Periodic Review Report

February 16, 2024 – June 16, 2025

August 2025

Former Columbia Smelting a.k.a Red Hook Recreation Area Ball Fields 5-8 and Ball Field 9

Prepared For:

New York City Department of
Parks and Recreation
Olmstead Center
Flushing Meadow-Corona Park
Queens, New York 11268

Prepared By:

TRC Engineers, Inc.
1407 Broadway, Suite 3301
New York, New York 10018

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ACRONYM LIST

µg/L	Micrograms per liter
AARCO	AARCO Environmental Services Corporation
bgs	Below ground surface
CAMP	Community Air Monitoring Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CENJ	Clean Earth of New Jersey, Inc.
Columbia	Columbia Smelting & Refining Works
D&IP	Design and Implementation Plan
DPR	New York City Department of Parks and Recreation
ECs	Engineering Controls
EPA	United States Environmental Protection Agency
EWP	Excavation Work Plan
HASP	Health and Safety Plan
HQ 1	Hazard Quotient 1
ICs	Institutional Controls
LAWES	Land, Air, Water Environmental Services, Inc.
mg/kg	Milligrams per kilogram
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
Oweis	Oweis Engineering, Inc.
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PID	Photoionization Detector
PRR	Periodic Review Report
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RAOs	Remedial Action Objectives
RML	Removal Management Levels
RRUSCOs	Restricted Residential Use Soil Cleanup Objectives
SMP	Site Management Plan
SVOCs	Semivolatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TOGs	NYSDEC Division of Water Technical and Operational Guidance Series
TRC	TRC Engineers, Inc.
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds
Weston	Weston Solutions, Inc.

Executive Summary

Category	Summary/Results
Engineering Control	• Cover system consisting of a minimum of one foot of synthetic turf cover; paved areas, clean topsoil, bonded aggregate, and/or permeable pavers underlain by a physical demarcation layer consisting of orange-colored plastic snow fencing or equivalent material

Institutional Control	• Site Management Plan (SMP) – January 2024
	• Deed Restriction – 2024
	  ○ Land use Restriction
	  ○ Groundwater use Restriction

Site Classification	Class P
Site Management Plan	SMP – January 2024, approved by New York State Department Environmental Conservation (NYSDEC) February 2024
Certification/Reporting Period	The Certification Period is defined as one year in the SMP. The SMP requires a Periodic Review Report (PRR) to be completed every year for the first two years with frequency thereafter to be determined.
Inspection	**Frequency**
1. Site Inspection	Annually
Prior PRR Recommendations	No prior PRRs have been prepared for the Site.
Site Management Activities	One annual site inspection was completed on October 24, 2024, by TRC Engineers, Inc. (TRC) during this reporting period (February 16, 2024 through Jun 16, 2025).
Significant Findings or Concerns	1. The overall integrity of the Site cover system is acceptable. Insufficient cover of mulch and grass were noted in the planting beds and bioswales along Henry Street, Bay Street, Hicks Street, and Lorraine Street, surrounding Ball Fields 5-8, see photolog in **Appendix C.** 2. No disturbances to the Site cover system were noted during the reporting period. The remedy continued to be protective of human health and the environment this reporting period.
Recommendations	1. Annual Site inspection is recommended to verify the ICs and ECs are in-place and effective and to observe any future development of the Site. The Site inspection form should be completed during inspection.

	2. Sufficient mulch and vegetation should be added to the Site planting beds and bioswales noted during the October 2024 site inspection. In accordance with the as-built drawings provided in **Appendix B** of this report, the mulch layer atop the planting beds of the Site should be 3 inches thick. In addition to mulch, vegetation is required within the bioswale areas.
Cost Evaluation	The total cost of site management activities this reporting period was approximately $15,000. This cost includes engineering (e.g., labor and expense) costs. It should be noted that this total does not include any direct costs incurred by the NYSDEC.

1.0 Introduction

This Periodic Review Report (PRR) has been prepared for the Former Columbia Smelting also known as the Red Hook Ball Fields 5 through 8 and Ball Field 9 Site, located at 98 Lorraine Street and 100 Bay Street, respectively, in Red Hook, Brooklyn, New York (the Site), and covers the period between February 16, 2024 through June 16, 2025. This PRR was prepared in accordance with the January 2024 Site Management Plan (SMP), approved by the New York State Department of Environmental Conservation (NYSDEC) on February 16, 2024, and NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation (NYSDEC DER-10). This PRR discusses the site management activities performed by TRC Engineers, Inc. (TRC) during the referenced reporting period. A Site summary and applicable remedial program information are summarized below. The executed Institutional and Engineering Controls Certification Form for the periodic review period is included as **Appendix A** of this report.

Site Information			
Site Name:	Former Columbia Smelting a.k.a Red Hook Ball Fields 5 through 8 and Ball Field 9	**NYSDEC Site No:**	224231
Site Location:	98 Lorraine Street and 100 Bay Street, Red Hook, Brooklyn, NY	**Remedial Program:**	State Superfund Program
Site Type:	Manufacturer (metals)	**Classification:**	P[1]
Parcel Identification(s):	Block 581 Lot 1 (Ball Fields 5-8) and Block 614 Lot 300 (Ball Field 9) on the Brooklyn Tax Map	**Parcel Acreage / EE Acreage:**	7.57[2]
Selected Remedy:	Excavation, UST removal, and cover system	**Site COC(s):**	• Metals • SVOCs

Current Remedial Program Phase:	Post Remedial Action Site Monitoring; Site Management	**Institutional Controls:**	• SMP – (2024)
			• Deep Restriction (2024)
			  ○ Land use restriction
			  ○ Groundwater use restriction

Post-Remediation Monitoring Frequency:	Site inspection (Annual)	**Engineering Controls:**	Cover System
Monitoring Locations:	Not Applicable	**Required Reporting:**	PRR – Annual the first two years, with frequency thereafter to be determined[3]

Notes:
[1]A P classification indicates there is a potential for concern about site contamination.
[2]Ball Fields 5-8 (parcel identification: Block 581 Lot 1) is 4.17 acres and Ball Field 9 (parcel identification: Block 614 Lot 300) is 3.4 acres.
[3]After above-specified monitoring, the NYSDEC may be petitioned for its approval to discontinue or reduce monitoring, if conditions are warranted based on prior monitoring results.

1.1 Site Location Ownership, and Description

The Site is in Red Hook, Brooklyn, New York and is an approximately 7.57-acre portion of the 58-acre Red Hook Recreation Area Park. The 4.17-acre portion of the park is known and designated as Block 581, Lot 1 on the Brooklyn Tax Map developed with four baseball fields numbered 5, 6, 7, and 8 (overlain by Soccer Field 7); and the remaining 3.4-acre portion of the Site within the park is known and designated as Block 614, Lot 300 on the Brooklyn Tax Map developed as ball field 9. The Site is currently owned by the New York City Department of Parks and Recreation (DPR) and is open to the public as a public park.

The Site is bounded by Lorraine Street to the north, Halleck Street to the south, Henry Street and Clinton Street to the east, and Hicks Street and Columbia Street to the west. A Site Location Map and Site Plan are shown on **Figure 1** and **Figure 2**, respectively.

1.2 Investigation/Remedial History

The following subsections outline the site investigation and remedial history timeline and provide a brief summary of the available project records to document key investigative and remedial milestones for the Site. Additional details are included in the SMP.

A more summarized Site history, including the dates and descriptions of significant events and a Custodial Record detailing known and available Site reports, are provided in **Appendix B**.

1.2.1 Ball Field 5-8 Investigation

The Site was originally land under water and wetlands as a part of the Gowanus Bay. The Site was filled to raise the elevation some time prior to 1900 and was occupied as a shanty town in the 1920s. According to the United States Environmental Protection Agency (EPA), the Site was occupied by smelting and refining companies from the late 1920s through the late 1930s, including Columbia Smelting & Refining Works, Incorporated (Columbia). The Site was developed with a single-story, approximately 14,000-square-foot building from the mid to late 1920s, until it was demolished prior to 1940. Columbia dealt with white metals and alloys as well as brass and bronze ingots. The advertisement also indicated that the company manufactured soft lead, antimonial lead, babbitt, solder, type metals, terse metal, britannia metal, die-cast metal, unbreakable metal, and rerun zinc; consumed pig percentage metal, cable lead, battery plates, soft lead, type metals, babbitt, joists, pewter and dresses; and dealt in pig tin, pig lead, copper, antimony, aluminum, spelter, scrap metals, and residues. The former Columbia facility was historically located within Ball Field 7 (northwest corner of the Site). The historic Site building was demolished in the late 1930s, and the Site has been utilized as a public park dating back to 1940.

Final Soil Sampling Trip Report – April 9, 2015

In March 2015, Weston Solutions, Inc. (Weston) on behalf of the EPA collected 153 surface soil samples from 29 locations across the Site to 2 feet in depth at each location. The “Final Soil Sampling Trip Report – Columbia Smelting & Refining Works Site, Brooklyn, New York” dated April 9, 2015 prepared by Weston summarizes the results of the sampling event. Soil sample analytical results indicated lead, arsenic, and cadmium were detected above NYSDEC Restricted Residential Use Soil Cleanup Objectives (RRUSCOs) in Table 375-6.8(b) of 6 NYCRR Part 375-

6 (Remedial Program Soil Cleanup Objectives) (NYSDEC, 2006) and above EPA Removal Management Levels (RMLs) in soil samples collected from 0 to 2 feet below ground surface (bgs) across the Site. Lead concentrations were detected in the upper foot of soil up to 2,590 ppm. Based on the results of the investigation, the EPA determined the elevated contaminant levels are attributable to historic lead smelting operations at the Site.

Infiltration, Soil, and Groundwater Testing Report – June 9, 2016

TRC conducted an infiltration and geotechnical investigation in March 2016 to assess the conditions of the Site for site-wide cover construction and provide data for the design of a cover, synthetic turf, and drainage infrastructure in association with DPR's Order on Consent with the EPA. Oweis Engineering, Inc. (Oweis), under subcontract to TRC, was on-Site to perform the geotechnical investigation. TRC conducted soil and groundwater sampling concurrently with infiltration testing to obtain background chemical data for media that could be impacted by green infrastructure practices during Site reconstruction. Results of infiltration testing and associated soil and groundwater sampling are presented in the "Infiltration, Soil, and Groundwater Testing Report" prepared by TRC dated June 9, 2016, and summarized below.

The investigation consisted of the advancement of two (2) soil borings for infiltration and environmental testing at five locations across the Site to depths ranging between 17 and 21 feet bgs. Infiltration test borings were advanced at locations a minimum distance of 25 feet away from environmental borings. Soils from environmental borings were screened continuously to the boring completion depth, and samples were collected for laboratory chemical analysis from depths of 2 to 4 feet bgs, 5 to 7 feet bgs, and 8 to 10 feet bgs. No evidence of contamination (i.e., elevated photoionization detector (PID) readings, staining, or odors) were noted in any of the borings. Groundwater samples were collected from five temporary well points (RHGT-02, RHGT-03, RGHT-08, RGHT-13, and RGHT-14, see Figure 6A of SMP).

Soil and groundwater samples were analyzed for New York Codes Rules and Regulations (NYCRR) Part 375-6 semi-volatile organic compounds (SVOCs); Target Compound List (TCL) polychlorinated biphenyls (PCBs); NYCRR Part 375-6 Pesticides; NYCRR Part 375-6 Herbicides; Target Analyte List (TAL) Metals (total and dissolved); and cyanide. Soil analytical results were compared against RRUSCOs and EPA RMLs for Residential Soil. Groundwater sample analytical results were compared against NYSDEC Division of Water Technical and Operational Guidance Series (TOGS 1.1.1) Ambient Water Quality Standards and Guidance Values (Class GA Values). Infiltration tests were performed in accordance with the New York City Department of Environmental Protection (NYCDEP) Office of Green Infrastructure Procedure Governing Limited Geotechnical Investigation dated December 2015.

The results of the investigation indicated the following:

- Uncontrolled historic fill material was observed from ground surface to 8.5 to 19 feet bgs. This stratum consisted of dark brown, gray, sand, silt, and gravel, containing organics, bricks, glass, cinders and other miscellaneous debris. Groundwater was encountered in temporary monitoring wells from 8.75 to 11.50 feet bgs.
- The types and concentrations of SVOCs detected in the soil samples were consistent with the observed presence of historic fill at the Site. The concentrations of the SVOCs consisting of polycyclic aromatic hydrocarbons (PAHs) detected in soil samples above the

RRUSCOs and RMLs were generally attributed to the characteristics of historic fill material potentially containing one or more of the following: ash, cinders, coal, slag, heavy oil, and/or asphalt. No SVOCs, including PAHs, were detected in the groundwater samples.

- Metals (arsenic, barium, copper, lead and mercury) were detected in soil above the RRUSCOs. Generally, the concentrations of these metals decreased with soil depth. Arsenic, lead and cyanide were detected in one or more soil samples above the RMLs. The type and concentrations of metals detected in soil samples above the RRUSCOs and RMLs were generally attributed to the characteristics of historic fill material potentially containing one or more of the following: metal plating or smelting waste, ash, cinders, coal, slag, paint, and/or herbicides.
- No pesticides, herbicides or PCBs were detected in soil at a concentration exceeding the RRUSCOs or RMLs.
- There were no visual or olfactory indications of contamination observed in the groundwater samples collected. The results of the analyses of the field filtered groundwater samples revealed that barium was detected at a concentration of 1,120 micrograms per liter (µg/L) and 1,040 µg/L at RHGT-08 and RHGT-13, respectively. Although these concentrations are above the Class GA Value of 1,000 µg/L for barium they are well below the respective NYSDEC Groundwater Effluent Limitation of 2,000 µg/L (Table 5 of NYSDEC TOGS 1.1.1). Silver was detected at a concentration of 66.8 µg/L in dissolved groundwater at one location (RHGT-02) above the Class GA Value (50 µg/L) but well below the respective NYSDEC Groundwater Effluent Limitation (100 µg/L). Although detected at elevated concentrations within soil, arsenic, copper, lead, and mercury were not detected in the field filtered groundwater samples. Iron, magnesium, manganese and sodium were detected in dissolved groundwater above Class GA Values; however, they are naturally occurring metals and their elevated presence in the Site groundwater may be a result of saltwater intrusion from the nearby basin and harbor. A contributing source of manganese, iron and arsenic in groundwater could be associated with anaerobic conditions generated by decomposition of organic deposits commonly found along low-lying marshland in addition to historic fill. Notably, elevated levels of lead were not detected in the filtered groundwater samples.
- There were no SVOCs, pesticides, herbicides or PCBs detected at a concentration exceeding the Class GA Values in the groundwater samples.
- The measurable parameters of groundwater infiltration capability and correlated conclusions and the applicability of green infrastructure infiltration practices at each location can be found in Appendix C of the Report.

Geotechnical Report – December 8, 2016

Oweis, under subcontract to TRC, completed a geotechnical investigation in March 2016 to evaluate subsurface conditions and provide recommendations for the proposed reconstruction of the Site. The geotechnical investigation was performed along with TRC's infiltration and environmental investigation described above. The results of the geotechnical investigation were presented in the "Geotechnical Report – Red Hook Ball Fields 5 to 8, Borough of Brooklyn, New York" dated December 8, 2015.

Results of the Geotechnical Investigation indicate soils encountered at the Site generally consist of uncontrolled fill material to approximately 8.5 to 19 feet below grade (Stratum 1), black and dark gray peat with wood pieces at approximately 11.5 to 13.5 feet bgs (Stratum 2), soft to very soft dark gray/gray organic clay or silty clay at approximately 13.5 ft to 20+ feet bgs (Stratum 3), and brown to gray poorly graded sand at approximately 22 feet (Stratum 4).

Based on the results of the investigation, Oweis recommended a large portion of the fill be removed or replaced, if possible, or maintenance be provided over the life of the proposed synthetic turf field including removing and re-setting portions of the field section and minimizing settling of the fill through proper subgrade preparation consisting of surface stripping the topsoil, and compacting the exposed subgrade. Oweis also recommended that the owner accept an expected settlement of fill from the planned construction of a chain link fence around the perimeter, potential for future maintenance if needed, and seismic vulnerability but attempt to reduce the impact of the settlement. Prior to constructing the proposed synthetic turf section, Oweis recommended the subgrade conditions and compaction effort should be observed by a geotechnical engineer to verify that subsurface conditions are similar to those encountered during the field investigation. Unless otherwise specified for drainage purposes, backfill materials should be granular soil free of debris and should contain less than 20% fines passing the No. 200 sieve. Boring logs can be found in Appendix A of the Geotechnical Investigation Report.

Supplemental Surface Soil Sampling Report – March 3, 2017

On behalf of the DPR, TRC conducted additional soil sampling in February 2017 to characterize surface soil (0 to 6 inches bgs) at Ball Fields 5 through 8 for total lead and leachable lead and assess the hazardous waste characteristics of the soil planned for off-Site disposal. The results of the supplemental sampling event are presented in the “Supplemental Surface Soil Sampling Report” prepared by TRC dated March 3, 2017. To provide spatial coverage, the Site was divided into 11 grid boxes on the outfields (Grid Boxes 4, 5, 7 and 8), infields (Grid Boxes 2, 3, 6, and 9) and exterior planting strips (Grid Boxes 1, 10, and 11) of Ball Fields 5 through 8; see Figure 2 from the supplemental soil investigation report provided in Appendix C of the SMP. One 5-point composite soil sample was collected from each grid box from 0 to 6 inches bgs and submitted for laboratory analysis of total lead by EPA Method 6010C and Toxicity Characteristic Leaching Procedure (TCLP) Lead by EPA Methods 1311 and 6010C.

Soil sample results for total lead were compared to NYSDEC RRUSCOs and EPA RMLs for Residential Soil, and results for TCLP lead were compared to EPA Maximum Concentration of Contaminants for the Toxicity Characteristic for hazardous waste in Table 1 of 40 CFR Section 261.24 and 6 NYCRR Section 371.3(e).

Analytical results indicate total lead was detected in all 11 surface soil samples at concentrations ranging from 152 to 2,580 milligrams per kilogram (mg/kg). Eight (8) of the 11 surface soil samples exceeded the RRUSCO and RML of 400 mg/kg for total lead at concentrations ranging from 563 to 2,580 mg/kg; total lead was only detected in one of the infield clay samples (Ball Field 6) above the RRUSCO and RML. The highest concentrations of total lead levels were detected in the surface soil in the outfield areas and planting strip along Lorraine Street. None of the TCLP lead soil sample results exceeded the EPA hazardous waste toxicity characteristic criterion for lead (5 milligrams per liter [mg/L]).

Based on the results of the sampling event, TRC concluded the subsurface soil at the Site would likely be characterized as a non-hazardous regulated material for off-site disposal.

Underground Storage Tank Closure Report – April 26, 2020

One (1) abandoned 3,000-gallon petroleum underground storage tank (UST) (PBS ID No. 2-613138) was discovered during construction activities performed at the Site as part of the April 2018 Design and Implementation Plan (D&IP) for Red Hook Ball Fields 5 through 8. The UST was closed and removed by AARCO Environmental Services Corporation (AARCO) on February 27, 2020. A "UST Closure Report" prepared by AARCO dated April 26, 2020, documents the permanent closure of the UST, which included collection of post-excavation soil verification samples in the vicinity of the former tank immediately following tank removal.

Post-excavation soil sampling analytical results revealed no volatile organic compounds (VOCs) and low concentrations of SVOCs were detected in soil samples collected. The detected SVOC concentrations were consistent with those documented by prior investigations for historic fill across the Site. Elevated SVOC concentrations were detected in historic fill containing ash and cinders, which were also identified in soil excavated during UST removal. Based on the results of the UST Closure Report, TRC concluded potential human health exposure concerns associated with historic site fill, including that at the former UST location, would be addressed with the planned construction of a clean cover remedy for the entire Site.

1.2.2 Ball Field 9 Investigation

At least a portion, if not all, of Ball Field 9 was formerly land under water. The Sanborn fire insurance maps indicate that the Henry Street basin extended to Bay Street prior to 1886 and was present over the eastern portion of the current Ball Field 9 area until at least 1924. The Ball Field 9 Site area was filled in stages between 1886 and 1940. It was occupied as a shanty town known as a Hooverville in at least the early 1930s and was otherwise vacant land prior to use as a public park.

Ball Field 9 is adjacent to and south of the Ball Fields 5 through 8 block which included the Columbia facility.

Final Soil Sampling Trip Report – April 9, 2015

As part of the Removal Assessment of the Site, the EPA and its contractor, Weston, performed surface soil sampling to characterize the soil from zero to two feet bgs on Ball Field 9 and associated planting strips along Bay Street. A total of sixty (60) composite soil samples, plus quality assurance/quality control (QA/QC) samples, were collected and submitted for laboratory analysis of TAL metals and tin.

Arsenic and lead were detected at maximum concentrations of 290 mg/kg and 17,000 mg/kg respectively, exceeding the EPA RMLs for Residential Soil (Hazard Quotient 1 [HQ1]) and NYSDEC RRUSCOs in samples collected from Ball Field 9 and/or Ball Field 9 Planting Strips at depths greater than six inches bgs. Antimony and iron were detected at maximum concentrations of 230 mg/kg and 100,000 mg/kg respectively, exceeding the EPA RMLs for Residential Soil (HQ1) in samples collected from Ball Field 9 at depths greater than six inches bgs. In addition,

barium, cadmium, copper, and zinc were frequently detected at concentrations below the EPA RML but exceeding the NYSDEC RRUSCO.

