Environmental Corp. (J. Peronto) dated November 21, 2000

TABLE 4
NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION
9/11 MEMORIAL, ST. GEORGE STATION
STATEN ISLAND, NEW YORK
IN-SITU SOIL CHARACTERIZATION
SUMMARY OF RESULTS OF ANALYSIS OF SOIL SAMPLES FOR PCBs

Sample ID	M-SB-1-3	M-SB-4-6	M-SB-7-9	M-SB-10-12	M-SB-13-15	M-SB-16-18
Lab Sample ID	12G0390-24	12G0390-25	12G0390-26	12G0390-27	12G0390-28	12G0390-32
Sampling Date	7/11/2012	7/11/2012	7/12/2012	7/12/2012	7/11/2012	7/12/2012
Matrix	Solid	Solid	Solid	Solid	Solid	Solid
Dilution Factor	10	10	10	10	10	10
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
POLYCHLORINATED BIPHENYLS (PCBs) µg/kg	Site-Specific Clean Soil Criteria	Commercial Use SCO	Unrestricted Use SCO	Results	Results	Results
Aroclor 1016	NC	NC	NC	245	187	204
Aroclor 1221	NC	NC	NC	245	187	204
Aroclor 1232	NC	NC	NC	245	187	204
Aroclor 1242	NC	NC	NC	245	187	204
Aroclor 1248	NC	NC	NC	245	187	204
Aroclor 1254	NC	NC	NC	245	187	204
Aroclor 1260	NC	NC	NC	245	187	204
Aroclor 1262	NC	NC	NC	245	187	204
Aroclor 1268	NC	NC	NC	245	187	204
Total PCBs	100	1,000	100	245	187	204

Notes:

µg/kg - micrograms per kilogram

U - Analyte was not detected.

NC - No Criterion

Shading indicates result above SCO.

SCO - Soil Cleanup Objective (6 NYCRR Part 375-6.8)

Site-Specific Clean Soil Criteria approved by NYSDEC in a letter from NYSDEC to TRC Environmental Corp. (J. Peronto) dated November 21, 2000

TABLE 5
NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION
9/11 MEMORIAL, ST. GEORGE STATION
STATEN ISLAND, NEW YORK
IN-SITU SOIL CHARACTERIZATION
SUMMARY OF RESULTS OF ANALYSIS OF SOIL SAMPLES FOR PESTICIDES

Sample ID	M-SB-1-3	M-SB-4-6	M-SB-7-9	M-SB-10-12	M-SB-13-15	M-SB-16-18
Lab Sample ID	12G0390-24	12G0390-25	12G0390-26	12G0390-27	12G0390-28	12G0390-32
Sampling Date	7/11/2012	7/11/2012	7/12/2012	7/12/2012	7/11/2012	7/12/2012
Matrix	Solid	Solid	Solid	Solid	Solid	Solid
Dilution Factor	10	10	10	10	10	10
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PESTICIDES (µg/kg)	Unrestricted Use SCO	Commercial Use SCO	Site-Specific Clean Soil Criteria	Results	Results	Results
4,4'-DDD	3.3	92,000	NC	4.75	U	3.59
4,4'-DDE	3.3	62,000	NC	4.75	U	3.59
4,4'-DDT	3.3	47,000	NC	4.75	U	3.59
Aldrin	5	680	NC	4.75	U	3.59
alpha-BHC	20	3,400	NC	4.75	U	3.59
alpha-Chlordane	94	24,000	NC	4.75	U	3.59
beta-BHC	36	3,000	NC	4.75	U	3.59
Chlordane	NC	NC	NC	19	U	14.1
delta-BHC	40	500,000	NC	4.75	U	3.59
Dieldrin	5	1,400	NC	4.75	U	3.59
Endosulfan I	2,400	200,000	NC	4.75	U	3.59
Endosulfan II	2,400	200,000	NC	4.75	U	3.59
Endosulfan sulfate	2,400	200,000	NC	4.75	U	3.59
Endrin	14	89,000	NC	4.75	U	3.59
Endrin aldehyde	NC	NC	NC	4.75	U	3.59
Endrin ketone	NC	NC	NC	4.75	U	3.59
gamma-BHC (Lindane)	100	9,200	NC	4.75	U	3.59
gamma-Chlordane	NC	NC	NC	4.75	U	3.59
Heptachlor	42	15,000	NC	4.75	U	3.59
Heptachlor epoxide	NC	NC	NC	4.75	U	3.59
Methoxychlor	NC	NC	NC	23.7	U	18
Silvex (2,4,5-TP)	3,800	500,000	NC	144	U	109
Toxaphene	NC	NC	NC	240	U	182
Total Pesticides	NC	NC	10,000	517	U	392

Notes:

µg/kg - micrograms per kilogram

U - Analyte was not detected.

NC - No Criterion

Shading indicates result above SCO.

SCO - Soil Cleanup Objective (6 NYCRR Part 375-6.8)

Site-Specific Clean Soil Criteria approved by NYSDEC in a letter from NYSDEC to TRC Environmental Corp. (J. Peronto) dated November 21, 2000

TABLE 7
NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION
NAVY HOMEPORT, STAPLETON AREA
STATEN ISLAND, NEW YORK
IN-SITU SOIL CHARACTERIZATION

SUMMARY OF RESULTS OF ANALYSIS OF SOIL SAMPLES FOR TOXICITY CHARACTERISTIC LEACHING PROCEDURE METALS

Sample ID	M-SB-1-3	M-SB-7-9	M-SB-13-15
Lab Sample ID	12G0390-24	12G0390-26	12G0390-28
Sampling Date	7/11/2012	7/12/2012	7/11/2012
Matrix	Solid	Solid	Solid
Dilution Factor	1	1	1
Units	mg/L	mg/L	mg/L
METALS (mg/L)	EPA Hazardous Waste Limits		
Chromium	5	0.0018	U
Lead	0.11	NT	0.212

Notes:

mg/kg - milligrams per kilogram

U - Analyte was not detected.

NT - Analyte was not a target for this sample

Shading indicates result above EPA Hazardous Waste Limits.

APPENDIX A
GEOPHYSICAL SURVEY REPORT

NOVA GEOPHYSICAL SERVICES

SUBSURFACE MAPPING SOLUTIONS

56-01 Marathon Parkway, PO Box 765, Douglaston, New York 11362

Ph. 347-556-7787 Fax. 718-261-1527

www.nova-gsi.com

July 19, 2012

Kirsten Myers
Project Engineer
TRC Environmental Corporation
1430 Broadway, 10th Floor
New York, NY 10018
Direct: 221-221-7822
Email: kmyers@trcsolutions.com

Re: Geophysical Survey Report
Site 1: Bay Street & Edge Water Drive
Site 2: Bank Street
Staten Island, New York

Dear Ms. Myers:

Nova Geophysical Services (NOVA) is pleased to provide findings of our geophysical survey at the above referenced project sites located at Bay Street & Edge Water Drive and Bank Street, Staten Island, NY (the "Site").

INTRODUCTION TO GEOPHYSICAL SURVEY

NOVA performed a Geophysical survey consisting of Ground Penetrating Radar (GPR), Electromagnetic (EM) surveys and comprehensive subsurface utility (CSUL) surveys at the project Site. The purpose of this survey is to locate and identify current and former underground storage tanks (USTs), anomalies, subsurface structures, utilities and to clear and mark proposed boring locations located at the project site on July 9th & 10th, 2012.

The equipment selected for this investigation will be included a CSUL Pipe and Cable Locator (an magnetic detector), Ditch-Witch utility locator, Electromagnetic detector (Geonics EM61), MALAs 350 MHz ground penetrating radar (GPR) antenna.

A GPR system consists of a radar control unit, control cable and a transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 350 MHz. The trigger pulse is sent to the transmitter electronics in the transducer via the control cable. The transmitter electronics amplify the trigger pulses into bipolar pulses that are radiated to the surface. The

transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

GEOPHYSICAL METHODS

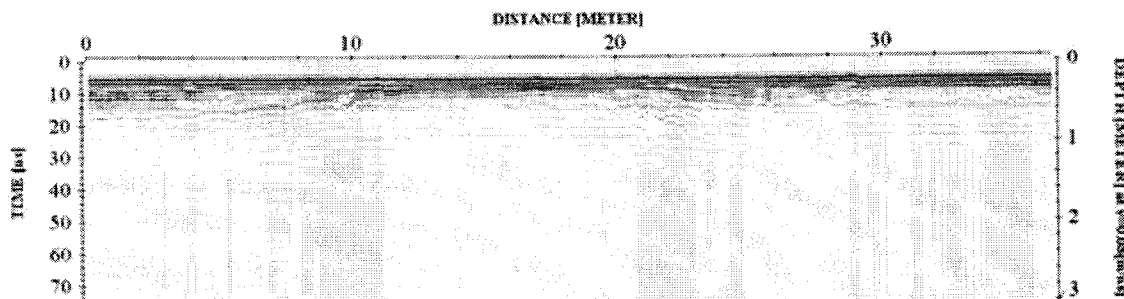
The project site was first screened using the Geonics(tm) electromagnetic detector by carrying the instrument over the boring locations at the site in 5' x 5' traverses. When evidence of anomalies were observed, the Ditch-witch(tm) utility locator was then used to determine if the anomalies were utilities or other large sub-surface metal objects. Finally, GPR profiles were collected over each metal-detector anomaly and inspected for reflections, which could be indicative of major anomalies.

GPR data profiles were collected for the areas of the Site specified by the client. The surveyed areas consisted of paved and none-paved areas & wetlands.

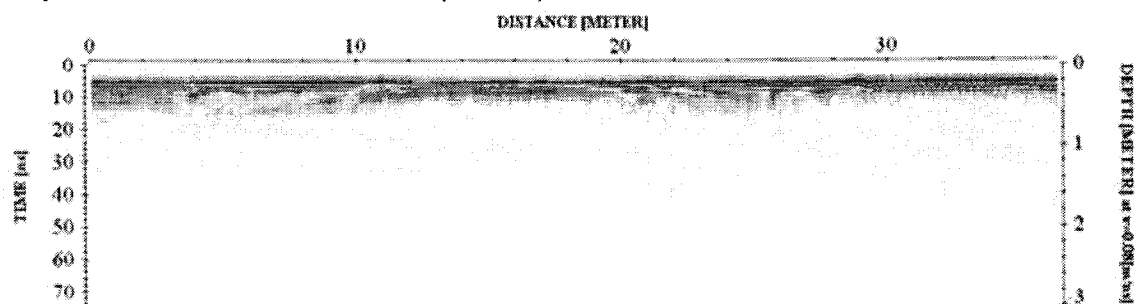
DATA PROCESSING

In order to improve the quality of the results and to better identify subsurface anomalies NOVA processed the collected data. The processes flow is briefly described at this section.

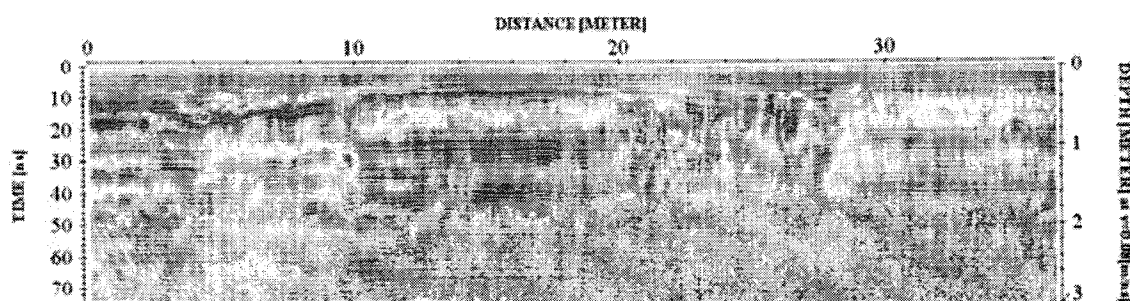
Step 1. Import raw RAMAC data to standard processing format



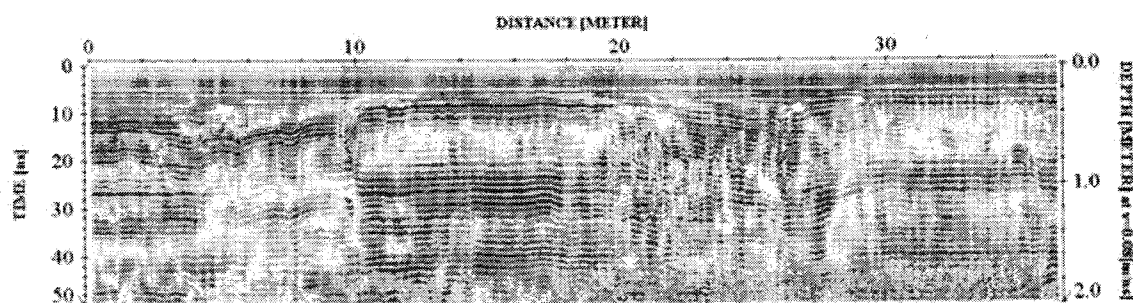
Step 2. Remove instrument noise (dewow)



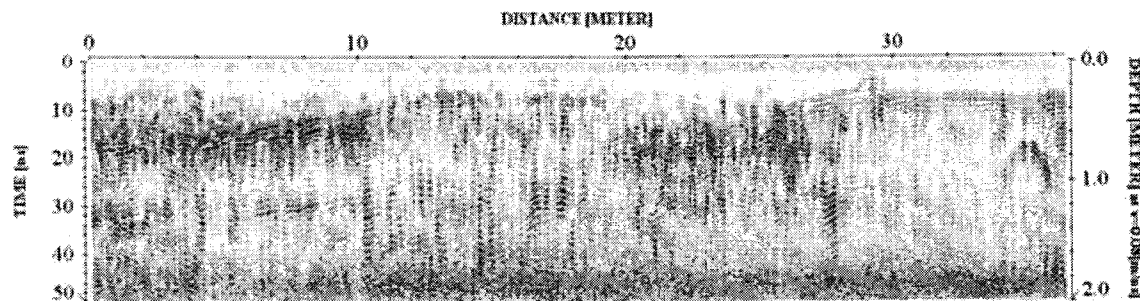
Step 3. Correct for attenuation losses (energy decay function)



Step 4. Remove static from bottom of profile (time cut)



Step 5. Mute horizontal ringing/noise (*subtracting average*)



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and describes the subsurface anomalies more accurately.