Red Hook Park Superfund Soil Sampling Field Reports – July 30, 2015

Soil sampling was conducted by the EPA and Weston at the Columbia site. The DPR report titled "Red Hook Park Superfund Soil Sampling 2014-2015 Field Reports and Contaminant Results" dated July 30, 2015 (Soil Sampling Report) was prepared to summarize the results of soil sampling. The sampling included the Red Hook East Houses, a tree lawn along Lorraine Street, Ball Fields 5 through 9, Soccer Fields 1, 2, and 6, and limited areas of the Bay Street Planting Strips, Soccer Field 3 and west of Red Hook Pool, and was completed in October 2014, March 2015, and April 2015; the March 2015 sampling was discussed above. In general, lead was detected above EPA RML and NYSDEC RRUSCO in soil samples collected from 0.5 to 2 feet bgs in the majority of the sample locations on Ball Field 9. Samples collected from Ball Fields 5 through 8 generally contained concentrations of multiple SVOCs and Metals.

Limited Geotechnical, Soil, and Groundwater Sampling Report – March 6, 2017

The limited geotechnical testing and soil and groundwater sampling field activities were performed in December 2016 by TRC and its subcontractor, Land, Air, Water Environmental, Services, Inc. (LAWES). Additionally, Oweis, under subcontract to TRC, performed a geotechnical investigation of the Site concurrent to TRC performing soil and groundwater sampling and infiltration testing.

As part of the investigation activities, two soil boring pairs were completed at four locations designated as RHBF9-01, RHBF9-02, RHBF9-03, and RHBF9-04, for a total of eight (8) borings, see Figure 6 of SMP. Relative density testing, soil and groundwater sampling, and geotechnical investigation activities were performed at the first. Permeability testing was performed at the second boring, which was a minimum of 25 feet from the corresponding coupled borehole at each of the four locations.

A total of 13 soil samples, including one blind duplicate, were collected in accordance with the Quality Assurance Project Plan (QAPP) and submitted for laboratory chemical analysis of SVOCs, pesticides, silvex (a herbicide), TCL PCBs, and TAL metals plus mercury, hexavalent chromium, tin and total cyanide.

Groundwater sampling was conducted in accordance with EPA low-flow sampling procedures and the QAPP. The completed groundwater purge and sampling logs are presented in Appendix B of the SMP. A total of five groundwater samples, including one blind duplicate, were collected and submitted for laboratory analysis for the following parameters: SVOCs, pesticides, herbicides, TCL PCBs, TAL metals (total and dissolved) plus mercury, hexavalent chromium, tin, and total cyanide.

No elevated PID readings, visual indicators, or odors were identified in any of the borings. The types and concentrations of SVOCs detected in the soil and groundwater samples are consistent with the observed presence of historic fill at the Site. The concentrations of the SVOCs consisting of PAHs detected in soil samples above the RRUSCOs and RMLs were generally attributed to the characteristics of historic fill material. SVOCs, including PAHs, were detected in the

groundwater samples. SVOC concentrations exceeding Class GA Values detected in groundwater were attributed to the characteristics of fill material in Site soil.

Metals (arsenic, iron, magnesium, manganese, and sodium) were detected in groundwater above the Class GA Values at maximum concentrations of 174 µg/L (arsenic), 31,300 µg/L (iron), 64,700 µg/L (magnesium), 1,170 µg/L (manganese), and 365,000 µg/L (sodium) respectively. Antimony, arsenic, cobalt, iron, and lead were detected in one or more soil samples above the RMLs with maximum concentrations of 37.4 mg/kg (antimony), 41.8 mg/kg (arsenic), 25.4 mg/kg (cobalt), 116,000 mg/kg (iron), and 4,230 mg/kg (lead) respectively. The type and concentrations of metals detected in soil samples above the RRUSCOs and RMLs were generally attributed to the characteristics of historic fill material. No pesticides, herbicides, or PCBs were detected in the soil samples at a concentration exceeding the RRUSCOs or RMLs.

There were no visual or olfactory indications of contamination observed in the groundwater samples collected. Arsenic was detected in one dissolved groundwater sample above Class GA Values. Iron, magnesium, manganese, and sodium were detected in dissolved groundwater above Class GA Values; however, they are naturally occurring metals and their elevated presence in the Site groundwater were attributed to saltwater intrusion from the nearby basin and harbor. A proposed potential contributing source of manganese, iron, and arsenic in groundwater was associated with anaerobic conditions generated by decomposition of organic deposits commonly found along low-lying marshland in addition to historic fill. Notably, elevated levels of lead were not detected in the filtered groundwater samples.

There were no pesticides, herbicides, or PCBs detected at a concentration exceeding the Class GA Values in the groundwater samples.

Limited geotechnical tests were performed in accordance with the New York City Department of Environmental Protection Office of Green Infrastructure Limited Geotechnical Investigation Procedures for On-Site Green Infrastructure Practices (NYCDEP Procedure) dated November 2016.

Results of the Geotechnical Investigation indicated soils encountered at the Site generally consisted of uncontrolled historic fill material from ground surface to 16 feet bgs overlying silty sand and clay observed from 16 to 32 feet bgs (maximum boring depth). The observed historic fill material was consistent with previous site investigations.

The measurable parameters of groundwater infiltration capability, soil boring logs, and groundwater purge forms can be found in Appendix C of the SMP.

1.2.3 Summary Remedial Actions

The D&IP was prepared as a component of the Remedial Action Work Plan to describe the design details and planned logistics for the removal actions for Red Hook Ball Fields 5 through 9. The D&IP is included in Appendix K of the SMP.

The scope of the removal action included the following key components for the Site:

1. Removal of approximately 6-inches of topsoil and infield clay layer and off-site disposal;

2. Installation of an approximately 1-foot-thick synthetic turf cover system (turf/infill, polyethylene drainage/shock pad, porous aggregate, drainage panel, geogrid, clean imported fill) underlain by a demarcation layer;
3. Installation of a minimum 1-foot-thick layer or more of clean soil cover underlain by a demarcation layer in the grassed lawn/planting areas;
4. Installation of up to a 1-foot-thick layer of clean cover, paving, bonded aggregate, permeable pavers, mulch, and ground cover where existing mature trees will be maintained (and provided with fencing) or new paving or pavers were installed, underlain by a demarcation layer;
5. Implementation of a long-term Site inspection, maintenance, and monitoring program, the requirements of which are detailed in the SMP; and,
6. Establishment of institutional controls including deed restrictions for the Site.

Site construction for implementation of Site remedial actions, as described above, was conducted at the Site from March 2019 through November 2022. A Construction Completion Report was prepared to summarize the completed remedial activities at Ball Fields 5 through 8 and Ball Field 9. The Construction Completion Report is presented in Appendix L of the SMP. As-built drawings for the cover system for Ball Fields 5-8 and Ball Field 9 are presented in **Appendix C**.

After completed remedial actions, Ball Fields 5-8 opened to the public as a public park in December 2021 and Ball Field 9 opened to the public as a public park in November 2022. In January 2024, the SMP for the Site was prepared by TRC to manage remaining contamination, discussed further in Section 1.3, at the Site. In February 2024, a Deed Restriction for the Site was submitted to the NYC Finance department in favor of the NYSDEC.

1.3 Remaining Contamination

1.3.1 Soil

Ball Fields 5-8

The results of analyses of soil samples were compared to the NYSDEC RRUSCOs. The Restricted Residential Use category applies to sites to be used for active recreational uses, including public uses with a reasonable potential for soil contact.

The results of analyses of the soil samples were also compared to the EPA Removal Management Levels for Residential Soil (HQ1), November 2015 (RMLs). The RMLs are used to support the decision for EPA to undertake a removal action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The RMLs are risk-based concentrations derived from standardized equations combining exposure assumptions with toxicity data from the Superfund program's hierarchy. Although they are not necessarily protective for long-term exposures, exceedance of an RML does not imply that adverse health effects will occur. The RMLs contained in the RML table are generic. In other words, the RMLs are calculated without site-specific information (e.g., the time-frame over which individuals may potentially be exposed to site contaminants).

The results of the Infiltration, Soil, and Groundwater Testing Report dated June 9, 2016 indicate antimony, arsenic, cobalt, and lead were detected at concentrations exceeding the EPA RMLs and NYSDEC RRUSCOs (if a criteria exists) in soil samples collected from 0 to 2 feet bgs in the majority of sample locations during the investigation conducted in 2016. In addition, barium, cadmium, and mercury were detected at concentrations below the EPA RMLs but exceeding the NYSDEC RRUSCOs in a majority of sample locations. The type and concentrations of metals detected in soil samples above the RRUSCOs and RMLs may generally be attributed to the characteristics of historic fill material potentially containing one or more of the following: metal plating or smelting waste, ash, cinders, coal, slag, paint, and/or herbicides.

The SVOC benzo(a)pyrene was detected at concentrations exceeding the EPA RML and NYSDEC RRUSCO in two soil samples selected from 2 to 4 feet bgs at the Site. Five additional SVOCs, all PAHs, were detected in soil samples at concentrations above the RRUSCOs. The concentrations of SVOCs may generally be attributed to the characteristics of historic fill material potentially containing one or more of the following: ash, cinders, coal, slag, heavy oil, and/or asphalt.

Pesticides, herbicides, and PCBs were not detected in soil at concentrations exceeding the RRUSCOs or RMLs.

Post-excavation soil samples collected in accordance with the UST Closure Report dated April 26, 2020, revealed elevated SVOC concentrations in Site soil consistent with those documented by prior investigations for historic fill across the Site. Tables 1-4 of the Infiltration, Soil, and Groundwater Testing Report (located in Appendix C of the SMP) summarize the results of all soil samples collected that exceed the Unrestricted Use, Restricted Residential Use, and Protection of Groundwater Use SCOs at the Site after completion of remedial action. The locations of the remaining soil sample exceedances are provided on Figure 3 of the SMP.

Ball Field 9

The results of analyses of the soil samples from Ball Field 9 were compared to the NYSDEC RRUSCOs and the EPA Removal Management Levels for Residential Soil (HQ1), June 2017 (RMLs).

Arsenic and lead were detected in soil samples above the RMLs and RRUSCOs and antimony, cobalt, and iron were detected in soil samples above RMLs in soil samples collected from 0.5 to 2 feet bgs in the majority of the sample locations. In addition, barium, cadmium, copper, manganese, mercury and zinc were detected at concentrations below the EPA RMLs but exceeding the NYSDEC RRUSCOs. Generally, the concentrations of these metals decreased with soil depth. The type and concentrations of metals detected in soil samples above the RRUSCOs and RMLs may generally be attributed to the characteristics of historic fill material potentially containing one or more of the following: metal plating or smelting waste, ash, cinders, coal, slag, paint, and/or herbicides.

Several SVOCs were detected at concentrations exceeding the EPA RMLs and NYSDEC RRUSCOs in one or more soil samples selected from 2 to 7 feet bgs at the Site. Two additional SVOCs, both PAHs, were detected in soil samples at concentrations above the RRUSCOs. The

concentrations of SVOCs may generally be attributed to the characteristics of historic fill material potentially containing one or more of the following: ash, cinders, coal, slag, heavy oil, and/or asphalt.

There were no pesticides, herbicides or PCBs detected in soil at concentrations exceeding the RMLs or RRUSCOs.

Tables 1 through 4 of the Infiltration, Soil, and Groundwater Testing Report for Ball Field 9 (located in Appendix C of the SMP) summarize the results of all soil samples collected that exceed the RRUSCOs and the EPA RMLs for Residential Soil. The locations of the remaining soil sample exceedances are provided on Figure 3 of the SMP.

1.3.2 Groundwater

The results of the analyses of groundwater samples were compared to Class GA Values in the NYSDEC TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values (NYSDEC, 1998).

Ball Fields 5-8

Barium was detected in two filtered groundwater samples and silver was detected in one filtered groundwater sample at concentrations slightly above the Class GA Values. Iron, magnesium, manganese, and sodium were detected in filtered groundwater above Class GA Values; however, they are naturally occurring metals and the concentrations detected in the Site groundwater may be a result of saltwater intrusion from the nearby basin and harbor. Tables 5-8 of the Infiltration, Soil, and Groundwater Testing Report for Ball Fields 5 through 8 provided in Appendix C of the SMP summarize the results of all samples of groundwater that exceed the Class GA Values. The groundwater sample locations are show on Figure 6A of the SMP.

Ball Field 9

Arsenic was detected at a concentration above the Class GA Value in one filtered groundwater sample. Although detected at elevated concentrations in soil, antimony, barium, cadmium, copper, lead, and mercury were not detected above the Class GA Values in the field filtered groundwater samples. Iron, magnesium, manganese and sodium were detected in field filtered groundwater above Class GA Values; however, they are naturally occurring metals and the concentrations detected in the Site groundwater may be a result of saltwater intrusion from the nearby basin and harbor.

There were no pesticides, herbicides or PCBs detected at concentrations exceeding the Class GA Values in the groundwater samples collected. SVOCs, including PAHs, were detected in the groundwater samples. SVOC concentrations exceeding Class GA Values detected in groundwater are attributed to the characteristics of historic fill material in Site soil.

Tables 5-8 of the Infiltration, Soil, and Groundwater Testing Report for Ball Field 9 summarize the results of all samples of groundwater that exceed the Class GA Values. The groundwater sample locations are show on Figure 6 of the SMP.

1.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as based on the requirements in the Order on Consent and the D&IP are as follows:

Groundwater

RAOs for Public Health Protection:

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.

RAOs for Environmental Protection:

- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection:

- Prevet ingestion/direct contact with contaminated soil.

RAOs for Environmental Health Protection:

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

2.0 Institutional and Engineering Control Plan Compliance

2.1 Institutional Controls

A series of Institutional Controls (ICs) is required by the Order on Consent and Design and Implementation Plan to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and (3) limit the use and development of the Site to restricted residential uses only.

Adherence to these ICs on the Site is required by the Deed Restriction and implemented under the April 2024 SMP. ICs identified in the Deed Restrictions may not be discontinued without an amendment to or extinguishment of the Deed Restrictions.

The IC boundaries are shown on **Figures 3 and 4**. The ICs specifically include the following:

- The property may be used for: restricted residential use;
- All Engineering Controls (ECs) must be operated and maintained as specified in the SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the New York City Department of Health and Mental Hygiene to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the NYSDEC.
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any physical component of the remedy shall be performed as defined in the SMP;
- Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Deed Restrictions; and
- Vegetable gardens and farming on the Site are prohibited.

2.2 Engineering Controls

2.2.1 Cover System

Exposure to remaining contamination at the Site is prevented by a cover system placed over the Site. This cover system is comprised of a minimum of a 12-inch-thick synthetic turf, clean cover, paving, bonded aggregated and permeable pavers, mulch, ground cover and/or fencing underlain

by a physical demarcation layer consisting of orange snow fencing or equivalent material. **Figures 3 and 4** present the location of the cover system and applicable demarcation layers. As-built drawings for the cover system for Ball Fields 5-8 and Ball Field 9 are presented in **Appendix C**. The as-built drawings include as-built environmental easement drawings, demarcation layer survey drawings, final condition as-built survey drawings, and remedial as-built drawings and cross sections for Ball Fields 5 through 8 and Ball Field 9. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of the SMP and discussed in Section 3.0 of this report.

The Excavation Work Plan (EWP) provided in Appendix C of the SMP outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the site; a generic HASP and CAMP are provided in Appendix G of the SMP.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10.

The remedial party will also conduct any needed site restoration activities, such as asphalt repair/patching. In addition, the remedial party will conduct any necessary restoration of vegetation coverage, trees and wetlands will comply with applicable NYSDEC and United States Army Corps of Engineers regulations and guidance. Also, the remedial party will ensure that no ongoing erosion is occurring on the Site.

2.2.2.1 Cover System

The cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity or at a modified frequency and duration as approved by NYSDEC.

2.3 Institutional and Engineering Controls Certification

1. Some or all of the Site has not been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period.
2. There has been no change in use at the Site during this reporting period.
3. No Federal, State, and/or Local permits have been issued for or at the property during this reporting period.
4. The Site is not currently undergoing development.
5. The Site use is consistent with the listed use as Recreational Property.
6. All IC’s are in place and functioning as designed.

3.0 Site Remedy Compliance

The SMP was prepared to manage remaining contamination and ensure that the remedy remains effective by restricting Site use, Site development and soil movement on the property. The table below shows the SMP-specified monitoring and sampling activities for the Site and the dates those activities were completed:

Summary of SMPs Site Monitoring and Sampling Plan				
Site Management Activity	**Frequency**	**Location**	**Analytical Method**	**Completion Date(s)**
Site Inspection	Annually (including after inclement weather)	Block 581 Lot 1 (Ball Fields 5-8) and Block 614 Lot 300 (Ball Field 9)	Not Applicable	10/31/2024
Soil Sampling	As needed	Imported Borrow Soils	EPA Method 8260 for VOCs, EPA Method 8270 for SVOCs, EPA Method 8081/8082 for Pesticides/PCBs, EPA Method 6010/7470/7471 for Metals, and EPA Method 537.1 for PFAS	Not Applicable
PRR	Annually	Not Applicable	Not Applicable	August 2025

Notes:
PCBs – Polychlorinated biphenyls
SVOCs – Semivolatile organic compounds
EPA – United States Environmental Protection Agency
VOCs – Volatile organic compounds

3.1 Site Inspection

TRC conducted a Site inspection on October 31, 2024, in accordance with the SMP. The Site inspection was conducted to document compliance with all ICs and evaluate the condition and continued effectiveness of the Site cover system.

Completion of an inspection form, presented in Appendix I of the SMP, is required by the SMP for each site inspection. The completed site inspection form for this reporting period is included as **Appendix D**.

A summary of the Site inspection is presented below:

Summary of Site Activities and Site Monitoring and Sampling February 16, 2024 to June 16, 2025		
Site Management Activity	**Summary of Results**	**Maintenance/Corrective Measure**
Site Inspection	The annual Site inspection was performed on October 31, 2024. The athletic fields, tree pits, and paved areas of the Site cover system were observed to be in good condition. It was observed that in the soil cover areas of the Site, additional mulch and grasses was needed at the planting beds and bioswales surrounding Ball Fields 5-8. No disturbances of the Site cover or exposure of the demarcation layer were reported.	Additional mulch and grass needed at planting beds and bioswales along Henry Street, Bay Street, Hicks Street, and Lorraine Street surrounding Ball Fields 5-8.

4.0 Cost Summary

The total estimated cost of utilities and TRC's management activities for this reporting period (February 16, 2024 through June 16, 2025) is approximately $15,000. Site management activities during the reporting period included one Site inspection, and preparation of the PRR. The total includes engineering costs, as well as expenses associated with the project. It should be noted that the total does not include costs incurred by DPR for site management activities performed by others, or project support. A summary of TRC's 2024 site management costs is presented below:

Summary of TRC's Site Management Costs
February 16, 2024 through June 16, 2025

Cost Item	Amount Expended (February 16, 2024 through June 16, 2025)	Percent of Total Cost
Engineering Support		
TRC	$14,500	96.7%
Expenses		
TRC	$500	3.3%
Total Cost	**$15,000**	----

The following provides a review of each cost item:

- Engineering support includes labor costs associated with project management (e.g., monthly invoicing, project scheduling and coordination, etc.), Site inspections, and reporting (i.e., PRR).
- Expense costs include travel and supplies in support of the Site inspection.

5.0 Conclusions and Recommendations

5.1 Conclusions

- The overall integrity of the Site cover system is acceptable. Insufficient cover of mulch and grass were noted in the planting beds and bioswales along Henry Street, Bay Street, Hicks Street, and Lorraine Street, surrounding Ball Fields 5-8, see figure in **Appendix D**.
- No disturbance to the Site cover system was noted during the reporting period. The remedy continued to be protective of human health and the environment this reporting period.

5.2 Recommendations

- Annual Site inspections should continue to verify the ICs and ECs are in-place and effective and to observe any future development of the Site. The Site inspection form should be completed during inspection.
- Sufficient mulch and vegetation should be added to the Site planting beds and bioswales noted during the October 2024 site inspection. In accordance with the as-built drawings provided in **Appendix C** of this report, the mulch layer atop the planting beds of the Site should be 3 inches thick. In addition to mulch, vegetation is required within the bioswale areas.

6.0 Certification of Engineering and Institutional Controls

For each institutional or engineering control identified for the Site, I certify that all the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- 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 the NYSDEC;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- Use of the site is compliant with the deed restrictions;
- The engineering control systems are performing as designed and are effective;
- 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
- The information presented in this report is accurate and complete.

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. I, Kirsten Myers, of TRC Engineers, Inc., am certifying as Owner's/Remedial Party's Designated Site Representative for the site.

Signature

089236-1
NYS Professional Engineer No.

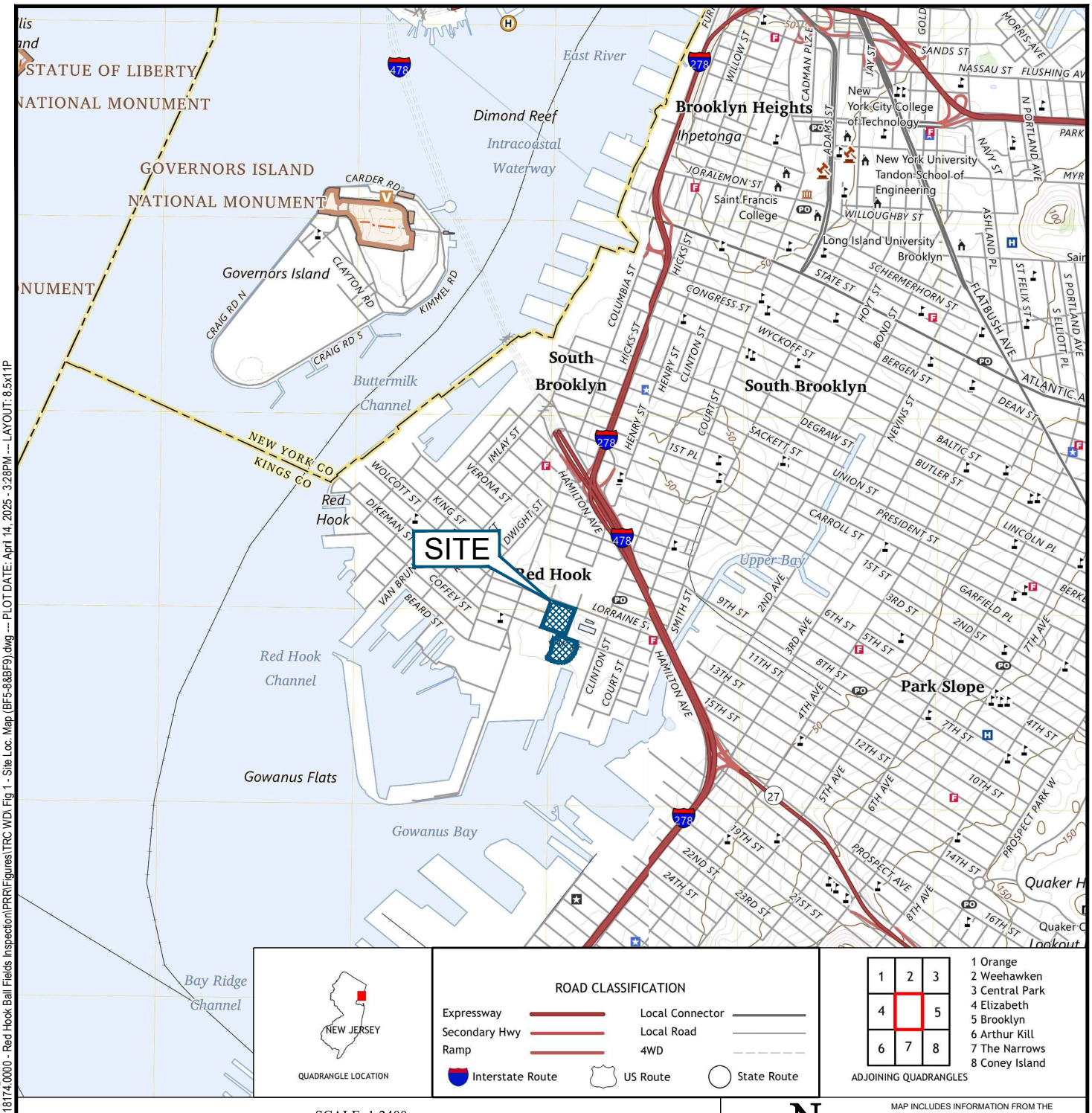
08/21/2025
Date

7.0 Future Site Activities

Based on the recommendations in Section 5, the following site management activities will be completed during the next PRR reporting period (June 2025 through May 2026):

- Site Inspections – Annual (next scheduled: Q4 2025)
- PRR – Annual (next scheduled: Q3 2026)

Figures



NEW JERSEY

QUADRANGLE LOCATION

ROAD CLASSIFICATION

Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD

Interstate Route | US Route | State Route

1	2	3
4		5
6	7	8

1 Orange
2 Weehawken
3 Central Park
4 Elizabeth
5 Brooklyn
6 Arthur Kill
7 The Narrows
8 Coney Island

ADJOINING QUADRANGLES

SCALE: 1:2400

1 0.5 0 KILOMETERS 1 2

1000 500 0 METERS 1000 2000

1 0.5 0 1

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

FEET

N

TRUE NORTH
NY83-LIF

MAP INCLUDES INFORMATION FROM THE FOLLOWING MAP SHEET(S):
TP, JERSEY CITY, NJ-NY, 7.5 MINUTE, DATED 2023,
E, BROOKLYN, NY, 7.5 MINUTE, DATED 2023.

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).

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PROJECT:
CITY OF NEW YORK PARKS AND RECREATION - CAPITAL PROJECTS DIVISION
PERIODIC REVIEW REPORT
RED HOOK PARK - BALL FIELDS 5, 6, 7, 8, & 9
BOROUGH OF BROOKLYN, NY

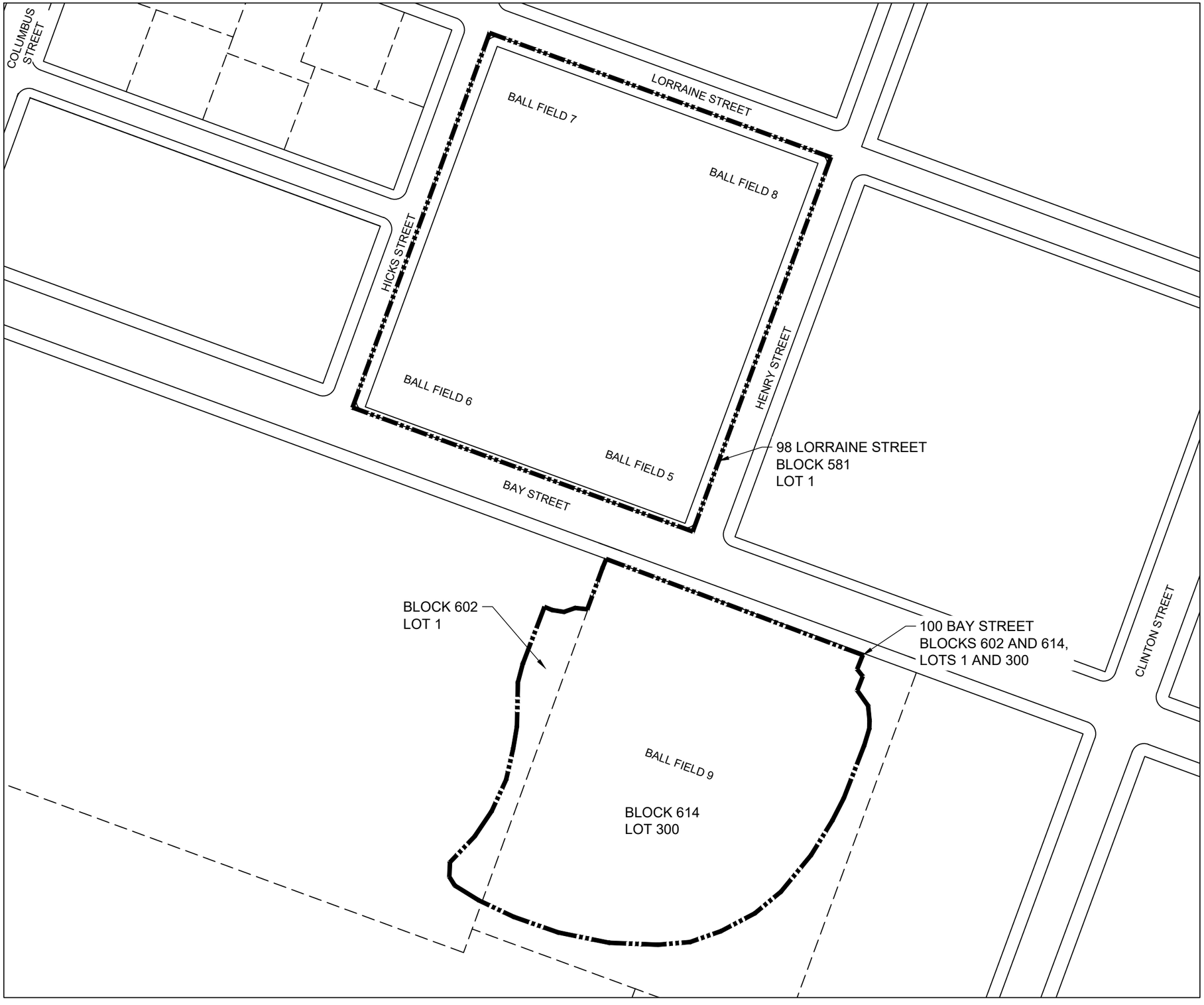
TITLE:

SITE LOCATION MAP

DRAWN BY:	H. DELGADO
CHECKED BY:	M. WELLS
APPROVED BY:	K. MYERS
DATE:	APRIL 2025
PROJ. NO.:	618174.0000.0000
FILE:	Fig 1 - Site Loc. Map (BF5-8&BF9).dwg

FIGURE 1

8.5x11 -- ATTACHED XREFS: -- ATTACHED IMAGES: NJ Jersey City 20230811, TM: NY Brooklyn 20230531, TM:
DRAWING NAME: \\nyc-fp1\Projects\NYC Parks\Contract 2021\62009916\618174.0000 - Red Hook Ball Fields Inspection\PRR\Figures\TRC WD\ Fig 1 - Site Loc. Map (BF5-8&BF9).dwg -- PLOT DATE: April 14, 2025 - 3:28PM -- LAYOUT: 8.5x11P



LEGEND (SYMBOLS NOT TO SCALE):

SITE BOUNDARY

LOT BOUNDARY

N

TRUE NORTH
NYB3-LIF

0 120' 240'

SCALE: 1" = 120'
SHEET SIZE: 11" BY 17"

ASSUMED GROUNDWATER FLOW DIRECTION

PROJECT:
CITY OF NEW YORK PARKS AND RECREATION - CAPITAL PROJECTS DIVISION
PERIODIC REVIEW REPORT
RED HOOK PARK - BALL FIELDS 5, 6, 7, 8, & 9
BOROUGH OF BROOKLYN, NY

TITLE:
ORIGINAL SITE LAYOUT PLAN

DRAWN BY:	H. DELGADO	PROJ NO.:	618174.0000.0000
CHECKED BY:	M. WELLS		**FIGURE 2**
APPROVED BY:	K. MYERS		
DATE:	APRIL 2025		

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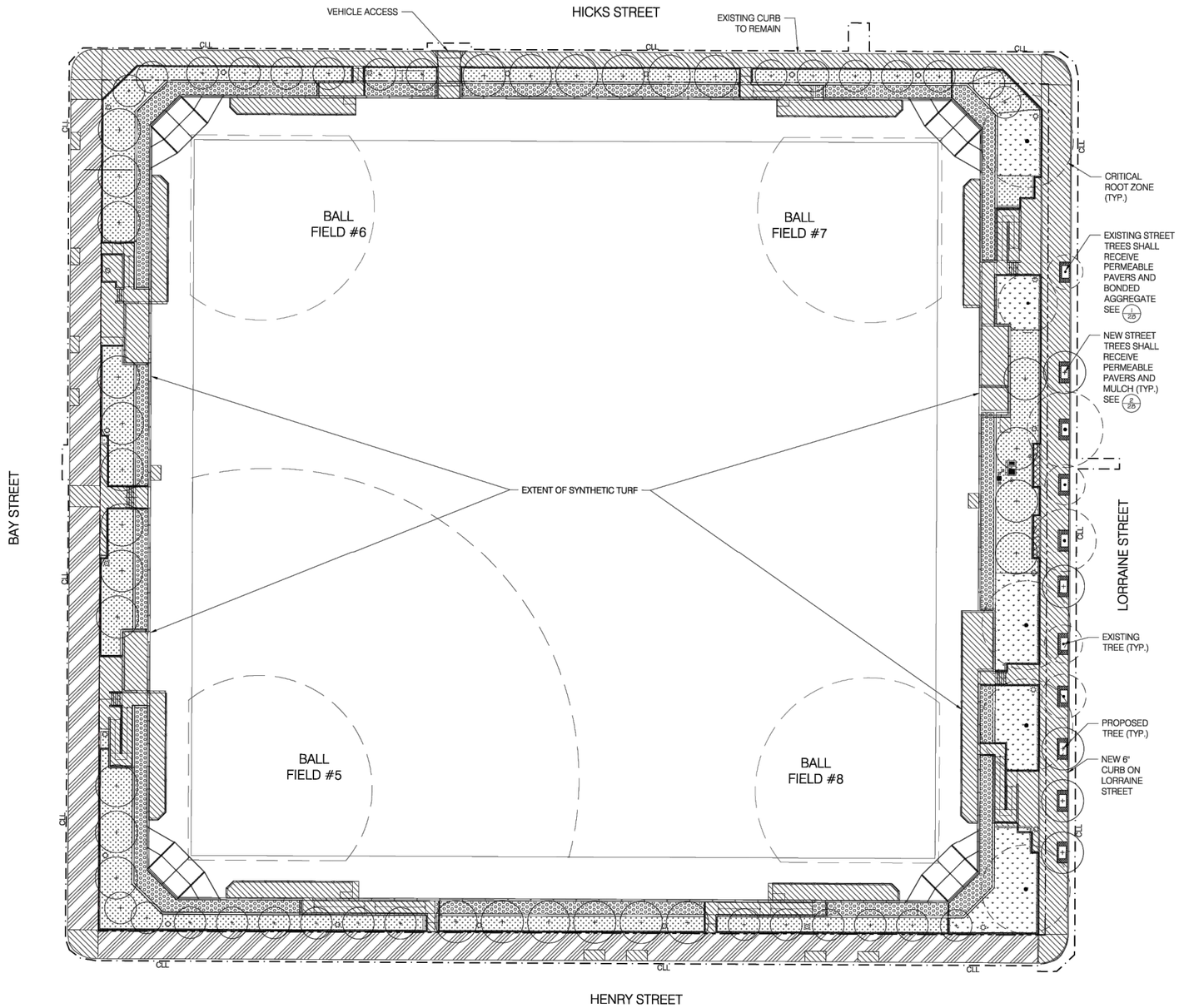
FILE NO.: Fig 2 - Original Site Layout Plan (BF5-8&BF9).dwg



LEGEND (SYMBOLS NOT TO SCALE):

SHADING/HATCHING	TYPE OF COVER	REMEDIAL COVER
	SYNTHETIC TURF	MINIMUM OF 1-FOOT THICK LAYER OF CLEAN COVER WITH DEMARCATION LAYER BELOW.
	BIOSWALE	GRASSES WITH 3-INCH THICK LAYER OF MULCH ABOVE A MINIMUM 1-FOOT THICK LAYER OF CLEAN COVER WITH DEMARCATION LAYER BELOW.
	EXISTING PAVING (TO REMAIN)	APPROXIMATELY 10-INCH THICK LAYER OF CONCRETE AND SUBBASE. REMOVE AND REPLACE WITH MINIMUM OF 10-INCH THICK LAYER OF CONCRETE AND SUBBASE WITH DEMARCATION LAYER AS BID ALTERNATE.
	NEW PAVING (SEE NOTE 5)	MINIMUM OF 10-INCH THICK LAYER OF CONCRETE AND SUBBASE WITH DEMARCATION LAYER.
	EXISTING MATURE TREES WITHIN PLANTING STRIPS	REMOVE 0-6-INCHES OF SOIL AS PER THE HAND/PNEUMATIC EXCAVATION SPECIFICATION. PLACE DEMARCATION LAYER. CLEAN TOPSOIL AND COVER WITH 3-INCH THICK LAYER OF MULCH AND GROUND COVER. 4-FOOT FENCE.
	NEW TREES AND/OR PLANTINGS WITHIN PLANTING STRIPS	GROUND COVER WITH 3-INCH THICK LAYER OF MULCH ABOVE A MINIMUM 1-FOOT THICK LAYER OF CLEAN COVER WITH DEMARCATION LAYER BELOW.
	EXISTING MATURE TREE WITHIN TREE PITS	REMOVE 0-6-INCHES OF SOIL AS PER THE HAND/PNEUMATIC EXCAVATION SPECIFICATION. PLACE DEMARCATION LAYER, CLEAN TOP SOIL AND COVER WITH 2-INCH THICK LAYER OF BONDED AGGREGATE OR PERMEABLE PAVERS.
	NEW TREE WITHIN TREE PIT	REMOVE MINIMUM OF 12-INCHES OF SOIL. PLACE DEMARCATION LAYER, CLEAN TOP SOIL AND COVER WITH MULCH AND PERMEABLE PAVERS.

NEW TREE

EXISTING TREE TO REMAIN CRITICAL ROOT ZONE

DPR STANDARD DETAIL No. / DPR STANDARD DETAIL SHEET No.

CUSTOM DETAIL No. / CUSTOM DETAIL SHEET No.

CLL CONTRACT LIMIT LINE

NOTES:

1. REFER TO DETAIL SHEETS FOR MORE DETAIL REGARDING REMEDIAL COVER SYSTEM.
2. UTILITIES NOT SHOWN.
3. DRAWING SHALL BE USED FOR REMOVAL WORK ONLY AND SHALL NOT BE USED FOR ANY OTHER PURPOSE.
4. UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION OF THIS LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.
5. EXISTING SIDEWALK PAVING ALONG BAY AND HENRY STREETS SHALL BE REMOVED AND REPLACED AS BID ALTERNATE # 1.
6. ALL REMEDIAL COVERS SHALL BE INSTALLED PER PROJECT SPECIFICATIONS AND DRAWING DETAILS AND OTHER CONTRACT DOCUMENTS.
7. CONTRACTOR SHALL ADHERE TO ALL REQUIREMENTS OF THE ENVIRONMENTAL NOTES SHEET.

SOURCE:
DRAWING SOURCED FROM SHEET NO. 10 OF 42 DRAWING NO. H201.00 TITLED "REMEDIAL PLAN" PREPARED FOR THE CITY OF NEW YORK PARKS AND RECREATION AND PREPARED BY TRC ENGINEERS, INC. DATED MAY 2, 2017.

TRUE NORTH NY83-LIF

0 60' 120'

SCALE: 1" = 60'
SHEET SIZE: 11" BY 17"

PROJECT:
CITY OF NEW YORK PARKS AND RECREATION - CAPITAL PROJECTS DIVISION
PERIODIC REVIEW REPORT
RED HOOK PARK - BALL FIELDS 5, 6, 7, 8, & 9
BOROUGH OF BROOKLYN, NY

TITLE:
BALL FIELDS 5-8 REMEDIAL PLAN

DRAWN BY:	H. DELGADO	PROJ NO.:	618714.0000.0000
CHECKED BY:	M. WELLS		
APPROVED BY:	K. MYERS		**FIGURE 3**
DATE:	APRIL 2025		

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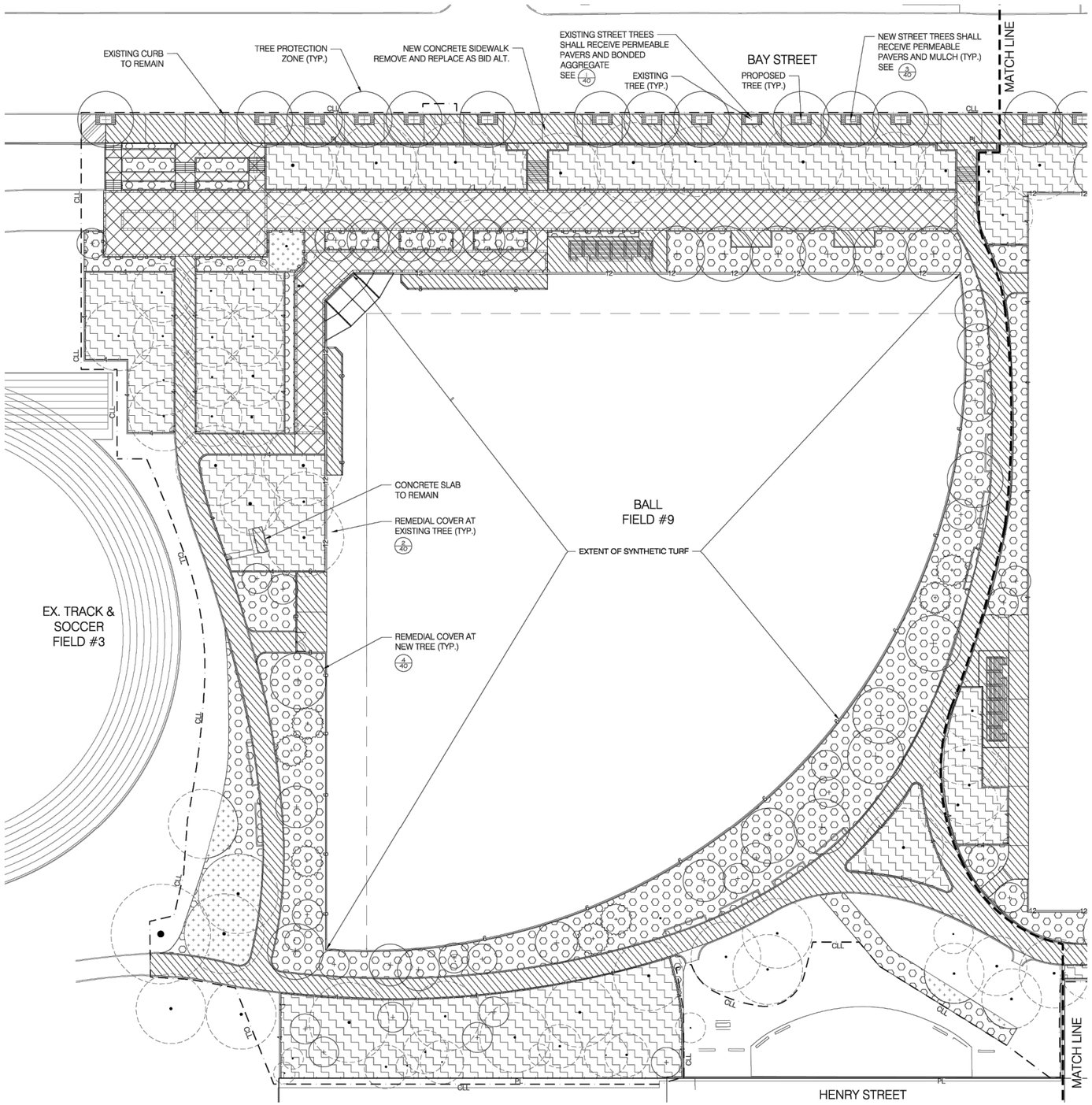
FILE NO.: Fig 3 - BF5-8 Remedial Plan (BF5-8&BF9).dwg