PHYSICAL SETTINGS

Nova observed following physical conditions at the time of the survey:

The weather: Clear and sunny.

Temp: 85 degrees

Surface: Paved and non-paved areas.

Geophysical Noise Level (GNL): Geophysical Noise Level (GNL) was low at the time of the survey.

RESULTS

The results of the geophysical survey identified following anomalies located at the project Site:

- Geophysical survey identified anomalies located within the project site. Based on their reflection rates and physical evidences, they were consistent with drains, drywell/catch basin etc. structures.
- Nova cleared and marked all of the proposed boring locations at the project site.
- Geophysical Survey Plan portrays the areas investigated during the geophysical survey.

If you have any questions please do not hesitate to contact the undersigned.
Sincerely,

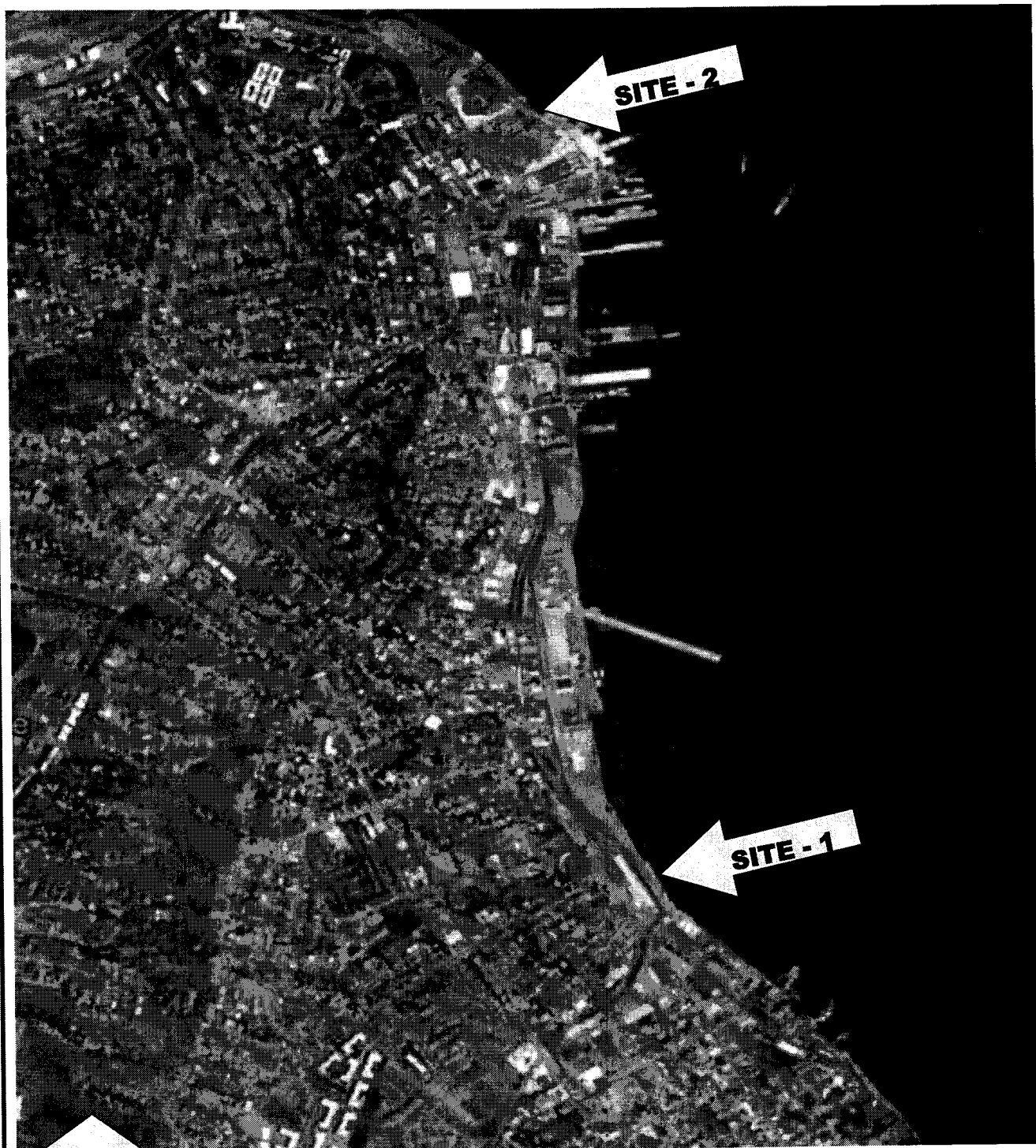
NOVA Geophysical Services



Levent Eskicakit, P.G., E.P.
Project Engineer

Attachments:

Figure 1 Site Location Map
Geophysical Survey Plan
Geophysical Images



N

FIGURE 1
SITE LOCATION MAP

NOVA

Geophysical Services

Subsurface Mapping Solutions

56-01 Marathon Pkwy, PO Box 765, Douglaston, NY 11362
(718) 261-1527 Fax (718) 261-1528

www.nova-ny.com

SITE:

Commercial Property

Site 1: Bay Street & Edge Water Dr., Staten Island, NY

Site 2: Bank Street, Staten Island, NY

SCALE:

See Map



All Anomalies were marked in the field

INFORMATION

	GPR/EM Surveyed Areas		Underground Utilities/Pipes
	Anomalies		Boring Locations

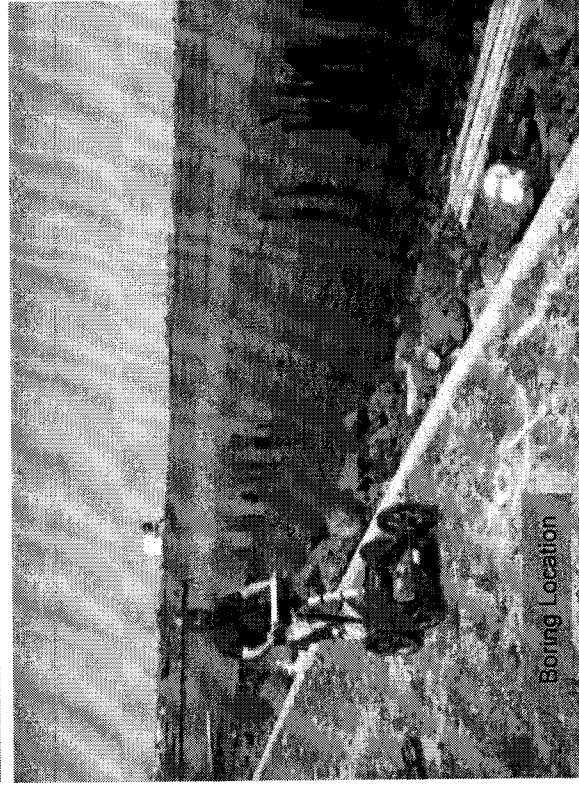
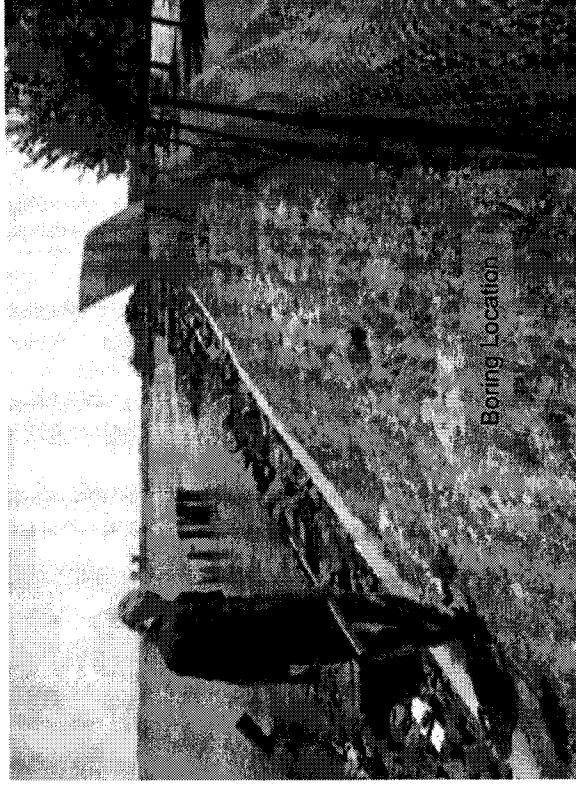
GEOPHYSICAL SURVEY PLAN

SITE : Commercial Property
 Bank Street, Staten Island, NY

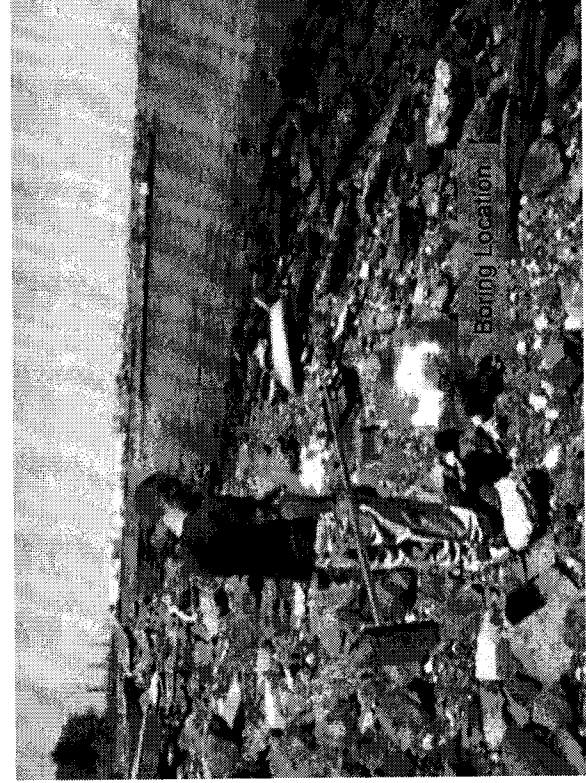
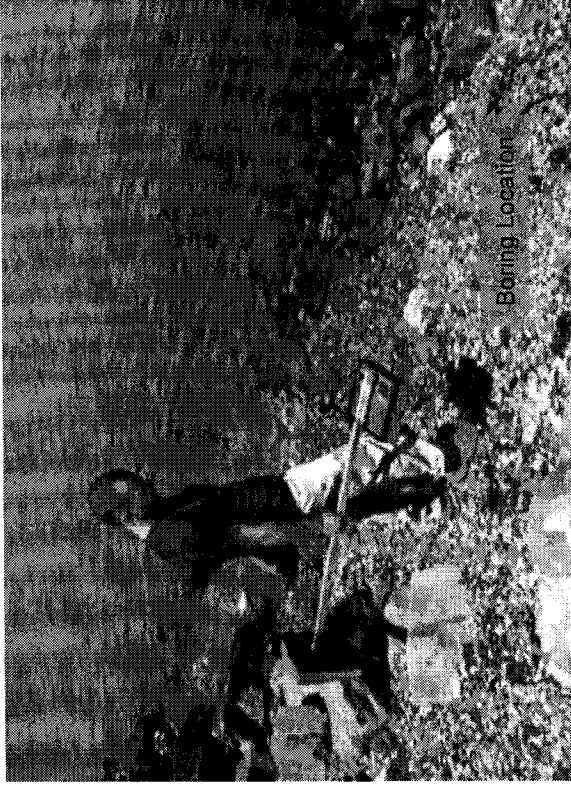
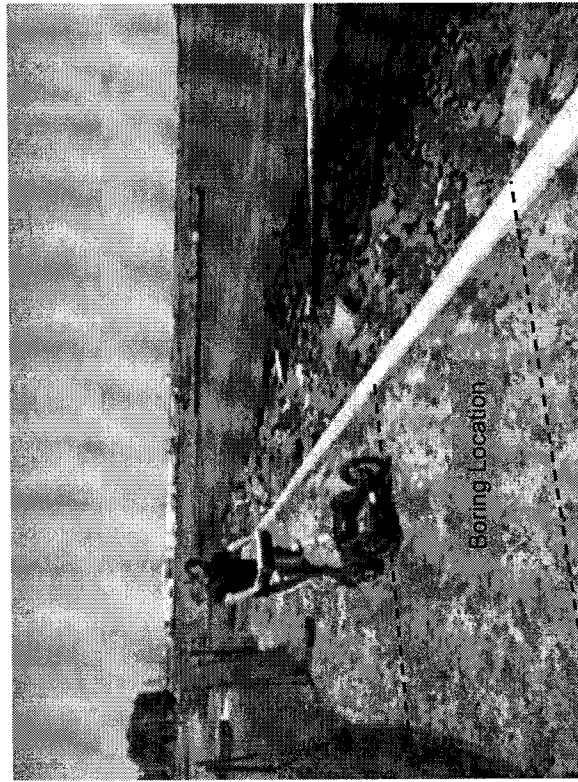
CLIENT: TRC Environmental
DATE: July 10th, 2012
Scale : See Map