LEGEND (SYMBOLS NOT TO SCALE):

HATCHING	TYPE OF COVER	REMEDIAL COVER
	SYNTHETIC TURF	REMOVE TOPSOIL/CLAY SOIL. MINIMUM OF 1-FOOT THICK LAYER OF CLEAN COVER WITH UNDERLYING DEMARCATION LAYER.
	NATURAL TURF / PLANTING	REMOVE 0-6 INCHES OF SOIL, PAVERS, OR ASPHALT. MINIMUM OF 1-FOOT THICK LAYER OF CLEAN SOIL COVER WITH UNDERLYING DEMARCATION LAYER.
	EXISTING PAVING (TO REMAIN)	APPROXIMATELY 10-INCH THICK LAYER OF CONCRETE AND SUBBASE.
	NEW CONCRETE PAVERS	REMOVE 0-10 INCHES OF SOIL, PAVERS, OR ASPHALT. MINIMUM OF 10-INCH THICK LAYER OF CONCRETE PAVERS AND SUBBASE WITH UNDERLYING DEMARCATION LAYER.
	NEW ASPHALT OR CONCRETE PAVING	REMOVE 0-10 INCHES OF SOIL, PAVERS, OR ASPHALT. MINIMUM OF 10-INCH THICK LAYER OF ASPHALT OR CONCRETE AND SUBBASE WITH UNDERLYING DEMARCATION LAYER.
	EXISTING TREES (PROPOSED FENCING)	REMOVE 0-12-INCHES OF SOIL (0-6-INCHES WITHIN THE TPZ) AS PER THE HAND/PNEUMATIC EXCAVATION SPECIFICATION. PLACE DEMARCATION LAYER, 0-12-INCHES OF CLEAN TOPSOIL AND COVER WITH 3-INCH THICK LAYER OF MULCH AND GROUND COVER. 4-FOOT HIGH FENCE.
	EXISTING TREES (NO PROPOSED FENCING)	STRUCTURALLY ANCHOR TREE AND REMOVE 12-INCH THICK LAYER OF SOIL AS PER THE HAND/PNEUMATIC EXCAVATION SPECIFICATION. PLACE DEMARCATION LAYER AND 12-INCHES OF CLEAN TOPSOIL. NO FENCE.
	EXISTING TREE WITHIN TREE PITS WITH PERMEABLE PAVERS	REMOVE 0-6-INCHES OF SOIL AS PER THE HAND/PNEUMATIC EXCAVATION SPECIFICATION. PLACE DEMARCATION LAYER, CLEAN TOPSOIL AND COVER WITH 2-INCH THICK LAYER OF BONDED AGGREGATE AND PERMEABLE PAVERS.
	NEW TREE WITHIN TREE PIT	REMOVE MINIMUM OF 12-INCHES OF SOIL. PLACE DEMARCATION LAYER, CLEAN TOPSOIL AND COVER WITH MULCH AND PERMEABLE PAVERS.

- EXISTING EVERGREEN TREE TO REMAIN TREE PROTECTION ZONE
- NEW TREE TREE PROTECTION ZONE
- EXISTING TREE TO REMAIN TREE PROTECTION ZONE
- DPR STANDARD DETAIL No. / DPR STANDARD DETAIL SHEET No.
- CUSTOM DETAIL No. / CUSTOM DETAIL SHEET No.
- CLL — CONTRACT LIMIT LINE

NOTES:

1. REFER TO DETAIL SHEETS 39, 39, AND 40 FOR MORE DETAIL REGARDING REMEDIAL COVER SYSTEM.
2. UTILITIES NOT SHOWN.
3. DRAWING SHALL BE USED FOR REMEDIAL WORK ONLY AND SHALL NOT BE USED FOR ANY OTHER PURPOSE.
4. UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION OF THIS LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.
5. ALL REMEDIAL COVERS SHALL BE INSTALLED PER PROJECT SPECIFICATIONS AND DRAWING DETAILS AND OTHER CONTRACT DOCUMENTS.
6. CONTRACTOR SHALL ADHERE TO ALL REQUIREMENTS OF THE ENVIRONMENTAL NOTES SHEET #11 H001.00.

SOURCE:
DRAWING SOURCED FROM SHEET NO. 12 OF 48 DRAWING NO. H201.00 TITLED "REMEDIAL PLAN 1" PREPARED FOR THE CITY OF NEW YORK PARKS AND RECREATION AND PREPARED BY TRC ENGINEERS, INC DATED JUNE 29, 2018.

N (TRUE NORTH NY83-LIF)

0 60' 120'

SCALE: 1" = 60'
SHEET SIZE: 11" BY 17"

PROJECT:
CITY OF NEW YORK PARKS AND RECREATION - CAPITAL PROJECTS DIVISION
PERIODIC REVIEW REPORT
RED HOOK PARK - BALL FIELDS 5, 6, 7, 8, & 9
BOROUGH OF BROOKLYN, NY

TITLE:
BALL FIELD 9 REMEDIAL PLAN

DRAWN BY:	H. DELGADO	PROJ NO.:	618714.0000.0000
CHECKED BY:	M. WELLS		**FIGURE 4**
APPROVED BY:	K. MYERS		
DATE:	APRIL 2025		

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FILE NO.: Fig 4 - BF9 Remedial Plan (BF5-8&BF9).dwg

Appendix A

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. **224231**

Site Name Former Columbia Smelting

Site Address: 98 LORRAINE STREET Zip Code: 11231
City/Town: Brooklyn
County: Kings
Site Acreage: 4.170

Reporting Period: February 16, 2024 to June 16, 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?	✓ ☐	☐
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

08/21/2025
Date

SITE NO. 224231 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
	NYC Department of Parks and Recreation	
		Ground Water Use Restriction
		Ground Water Use Restriction
		Soil Management Plan
		Landuse Restriction
		Site Management Plan
		IC/EC Plan
		Soil Management Plan
		Landuse Restriction
		Site Management Plan
		IC/EC Plan

Imposition of an institutional control in the form of environmental easement for the controlled property which will:
-require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for restricted-residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- monitoring to assess the performance and effectiveness of the remedy in compliance with the Department approved Site Management Plan.

581-1	NYC Department of Parks and Recreation	
		Ground Water Use Restriction
		Site Management Plan
		Soil Management Plan
		Landuse Restriction
		IC/EC Plan

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- monitoring to assess the performance and effectiveness of the remedy in compliance with the Department approved Site Management Plan.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
	Cover System
	Cover System

A site cover will be required to allow for restricted-residential use of the site in areas where the upper one foot of exposed surface soil will exceed the restricted-residential soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

Parcel
581-1

Engineering Control

Cover System

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Box 5

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 compete.

   (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: 08/21/2025

IC CERTIFICATIONS
SITE NO. 224231

Box 6

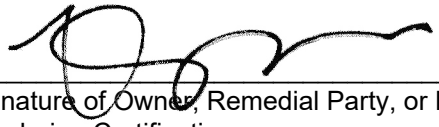
SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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 Kirsten Myers (print name) at 1407 Broadway, Suite 3301, New York, NY 10018 (print business address),

am certifying as Designated Representative for Owner (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

08/21/2025
Date

EC CERTIFICATIONS

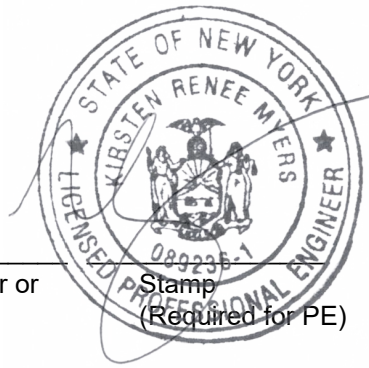
Box 7

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 Kirsten Myers (print name) at 1407 Broadway, Suite 3301, New York, NY 10018 (print business address),

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



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

Stamp (Required for PE)

08/21/2025
Date

Appendix B

SITE HISTORY

RED HOOK RECREATION AREA BALL FIELDS 5-8 AND BALL FIELD 9 SITE

(NYSDEC SITE NO. 224231)

Date	Description
Circa 1900	The Site was originally land under water and wetlands as a part of Gowanus Bay. Some time prior to 1900, Ball Fields 5-8 were filled to raise the elevation. Ball Field 9 was gradually filled in stages from 1886-1940.
Mid-1920s – Late 1930s	Ball Fields 5-8 were developed with a single-story, approximately 14,000-square-foot building from the mid to late 1920s and were occupied by smelting and refining companies, including Columbia Smelting & Refining Works, Inc. (Columbia), from later 1920s through late 1930s. During operation, Columbia dealt with metals, including antimonial lead, zinc, and copper, and alloys including brass and bronze ingots. The Site building was demolished in late 1930s. In at least the early 1930s, Ball Field 9 was occupied as a shanty town known as Hooverville.
1940	The Site is utilized as a public park.
2014 – 2015	Soil sampling was conducted throughout the Red Hook Park area both on and off the project site. As a part of the Removal Assessment for the Site, soil sampling was conducted at Ball Field 5-8 and Ball Field 9 by Weston Solutions, Inc. up to 2 feet in depth. Analytical results indicated the soil was contaminated with metals lead, arsenic, antimony, iron, barium, copper, zinc, and cadmium detected at concentrations above NYSDEC Restricted Residential Use Soil Cleanup Objectives (RRUSCOs) and United States Environmental Protection Agency (EPA) Removal Management Levels (RMLs). Semivolatile organic compounds (SVOCs) were also found in Ball Fields 5-8.
March 2016	In March 2016, at Ball Fields 5-8, an infiltration and geotechnical investigation, including soil and groundwater sampling, was conducted by TRC Engineers, Inc. (TRC) and its subcontractor, Oweis Engineering, Inc. (Oweis) to assess conditions for site-wide cover construction and provide data for design work. SVOC and metal exceedance detected in soil were attributed to the characteristics of the historic fill material observed from ground surface to 8.5 to 19 feet bgs. Metal exceedances found in groundwater were attributed to the natural elements such as saltwater intrusion from the nearby basin and harbor, and anaerobic conditions generated by decomposition of organic deposits commonly found along low-lying marshland in addition to historic fill. No pesticides, herbicides or polychlorinated biphenyls (PCBs) were detected in soil or groundwater exceeding standards, criteria, and guidance values (SGCs). No SVOCs were detected in groundwater exceeding SCGs. Based on geotechnical investigation, due to the encountered uncontrolled fill, Oweis recommended removal and replacement of fill, or maintenance of the proposed Site cover system and other construction for potential settlement.

December 2016	As a part of site investigation, limited geotechnical testing and soil and groundwater sampling were conducted at Ball Field 9 by TRC and its subcontractors Land, Air, Water Environmental Services, Inc. (LAWES). Laboratory analytical results for soil and groundwater led to the same conclusion as the investigation conducted at Ball Fields 5-8 in March 2016 (see above). Exceedances of SVOCs in soil and groundwater were attributed to the characteristics of the historic fill. Metal exceedances found in soil were attributed to the historic fill. Metal exceedances in groundwater were attributed to natural occurrences in addition to the historic fill. No pesticides, herbicides, or PCBs were detected above SCGs in soil and groundwater.
2017	In February 2017, TRC conducted additional soil sampling to characterize surface soil (0 to 6 inches bgs) at Ball Fields 5-8 for total lead and leachable lead and assess the hazardous waste characteristics of the soil planned for off-Site disposal. Total lead was detected in all 11 surface soil samples and exceeded RRUSCO and RML in 8 of the 11 samples; detected concentrations ranged from 152 to 2,580 mg/kg. None of the TCLP lead soil sample results exceeded the USEPA hazardous waste toxicity characteristic criterion for lead. Based on the results of the sampling event, TRC concluded the subsurface soil at the Site would likely be characterized as a non-hazardous regulated material for off-site disposal.
2019 – 2022	Implementation of site remedial actions including removal of existing park features, site utilizes and topsoil, installation of a new cover system across the Site, installation of new buried site utilities, and implementation of long-term institutional controls.
2020	One (1) abandoned 3,000-gallon petroleum underground storage tank (UST) (PSB ID No. 2-613138 was discovered during construction activities performed at Ball Fields 5-8 as a part of the Design and Implementation Plan. The UST was closed and removed by AARCO Environmental Services Corporation (AARCO) in February 2020. Subsurface conditions were consistent with previous investigation conducted at the Site.
2021	In December 2021, Ball Fields 5-8 became open to the public as a NYC public park.
2022	In November 2022, Ball Field 9 became open to the public as a NYC public park.
2024	A Site Management Plan (SMP) was prepared for the Site by TRC dated January 2024. In February 2024, a Deed Restriction for the Site was submitted by New York City Department of Parks and Recreation to the NYC Finance department in favor of the NYSDEC.

CUSTODIAL RECORD

RED HOOK RECREATION AREA BALL FIELDS 5-8 AND BALL FIELD 9 SITE

(NYSDEC SITE NO. 224231)

Weston Solutions, Inc., *Final Soil Sampling Trip Report – Columbia Smelting & Refining Works Site, Brooklyn, New York,* April 9, 2015.

New York City Department of Parks and Recreation, *Red Hook Park Superfund Soil Sampling 2014-2015 Field Reports and Contaminant Results*, June 30, 2015

TRC Engineers, Inc., *Infiltration, Soil, and Groundwater Testing Report, Red Hook Ball Fields 5, 6, 7, and 8, 98 Lorraine Street, Block 581, Lot 1, Brooklyn, New York*, June 9, 2016.

TRC, *Design and Implementation Plan for Removal Action, Red Hook Ball Fields 5, 6, 7, and 8, 98 Lorraine Street, Block 581, Lot 1, Brooklyn, New York*, June 24, 2016.

United States Environmental Protection Agency Region 2, *Administrative Settlement Agreement and Order on Consent For a Removal Action, Columbia Smelting and Refining Works Site, Brooklyn, New York, Index No. CERCLA-02-2016-2010*, July 7, 2016.

Oweis Engineering, Inc., *Geotechnical Report, Red Hook Ball Fields 5-8, Borough of Brooklyn, New York*, December 8, 2016.

TRC, *Supplemental Surface Soil Investigation, Red Hook Ball Fields 5, 6, 7, and 8, 98 Lorraine Street, Block 581, Lot 1, Brooklyn, New York*, March 3, 2017.

TRC, *Limited Geotechnical, Soil, and Groundwater Sampling Report, Red Hook Ball Field 9, Brooklyn, New York*, March 6, 2017.

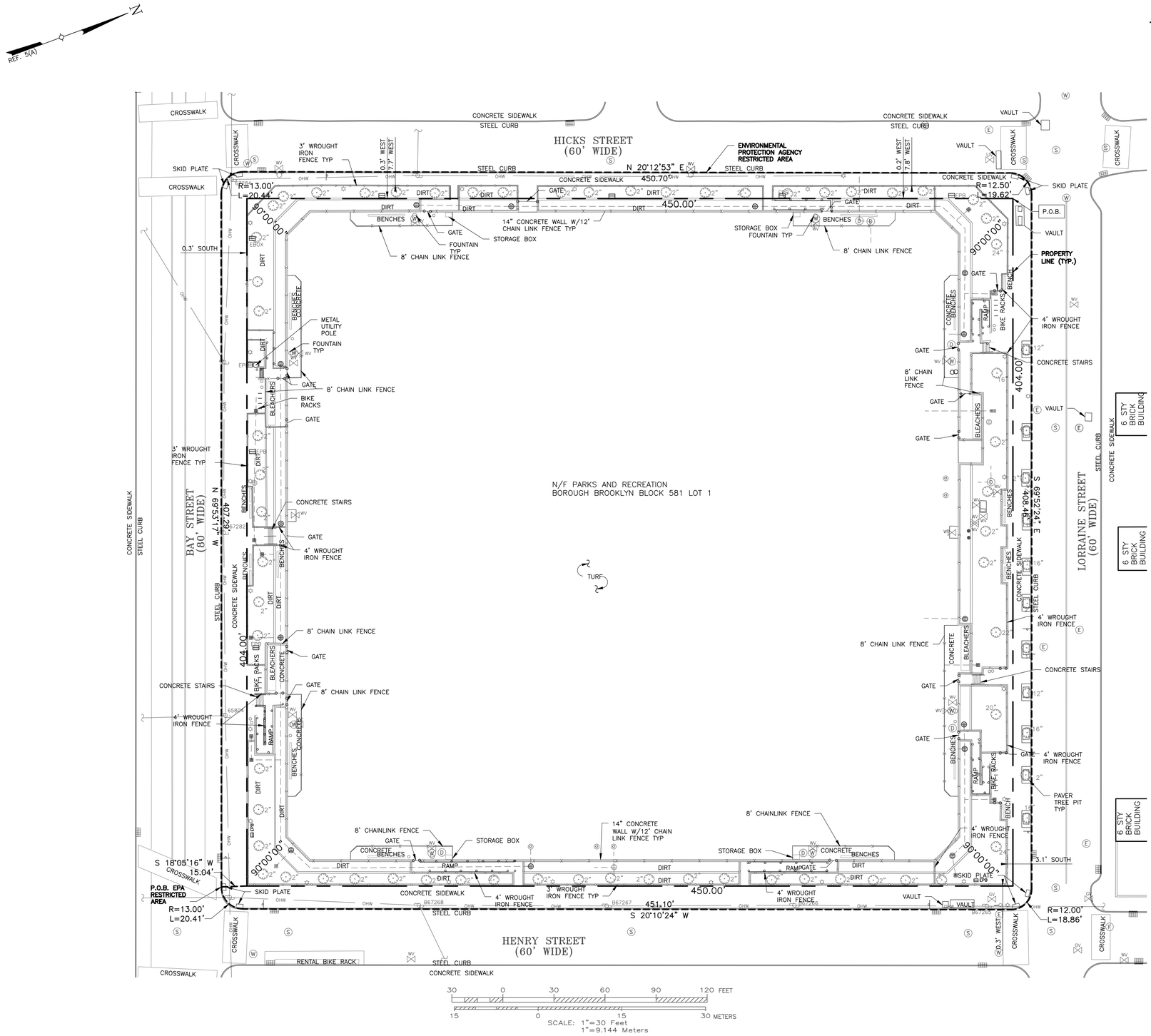
TRC, *Design and Implementation Plan, Red Hook Recreation Area Ball Field 9 and the Ball Field Planting Strips, Portions of Block 602, Lot 1 and Block 614 Lot 300, Brooklyn, New York*, April 23, 2018.

TRC, *RE: Underground Storage Tank Closure Report, PBS No. 2-613138 Remediation and Reconstruction of Ball Fields 5-8, Red Hook Recreation Area, 98 Lorraine Street, Brooklyn,* June 15, 2020.

TRC, *Former Columbia Smelting a.k.a Red Hook Recreation Area, Ball Fields 5-8 and Ball Field 9, Kings County, Brooklyn, New York, Construction Completion Report, NYDEC Site Number: 224231, USEPA ID Number: NYN000206593*, January 2024

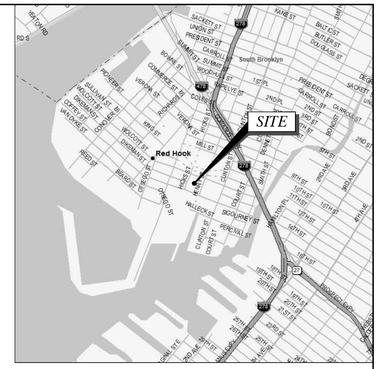
TRC, *Former Columbia Smelting a.k.a Red Hook Recreation Area, Ball Fields 5-8 and Ball Field 9, Kings County, Brooklyn, New York, Site Management Plan, NYDEC Site Number: 224231, USEPA ID # NYR000231670*, January 2024

Appendix C



GENERAL NOTES

1. THIS PLAN IS BASED ON A FIELD SURVEY BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. COMPLETED ON 12/17/2021.
2. MERIDIAN AND COORDINATES REFER TO NEW YORK STATE PLANE, NAD 83, NEW YORK LONG ISLAND ZONE AND ARE BASED ON GPS OBSERVATIONS.
3. ANGLES OR BEARINGS SHOWN HEREON ARE FORMATTED IN DEGREES, MINUTES, AND SECONDS. DISTANCES OR ELEVATIONS SHOWN HEREON ARE IN U.S. SURVEY FEET, UNLESS NOTED OTHERWISE.
4. REFERENCES:
   (A) PLAN SET ENTITLED: "CONTRACT DRAWINGS FOR THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5–8 BOUNDED BY LORRAINE, BAY, HICKS AND HENRY STREETS, IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN, CONTRACT NO. B126–116M", PREPARED BY THE CITY OF NEW YORK PARKS & RECREATION, DATED 7/11/17.
5. THIS SURVEY IS SUBJECT TO A COMPLETE AND UP TO DATE ABSTRACT OF TITLE. COVENANTS, EASEMENTS, GRANTS AND RIGHTS–OF–WAY NOT VISIBLE AND NOT REFERENCED ARE NOT SHOWN. TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. SHALL NOT BE LIABLE FOR THE DISTURBANCE TO ANYONE'S RIGHT TO THE USE OF THE PROPERTY OR THE DISTURBANCE OF ANY UTILITIES NOT SHOWN OR REFERENCED ON THIS SURVEY PLAT.
6. UNDERGROUND IMPROVEMENTS IF ANY AND NOT VISIBLE AT THE TIME OF THE SURVEY, HAVE NOT BEEN LOCATED IN THE FIELD OR SHOWN HEREON.
7. LOCATIONS OF ALL UTILITIES AND SUBSTRUCTURES ARE APPROXIMATE ONLY BASED ON SURFACE EVIDENCE AND EXISTING PLANS. THE INFORMATION GIVEN ON THE SURVEY PERTAINING TO UTILITIES AND SUBSTRUCTURES IS NOT CERTIFIED TO ACCURACY OR COMPLETENESS. CONSULT WITH THE APPROPRIATE COMPANY OR AGENCY BEFORE DESIGNING OR CONSTRUCTING IMPROVEMENTS. TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. WILL NOT BE RESPONSIBLE FOR ANY DAMAGE SUBSEQUENTLY CAUSED TO PERSONNEL, STRUCTURES, OR UTILITIES.
8. THE SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE "AE" AS PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR THE BOROUGH OF BROOKYLN, STATE OF NEW YORK, COMMUNITY PANEL NO # 3604970184F, EFFECTIVE DATE OF 09/05/07. THIS DETERMINATION IS BASED ON SCALED MAP LOCATION AND GRAPHIC PLOTTING.
9. THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 1 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN THE SITE MANAGEMENT PLAN SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT DERWEB@DEC.NY.GOV



LOCATION MAP

SCALE: 1" = 2000'±

LEGEND

- PROPERTY LINE
- INDEX CONTOUR LINE
- CONTOUR LINE
- CHAIN LINK FENCE
- STOCKADE FENCE
- WROUGHT IRON FENCE
- CURB LINE
- EDGE OF CONCRETE
- EDGE OF PAVEMENT
- GUIDE RAIL
- PAINTED TRAFFIC LINES
- OHW — OVERHEAD WIRES
- STRUCTURE
- GATEPOST
- GUY ANCHOR
- UTILITY POLE
- CATCH BASIN
- CURB INLET
- FIELD INLET (SQUARE)
- FIELD INLET (ROUND)
- (D) MANHOLE (DRAIN)
- (E) MANHOLE (ELECTRIC)
- (F) MANHOLE (FIRE)
- (S) MANHOLE (SAN. SEWER)
- (Mh) MANHOLE (UNKNOWN)
- (W) MANHOLE (WATER)
- GV — GAS VALVE
- WV — WATER VALVE
- HYDRANT
- SIGN
- LIGHT POST
- EPB — ELECTRIC PULLBOX
- VAULT

EPA RESTRICTED AREA DESCRIPTION

BLOCK 581, LOT 1 AND ADJOINING SIDEWALK
BEING IN THE BOROUGH OF BROOKLYN, COUNTY OF KINGS, CITY AND STATE OF NEW YORK AS DEPICTED IN THE FINAL SECTION MAP NO. 32 AND BEING LAID OUT INSIDE RED HOOK BALLFIELD AREA BOUNDED AND DESCRIBED AS FOLLOWS:
COMMENCING AT THE INTERSECTION OF THE NORTHERLY SIDE OF BAY STREET (80 FEET WIDE) AND THE WESTERLY SIDE OF HENRY STREET (60 FEET WIDE), RUNNING THENCE SOUTH 18 DEGREES 05 MINUTES 16 SECONDS WEST A DISTANCE OF 15.04 FEET TO THE POINT OF BEGINNING (P.O.B.); THENCE,
GENERALLY, ALONG BOTTOM OF STEEL FACED CURB OF NORTH SIDE OF BAY STREET, BEARING NORTH 69 DEGREES 53 MINUTES 17 SECONDS WEST A DISTANCE 407.29 FEET, TO A POINT OF CURVATURE; THENCE,
NORTHWESTERLY, AN ARC BEARING TO THE RIGHT, A RADIUS OF 13.00 FEET, AN ARC LENGTH OF 20.44 FEET, A CHORD BEARING AND DISTANCE OF NORTH 24 DEGREES 50 MINUTES 12 SECONDS WEST, 18.40 FEET TO A POINT; THENCE,
GENERALLY, ALONG BOTTOM CURB OF EAST SIDE OF HICKS STREET, BEARING NORTH 20 DEGREES 12 MINUTES 53 SECONDS EAST A DISTANCE 450.70 FEET TO A POINT OF CURVATURE; NORTHEASTERLY, AN ARC BEARING TO THE RIGHT, A RADIUS OF 12.50 FEET, AN ARC LENGTH OF 19.62 FEET, A CHORD BEARING AND DISTANCE OF NORTH 65 DEGREES 10 MINUTES 15 SECONDS EAST, 17.66 FEET TO A POINT; THENCE,
GENERALLY, ALONG BOTTOM CURB OF SOUTH SIDE OF LORRAINE STREET, BEARING SOUTH 69 DEGREES 52 MINUTES 24 SECONDS EAST A DISTANCE 408.46 FEET, TO A POINT OF CURVATURE; THENCE,
SOUTHEASTERLY, AN ARC BEARING TO THE RIGHT, A RADIUS OF 12.00 FEET, AN ARC LENGTH OF 18.86 FEET, A CHORD BEARING AND DISTANCE OF SOUTH 24 DEGREES 51 MINUTES 00 SECONDS EAST, 16.98 FEET TO A POINT; THENCE,
GENERALLY, ALONG BOTTOM CURB OF WEST SIDE OF HENRY STREET, BEARING SOUTH 20 DEGREES 10 MINUTES 24 SECONDS WEST A DISTANCE 451.10 FEET TO A POINT OF CURVATURE; THENCE,
SOUTHWESTERLY, AN ARC BEARING TO THE RIGHT, A RADIUS OF 13.00 FEET, AN ARC LENGTH OF 20.41 FEET, A CHORD BEARING AND DISTANCE OF SOUTH 65 DEGREES 08 MINUTES 33 SECONDS WEST, 18.37 FEET TO THE POINT AND PLACE OF BEGINNING.
SAID PREMISES COVERING AN AREA OF 206,096 SQUARE FEET EQUALS 4.731 ACRES.
SAID PREMISES BEING IN BLOCK 581 LOT 1 AND THE ADJOINING AREA FROM THE PROPERTY LINE TO THE BOTTOM OF THE CURB SURROUNDING THE PARCEL.

DESCRIPTION OF THE ENGINEERING AND INSTITUTIONAL CONTROLS

I. ENGINEERING CONTROLS
1. EXPOSURE TO REMAINING CONTAMINATION AT THE SITE IS PREVENTED BY A COVER SYSTEM PLACED OVER THE SITE. THIS COVER SYSTEM IS COMPRISED OF A MINIMUM OF A 12–INCH THICK SYNTHETIC TURF, CLEAN COVER, PAVING, BONDED AGGREGATED AND PERMEABLE PAVERS, MULCH, GROUND COVER AND/OR SURROUNDING FENCING UNDERLAIN BY A PHYSICAL DEMARCATION LAYER CONSISTING OF ORANGE SNOW FENCING OR EQUIVALENT MATERIAL. THE COVER SYSTEM MATERIAL TYPES AND THICKNESSES ACROSS THE SITE ARE INDICATED ON THE FINAL CONDITIONS SURVEY.
II. INSTITUTIONAL CONTROLS
1. THE PROPERTY MAY BE USED FOR RESTRICTED RESIDENTIAL USE;
2. ALL ENGINEERING CONTROLS (ECS) MUST BE OPERATED AND MAINTAINED AS SPECIFIED IN THE SITE MANAGEMENT PLAN (SMP);
3. ALL ECS MUST BE INSPECTED AT A FREQUENCY AND IN A MANNER DEFINED IN THE SMP;
4. THE USE OF GROUNDWATER UNDERLYING THE PROPERTY IS PROHIBITED WITHOUT NECESSARY WATER QUALITY TREATMENT AS DETERMINED BY THE NYSDOH OR THE NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE TO RENDER IT SAFE FOR USE AS DRINKING WATER OR FOR INDUSTRIAL PURPOSES, AND THE USER MUST FIRST NOTIFY AND OBTAIN WRITTEN APPROVAL TO DO SO FROM NYSDEC.
5. DATA AND INFORMATION PERTINENT TO SITE MANAGEMENT MUST BE REPORTED AT THE FREQUENCY AND IN A MANNER AS DEFINED IN THE SMP;
6. ALL FUTURE ACTIVITIES THAT WILL DISTURB REMAINING CONTAMINATED MATERIAL MUST BE CONDUCTED IN ACCORDANCE WITH THE SMP;
7. MONITORING TO ASSESS THE PERFORMANCE AND EFFECTIVENESS OF THE REMEDY MUST BE PERFORMED AS DEFINED IN THE SMP;
8. OPERATION, MAINTENANCE, MONITORING, INSPECTION, AND REPORTING OF ANY PHYSICAL COMPONENT OF THE REMEDY SHALL BE PERFORMED AS DEFINED IN THE SMP;
9. ACCESS TO THE SITE MUST BE PROVIDED TO AGENTS, EMPLOYEES OR OTHER REPRESENTATIVES OF THE STATE OF NEW YORK WITH REASONABLE PRIOR NOTICE TO THE PROPERTY OWNER TO ASSURE COMPLIANCE WITH THE RESTRICTIONS IDENTIFIED BY THE DEED RESTRICTIONS, AND
10. VEGETABLE GARDENS AND FARMING ON THE SITE ARE PROHIBITED.

PARCEL DESCRIPTION

BLOCK 581, LOT 1.

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND LYING, BEING AND SITUATED IN THE BOROUGH AND COUNTY OF KINGS, CITY AND STATE OF NEW YORK BEING BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT POINT OF INTERSECTION FORMED BY THE EASTERLY SIDELINE OF HICKS STREET (60' WIDE) WITH THE SOUTHERLY SIDELINE OF LORRAINE STREET (60' WIDE)

RUNNING THENCE EASTERLY ALONG SAID SOUTHERLY SIDELINE OF LORRAINE STREET 404.00 FEET TO POINT OF INTERSECTION WITH THE EASTERLY SIDELINE OF LORRAINE STREET WITH THE WESTERLY SIDELINE OF HENRY STREET (60' WIDE) SAID POINT FORMING AN INTERIOR ANGLE TO THE LEFT OF 90°00'00" WITH THE FINAL COURSE;
THENCE SOUTHERLY AT RIGHT ANGLES AND FORMING INTERIOR ANGLES TO THE LEFT OF 90°00'00" ALONG SAID WESTERLY SIDELINE OF HENRY STREET 450.00 FEET TO THE INTERSECTION OF THE WESTERLY SIDELINE OF HENRY STREET WITH THE NORTHERLY SIDELINE OF BAY STREET (80' WIDE);
THENCE WESTERLY AT RIGHT ANGLES AND FORMING INTERIOR ANGLES TO THE LEFT OF 90°00'00" ALONG SAID NORTHERLY SIDELINE OF BAY STREET 404.00 FEET TO THE INTERSECTION OF THE EASTERLY SIDELINE OF HICKS STREET (60' WIDE) WITH THE NORTHERLY LINE OF BAY STREET;
THENCE NORTHERLY AT RIGHT ANGLES AND FORMING INTERIOR ANGLES TO THE LEFT OF 90°00'00" ALONG SAID EASTERLY LINE OF HICKS STREET 450.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 181,800 SQUARE FEET OR 4.2 ACRES.

0 1 2 3
ORIGINAL SIZE IN INCHES

Rev	Date	Revision	Approved
0	1/27/22	ISSUED	
1	05/05/22	PER COMMENTS	
2	07/05/22	PER COMMENTS	

DRAWING CONTROL

Designed by: N/A	Drawn by: I	Checked by: TAF

Purpose	Released by	Date
○ For Comment		
○ For Approval		
○ For Bid		
○ For Construction		

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering & Surveying Consultants P.C.
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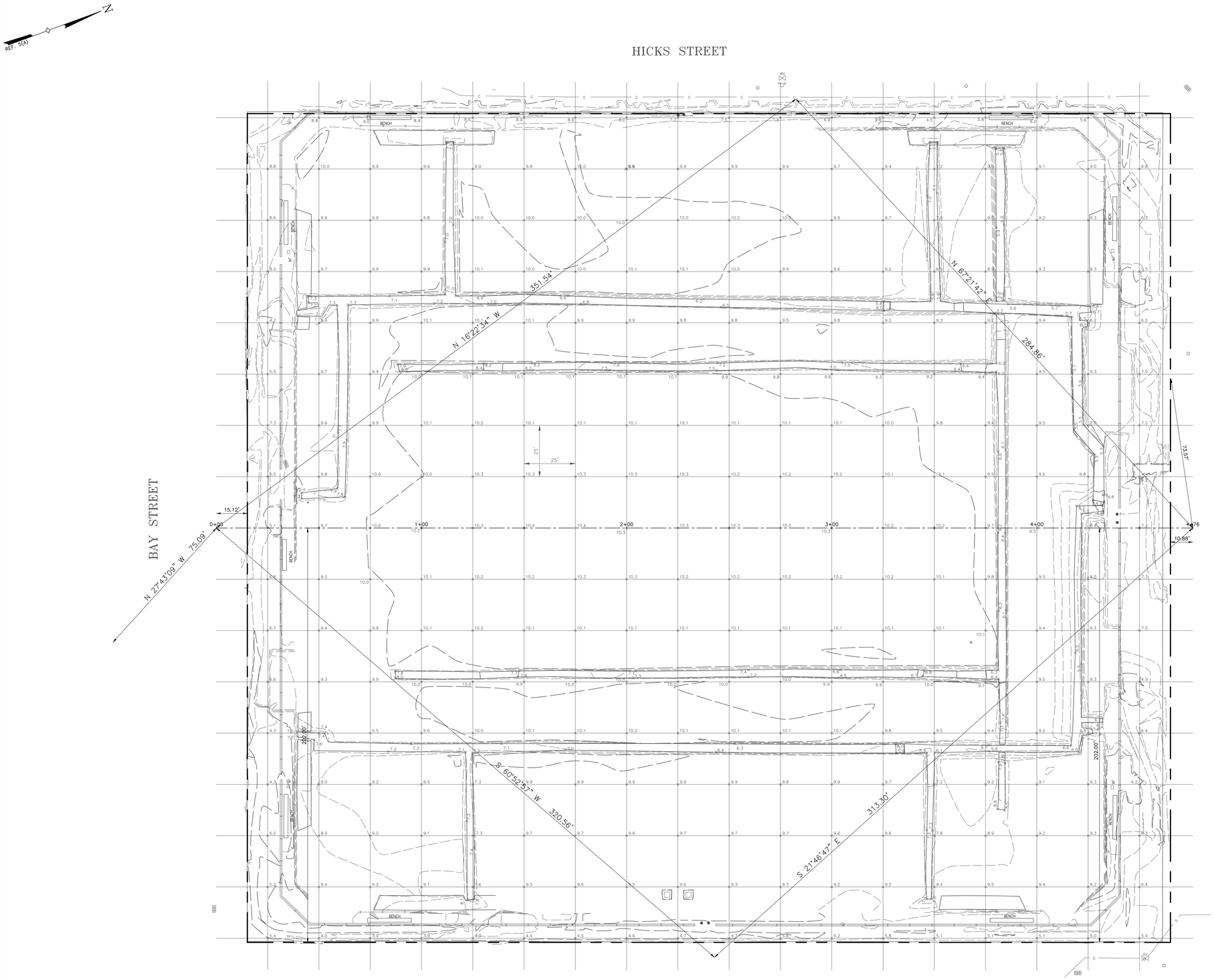
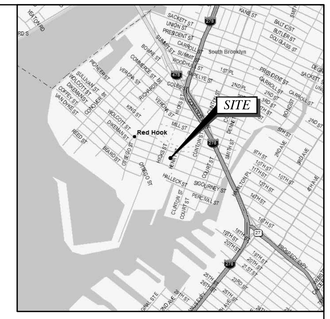
STATE OF NEW YORK · THOMAS A. FETTERMAN · LICENSED LAND SURVEYOR · NO. 050690
THOMAS A. FETTERMAN, P.L.S. 50690

ENVIRONMENTAL EASEMENT BOUNDARY SURVEY

CONTRACT NO. B126–116M
REMEDIATION & RECONSTRUCTION OF BALL FIELDS 5–8
98 LORRAINE STREET
BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK

Date	Work Order	Drawing No.	Rev
01/12/22	9463.01	SU–111	2
Scale 1"=30'			





LOCATION MAP

SCALE: 1" = 2000'±

GENERAL NOTES

1. THIS PLAN IS BASED ON A FIELD SURVEY BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. COMPLETED ON 05/26/2021.
2. PLANIMETRIC FEATURES SHOWN HEREON, ARE BASED ON REFERENCE 5(A).
3. MERIDIAN, COORDINATES AND ELEVATION DATUM ARE BASED ON REFERENCE 5(A).
4. ANGLES OR BEARINGS SHOWN HEREON ARE FORMATTED IN DEGREES, MINUTES, AND SECONDS. DISTANCES OR ELEVATIONS SHOWN HEREON ARE IN U.S. SURVEY FEET, UNLESS NOTED OTHERWISE.
5. REFERENCES:
   (A) PLAN SET ENTITLED: "CONTRACT DRAWINGS FOR THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5-8 BOUNDED BY LORRAINE, BAY, HICKS AND HENRY STREETS, IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN, CONTRACT NO. B126-116M", PREPARED BY THE CITY OF NEW YORK PARKS & RECREATION, DATED 7/11/17.
6. THE PROPERTY LINES SHOWN HEREON ARE APPROXIMATE AND FOR ORIENTATION PURPOSE ONLY AND THEY DO NOT REPRESENT A PROPERTY/BOUNDARY OPINION BY THE LAND SURVEYOR.
7. UTILITIES SHOWN HEREON ARE TAKEN DIRECTLY FROM REFERENCE 5(A), TOPOGRAPHIC SURVEY PREPARED BY MUNOZ ENGINEERING, P.C., DRAWING NO. V101.00, SHEET 3 OF 42.

LEGEND

- PROPERTY LINE
- INDEX CONTOUR LINE
- CONTOUR LINE
- CHAIN LINK FENCE
- CONCRETE WALL WITH CHAIN LINK FENCE
- CURB LINE
- EDGE OF CONCRETE
- C — UNDERGROUND CABLE (PER MARKOUT)
- G — UNDERGROUND GAS (PER MARKOUT)
- 1+00 — SURVEY BASELINE
- ×9.6 — SPOT ELEVATION OF DEMARCATION LAYER
- ×BW9.3 — BOTTOM OF WALL ELEVATION
- BOLLARD
- UTILITY POLE
- CATCH BASIN
- (E) MANHOLE (ELECTRIC)
- C PULLBOX (CABLE)
- FB PULLBOX (FIRE)
- (S) MANHOLE (SAN. SEWER)
- GAS VALVE
- WV WATER VALVE
- HYDRANT
- LIGHT POST

CONTRACTOR INFO.