NOVA
Geophysical Services
 Subsurface Mapping Solutions
 56-01 Marathon Parkway, PO Box 765
 Douglaston, New York 11362
 Phone (347) 556-7787 * Fax (718) 261-1527
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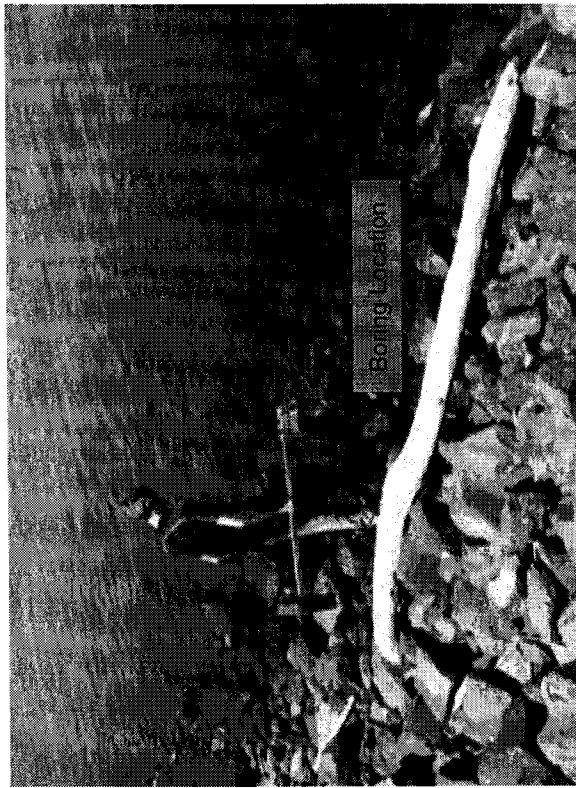
GEOPHYSICAL IMAGES
 Commercial Property
 Bank Street, Staten Island, NY
 July 10, 2012



GEOPHYSICAL IMAGES
 Commercial Property
 Bank Street, Staten Island, NY
 July 10, 2012



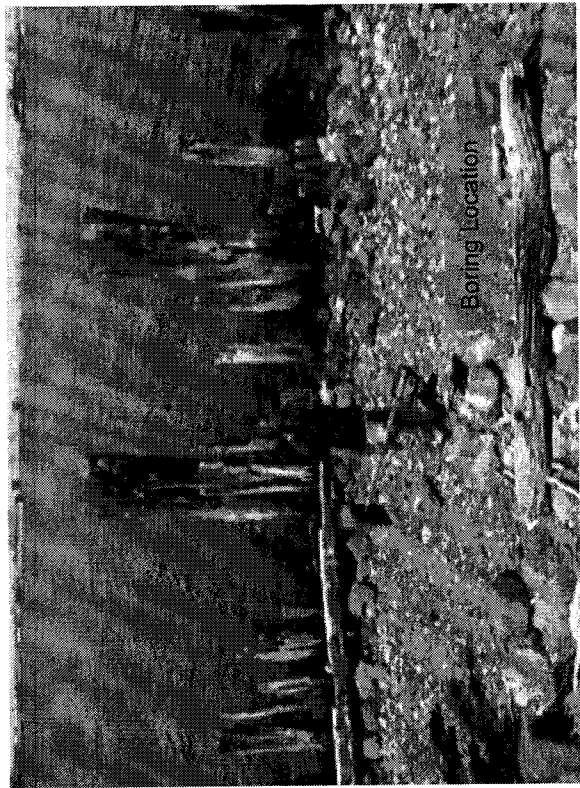
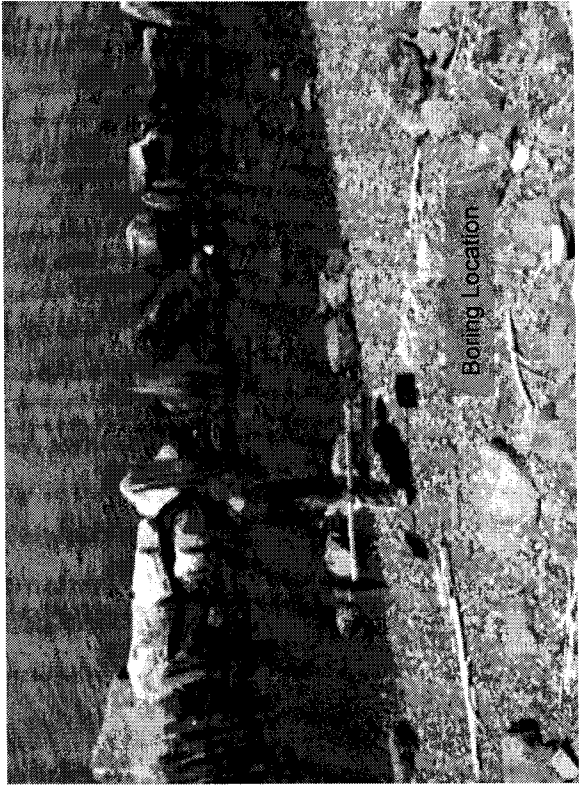
GEOPHYSICAL IMAGES
Commercial Property
Bank Street, Staten Island, NY
July 10, 2012



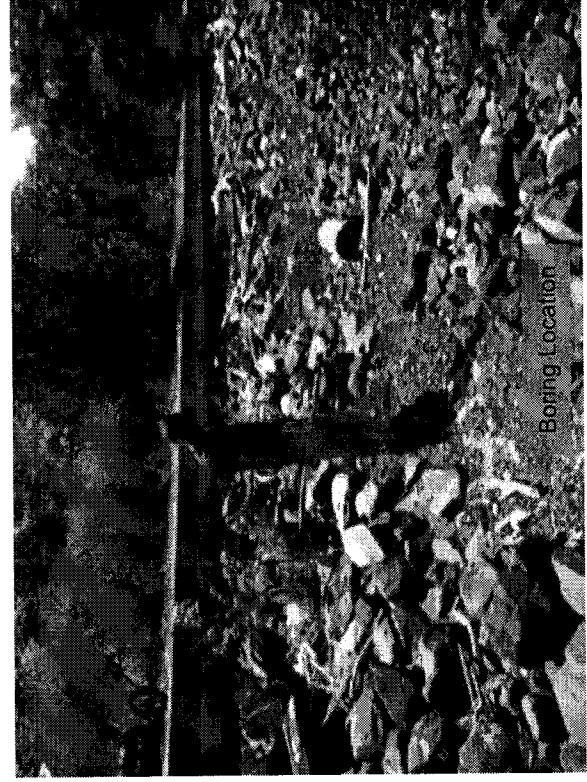
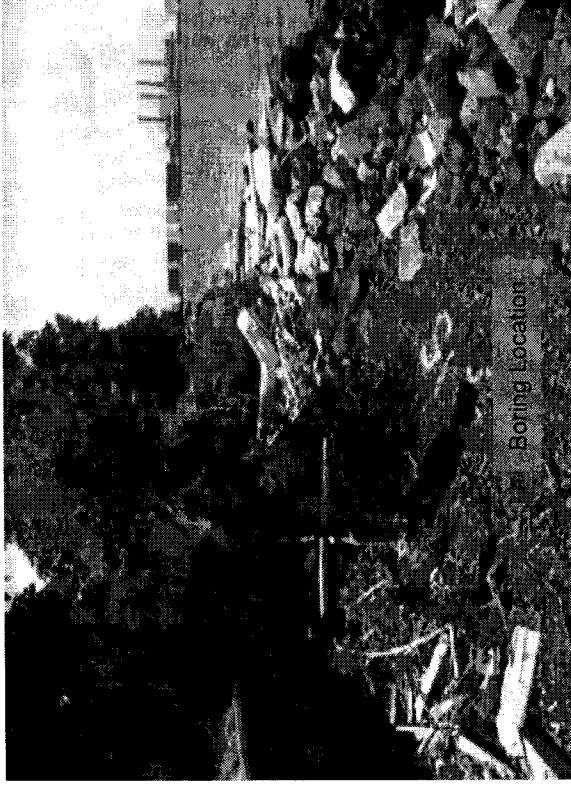
NOVA GEOPHYSICAL SERVICES

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GEOPHYSICAL IMAGES
Commercial Property
Bank Street, Staten Island, NY
July 10, 2012



GEOPHYSICAL IMAGES
Commercial Property
Bank Street, Staten Island, NY
July 10, 2012



APPENDIX B
SOIL BORING LOGS



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-1

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/11/12	COMPLETED	7/11/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	CHECKED BY	
NOTES	Composite sample collected from M-SB-1, M-SB-2, and M-SB-3		
GROUND WATER LEVELS:		AT TIME OF DRILLING	--
		AT END OF DRILLING	--
		AFTER DRILLING	--

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, medium to coarse grained, wet, and gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.




TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-2

PAGE 1 OF 1

CLIENT EDC PROJECT NAME 9-11 Memorial Waste Characterization
PROJECT NUMBER - PROJECT LOCATION Staten Island, NY
DATE STARTED 7/11/12 COMPLETED 7/11/12 GROUND ELEVATION _____ HOLE SIZE 12 inches
DRILLING CONTRACTOR ADT GROUND WATER LEVELS:
DRILLING METHOD Hand Auger AT TIME OF DRILLING —
LOGGED BY PC CHECKED BY _____ AT END OF DRILLING —
NOTES Composite sample collected from M-SB-1, M-SB-2, and M-SB-3 AFTER DRILLING —

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, medium to coarse grained, wet, little gravel, no odor, no staining	
5	 GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-3

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/11/12	COMPLETED	7/11/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	CHECKED BY	
NOTES	Composite sample collected from M-SB-1, M-SB-2, and M-SB-3		
		GROUND WATER LEVELS:	
		AT TIME OF DRILLING	---
		AT END OF DRILLING	---
		AFTER DRILLING	---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, wet, and gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-4

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/11/12	COMPLETED	7/11/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	CHECKED BY	
NOTES	Composite sample collected from M-SB-4, M-SB-5, and M-SB-6		
GROUND WATER LEVELS:		AT TIME OF DRILLING	—
		AT END OF DRILLING	—
		AFTER DRILLING	—

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, wet, and gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
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New York, NY 10018
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BORING NUMBER M-SB-5

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/11/12	COMPLETED	7/11/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	CHECKED BY	
NOTES	Composite sample collected from M-SB-4, M-SB-5, and M-SB-6		
GROUND WATER LEVELS:		AT TIME OF DRILLING	--
		AT END OF DRILLING	--
		AFTER DRILLING	--

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, moist to wet, and gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.





TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-6

PAGE 1 OF 1

CLIENT EDC PROJECT NAME 9-11 Memorial Waste Characterization
PROJECT NUMBER - PROJECT LOCATION Staten Island, NY
DATE STARTED 7/11/12 COMPLETED 7/11/12 GROUND ELEVATION _____ HOLE SIZE 12 inches
DRILLING CONTRACTOR ADT GROUND WATER LEVELS:
DRILLING METHOD Hand Auger AT TIME OF DRILLING --
LOGGED BY PC CHECKED BY _____ AT END OF DRILLING --
NOTES Composite sample collected from M-SB-4, M-SB-5, and M-SB-6 AFTER DRILLING --

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, tan, fine to medium grained, moist to wet, trace gravel, no odor, no staining	
5	 GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-7

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/12/12	COMPLETED	7/12/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	GROUND WATER LEVELS:	
CHECKED BY		AT TIME OF DRILLING	—
NOTES	Composite sample collected from M-SB-7, M-SB-8, and M-SB-9		
		AT END OF DRILLING	—
		AFTER DRILLING	—

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, moist to wet, and gravel, no odor, no staining	
				PID = 0
5	GB			

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-8

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/12/12	COMPLETED	7/12/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	CHECKED BY	
NOTES	Composite sample collected from M-SB-7, M-SB-8, and M-SB-9		
GROUND WATER LEVELS:		AT TIME OF DRILLING	---
		AT END OF DRILLING	---
		AFTER DRILLING	---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, wet, and gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.





TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-9

PAGE 1 OF 1

CLIENT EDC PROJECT NAME 9-11 Memorial Waste Characterization
PROJECT NUMBER - PROJECT LOCATION Staten Island, NY
DATE STARTED 7/11/12 COMPLETED 7/11/12 GROUND ELEVATION _____ HOLE SIZE 12 inches
DRILLING CONTRACTOR ADT GROUND WATER LEVELS:
DRILLING METHOD Hand Auger AT TIME OF DRILLING --
LOGGED BY PC CHECKED BY _____ AT END OF DRILLING --
NOTES Composite sample collected from M-SB-7, M-SB-8, and M-SB-9 AFTER DRILLING --

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, wet, and gravel, no odor, no staining	
5	 GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-10

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/12/12	COMPLETED	7/12/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	GROUND WATER LEVELS:	
CHECKED BY		AT TIME OF DRILLING	—
		AT END OF DRILLING	—
NOTES	Composite sample collected from M-SB-10, M-SB-11, and M-SB-12		
	AFTER DRILLING —		

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, wet, trace gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-11

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/12/12	COMPLETED	7/12/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	GROUND WATER LEVELS:	
CHECKED BY		AT TIME OF DRILLING	--
		AT END OF DRILLING	--
NOTES	Composite sample collected from M-SB-10, M-SB-11, and M-SB-12		
	AFTER DRILLING --		

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, moist to wet, little gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.





TRC
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New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-12

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/12/12	COMPLETED	7/12/12
GROUND ELEVATION		HOLE SIZE	12 inches
DRILLING CONTRACTOR	ADT	GROUND WATER LEVELS:	
DRILLING METHOD	Hand Auger	AT TIME OF DRILLING	--
LOGGED BY	PC	CHECKED BY	
AT END OF DRILLING			--
NOTES	Composite sample collected from M-SB-10, M-SB-11, and M-SB-12		
AFTER DRILLING	---		

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, moist to wet, and gravel, no odor, no staining	
5	 GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-13

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/11/12	COMPLETED	7/11/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	GROUND WATER LEVELS:	
CHECKED BY		AT TIME OF DRILLING	--
		AT END OF DRILLING	--
NOTES	Composite sample collected from M-SB-13, M-SB-14, and M-SB-15 AFTER DRILLING --		

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, moist to wet, and gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-14

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/11/12	COMPLETED	7/11/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	GROUND WATER LEVELS:	
CHECKED BY		AT TIME OF DRILLING	--
		AT END OF DRILLING	--
NOTES	Composite sample collected from M-SB-13, M-SB-14, and M-SB-15		
	AFTER DRILLING --		

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, moist to wet, and gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-15

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/11/12	COMPLETED	7/11/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	GROUND WATER LEVELS:	
CHECKED BY		AT TIME OF DRILLING	--
		AT END OF DRILLING	--
NOTES	Composite sample collected from M-SB-13, M-SB-14, and M-SB-15		
		AFTER DRILLING	--

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, coarse grained, moist to wet, and gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-16

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/10/12	COMPLETED	7/10/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	GROUND WATER LEVELS:	
CHECKED BY		AT TIME OF DRILLING	--
		AT END OF DRILLING	--
NOTES	Composite sample collected from M-SB-16, M-SB-17, and M-SB-18		
	AFTER DRILLING --		

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, fine to medium grained, dry, trace silt, trace fine gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-17

PAGE 1 OF 1

CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/10/12	COMPLETED	7/10/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	GROUND WATER LEVELS:	
CHECKED BY		AT TIME OF DRILLING	—
		AT END OF DRILLING	—
NOTES	Composite sample collected from M-SB-16, M-SB-17, and M-SB-18		
	AFTER DRILLING —		

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, fine to medium grained, dry, trace silt, trace fine gravel, no odor, no staining	
				PID = 0
5	GB			

Bottom of borehole at 5.0 feet.



TRC
1430 Broadway
New York, NY 10018
Telephone: 212-221-7822

BORING NUMBER M-SB-18

PAGE 1 OF 1

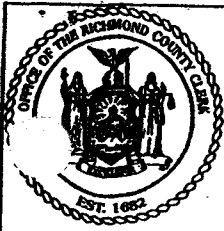
CLIENT	EDC	PROJECT NAME	9-11 Memorial Waste Characterization
PROJECT NUMBER	-	PROJECT LOCATION	Staten Island, NY
DATE STARTED	7/10/12	COMPLETED	7/10/12
DRILLING CONTRACTOR	ADT	GROUND ELEVATION	
DRILLING METHOD	Hand Auger	HOLE SIZE	12 inches
LOGGED BY	PC	GROUND WATER LEVELS:	
CHECKED BY		AT TIME OF DRILLING	—
		AT END OF DRILLING	—
NOTES	Composite sample collected from M-SB-16, M-SB-17, and M-SB-18		
		AFTER DRILLING	—

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0				
			SAND, brown, fine to medium grained, dry, trace silt, trace fine gravel, no odor, no staining	
5	GB			PID = 0

Bottom of borehole at 5.0 feet.

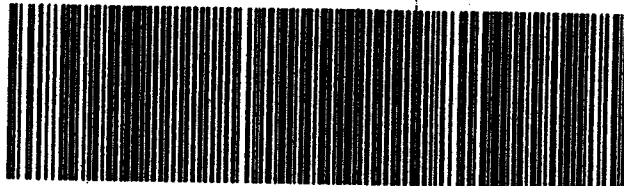
APPENDIX C
LABORATORY ANALYTICAL DATA REPORTS
(COMPACT DISC WITH REPORTS AVAILABLE)

APPENDIX H



Office of the
Richmond County Clerk
130 Stuyvesant Place
Staten Island, NY 10301

Hon. Stephen J. Fiala, County Clerk



ACS-000000000027412-000000000036749-017

Recording and Endorsement Cover Page

Document Id: 000000000036749 Document Date: 08/31/2005 Preparation Date: 09/14/2005
Document Type: DECLARATION
Document Page Count: 00017

PRESENTER:

DAN GREENE
100 CHURCH STREET

NEW YORK NY, 10007

RETURN TO:

DAN GREENE
100 CHURCH STREET

NEW YORK NY, 10007

Block	Lot	PROPERTY DATA	# OF BLOCKS	Unit	Address	# OF LOTS
2	20	Partial Lot	1		75 RICHMOND TERRACE	1
Property Type: Industrial Building						

PARTIES

GRANTOR
CITY OF NEW YORK
110 WILLIAM STREET
NEW YORK NY, 10038

GRANTEE
NEW YORK STATE DEPT OF ENVIRONMENTAL CON
625 BROADWAY
ALBANY NY, 12233

PAYMENT DETAIL

Make Checks Payable to:

Total Payments For This Document: .00

EXAM DAK DATE 9/14/05

LAND DOC# 71568
27-DECL,CONT,WAIVER

09/14/2005 11:54:02 A.M.
RECEIPT: 67802 FEE: \$.00
RICHMOND COUNTY CLERK

RECORDED IN RICHMOND COUNTY

SEP 14 2005

Steph J. Fiala
COUNTY CLERK

DECLARATION OF COVENANTS AND RESTRICTIONS

THIS COVENANT is made the 31 day of August 2005, by the City of New York ("City"), a municipal corporation organized and existing under the laws of the State of New York and having an office for the transaction of business at the New York City Department of Small Business Services, 110 William Street, 7th Floor, New York, New York, 10038, in favor of the New York State Department of Environmental Conservation ("Department"), an agency of the State of New York, with offices at 625 Broadway, Albany, New York, 12233;

WHEREAS, pursuant to an Agreement between the Department and the City entitled "In the Matter of the Implementation of Further Investigation, if needed and Remediation of St. George Railyard," Index No. W2-0852-99-10 (VCP Site Number V-00228), (the "Agreement"), the City, acting by and through its Commissioner of the Department of Small Business Services, hereby executes this declaration of covenants and restrictions in favor of the Department for the parcel of real property bounded on the North by Bank Street between Richmond Terrace and the Kill Van Kull, on the East by the Kill Van Kull, on the South by the North Ramp of the Staten Island Ferry Terminal north parking field extending from Richmond Terrace at Wall Street east to the Kill Van Kull, and on the West by Richmond Terrace from Wall to Bank Streets, in the County of Richmond, State of New York, more specifically denoted as Tax Map Nos. 16 and 17, Block 2, Lot 20 (not including the railroad right-of-way), which are the lands conveyed by the New York City Economic Development Corporation to the City of New York by deed dated December 1, 2000 and recorded in the Richmond County Clerk's Office on December 21, 2000 on Reel 10786 at Page 74, and are more particularly described by the maps and metes and bounds description attached hereto as Schedule "A" (hereinafter referred to as the "Property").

NOW THEREFORE, the City of New York, for itself and its successors and/or assigns, covenants that:

First, this declaration is and shall be deemed a covenant and shall run with the land, be binding on all future owners of the Property, and shall provide that the owner, and its successors and assigns, consent to the enforcement by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens (hereinafter referred to as the "Relevant Agency"), contained in this covenant, and hereby covenant not to contest the authority of the Department or Relevant Agency to seek enforcement;

Second, unless prior written approval by the New York State Department of Environmental Conservation or the Relevant Agency, is first obtained, this declaration prohibits the use of the Property for any purpose other than as a sports stadium, a public parking lot, and water-front esplanade;

Third, the owner of the Property shall prohibit the use of groundwater underlying the Property without treatment rendering it safe for drinking water, irrigation, or industrial purposes, as appropriate, unless the owner first obtains permission from the Department or the Relevant Agency;

Fourth, the owner of the Property, and its successors and assigns, shall continue in full force and effect any institutional and/or engineering controls required, including the sub-slab methane venting system and the gas monitoring system, under the Agreement and maintain such controls unless the owner first obtain permission to discontinue such controls from the Department or Relevant Agency;

Fifth, unless prior written approval by the Department or Relevant Agency is first obtained, there shall be no excavation exceeding the following limitations:

- A. In open areas of the Property (i.e. areas not covered by pavement or building structures) covered by a layer of at least 18 inches of clean soil, there shall be no excavation below 18 inches of clean soil;
- B. In the western open area of the Property covered by less than 18 inches of clean fill and a permeable filter fabric demarcation layer, there shall be no excavation below the permeable filter fabric demarcation layer;
- C. In paved areas of the Property, there shall be no excavation below the underlying imported subgrade layer;
- D. In areas covered by buildings or other structures on the Property, there shall be no excavation below the footprint of such structures and the underlying imported subgrade materials.

The areas described in sub-paragraphs A through D above are described in greater detail on the map attached as Schedule "B." If excavation occurs on the Property, any soils that are excavated must be managed, characterized, and properly disposed of off-site in an approved and permitted facility in accordance with regulations and directives of the Department or Relevant Agency, or re-deposited onsite and covered by filter fabric and a clean soil cover, unless the owner demonstrates to the satisfaction of the Department or Relevant Agency that such soil is not contaminated with any substance that will pose a risk to human health;

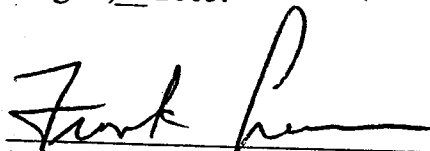
Sixth, any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Department or Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below



ANDREW SCHWARTZ
Deputy Commissioner
Department of Small Business Services

Sworn to before me this 31 day of
August, 2005.



Notary Public

FRANK ENCARNACION
Notary Public, State of New York
No. 41-4849424
Qualified in Queens County
Commission Expires

4/30/07

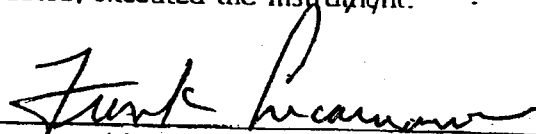
On the 31st day of August in the year 2005

undersigned, personally appeared

Andrew Schwork

before me, the

personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.



(signature and office of individual taking acknowledgment)

FRANK ENCARNACION
Notary Public, State of New York
No. 41-4849424
Qualified in Queens County
Commission Expires 4/30/07

TO BE USED ONLY WHEN THE ACKNOWLEDGMENT IS MADE OUTSIDE NEW YORK STATE

State (or District of Columbia, Territory, or Foreign Country) of

SS:

On the day of
personally appeared

in the year

before me, the undersigned,

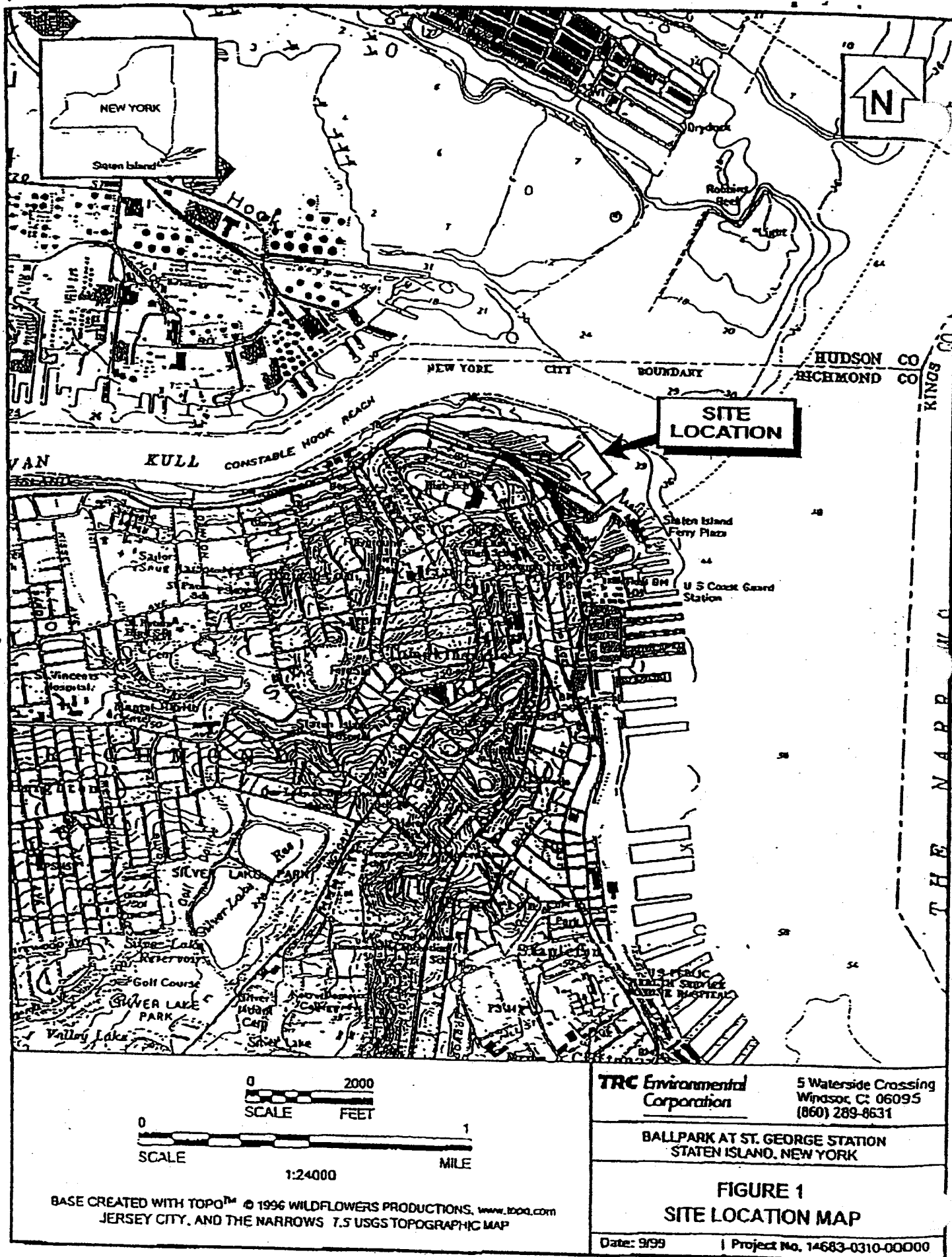
personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose names(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument, and that such individual made such appearance before the undersigned in the

(insert the City or other political subdivision)

in _____
(and insert the State or Country or other place the acknowledgment was taken)

(signature and office of individual taking acknowledgment)

Schedule "A"



SCHEDULE A DESCRIPTION

PARCEL I

ALL that certain plot, piece or parcel of land, situate, lying and being in the Borough of Staten Island, County of Richmond, City and State of New York, bounded and described as follows:

BEGINNING at a point on the northerly side of Richmond Terrace as vested in the City of New York, 12/5/1947 where the same is intersected by the northerly prolongation of the westerly side of Nicholas Street;

RUNNING THENCE North 24 degrees 07 minutes 43 seconds East along the northerly prolongation of the westerly side of Nicholas Street, 107.42 feet to the low water line as the same existed in 1797;

THENCE along said low water line the following courses and distances;

NORTH 66 degrees 39 minutes 07 seconds West 208.86 feet;

NORTH 76 degrees 43 minutes 47 seconds West 80.52 feet and North 89 degrees 56 minutes 27 seconds West 82.61 feet to a point;

THENCE North 71 degrees 19 minutes 27 seconds West, along other lands of the Staten Island Railroad Corporation, 675.17 feet to a point;

THENCE the following courses and distances:

NORTH 12 degrees 14 minutes 30 seconds West 32.20 feet;

NORTH 63 degrees 26 minutes 06 seconds West 33.54 feet;

NORTH 87 degrees 25 minutes 36 seconds West 57.55 feet;

NORTH 12 degrees 34 minutes 50 seconds East 66.88 feet to the U.S. Bulkhead Line as approved by the Secretary of War 1/27/31;

RUNNING THENCE along said line the following five courses and distances:

SOUTH 89 degrees 35 minutes 00 seconds East 666.44 feet;

SOUTH 72 degrees 52 minutes 30 seconds East 950.00 feet;

SOUTH 59 degrees 12 minutes 30 seconds East 604.00 feet;

SOUTH 44 degrees 54 minutes 00 seconds East 627.50 feet;

BLOCKED 12/16/44 ✓
REBLOCKED / /

BLOCKED 12/18/49 3
REBLOCKED / /

-- CONTINUED --

LEGAL DESCRIPTION - CONTINUED

THENCE along said land of the City of New York:

SOUTH 43 degrees 50 minutes 00 seconds West 51.12 feet;

SOUTH 34 degrees 14 minutes 00 seconds East 263.52 feet;

SOUTH 55 degrees 46 minutes 05 seconds West 3.50 feet;

SOUTH 34 degrees 14 minutes 00 seconds East 5.00 feet to a point of curve;

CONTINUING along said curve to the right having a radius of 25.50 feet and a central angle of 87 degrees 16 minutes 31 seconds 38.84 feet to a point of tangency;

CONTINUING along said lands of the City of New York South 53 degrees 02 minutes 31 seconds West 136.35 feet to a point of curve;

CONTINUING along said curve to the right having a radius of 275.00 feet and a central angle of 45 degrees 28 minutes 31 seconds 218.27 feet to a point of tangency;

CONTINUING along said lands of the City of New York North 81 degrees 28 minutes 58 seconds West 321.20 feet to the Northeasterly side of Richmond Terrace;

THENCE along the Northeasterly and Northerly side of Richmond Terrace, the following courses and distances;

NORTH 30 degrees 08 minutes 23 seconds West 569.50 feet to a point of curve;

THENCE on a curve to the left having a radius of 320.17 feet a central angle of 22 degrees 47 minutes 16 seconds a distance of 127.34 feet to a point of tangency;

THENCE North 52 degrees 55 minutes 39 seconds West 379.51 feet;

NORTH 54 degrees 16 minutes 20 seconds West 188.13 feet to a point of curve;

THENCE on a curve to the left having a radius of 853.42 feet, a central angle of 17 degrees 06 minutes 20 seconds a distance of 254.79 feet to a point of tangency, and North 71 degrees 22 minutes 40 seconds West 48.91 feet to the point or place of BEGINNING.

BLOCKED 12/18/99 B
REBLOCKED / / —

BLOCKED 12/16/99 ✓
REBLOCKED / / —

LEGAL DESCRIPTION - CONTINUED

PARCEL II

ALL that certain plot, piece or parcel of land, situate, lying and being in the Borough of Staten Island, County of Richmond, City and State of New York, bounded and described as follows:

BEGINNING at a point formed by the intersection of the U.S. Bulkhead Line as approved by the Secretary of War 1/27/31, and the Easterly line of a grant of lands to Pindelton Estates in Liber 595 Cp. 472. Said point or place of beginning being the following courses and distances from Richmond Terrace;

BEGINNING at a point on the northerly side of Richmond Terrace as vested in the City of New York 12/5/1947 where the same is intersected by the Northerly prolongation of the Westerly side of Nicholas Street;

RUNNING THENCE North 24 degrees 07 minutes 43 seconds East along the Northerly prolongation of the Westerly side of Nicholas Street 107.42 feet to the low waterline as the same existed in 1797;

THENCE along said low water line the following courses and distances;

NORTH 66 degrees 39 minutes 07 seconds West 208.86 feet;

NORTH 76 degrees 43 minutes 47 seconds West 80.52 feet and North 89 degrees 56 minutes 27 seconds West 82.61 feet to a point;

NORTH 71 degrees 19 minutes 27 seconds West, along other lands of the Staten Island Railroad Corporation 675.17 feet to a point;

THENCE the four following courses and distances:

NORTH 12 degrees 14 minutes 30 seconds West 32.20 feet;

NORTH 63 degrees 26 minutes 06 seconds West 33.54 feet;

NORTH 87 degrees 25 minutes 36 seconds West 57.55 feet and North 12 degrees 34 minutes 50 seconds East 66.88 feet to the true point or place of beginning;

THENCE North 12 degrees 34 minutes 50 seconds East along said grant of lands 163.94 feet to the U.S. Pierhead Line as approved by the Secretary of War 1/27/1931;

THENCE along said Pierhead Line, South 89 degrees 35 minutes 00 seconds East 1280.25 feet;

SOUTH 68 degrees 25 minutes 00 seconds East 1200.00 feet; and

SOUTH 46 degrees 10 minutes 00 seconds East 792.80 feet to the Northwesterly line of lands of the City of New York as described in Liber 1887 of deeds Page 208;

BLOCKED 12/16/18 ✓
REBLOCKED 1/1/19
BLOCKED 12/18/19 B
REBLOCKED 1/1/20

REEL 838 PAGE 0204

LEGAL DESCRIPTION - CONTINUED

THENCE along said lands of the City of New York, South 43 degrees 50 minutes 00 seconds West 509.23 feet to a point in the U.S. Bulkhead Line as approved by the Secretary of War 1/27/1931;

THENCE along said Bulkhead line:

NORTH 34 degrees 14 minutes 00 seconds West 204.25 feet;

NORTH 44 degrees 54 minutes 00 seconds West 627.50 feet;

NORTH 59 degrees 12 minutes 30 seconds West 604 feet;

NORTH 72 degrees 52 minutes 30 seconds West 950 feet;

NORTH 89 degrees 35 minutes 00 seconds West 666.40 feet to the true point or place of BEGINNING.

BLOCKED 12/28/99 SB
REBLOCKED / /

REEL 838 PAGE 0205

BLOCKED 12/16/99 ✓
REBLOCKED / /

LEGAL DESCRIPTION - CONTINUED

BLANKET DESCRIPTION

ALL that certain plot, piece or parcel of land, situate, lying and being in the Borough of Staten Island, County of Richmond, City and State of New York, bounded and described as follows:

TRACT I (Underwater and solid fill combined)

BEGINNING at a point on the Northerly side of Richmond Terrace as vested in the City of New York 12/5/1947 where the same is intersected by the Northerly prolongation of the Westerly side of Nicholas Street;

RUNNING North 24 degrees 07 minutes 43 seconds East along the Northerly prolongation of the Westerly side of Nicholas Street 107.42 feet to the low water line as the same existed in 1797;

THENCE along said low water line the following courses and distances;

NORTH 66 degrees 39 minutes 07 seconds West 208.86 feet;

NORTH 76 degrees 43 minutes 47 seconds West 80.52 feet and North 89 degrees 56 minutes 27 seconds West 82.61 feet to a point;

THENCE North 71 degrees 19 minutes 27 seconds West, along other lands of the Staten Island Railroad Corporation, 675.17 feet to a point;

THENCE the four following courses and distances:

NORTH 12 degrees 14 minutes 30 seconds West 32.20 feet;

NORTH 63 degrees 26 minutes 06 seconds West 33.54 feet;

NORTH 87 degrees 25 minutes 36 seconds West 57.55 feet and North 12 degrees 34 minutes 50 seconds East 230.82 feet to the U.S. Pierhead Line as approved by the Secretary of War 9/5/1913 and 1/27/1931;

THENCE along said Pierhead Line;

SOUTH 89 degrees 35 minutes 00 seconds East, 1,280.25 feet;

SOUTH 68 degrees 25 minutes 00 seconds East, 1,200.00 feet and South 46 degrees 10 minutes 00 seconds East, 792.80 feet to the northwesterly line of land of the City of New York as described in Liber 1887 of deed Page 208;

THENCE along the said lands of the City of New York;

SOUTH 43 degrees 50 minutes 00 seconds West, 560.35 feet;

BLOCKED 12/18/99 B
REBLOCKED 1/1

BLOCKED 12/16/99 ✓
REBLOCKED 1/1

REEL 9780 PAGE 143

LEGAL DESCRIPTION - CONTINUED

SOUTH 34 degrees 14 minutes 00 seconds East, 263.52 feet;

SOUTH 55 degrees 46 minutes 05 seconds West, 3.50 feet;

SOUTH 34 degrees 14 minutes 00 seconds East, 5.00 feet to a point of curve;

CONTINUING along said curve to the right having a radius of 25.50 feet and central angle of 87 degrees 16 minutes 31 seconds, 38.84 feet to a point of tangency;

CONTINUING along said lands of the City of New York South 53 degrees 02 minutes 31 seconds West, 136.35 feet to a point of curve;

CONTINUING along said curve to the right having a radius of 275.00 feet and a central angle of 45 degrees 28 minutes 31 seconds, 218.27 feet to a point of tangency;

CONTINUING along said lands of the City of New York North 81 degrees 28 minutes 58 seconds West 321.20 feet to the Northeasterly side of Richmond Terrace;

THENCE along the Northeasterly and Northerly side of Richmond Terrace, the following courses and distances:

NORTH 30 degrees 08 minutes 23 seconds West 569.50 feet to a point of curve;

THENCE on a curve to the left having a radius of 320.17 feet, a central angle of 22 degrees 47 minutes 16 seconds a distance of 127.34 feet to a point of tangency;

THENCE North 52 degrees 55 minutes 39 seconds West 379.51 feet;

NORTH 54 degrees 16 minutes 20 seconds West 188.13 feet to a point of curve;

THENCE on a curve to the left having a radius of 853.42 feet, a central angle of 17 degrees 06 minutes 20 seconds a distance of 254.79 feet to a point of tangency; and