LAWS CONSTRUCTION CORP.
34 IRVINGTON STREET
PLEASANTVILLE, NY 10570

Rev	Date	Revision	Approved
0	06/14/21	ISSUED	
1	07/01/21	PER COMMENTS	

DRAWING CONTROL

Designed by: N/A	Drawn by: RD	Checked by: TAF

Purpose	Released by	Date
○ For Comment		
○ For Approval		
○ For Bid		
○ For Construction		

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STATE OF NEW YORK · THOMAS A. PETTERMAN · LICENSED LAND SURVEYOR · NO. 050690

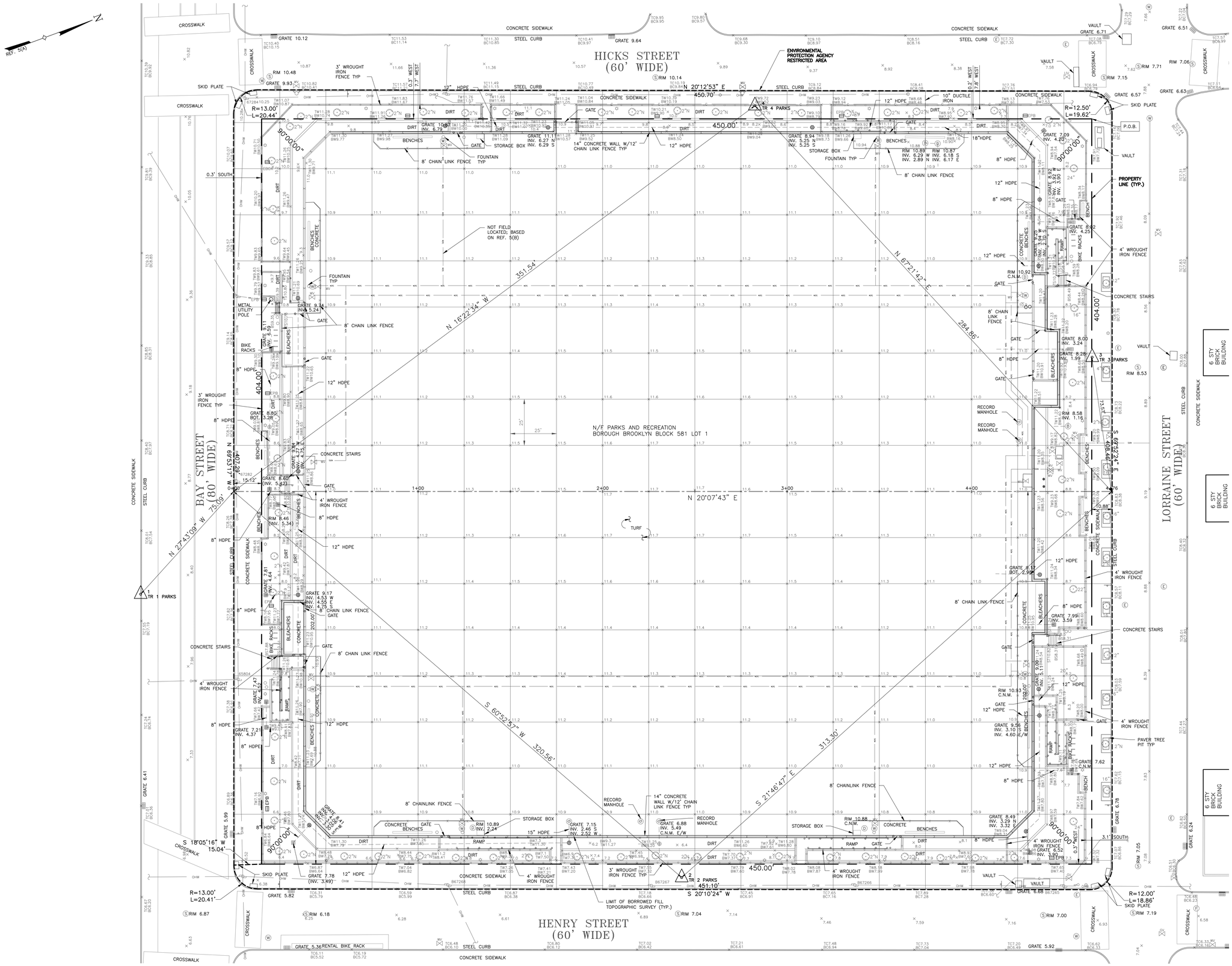
THOMAS A. PETTERMAN, P.L.S. 50690

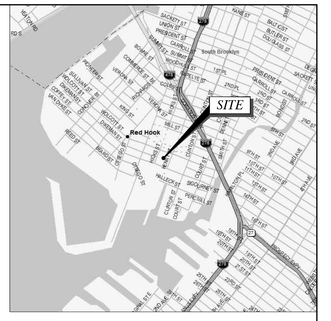
SURVEY OF SUBGRADES FOR DEMARCATION LAYER

CONTRACT NO. B126-116M
REMEDIATION & RECONSTRUCTION OF BALL FIELDS 5-8
LORRAINE, BAY, HICKS & HENRY STREETS
BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK

Date	Work Order	Drawing No.	Rev
06/14/2021	9463.01	SU-102	1

Scale: 1" = 20'





LOCATION MAP

SCALE: 1" = 2000'±

GENERAL NOTES

1. THIS PLAN IS BASED ON A FIELD SURVEY BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. COMPLETED ON 12/17/2021.
2. PLANIMETRIC FEATURES SHOWN HEREON, ARE BASED ON REFERENCE 5(A).
3. MERIDIAN AND COORDINATES REFER TO NEW YORK STATE PLANE, NAD 83, NEW YORK EAST ZONE AND ARE BASED ON GPS OBSERVATIONS.
4. ANGLES OR BEARINGS SHOWN HEREON ARE FORMATTED IN DEGREES, MINUTES, AND SECONDS. DISTANCES OR ELEVATIONS SHOWN HEREON ARE IN U.S. SURVEY FEET, UNLESS NOTED OTHERWISE.
5. REFERENCES:
   (A) PLAN SET ENTITLED: "CONTRACT DRAWINGS FOR THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5–8 BOUNDED BY LORRAINE, BAY, HICKS AND HENRY STREETS, IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN, CONTRACT NO. B126–116M", PREPARED BY THE CITY OF NEW YORK PARKS & RECREATION, DATED 7/11/17.
   (B) DRAWINGS ENTITLED: "WATER SUPPLY PLAN–SITE SECURITY LIGHTING PLAN, RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN, CONTRACT NO. B126–116M", PREPARED BY THE CITY OF NEW YORK PARKS & RECREATION, DATED 7/11/17.
6. THIS SURVEY IS SUBJECT TO A COMPLETE AND UP TO DATE ABSTRACT OF TITLE, COVENANTS, EASEMENTS, GRANTS AND RIGHTS–OF–WAY NOT VISIBLE AND NOT REFERENCED ARE NOT SHOWN. TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. SHALL NOT BE LIABLE FOR THE DISTURBANCE TO ANYONE'S RIGHT TO THE USE OF THE PROPERTY OR THE DISTURBANCE OF ANY UTILITIES NOT SHOWN OR REFERENCED ON THIS SURVEY PLAT.
7. UNDERGROUND IMPROVEMENTS IF ANY AND NOT VISIBLE AT THE TIME OF THE SURVEY, HAVE NOT BEEN LOCATED IN THE FIELD OR SHOWN HEREON.
8. LOCATIONS OF ALL UTILITIES AND SUBSTRUCTURES ARE APPROXIMATE ONLY BASED ON SURFACE EVIDENCE AND EXISTING PLANS. THE INFORMATION GIVEN ON THE SURVEY PERTAINING TO UTILITIES AND SUBSTRUCTURES IS NOT CERTIFIED TO ACCURACY OR COMPLETENESS. CONSULT WITH THE APPROPRIATE COMPANY OR AGENCY BEFORE DESIGNING OR CONSTRUCTING IMPROVEMENTS. TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. WILL NOT BE RESPONSIBLE FOR ANY DAMAGE SUBSEQUENTLY CAUSED TO PERSONNEL, STRUCTURES, OR UTILITIES.
9. THE SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE "AE" AS PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR THE CITY OF NEW YORK, COUNTY OF KINGS, STATE OF NEW YORK, COMMUNITY PANEL NO # 3604970192F, EFFECTIVE DATE OF 09/05/2007. THIS DETERMINATION IS BASED ON SCALED MAP LOCATION AND GRAPHIC PLOTTING.
10. THE PROPERTY LINES SHOWN HEREON ARE APPROXIMATE AND FOR ORIENTATION PURPOSE ONLY AND THEY DO NOT REPRESENT A PROPERTY/BOUNDARY OPINION BY THE LAND SURVEYOR.

LEGEND

- PROPERTY LINE
- INDEX CONTOUR LINE
- CONTOUR LINE
- CHAIN LINK FENCE
- STOCKADE FENCE
- WROUGHT IRON FENCE
- CURB LINE
- EDGE OF CONCRETE
- EDGE OF PAVEMENT
- GUIDE RAIL
- PAINTED TRAFFIC LINES
- OHW — OVERHEAD WIRES
- E(R) — ELECTRIC (UNDERGROUND) (RECORD)
- W(R) — WATER (UNDERGROUND) (RECORD)
- STRUCTURE
- 123.12 — SPOT ELEVATION
- TC123.12 BC123.12 — TOP/BOTTOM OF CURB ELEVATION
- TS123.12 BS123.12 — TOP/BOTTOM OF STAIR ELEVATION
- TW123.12 BW123.12 — TOP/BOTTOM OF WALL ELEVATION
- GATEPOST
- GUY ANCHOR
- UTILITY POLE
- CATCH BASIN
- CURB INLET
- FIELD INLET (SQUARE)
- FIELD INLET (ROUND)
- (D) MANHOLE (DRAIN)
- (E) MANHOLE (ELECTRIC)
- (F) MANHOLE (FIRE)
- (S) MANHOLE (SAN. SEWER)
- (MH) MANHOLE (UNKNOWN)
- (W) MANHOLE (WATER)
- GAS VALVE
- WATER VALVE
- HYDRANT
- SIGN
- LIGHT POST
- EPB — ELECTRIC PULLBOX
- VAULT
- C.N.M. — CANNOT MEASURE
- C.N.O. — CANNOT OPEN
- (INV. 4.80) — CONTRACTOR PROVIDED INVERTS
- TREE
- NEW TREE

SHEET 1 OF 3

BENCHMARK TABLE				
POINT#	NORTHING	EASTING	ELEVATION	DESCRIPTION
451	184896.85	982611.37	7.34	TR 451 XCUT
7622	184628.43	982464.63	10.27	TR 7622 XCUT
7623	184368.17	982591.80	8.92	TR 7623 XCUT
8574	184462.10	982903.58	7.18	TR 8574 XCUT

0 1 2 3
ORIGINAL SIZE IN INCHES

Rev	Date	Revision	Approved
0	01/27/22	ISSUED	
1	02/04/22	REVISED WALL WIDTH	
2	05/05/22	PER COMMENTS	
3	07/05/22	PER COMMENTS	
4	08/26/22	PER COMMENTS	
5	11/03/22	PER COMMENTS	

DRAWING CONTROL

Designed by: N/A | Drawn by: IRW | Checked by: TAF

Purpose	Released by	Date
○ For Comment		
○ For Approval		
○ For Bid		
○ For Construction		

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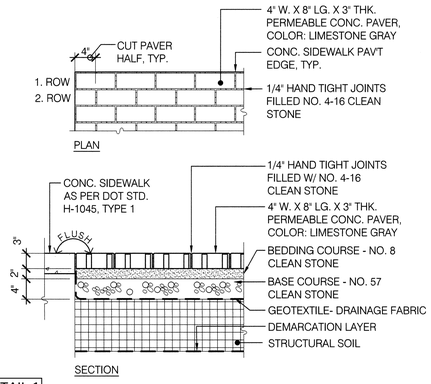
STATE OF NEW YORK — THOMAS A. FETTERMAN — 050690 — LICENSED LAND SURVEYOR

THOMAS A. FETTERMAN, P.L.S. 50690

FINAL CONDITIONS SURVEY

CONTRACT NO. B126–116M
REMEDIATION & RECONSTRUCTION OF BALL FIELDS 5–8
98 LORRAINE STREET
BOROUGH OF BROOKLYN, KINGS COUNTY, NEW YORK

Date	Work Order	Drawing No.	Rev
01/27/22	9463.01	SU–112	5
Scale 1" = 20'			

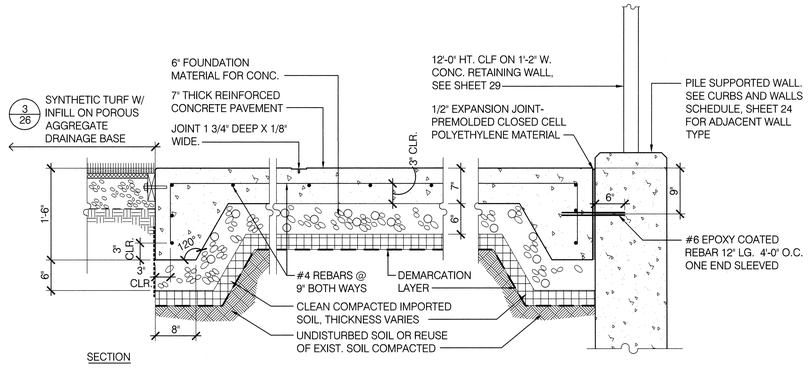


DETAIL 1 AB-01

Permeable Concrete Pavers

Scale: 1" = 1'-0"

0 3" 6" 1' 2'

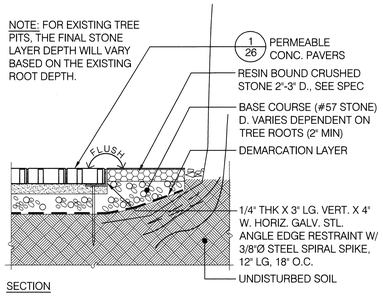


DETAIL 2 AB-01

Reinforced Conc. Pavement/ Foundation Slab

Scale: 1" = 1'-0"

0 3" 6" 1' 2'

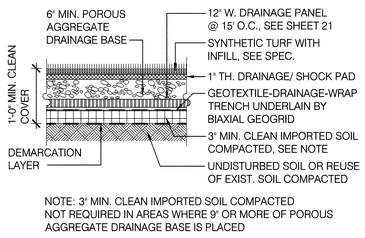


DETAIL 3 AB-01

Bonded Aggregate

Scale: 1" = 1'-0"

0 3" 6" 1' 2'



NOTE: 3" MIN. CLEAN IMPORTED SOIL COMPACTED NOT REQUIRED IN AREAS WHERE 9" OR MORE OF POROUS AGGREGATE DRAINAGE BASE IS PLACED

DETAIL 4 AB-01

Synthetic Turf with Infill

Scale: 1" = 1'-0"

0 3" 6" 1' 2'

STATE OF NEW YORK
FRANK P. VILLANO
LICENSED PROFESSIONAL ENGINEER
078540
SECRETARIO

Frank P. Villano

AS-BUILT CERTIFICATION

CONSTRUCTED BY:	LAWS CONSTRUCTION CORP
CONSTRUCTED FOR:	CITY OF NEW YORK DEPARTMENT PARKS & RECREATION
PROJECT TITLE:	THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5-8 BOUNDED BY LORRAINE, BAY, HICKS, AND HENRY STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN
CONTRACT No.:	B126-116M
DATE:	7/25/2023

CONTRACT No. B126-116M

THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5-8 BOUNDED BY LORRAINE, BAY, HICKS AND HENRY STREETS IN THE RED HOOK RECREATION AREA

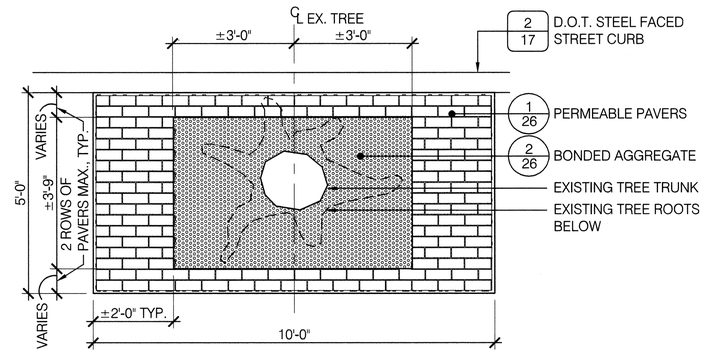
BOROUGH OF BROOKLYN

LAWS CONSTRUCTION
Sitework - Utilities
Heavy Highway - Parks
34 IRVINGTON STREET
PLEASANTVILLE, NEW YORK 10570
PHONE: (914) 741-2100
www.lawscc.com

DATE: 7/17/2023

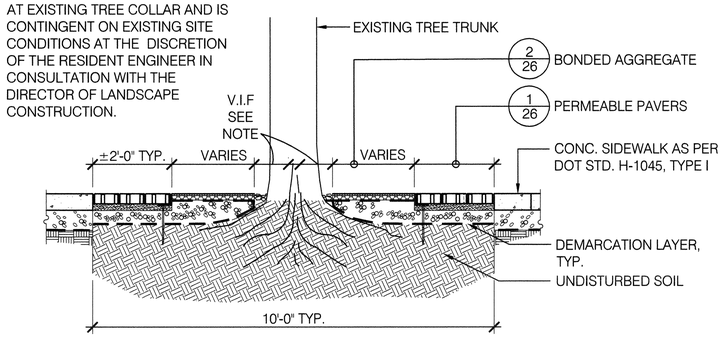
AS-BUILT
COVER CROSS SECTIONS

Drawing No.: AB-01.1



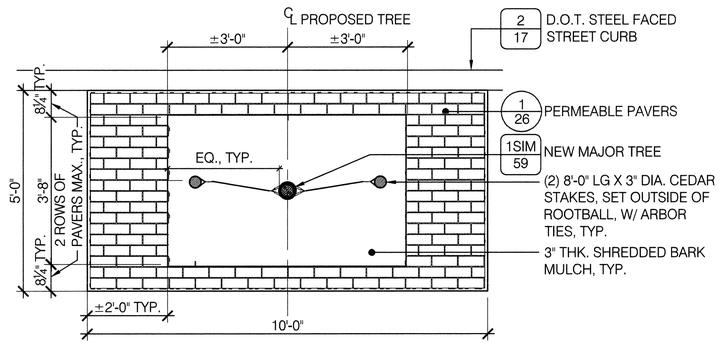
PLAN

NOTE:
BONDED AGGREGATE SHALL BE POURED UP TO ±2" RING OF MULCH AT EXISTING TREE COLLAR AND IS CONTINGENT ON EXISTING SITE CONDITIONS AT THE DISCRETION OF THE RESIDENT ENGINEER IN CONSULTATION WITH THE DIRECTOR OF LANDSCAPE CONSTRUCTION.

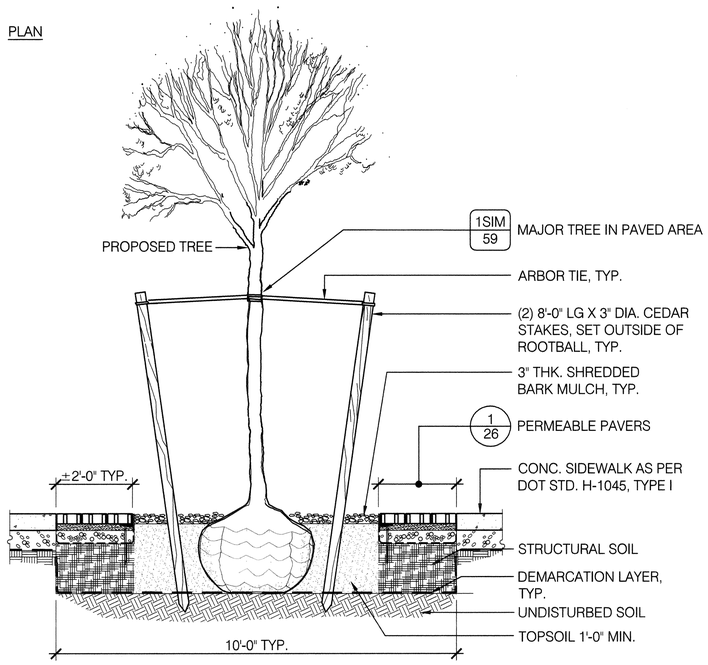


SECTION

DETAIL 1 AB-02 **Street Tree Pit - Existing Tree**
Scale: NTS

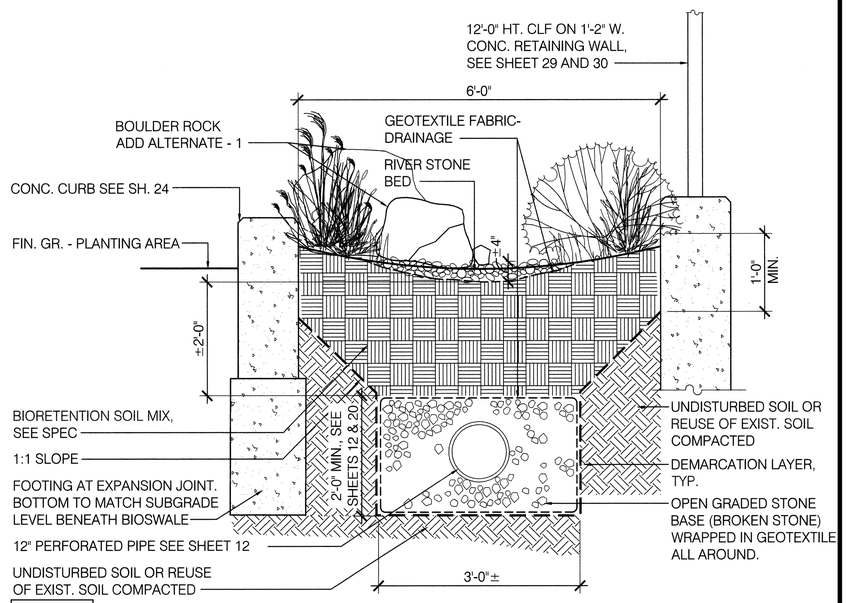


PLAN

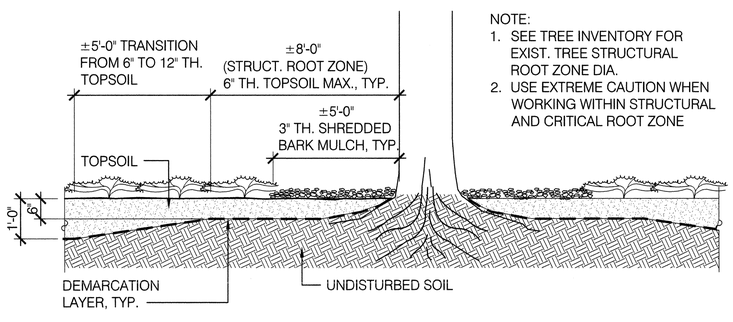


SECTION

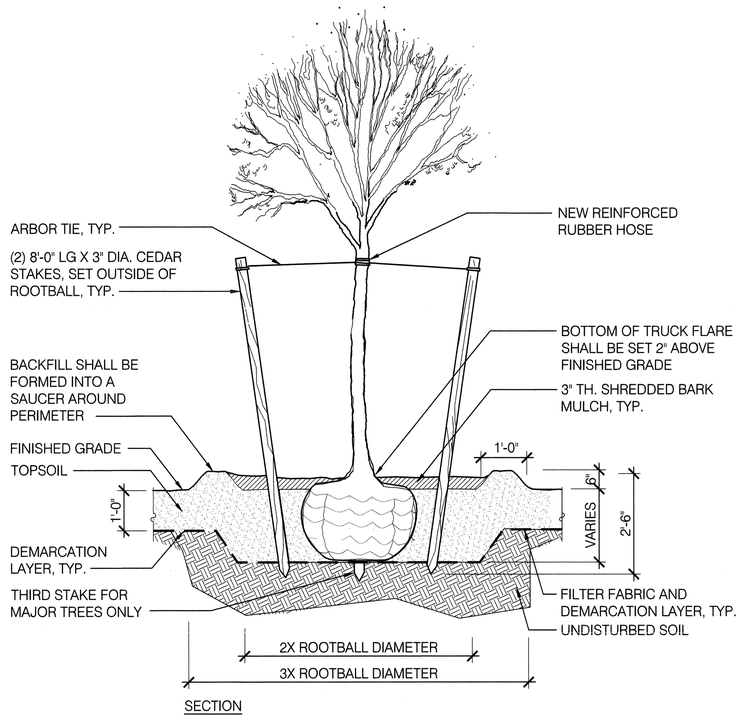
DETAIL 2 AB-02 **Street Tree Pit - New Tree**
Scale: NTS