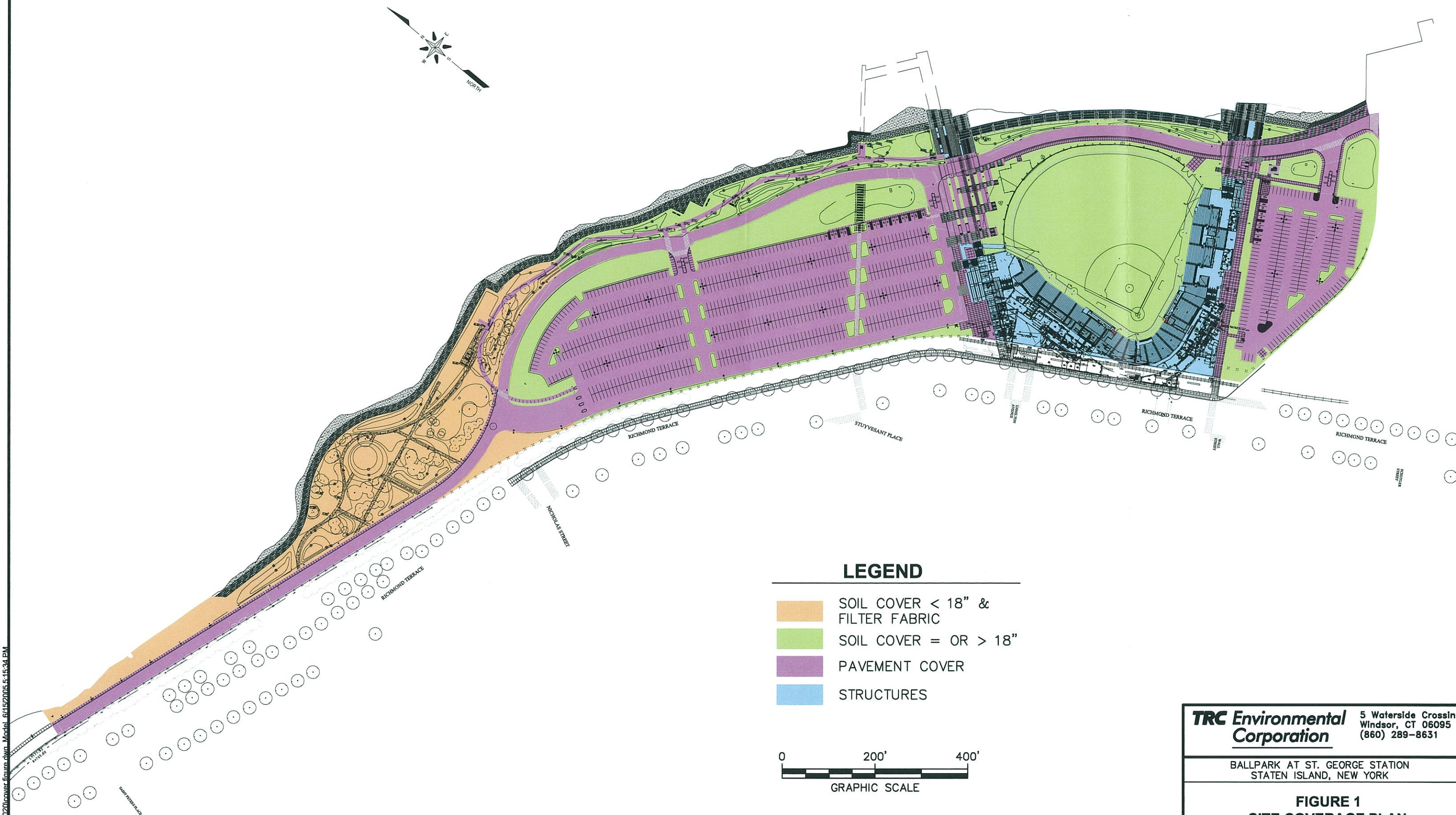
NORTH 71 degrees 22 minutes 40 second West 48.91 feet to the point or place of BEGINNING.

BLOCKED 12/08/99 12
REBLOCKED / /

BLOCKED 12/16/99 ✓
REBLOCKED / /

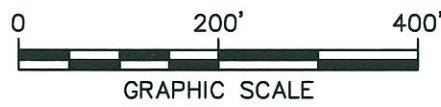
Schedule "B"

J:\Cad\31193\0020\cover figure.dwg Model 6/15/2005 5:15:34 PM



LEGEND

- SOIL COVER < 18" & FILTER FABRIC
- SOIL COVER = OR > 18"
- PAVEMENT COVER
- STRUCTURES



TRC Environmental Corporation	5 Waterside Crossing Windsor, CT 06095 (860) 289-8631
BALLPARK AT ST. GEORGE STATION STATEN ISLAND, NEW YORK	
FIGURE 1 SITE COVERAGE PLAN	
Date: 06/15/05	Project No. 31193-0020-00020

APPENDIX H

NYSDEC DEED RESTRICTION MODIFICATION

APPROVAL LETTER

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 2
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4995
www.dec.ny.gov

January 5, 2022

Tracy Bell
NYC Economic Development Corp.
110 William Street, 6th Floor
New York, NY 10017

**Re: Ballpark at St. George Station, Richmond County
Between North Ramp and Jersey St., Block 2, Lot 20, Staten Island
Voluntary Cleanup Program # V00228
Deed Restriction Modification**

Dear Ms. Bell:

The New York State Department of Environmental Conservation (the Department) has received a request by EDC (the Volunteer) to modify the above-referenced Deed Restriction dated August 31, 2005 and recorded in the Richmond County Clerk's Office on September 14, 2005 as Document #71568.

According to Paragraph "Second" of the deed restriction, "unless prior written approval by the New York State Department of Environmental Conservation or the Relevant Agency, is first obtained, this declaration prohibits the use of the Property for any purpose other than as a sports stadium, public parking lot, and water-front esplanade."

By this letter, please be advised that the Department hereby consents to the change of use restrictions as follows:

Second, unless prior written approval by the New York State Department of Environmental Conservation or the Relevant Agency, is first obtained, this declaration prohibits the use of the Property for any purpose other than commercial and/or industrial uses.

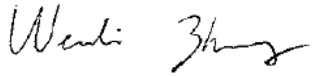
No other changes to the deed restriction are authorized at this time. Please submit a draft of the revised deed restriction incorporating the above language to the Department for review. Following approval of the revised deed restriction by the Department, it must be recorded by the property owner (City of New York).

Should you have any questions regarding this letter or any other aspect of the project, please contact me at 718-482-7541 or wendi.zheng@dec.ny.gov.



Department of
Environmental
Conservation

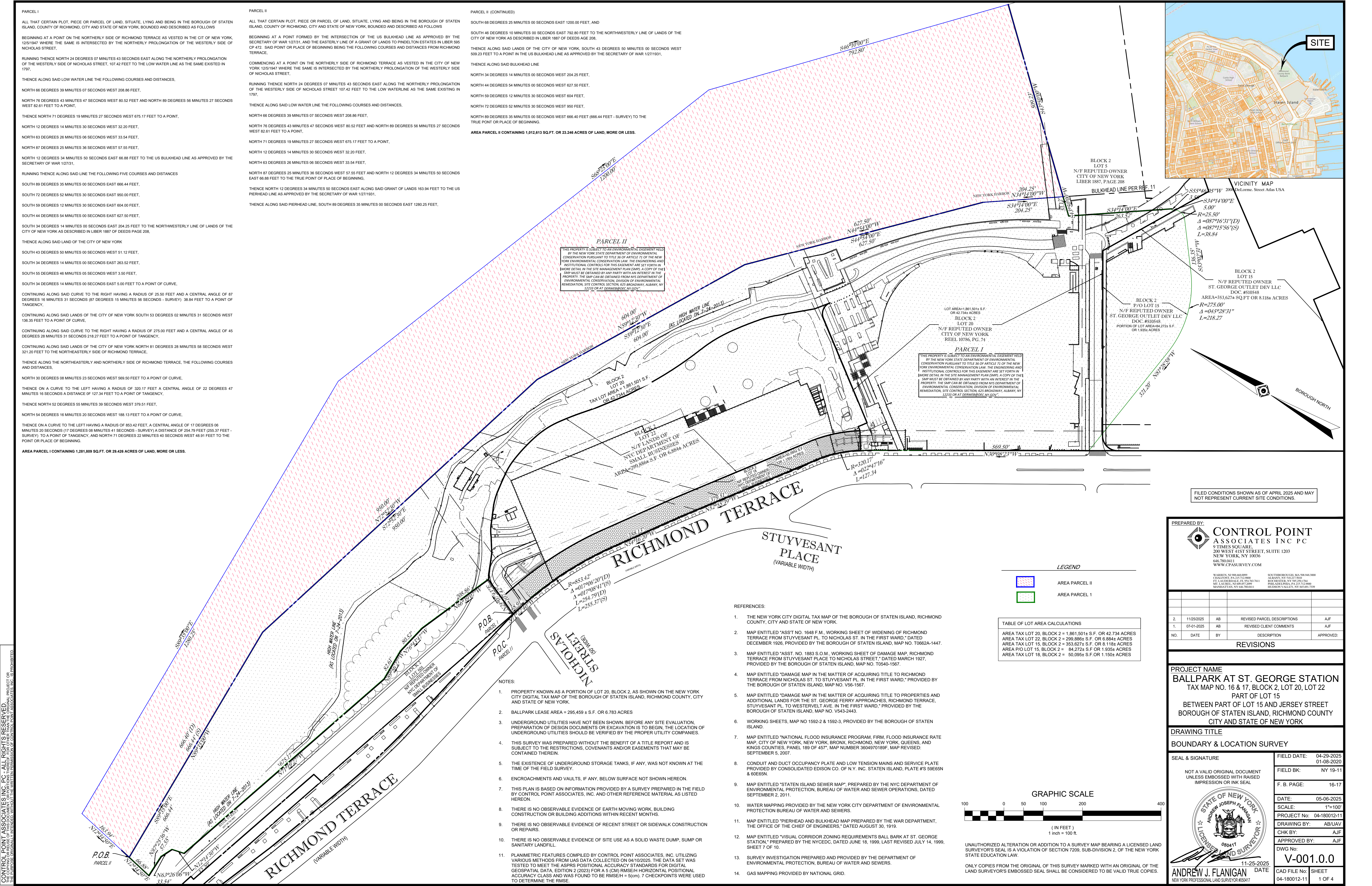
Sincerely,

A handwritten signature in black ink, appearing to read "Wendi Zheng". The signature is fluid and cursive, with the first name "Wendi" and the last name "Zheng" clearly distinguishable.

Wendi Zheng
Project Manager

cc: B. Burns, J. O'Connell, J. Simpson – NYSDEC
J. Peronto – TRC

APPENDIX I
METES AND BOUNDS PROPERTY SURVEY MAP



PREPARED BY:

CONTROL POINT ASSOCIATES INC PC

9 TIMES SQUARE
200 WEST 41ST STREET, SUITE 1203
NEW YORK, NY 10036
646.780.8111
WWW.CPASURVEY.COM

WARREN, NJ 08060-0009
CHALFONTE, PA 21512-0000
FELLSBURGH, VA 22033-0001
MANHATTAN, NY 10014-0011

SOUTHBOROUGH, MA 01886-0000
ALBANY, NY 12212-0000
ROCKY HILL, CT 06067-0001
HUDSON VALLEY, NY 12534-0000

NO.	DATE	BY	DESCRIPTION	APPROVED:
2	11/25/2025	AB	REVISED PARCEL DESCRIPTIONS	A/JF
1	07-01-2025	AB	REVISED CLIENT COMMENTS	A/JF

REVISIONS

PROJECT NAME

BALLPARK AT ST. GEORGE STATION

TAX MAP NO. 16 & 17, BLOCK 2, LOT 20, LOT 22

PART OF LOT 15

BETWEEN PART OF LOT 15 AND JERSEY STREET

BOROUGH OF STATEN ISLAND, RICHMOND COUNTY

CITY AND STATE OF NEW YORK

DRAWING TITLE

BOUNDARY & LOCATION SURVEY

SEAL & SIGNATURE

NOT A VALID ORIGINAL DOCUMENT
UNLESS EMBOSSED WITH RAISED
IMPRESSION OR INK SEAL

STATE OF NEW YORK

ANDREW J. FLANIGAN

LAND SURVEYOR

11-25-2025

DATE

CAD FILE NO. 04-18012-11

SHEET 1 OF 4

V-001.0.0

DWG No.

APPROVED BY: A/JF

CHK BY: A/JF

DRAWING BY: AB/UAJ

PROJECT No: 04-18012-11

SCALE: 1"=100'

DATE: 05-06-2025

F. B. PAGE: 16-17

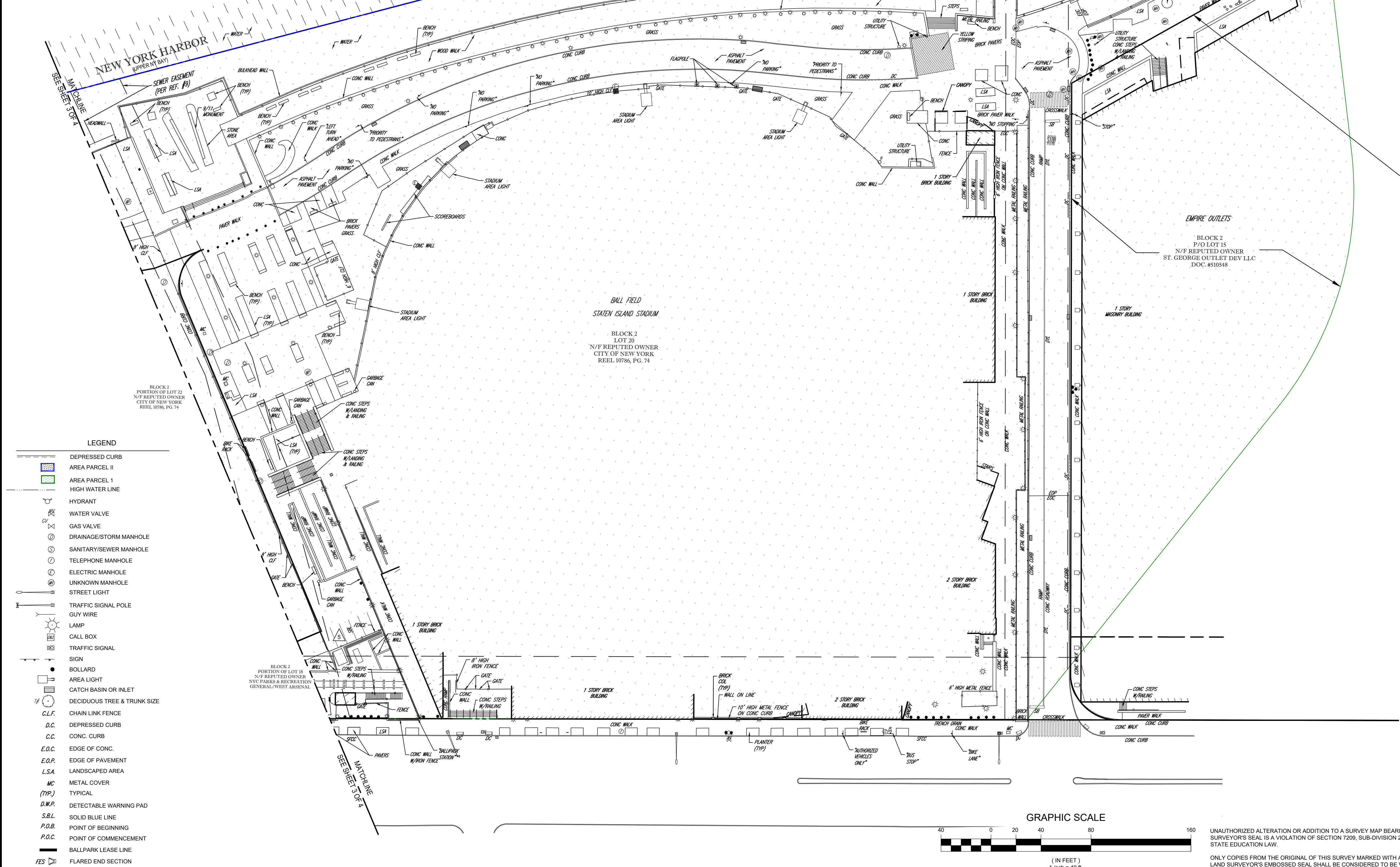
FIELD BK: NY 19-11

FIELD DATE: 04-29-2025

01-08-2020



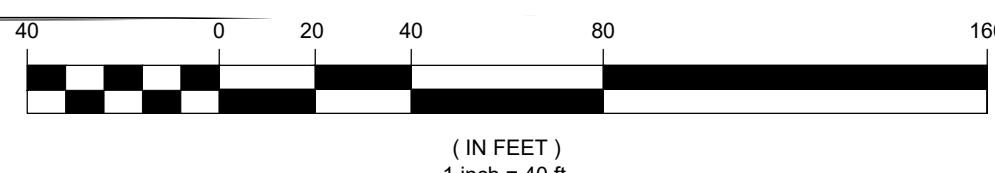
VICINITY MAP
2008 DeLorme Street Atlas USA



LEGEND

- DEPRESSED CURB
- AREA PARCEL II
- AREA PARCEL I
- HIGH WATER LINE
- HYDRANT
- WATER VALVE
- GAS VALVE
- DRAINAGE/STORM MANHOLE
- SANITARY/SEWER MANHOLE
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
- UNKNOWN MANHOLE
- STREET LIGHT
- TRAFFIC SIGNAL POLE
- GUY WIRE
- LAMP
- CALL BOX
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- BOLLARD
- AREA LIGHT
- CATCH BASIN OR INLET
- DECIDUOUS TREE & TRUNK SIZE
- CHAIN LINK FENCE
- DEPRESSED CURB
- D.C.
- E.O.C.
- E.O.P.
- L.S.A.
- M.C.
- (TYP.)
- D.W.P.
- S.B.L.
- P.O.B.
- P.O.C.
- BALLPARK LEASE LINE
- FLARED END SECTION

GRAPHIC SCALE



UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

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- MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, CITY OF NEW YORK, NEW YORK, BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES, PANEL 159 OF 457," MAP NUMBER 3604970189F, MAP REVISED SEPTEMBER 5, 2007.
- CONDUIT AND DUCT OCCUPANCY PLATE AND LOW TENSION MAINS AND SERVICE PLATE PROVIDED BY CONSOLIDATED EDISON CO. OF N.Y. INC. STATEN ISLAND, PLATE #S 59E65N & 60E65N.
- MAP ENTITLED "STATEN ISLAND SEWER MAP," PREPARED BY THE NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATER AND SEWER OPERATIONS, DATED SEPTEMBER 2, 2011.
- WATER MAPPING PROVIDED BY THE NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER AND SEWERS.
- MAP ENTITLED "PIERHEAD AND BULKHEAD MAP PREPARED BY THE WAR DEPARTMENT, THE OFFICE OF THE CHIEF OF ENGINEERS," DATED AUGUST 30, 1919.
- MAP ENTITLED "VISUAL CORRIDOR ZONING REQUIREMENTS BALL PARK AT ST. GEORGE STATION," PREPARED BY THE NYCDC, DATED JUNE 18, 1999, LAST REVISED JULY 14, 1999, SHEET 7 OF 10.
- SURVEY INVESTIGATION PREPARED AND PROVIDED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATER AND SEWERS.
- GAS MAPPING PROVIDED BY NATIONAL GRID.

NOTES:

- PROPERTY KNOWN AS A PORTION OF LOT 20, BLOCK 2, AS SHOWN ON THE NEW YORK CITY DIGITAL TAX MAP OF THE BOROUGH OF STATEN ISLAND, RICHMOND COUNTY, CITY AND STATE OF NEW YORK.
- BALLPARK LEASE AREA = 295,459 ± S.F. OR 6.783 ACRES
- UNDERGROUND UTILITIES HAVE NOT BEEN SHOWN. BEFORE ANY SITE EVALUATION, PREPARATION OF DESIGN DOCUMENTS OR EXCAVATION IS TO BEGIN, THE LOCATION OF UNDERGROUND UTILITIES SHOULD BE VERIFIED BY THE PROPER UTILITY COMPANIES.
- THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN.
- THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY.
- THERE WERE NO NATURAL STREAMS OR WATERCOURSES VISIBLE AT THE TIME OF THE FIELD SURVEY.
- ENCROACHMENTS AND VAULTS, IF ANY, BELOW SURFACE NOT SHOWN HEREON.
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PREPARED BY:

CONTROL POINT ASSOCIATES INC PC
9 TIMES SQUARE
200 WEST 41ST STREET, SUITE 1203
NEW YORK, NY 10036
(646) 780-8111
WWW.CPASURVEY.COM

WARREN, NJ 07066-0099
CHALFONTE, PA 21572-7000
F.L. AUBURNVILLE, NJ 08001-7001
MANHATTAN, NY 10014-0011

SOUTHBOROUGH, MA 01886-0000
ALBANY, NY 12212-7000
ROCKY HILL, CT 06067-7001
HUDSON VALLEY, NY 12534-7000

NO.	DATE	BY	DESCRIPTION	APPROVED:
2.	11/25/2025	AB	REVISED PARCEL DESCRIPTIONS	AJF
1.	07-01-2025	AB	REVISED CLIENT COMMENTS	AJF

REVISIONS

PROJECT NAME

BALLPARK AT ST. GEORGE STATION
TAX MAP NO. 16 & 17, BLOCK 2, LOT 20, LOT 22
PART OF LOT 15
BETWEEN PART OF LOT 15 AND JERSEY STREET
BOROUGH OF STATEN ISLAND, RICHMOND COUNTY
CITY AND STATE OF NEW YORK

DRAWING TITLE

BOUNDARY & LOCATION SURVEY

SEAL & SIGNATURE

NOT A VALID ORIGINAL DOCUMENT
UNLESS EMBOSSED WITH RAISED
IMPRESSION OR INK SEAL

ANDREW J. FLANIGAN
NEW YORK PROFESSIONAL LAND SURVEYOR #50417

FIELD DATE: 04-29-2025

FIELD BK: NY 19-11

F. B. PAGE: 16-17

DATE: 05-06-2025

SCALE: 1"=40'

PROJECT No: 04-180012-11

DRAWING BY: AB/UAJ

CHK BY: AJF

APPROVED BY: AJF

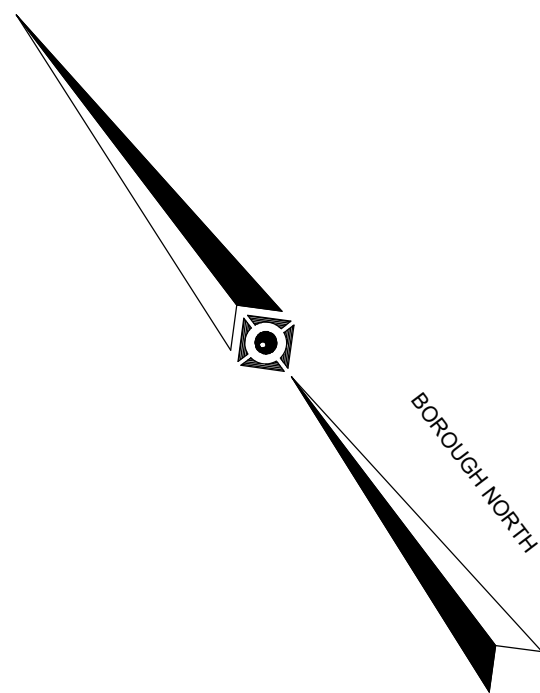
DWG No: V-001.0.0

CAD FILE No: 04-180012-11

SHEET 2 OF 4



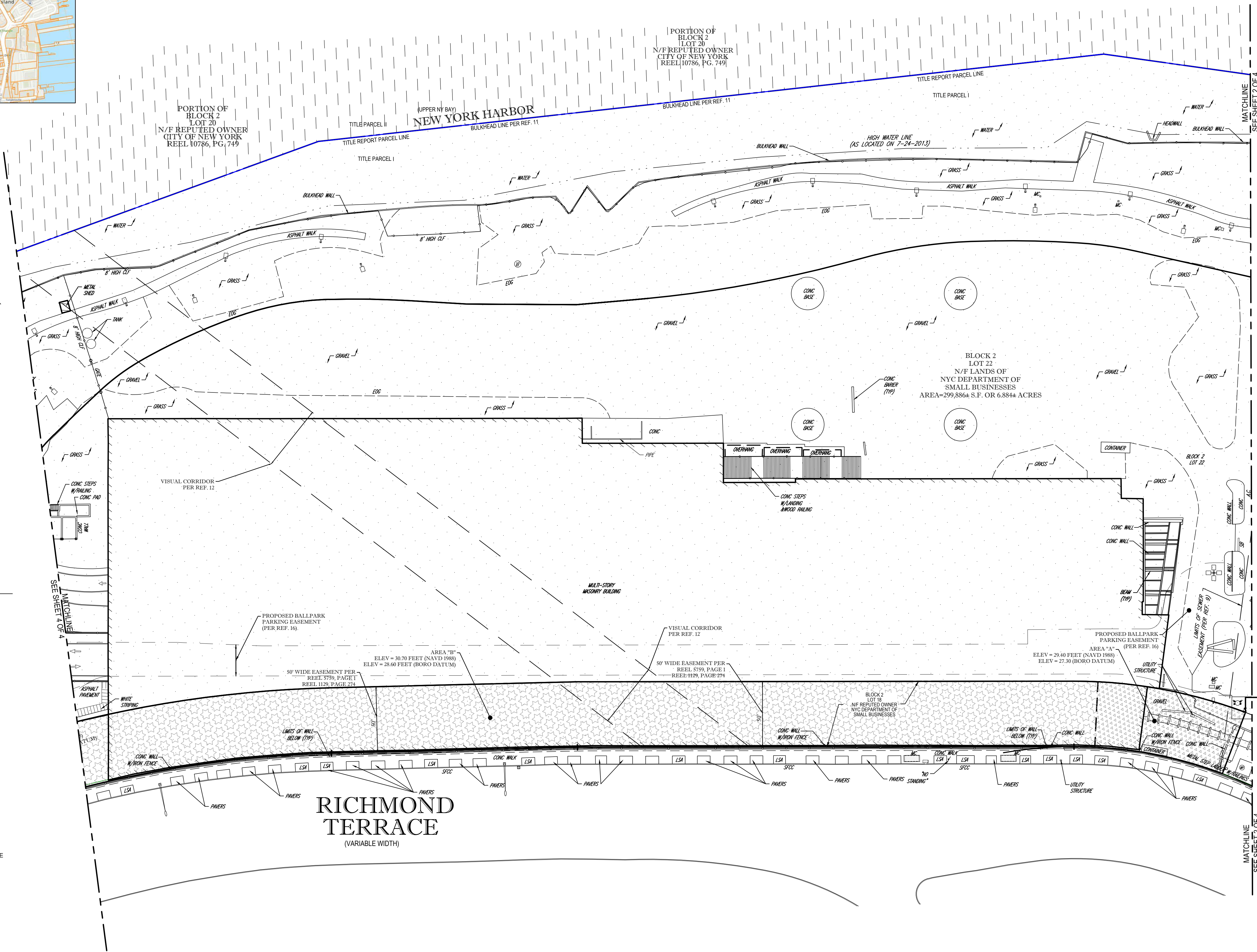
VICINITY MAP
2008 DeLorme Street Atlas USA



PORTION OF
BLOCK 2
LOT 20
N/F REPUTED OWNER
CITY OF NEW YORK
REEL 10786, PG. 749

PORTION OF
BLOCK 2
LOT 20
N/F REPUTED OWNER
CITY OF NEW YORK
REEL 10786, PG. 749

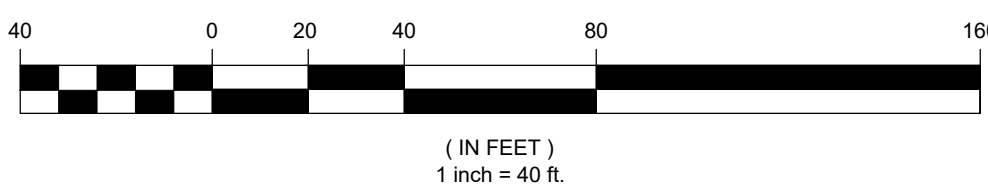
UPPER NY BAY
NEW YORK HARBOR



LEGEND

- DEPRESSED CURB
- AREA PARCEL II
- AREA PARCEL I
- HIGH WATER LINE
- HYDRANT
- WATER VALVE
- GAS VALVE
- DRAINAGE/STORM MANHOLE
- SANITARY/SEWER MANHOLE
- TELEPHONE MANHOLE
- ELECTRIC MANHOLE
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- AREA LIGHT
- CATCH BASIN OR INLET
- DECIDUOUS TREE & TRUNK SIZE
- CHAIN LINK FENCE
- DEPRESSED CURB
- CONC. CURB
- EDGE OF CONC.
- EDGE OF PAVEMENT
- LANDSCAPED AREA
- METAL COVER
- TYPICAL
- DETECTABLE WARNING PAD
- SOLID BLUE LINE
- POINT OF BEGINNING
- POINT OF COMMENCEMENT
- BALLPARK LEASE LINE
- FLARED END SECTION

GRAPHIC SCALE



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PREPARED BY:

CONTROL POINT ASSOCIATES INC PC
9 TIMES SQUARE
200 WEST 41ST STREET, SUITE 1203
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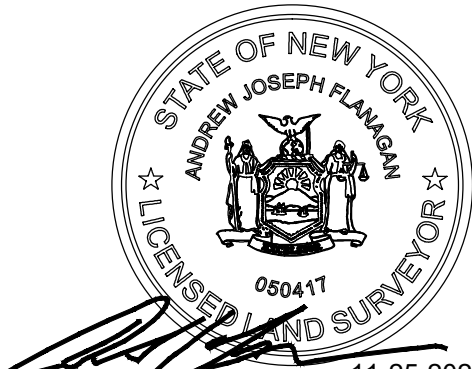
WARREN, NJ 08060-0909
CHALFONTE, PA 215 752 7000
FLA. ANDERSONVILLE, FL 904 363 7661
NEW YORK, NY 917 271 7661
MANHATTAN, NY 646 780-8411

SOUTHBOROUGH, MA 508 683 9000
ALBANY, NY 518 237 7000
ROCKY HILL, CT 860 261 7661
HUDSON VALLEY, NY 845 491 5709

NO.	DATE	BY	DESCRIPTION	APPROVED:
2	11/25/2025	AB	REVISED PARCEL DESCRIPTIONS	AJF
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REVISIONS				

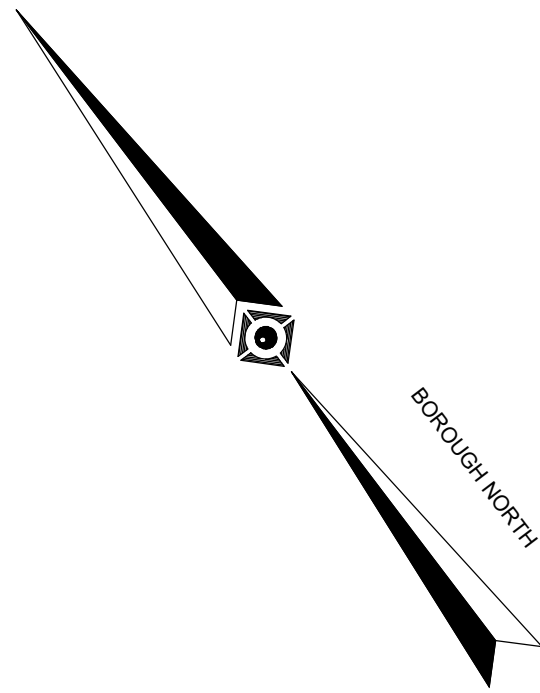
PROJECT NAME
BALLPARK AT ST. GEORGE STATION
TAX MAP NO. 16 & 17, BLOCK 2, LOT 20, LOT 22
PART OF LOT 15
BETWEEN PART OF LOT 15 AND JERSEY STREET
BOROUGH OF STATEN ISLAND, RICHMOND COUNTY
CITY AND STATE OF NEW YORK

DRAWING TITLE
BOUNDARY & LOCATION SURVEY

SEAL & SIGNATURE NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR INK SEAL  ANDREW J. FLANIGAN NEW YORK PROFESSIONAL LAND SURVEYOR #050417	FIELD DATE: 04-29-2025 01-08-2020 FIELD BK: NY 19-11 F. B. PAGE: 16-17 DATE: 05-06-2025 SCALE: 1"=40' PROJECT No: 04-180012-11 DRAWING BY: AB/UAJ CHK BY: AJF APPROVED BY: AJF DWG No: V-001.0.0 CAD FILE No: 04-180012-11 SHEET 3 OF 4



VICINITY MAP
2008 DeLorme Street Atlas USA

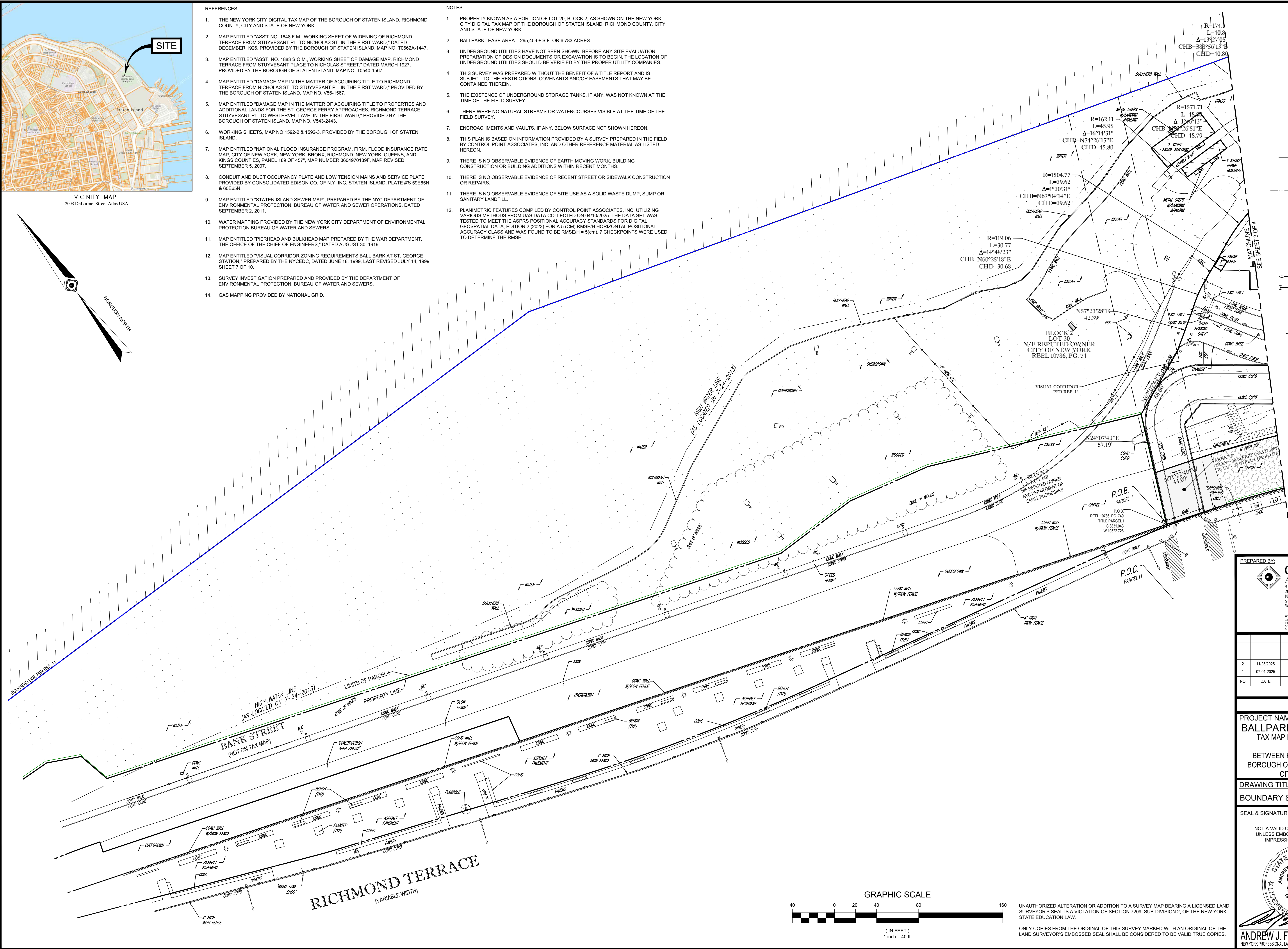


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13. SURVEY INVESTIGATION PREPARED AND PROVIDED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATER AND SEWERS.
14. GAS MAPPING PROVIDED BY NATIONAL GRID.

NOTES:

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LEGEND	
	DEPRESSED CURB
	AREA PARCEL II
	AREA PARCEL I
	HIGH WATER LINE
	HYDRANT
	WATER VALVE
	GAS VALVE
	DRAINAGE/STORM MANHOLE
	SANITARY/SEWER MANHOLE
	TELEPHONE MANHOLE
	ELECTRIC MANHOLE
	UNKNOWN MANHOLE
	STREET LIGHT
	TRAFFIC SIGNAL POLE
	GUY WIRE
	LAMP
	CALL BOX
	TRAFFIC SIGNAL
	SIGN
	BOLLARD
	AREA LIGHT
	CATCH BASIN OR INLET
	DECIDUOUS TREE & TRUNK SIZE
	CHAIN LINK FENCE
	D.C.
	C.C.
	E.O.C.
	E.O.P.
	L.S.A.
	MC
	(TYP.)
	D.W.P.
	S.B.L.
	P.O.B.
	P.O.C.
	BALLPARK LEASE LINE
	FLARED END SECTION

PREPARED BY:
CONTROL POINT ASSOCIATES INC PC
9 TIMES SQUARE,
200 WEST 1ST STREET, SUITE 1203
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ALBANY, NY 518 237 7001
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HARTFORD, CT 860 261 7041
HUDSON VALLEY, NY 845 491 7539

NO.	DATE	BY	DESCRIPTION	APPROVED:
2.	11-25-2025	AB	REVISED PARCEL DESCRIPTIONS	AJF
1.	07-01-2025	AB	REVISED CLIENT COMMENTS	AJF

REVISIONS

PROJECT NAME
BALLPARK AT ST. GEORGE STATION
TAX MAP NO. 16 & 17, BLOCK 2, LOT 20, LOT 22
PART OF LOT 15
BETWEEN PART OF LOT 15 AND JERSEY STREET
BOROUGH OF STATEN ISLAND, RICHMOND COUNTY
CITY AND STATE OF NEW YORK

DRAWING TITLE

BOUNDARY & LOCATION SURVEY

SEAL & SIGNATURE NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR INK SEAL ANDREW J. FLANIGAN NEW YORK PROFESSIONAL LAND SURVEYOR #050417	FIELD DATE: 04-29-2025 01-08-2020
	FIELD BK: NY 19-11 F. B. PAGE: 16-17 DATE: 05-06-2025 SCALE: 1"=40' PROJECT NO: 04-180012-11 DRAWING BY: AB/UAJ CHK BY: AJF APPROVED BY: AJF DWG No: V-001.0.0 CAD FILE No: 04-180012-11 SHEET 4 OF 4