DETAIL 3 AB-02 **Bioswale - Section**
Scale: 3/4" = 1'-0"



DETAIL 4 AB-02 **Remedial Cover at Planting Strip - Existing Tree**
Scale: NTS



SECTION

DETAIL 5 AB-02 **Remedial Cover at Planting Strip - New Tree**
Scale: NTS

STATE OF NEW YORK
FRANK P. VILLANO
LICENSED PROFESSIONAL ENGINEER
078540

Frank P. Villano

AS-BUILT CERTIFICATION

CONSTRUCTED BY: LAWS CONSTRUCTION CORP
CONSTRUCTED FOR: CITY OF NEW YORK
DEPARTMENT PARKS & RECREATION
PROJECT TITLE: THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5-8 BOUNDED BY LORRAINE, BAY HICKS, AND HENRY STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN
CONTRACT No.: B126-116M
DATE: 7/25/2023

CONTRACT No. B126-116M

THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5-8 BOUNDED BY LORRAINE, BAY, HICKS AND HENRY STREETS IN THE RED HOOK RECREATION AREA

BOROUGH OF BROOKLYN

LAWS CONSTRUCTION

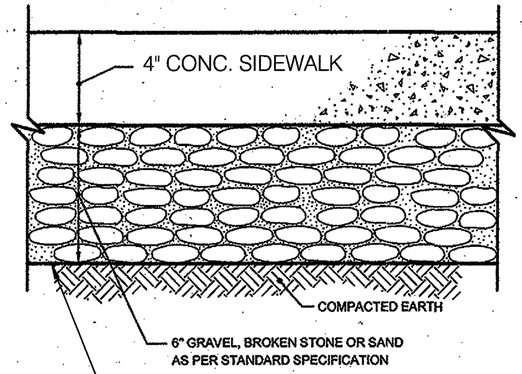
Sitework - Utilities
Heavy Highway - Parks

34 IRVINGTON STREET
PLEASANTVILLE, NEW YORK 10570
PHONE: (914) 741-2100
www.lawscc.com

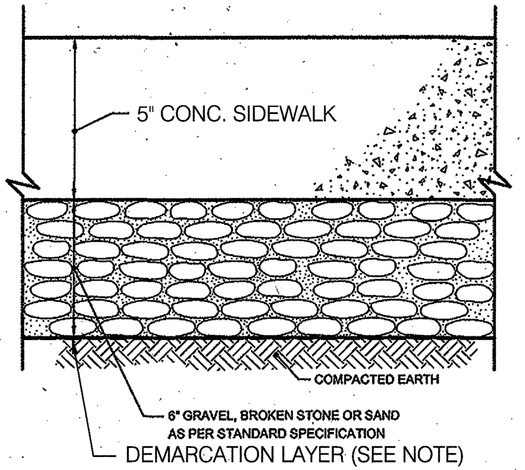
DATE: 7/17/2023

AS-BUILT
COVER CROSS SECTIONS

Drawing No.: AB-02.1



TYPE I - SIDEWALK, OUTSIDE DRIVEWAY AND CORNER QUADRANTS
N.T.S.



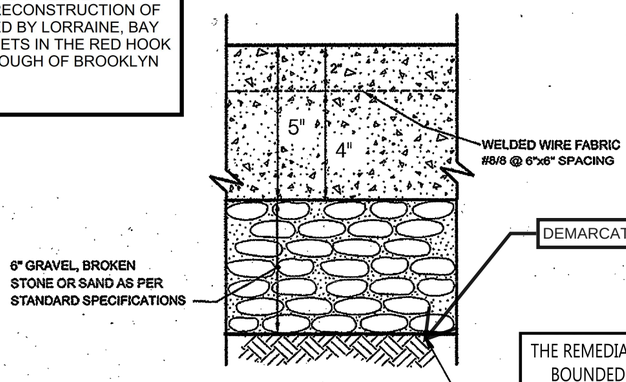
TYPE II - SIDEWALK, IN DRIVEWAY AND IN CORNER QUADRANTS
N.T.S.

AS-BUILT CERTIFICATION

CONSTRUCTED BY: LAWS CONSTRUCTION CORP
CONSTRUCTED FOR: CITY OF NEW YORK
DEPARTMENT PARKS & RECREATION
PROJECT TITLE: THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5-8 BOUNDED BY LORRAINE, BAY HICKS, AND HENRY STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN
CONTRACT No.: B126-116M
DATE: 7/25/2023

NOTES:

1. ALL MATERIALS AND CONSTRUCTION METHODS USED ARE TO CONFORM TO SECTION #4.13 OF THE NYC DEPARTMENT OF TRANSPORTATION (DOT) STANDARD HIGHWAY SPECIFICATIONS.
2. WELDED WIRE FABRIC, WHERE SPECIFIED, SHALL BE ASTM DESIGNATION A-185, GAUGE # 8/8 AT 6"x6" SPACING, AND CONFORM TO SECTION # 2.25 OF THE NYCDOT STANDARD HIGHWAY SPECIFICATIONS.
3. IN AREAS OF THE SIDEWALK WHERE THE EXISTING CONCRETE GRAVEL SUB BASE MATERIAL WILL BE REUSED THE DEMARCATION LAYER WILL BE PLACED ABOVE EXISTING SUB BASE MATERIAL.



TYPE III - SIDEWALK WITH WELDED WIRE FABRIC
N.T.S.

STATE OF NEW YORK
FRANK P. VILLANO
078540
LICENSED PROFESSIONAL ENGINEER

Frank P. Villano

CONTRACT No. B126-116M

THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5-8 BOUNDED BY LORRAINE, BAY, HICKS AND HENRY STREETS IN THE RED HOOK RECREATION AREA
BOROUGH OF BROOKLYN

LAWS CONSTRUCTION
Sitework - Utilities
Heavy Highway - Parks

34 IRVINGTON STREET
PLEASANTVILLE, NEW YORK 10570
PHONE: (914) 741-2100
www.lawscc.com

DATE: 7/17/2023

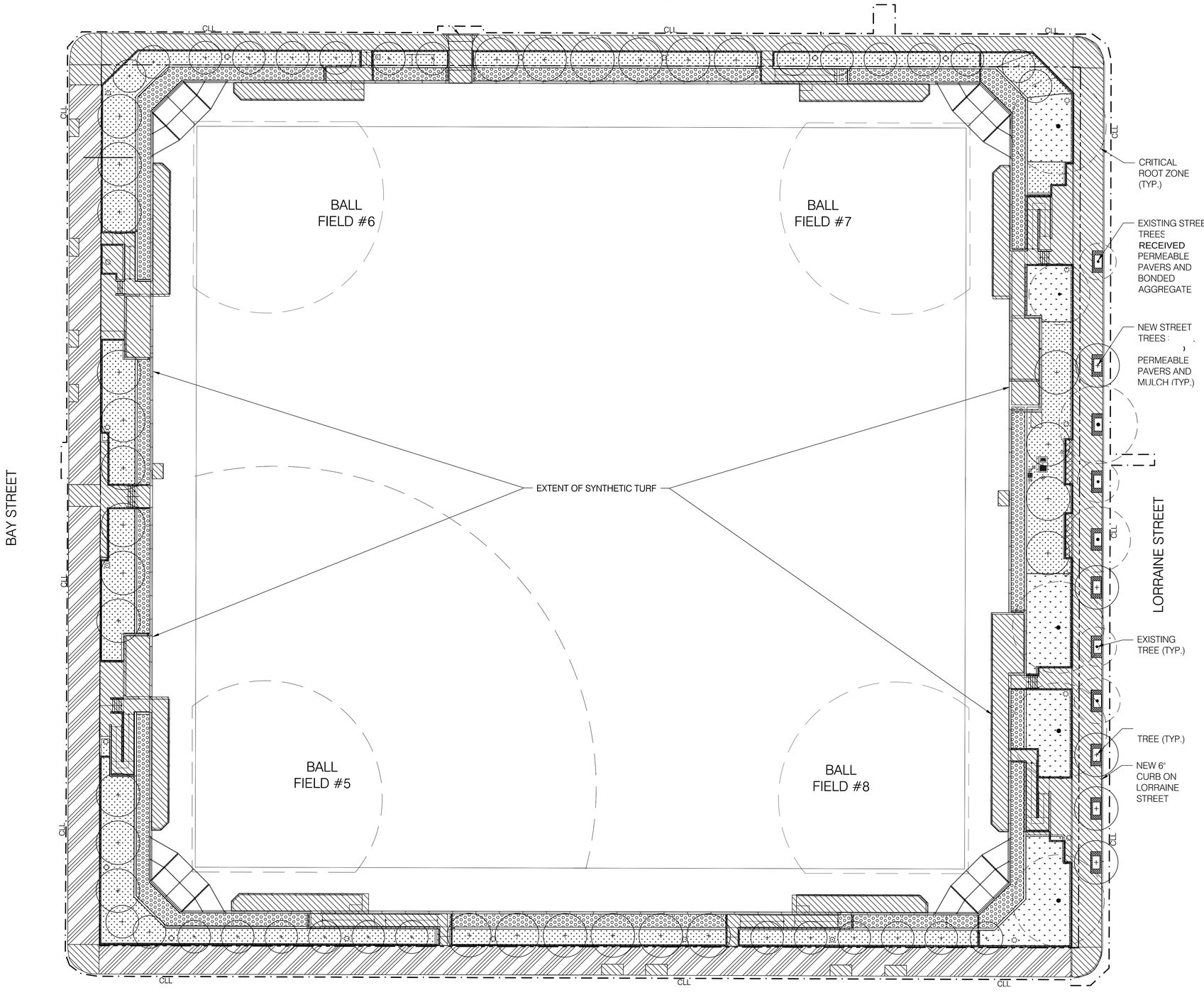
AS-BUILT
COVER CROSS SECTIONS

Drawing No.: AB-03.1

DETAIL 1
AB-03

NYC DOT Concrete Sidewalk

Scale: NTS



LEGEND (SYMBOLS NOT TO SCALE):

SHADING/HATCHING	TYPE OF COVER	REMEDIAL COVER
DETAIL 4 AB-01	SYNTHETIC TURF	MINIMUM OF 1-FOOT THICK LAYER OF CLEAN COVER WITH DEMARCATION LAYER BELOW.
DETAIL 3 AB-02	BIOSWALE	GRASSES WITH 3-INCH THICK LAYER OF MULCH ABOVE A MINIMUM 1-FOOT THICK LAYER OF CLEAN COVER WITH DEMARCATION LAYER BELOW.
DETAIL 1 AB-03	EXISTING PAVING (TO REMAIN)	APPROXIMATELY 10-INCH THICK LAYER OF CONCRETE AND SUBBASE.
DETAIL 2 AB-01 & DETAIL 1 AB-03	NEW PAVING	MINIMUM OF 10-INCH THICK LAYER OF CONCRETE AND SUBBASE WITH DEMARCATION LAYER.
DETAIL 4 AB-02	EXISTING MATURE TREES WITHIN PLANTING STRIPS	DEMARCATION LAYER. CLEAN TOPSOIL AND COVER WITH 3-INCH THICK LAYER OF MULCH AND GROUND COVER. 4-FOOT FENCE.
DETAIL 5 AB-02	NEW TREES AND/OR PLANTINGS WITHIN PLANTING STRIPS	GROUND COVER WITH 3-INCH THICK LAYER OF MULCH ABOVE A MINIMUM 1-FOOT THICK LAYER OF CLEAN COVER WITH DEMARCATION LAYER BELOW.
DETAIL 1 AB-02 & DETAILS 1 & 3 AB-01	EXISTING MATURE TREE WITHIN TREE PITS	DEMARCATION LAYER, CLEAN TOP SOIL AND COVER WITH 2-INCH THICK LAYER OF BONDED AGGREGATE OR PERMEABLE PAVERS.
DETAIL 2 AB-02 & DETAIL 1 AB-01	NEW TREE WITHIN TREE PIT	DEMARCATION LAYER, CLEAN TOP SOIL AND COVER WITH MULCH AND PERMEABLE PAVERS.

NEW TREE

EXISTING TREE

DETAIL No.
DETAIL SHEET No.

CLL CONTRACT LIMIT LINE

NOTES:

1. REFER TO DETAIL SHEETS FOR MORE DETAIL REGARDING REMEDIAL COVER SYSTEM.
2. UTILITIES NOT SHOWN.

STATE OF NEW YORK
FRANK P. VILLANO
078540
LICENSED PROFESSIONAL ENGINEER

Frank P. Villano

CONTRACT No. B126-116M

THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5-8 BOUNDED BY LORRAINE, BAY, HICKS AND HENRY STREETS IN THE RED HOOK RECREATION AREA

BOROUGH OF BROOKLYN

LAWS CONSTRUCTION

Sitework - Utilities
Heavy Highway - Parks

34 IRVINGTON STREET
PLEASANTVILLE, NEW YORK 10570
PHONE: (914) 741-2100
www.lawscc.com

DATE: 7/17/2023

AS-BUILT
COVER CROSS SECTIONS

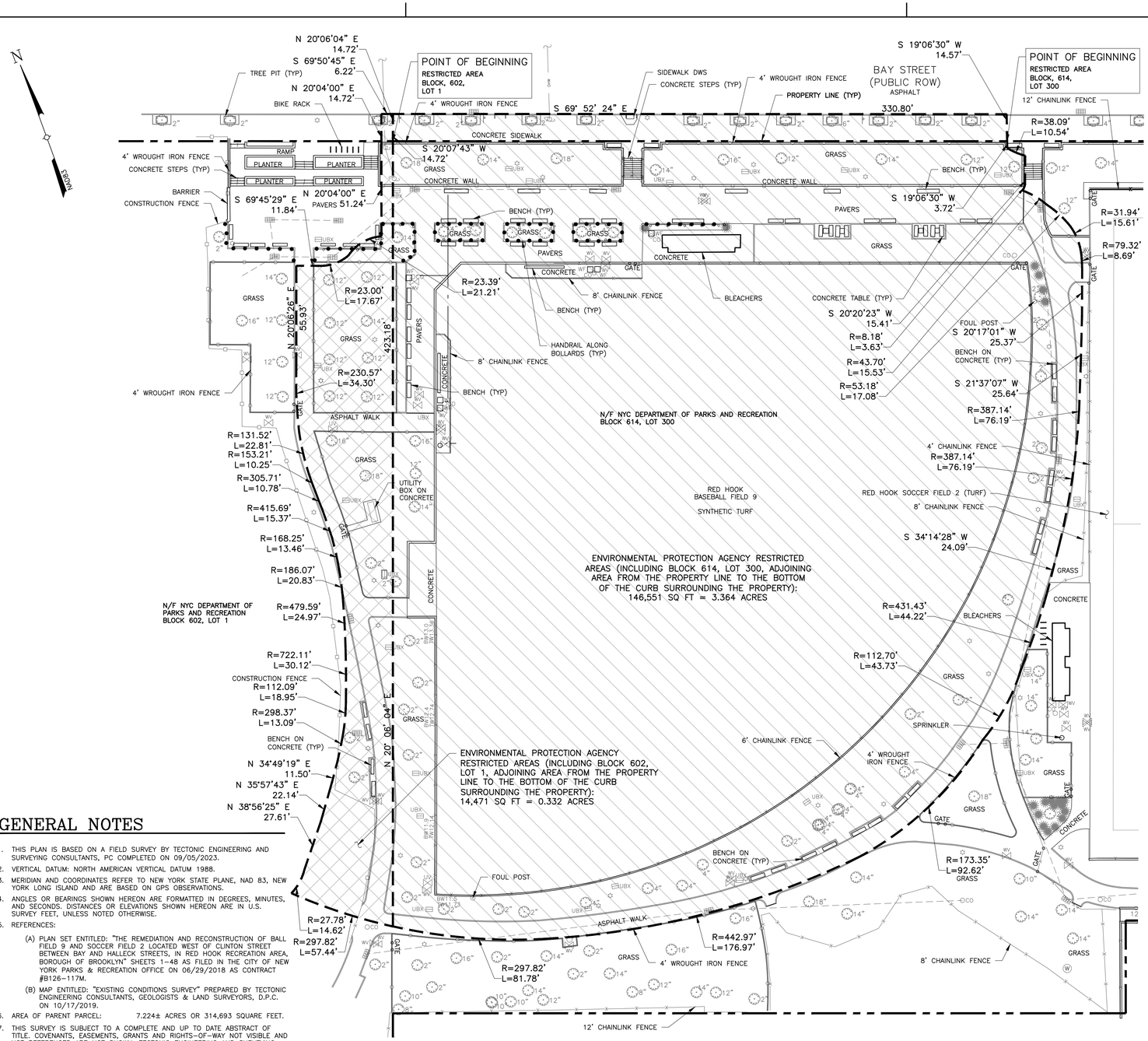
Drawing No.: A-04.0

AS-BUILT CERTIFICATION

CONSTRUCTED BY:	LAWS CONSTRUCTION CORP
CONSTRUCTED FOR:	CITY OF NEW YORK DEPARTMENT PARKS & RECREATION
PROJECT TITLE:	THE REMEDIATION AND RECONSTRUCTION OF BALL FIELDS 5-8 BOUNDED BY LORRAINE, BAY HICKS, AND HENRY STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN
CONTRACT No.:	B126-116M
DATE:	7/25/2023

NORTH
0 5' 10' 20' 40'

REMEDIAL PLAN
SCALE: 1"=20'-0"



EPA RESTRICTED AREA DESCRIPTION

BLOCK 614, LOT 300

BEING IN THE BOROUGH OF BROOKLYN, COUNTY OF KINGS, CITY AND STATE OF NEW YORK AS DEPICTED IN THE FINAL SECTION MAP # 32 AND BEING LAID OUT INSIDE RED HOOK PARK BOUNDED AND DESCRIBED AS FOLLOWS;

BEGINNING AT A POINT ON THE SOUTHERLY SIDE OF BAY STREET (80 FEET WIDE), SAID POINT BEING 276.95 FEET FROM THE WESTERLY SIDE OF CLINTON STREET (80 FEET WIDE); THENCE,

THROUGH BLOCK 614, LOT 300, THE FOLLOWING FIVE (5) COURSES.

SOUTH 19 DEGREES 08 MINUTES 09 SECONDS WEST A DISTANCE OF 3.72 FEET THROUGH BLOCK 614 LOT 300, TO A POINT OF CURVATURE; THENCE,

SOUTHEASTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 38.09 FEET AND AN ARC LENGTH OF 10.54 FEET A CHORD BEARING AND DISTANCE OF S46°53'07"E, 10.51 FEET, TO A POINT; THENCE,

SOUTH 20 DEGREES 22 MINUTES 02 SECONDS WEST A DISTANCE OF 15.41 FEET, TO A POINT OF CURVATURE; THENCE,

SOUTHWESTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 8.18 FEET AND AN ARC LENGTH OF 3.63 FEET A CHORD BEARING AND DISTANCE OF S42°37'03"W, 3.60 FEET, TO A POINT OF CURVATURE;

SOUTHEASTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 43.70 FEET AND AN ARC LENGTH OF 15.53 FEET A CHORD BEARING AND DISTANCE OF S39°29'14"E, 15.45 FEET, TO A POINT OF CURVATURE; THENCE,

GENERALLY, ALONG THE EXTERIOR BOTTOM LINE OF CURBED SIDEWALK AROUND BALLFIELD 9 AND THROUGH AFORESAID BLOCK 614, LOT 300, THE FOLLOWING NINE (9) COURSES.

SOUTHEASTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 53.18 FEET AND AN ARC LENGTH OF 17.08 FEET A CHORD BEARING AND DISTANCE OF S27°12'31"E, 17.00 FEET, TO A POINT OF CURVATURE; THENCE,

SOUTHEASTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 31.94 FEET AND AN ARC LENGTH OF 15.61 FEET A CHORD BEARING AND DISTANCE OF S01°47'45"E, 15.46 FEET, TO A POINT OF CURVATURE; THENCE,

SOUTHEASTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 79.32 FEET AND AN ARC LENGTH OF 8.69 FEET A CHORD BEARING AND DISTANCE OF S16°27'40"W, 8.68 FEET, TO A POINT; THENCE,

SOUTH 20 DEGREES 18 MINUTES 40 SECONDS WEST A DISTANCE OF 25.37 FEET, TO A POINT; THENCE

SOUTH 21 DEGREES 38 MINUTES 46 SECONDS WEST A DISTANCE OF 25.64 FEET, TO A POINT; THENCE,

SOUTH 22 DEGREES 09 MINUTES 21 SECONDS WEST A DISTANCE OF 24.26 FEET, TO A POINT OF CURVATURE; THENCE,

SOUTHWESTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 387.14 FEET AND AN ARC LENGTH OF 76.19 FEET A CHORD BEARING AND DISTANCE OF S28°36'18"W, 76.07 FEET, TO A POINT; THENCE,

SOUTH 34 DEGREES 16 MINUTES 07 SECONDS WEST A DISTANCE OF 24.09 FEET, TO A POINT OF CURVATURE; THENCE,

SOUTHWESTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 431.43 FEET AND AN ARC LENGTH OF 44.22 FEET A CHORD BEARING AND DISTANCE OF S38°47'16"W, 44.20 FEET, TO A POINT; THENCE,

SOUTHWESTERLY THROUGH SIDEWALK INTERSECTION, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 112.70 FEET AND AN ARC LENGTH OF 43.73 FEET A CHORD BEARING AND DISTANCE OF S48°44'08"W, 43.45 FEET, TO A POINT OF CURVATURE, SAID POINT BEING GENERALLY ALONG BOTTOM LINE OF CURB; THENCE,

SOUTHWESTERLY, ALONG AFORESAID BOTTOM LINE OF CURB AND BEYOND, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 173.35 FEET AND AN ARC LENGTH OF 92.62 FEET A CHORD BEARING AND DISTANCE OF S66°41'52"W, 91.52 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHWESTERLY, ALONG THE AFORESAID BOTTOM LINE OF CURB AND BEYOND, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 442.97 FEET AND AN ARC LENGTH OF 176.97 FEET A CHORD BEARING AND DISTANCE OF N84°26'41"W, 175.79 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHWESTERLY, ALONG AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 297.82 FEET AND AN ARC LENGTH OF 81.78 FEET, A CHORD BEARING AND DISTANCE OF N65°08'00"W, 81.52 FEET, TO A POINT, SAID POINT BEING ALONG THE EASTERLY PROPERTY LINE OF BLOCK 602, LOT 1; THENCE,

NORTH 20 DEGREES 07 MINUTES 43 SECONDS EAST A DISTANCE OF 423.18 FEET, TO A POINT IN THE SAME, SAID POINT BEING THE INTERSECTION OF THE SOUTHERLY RIGHT OF WAY (R.O.W.) OF BAY STREET (80 FEET WIDE) AND SOUTHEASTERLY CORNER OF BLOCK 602, LOT 1; THENCE,

NORTH 20 DEGREES 07 MINUTES 43 SECONDS EAST A DISTANCE 14.72 FEET GENERALLY, TO A POINT ALONG THE SOURTHERLY BOTTOM LINE OF STEEL FACED CURB IN BAY STREET (80 FEET WIDE); THENCE,

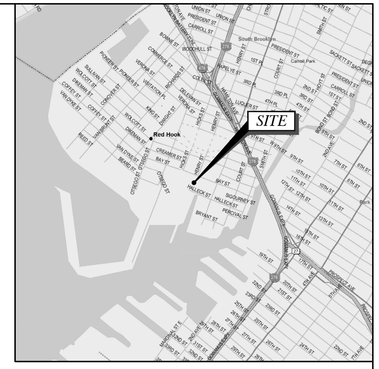
ALONG THE BOTTOM LINE OF STEEL FACED CURB ON THE SOUTHERLY SIDE OF BAY STREET (80 FEET WIDE), SOUTH 69 DEGREES 50 MINUTES 45 SECONDS EAST A DISTANCE 330.80 FEET, TO A POINT THEREIN; THENCE,

SOUTH 19 DEGREES 08 MINUTES 09 SECONDS WEST A DISTANCE OF 14.57 FEET, TO THE POINT AND PLACE OF BEGINNING.

SAID PREMISES COVERING AN AREA OF 146,551 SQUARE FEET EQUALS 3.364 ACRES.

SAID PREMISES BEING A PORTION OF BLOCK 614 LOT 300 AND THE ADJOINING AREA FROM THE PROPERTY LINE TO THE BOTTOM OF THE SOUTHERLY CURB LINE WITHIN BAY STREET (80 FEET WIDE).

AREA OF PREMISES COVERING A PORTION OF BLOCK 614, LOT 300 IS 141,705 SQUARE FEET, EQUALS 3.253 ACRES.



LOCATION MAP

SCALE: 1" = 2000'

EPA RESTRICTED AREA DESCRIPTION

BLOCK 602, LOT 1

BEING IN THE BOROUGH OF BROOKLYN, COUNTY OF KINGS, CITY AND STATE OF NEW YORK AS DEPICTED IN THE FINAL SECTION MAP # 32 AND BEING LAID OUT INSIDE RED HOOK PARK BOUNDED AND DESCRIBED AS FOLLOWS;

BEGINNING AT A POINT IN THE SOUTHERLY SIDE OF BAY STREET (80 FEET WIDE) AND THE NORTHWESTERLY CORNER OF BLOCK 614, LOT 300. SAID POINT BEING 608.00 FEET WEST FROM WESTERLY SIDE OF CLINTON STREET (80 FEET WIDE); THENCE,

ALONG THE WESTERLY PROPERTY LINE OF AFORESAID BLOCK 614, LOT 300, SOUTH 20 DEGREES 07 MINUTES 43 SECONDS WEST A DISTANCE 423.18 FEET TO A POINT OF CURVATURE IN THE SAME; THENCE,

NORTHWESTERLY, THROUGH BLOCK 602, LOT 1, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 297.82 FEET AND AN ARC LENGTH OF 57.44 FEET TO A CHORD BEARING AND DISTANCE OF N51°44'31"W, 57.35 FEET, TO A POINT IN THE SAME; THENCE,

THROUGH AFORESAID BLOCK 602, LOT 1 AND GENERALLY, ALONG THE NORTHERLY BOTTOM LINE OF CURBED SIDEWALK AROUND BALLFIELD 9, THE FOLLOWING TWENTY (20) COURSES;

NORTHWESTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 27.78 FEET AND AN ARC LENGTH OF 14.62 FEET TO A CHORD BEARING AND DISTANCE OF N48°57'46"E, 14.45 FEET, TO A POINT; THENCE,

NORTH 38 DEGREES 56 MINUTES 25 SECONDS EAST A DISTANCE 27.61 FEET, TO A POINT; THENCE,

NORTH 35 DEGREES 57 MINUTES 43 SECONDS EAST A DISTANCE 22.14 FEET, TO A POINT; THENCE,

NORTH 34 DEGREES 49 MINUTES 19 SECONDS EAST A DISTANCE 11.50 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 298.37 FEET AND AN ARC LENGTH OF 13.09 FEET A CHORD BEARING AND DISTANCE OF N31°48'40"E, 13.09 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 112.09 FEET AND AN ARC LENGTH OF 18.95 FEET A CHORD BEARING AND DISTANCE OF N25°42'41"E, 18.93 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 722.11 FEET AND AN ARC LENGTH OF 30.12 FEET A CHORD BEARING AND DISTANCE OF N19°40'25"E, 30.12 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 479.59 FEET AND AN ARC LENGTH OF 24.97 FEET A CHORD BEARING AND DISTANCE OF N16°59'13"E, 24.97 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 186.07 FEET AND AN ARC LENGTH OF 20.83 FEET A CHORD BEARING AND DISTANCE OF N12°17'19"E, 20.82 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 168.25 FEET AND AN ARC LENGTH OF 13.46 FEET A CHORD BEARING AND DISTANCE OF N06°47'24"E, 13.46 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 415.69 FEET AND AN ARC LENGTH OF 15.37 FEET A CHORD BEARING AND DISTANCE OF N01°06'45"E, 15.37 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHWESTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 305.71 FEET AND LENGTH 10.78 FEET A CHORD BEARING AND DISTANCE OF N00°57'24"W, 10.78 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHWESTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 153.21 FEET AND LENGTH 10.25 FEET A CHORD BEARING AND DISTANCE OF N00°02'57"W, 10.25 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 131.52 FEET AND LENGTH 22.81 FEET A CHORD BEARING AND DISTANCE OF N06°50'11"E, 22.78 FEET, TO A POINT OF CURVE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 230.57 FEET AND LENGTH 34.30 FEET A CHORD BEARING AND DISTANCE OF N17°27'30"E, 34.27 FEET, TO A POINT; THENCE,

NORTH 20 DEGREES 06 MINUTES 26 SECONDS EAST A DISTANCE 55.93 FEET, TO A POINT; THENCE,

SOUTH 69 DEGREES 45 MINUTES 29 SECONDS EAST A DISTANCE 11.84 FEET, TO A POINT OF CURVATURE; THENCE,

SOUTHEASTERLY, AN ARC BEARING TO THE LEFT WITH A RADIUS OF 23.00 FEET AND AN ARC LENGTH OF 17.67 FEET A CHORD BEARING AND DISTANCE OF S88°59'06"E, 17.24 FEET, TO A POINT OF CURVATURE; THENCE,

NORTHEASTERLY, AN ARC BEARING TO THE RIGHT WITH A RADIUS OF 23.39 FEET AN ARC LENGTH OF 21.21 FEET A CHORD BEARING AND DISTANCE OF N79°59'18"E, 20.49 FEET, TO A POINT; THENCE,

NORTH 20 DEGREES 04 MINUTES 00 SECONDS EAST A DISTANCE 51.24 FEET, TO A POINT IN THE SOUTHERLY RIGHT OF WAY (R.O.W.) OF BAY STREET (80 FEET WIDE); THENCE,

NORTH 20 DEGREES 04 MINUTES 00 SECONDS EAST A DISTANCE 14.72 FEET GENERALLY, TO A POINT IN THE SOUTHERLY BOTTOM LINE OF STEEL FACED CURB IN BAY STREET (80 FEET WIDE); THENCE,

ALONG THE BOTTOM LINE OF STEEL FACED CURB ON THE SOUTHERLY SIDE OF BAY STREET (80 FEET WIDE), SOUTH 69 DEGREES 50 MINUTES 45 SECONDS EAST A DISTANCE 6.22 FEET TO A POINT THEREIN; THENCE,

SOUTH 20 DEGREES 07 MINUTES 43 SECONDS WEST A DISTANCE OF 14.72 FEET, TO THE POINT AND PLACE OF BEGINNING.

SAID PREMISES COVERING AN AREA OF 14,471 SQUARE FEET EQUALS 0.332 ACRES.

SAID PREMISES BEING A PORTION OF BLOCK 602 LOT 1 AND THE ADJOINING AREA FROM THE PROPERTY LINE TO THE BOTTOM OF THE SOUTHERLY CURB LINE WITHIN BAY STREET (80 FEET WIDE).

AREA OF PREMISES COVERING A PORTION OF BLOCK 602, LOT 1 IS 14,379 SQUARE FEET, EQUALS 0.330 ACRES.

GENERAL NOTES

1. THIS PLAN IS BASED ON A FIELD SURVEY BY TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, PC COMPLETED ON 09/05/2023.
2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988.
3. MERIDIAN AND COORDINATES REFER TO NEW YORK STATE PLANE, NAD 83, NEW YORK LONG ISLAND AND ARE BASED ON GPS OBSERVATIONS.
4. ANGLES OR BEARINGS SHOWN HEREON ARE FORMATTED IN DEGREES, MINUTES, AND SECONDS. DISTANCES OR ELEVATIONS SHOWN HEREON ARE IN U.S. SURVEY FEET, UNLESS NOTED OTHERWISE.
5. REFERENCES:
   (A) PLAN SET ENTITLED: "THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS, IN RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN" SHEETS 1–48 AS FILED IN THE CITY OF NEW YORK PARKS & RECREATION OFFICE ON 06/29/2018 AS CONTRACT #B126–117M.
   (B) MAP ENTITLED: "EXISTING CONDITIONS SURVEY" PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. ON 10/17/2019.
6. AREA OF PARENT PARCEL: 7.224± ACRES OR 314,693 SQUARE FEET.
7. THIS SURVEY IS SUBJECT TO A COMPLETE AND UP TO DATE ABSTRACT OF TITLE. COVENANTS, EASEMENTS, GRANTS AND RIGHTS–OF–WAY NOT VISIBLE AND NOT REFERENCED ARE NOT SHOWN. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, PC SHALL NOT BE LIABLE FOR THE DISTURBANCE TO ANYONE'S RIGHT TO THE USE OF THE PROPERTY OR THE DISTURBANCE OF ANY UTILITIES NOT SHOWN OR REFERENCED ON THIS SURVEY PLAT.
8. UNDERGROUND IMPROVEMENTS IF ANY AND NOT VISIBLE AT THE TIME OF THE SURVEY, HAVE NOT BEEN LOCATED IN THE FIELD OR SHOWN HEREON.
9. LOCATIONS OF ALL UTILITIES AND SUBSTRUCTURES ARE APPROXIMATE ONLY BASED ON SURFACE EVIDENCE AND EXISTING PLANS. THE INFORMATION GIVEN ON THE SURVEY PERTAINING TO UTILITIES AND SUBSTRUCTURES IS NOT CERTIFIED TO ACCURACY OR COMPLETENESS. CONSULT WITH THE APPROPRIATE COMPANY OR AGENCY BEFORE DESIGNING OR CONSTRUCTING IMPROVEMENTS. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, P.C. WILL NOT BE RESPONSIBLE FOR ANY DAMAGE SUBSEQUENTLY CAUSED TO PERSONNEL, STRUCTURES, OR UTILITIES.
10. THIS SURVEY PLAT IS FOR SITE PLAN/ENGINEERING PURPOSES ONLY AND IS NOT INTENDED TO BE USED FOR THE TRANSFER OF TITLE.
11. THE SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE "X" AS PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR THE BOROUGH OF BROOKLYN, STATE OF NEW YORK, COMMUNITY PANEL NO # 3604970192F, EFFECTIVE DATE OF 09/05/2007. THIS DETERMINATION IS BASED ON SCALED MAP LOCATION AND GRAPHIC PLOTTING.
12. THE PROPERTY LINES SHOWN HEREON ARE BASED ON REFERENCE 5(A).

DESCRIPTION OF THE ENGINEERING AND INSTITUTIONAL CONTROLS

I. ENGINEERING CONTROLS
1. EXPOSURE TO REMAINING CONTAMINATION AT THE SITE IS PREVENTED BY A COVER SYSTEM PLACED OVER THE SITE. THIS COVER SYSTEM IS COMPRISED OF A MINIMUM OF A 12–INCH THICK SYNTHETIC TURF, CLEAN COVER, PAVING, BONDED AGGREGATED AND PERMEABLE PAVERS, MULCH, GROUND COVER AND/OR SURROUNDING FENCING UNDERLAIN BY A PHYSICAL DEMARCATION LAYER CONSISTING OF ORANGE SNOW FENCING OR EQUIVALENT MATERIAL. THE COVER SYSTEM MATERIAL TYPES AND THICKNESSES ACROSS THE SITE ARE INDICATED ON THE FINAL CONDITIONS SURVEY.
II. INSTITUTIONAL CONTROLS
1. THE PROPERTY MAY BE USED FOR RESTRICTED RESIDENTIAL USE;
2. ALL ENGINEERING CONTROLS (ECS) MUST BE OPERATED AND MAINTAINED AS SPECIFIED IN THE SITE MANAGEMENT PLAN (SMP);
3. ALL ECS MUST BE INSPECTED AT A FREQUENCY AND IN A MANNER DEFINED IN THE SMP;
4. THE USE OF GROUNDWATER UNDERLYING THE PROPERTY IS PROHIBITED WITHOUT NECESSARY WATER QUALITY TREATMENT AS DETERMINED BY THE NYSDOH OR THE NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE TO RENDER IT SAFE FOR USE AS DRINKING WATER OR FOR INDUSTRIAL PURPOSES, AND THE USER MUST FIRST NOTIFY AND OBTAIN WRITTEN APPROVAL TO DO SO FROM NYSDEC.
5. DATA AND INFORMATION PERTINENT TO SITE MANAGEMENT MUST BE REPORTED AT THE FREQUENCY AND IN A MANNER AS DEFINED IN THE SMP;
6. ALL FUTURE ACTIVITIES THAT WILL DISTURB REMAINING CONTAMINATED MATERIAL MUST BE CONDUCTED IN ACCORDANCE WITH THE SMP;
7. MONITORING TO ASSESS THE PERFORMANCE AND EFFECTIVENESS OF THE REMEDY MUST BE PERFORMED AS DEFINED IN THE SMP;
8. OPERATION, MAINTENANCE, MONITORING, INSPECTION, AND REPORTING OF ANY PHYSICAL COMPONENT OF THE REMEDY SHALL BE PERFORMED AS DEFINED IN THE SMP;
9. ACCESS TO THE SITE MUST BE PROVIDED TO AGENTS, EMPLOYEES OR OTHER REPRESENTATIVES OF THE STATE OF NEW YORK WITH REASONABLE PRIOR NOTICE TO THE PROPERTY OWNER TO ASSURE COMPLIANCE WITH THE RESTRICTIONS IDENTIFIED BY THE DEED RESTRICTIONS, AND
10. VEGETABLE GARDENS AND FARMING ON THE SITE ARE PROHIBITED.

LEGEND

EPA RESTRICTED AREA BLOCK 614, LOT 300

EPA RESTRICTED AREA BLOCK 602, LOT 1

CONTRACT NUMBER: B126–117M

Rev	Date	Revision	Approved
0	09/28/23	ISSUED	

DRAWING CONTROL

Designed by:	Drawn by:	Checked by:
N/A	RD	DS

Purpose	Released by	Date
○ For Comment		
○ For Approval		
○ For Bid		
○ For Construction		

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P.O. Box 37
Mountainville, NY 10953
Phone: (845) 534-5959
(800) 829-6531
www.tectonicengineering.com

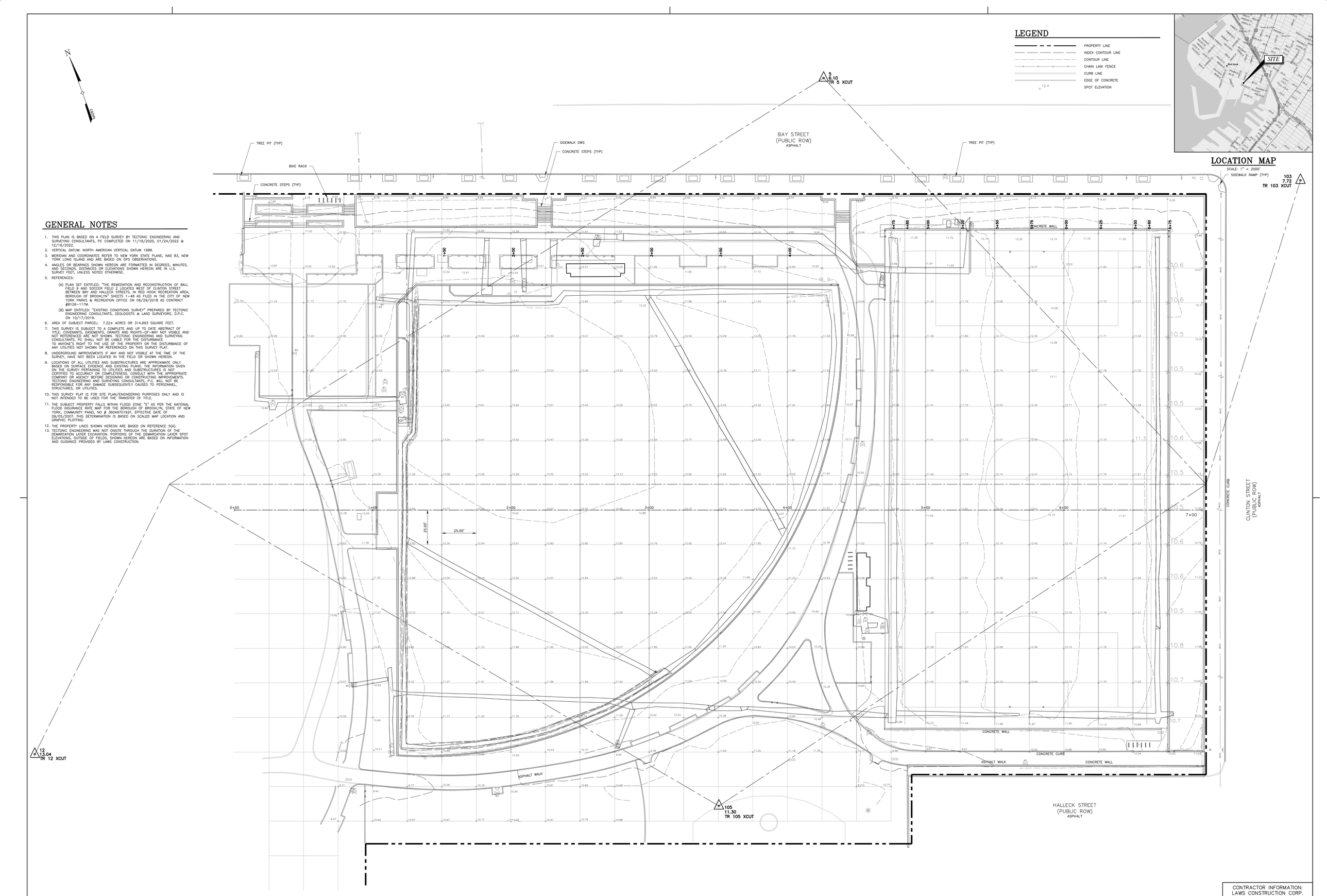
STATE OF NEW YORK · JAY KIMLER · LICENSED LAND SURVEYOR · NO 050695

JAY M. KIMLER, P.L.S. 50695

ENVIRONMENTAL EASEMENT BOUNDARY SURVEY

THE REMEDIATION AND RECONSTRUCTION OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN

Date	Work Order	Drawing No.	Rev
09/28/2023	10085.01	SU–113	0
Scale 1" = 30'			



GENERAL NOTES

1. THIS PLAN IS BASED ON A FIELD SURVEY BY TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, PC COMPLETED ON 11/19/2020, 01/24/2022 & 12/16/2022.
2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988.
3. MERIDIAN AND COORDINATES REFER TO NEW YORK STATE PLANE, NAD 83, NEW YORK LONG ISLAND AND ARE BASED ON GPS OBSERVATIONS.
4. ANGLES OR BEARINGS SHOWN HEREON ARE FORMATTED IN DEGREES, MINUTES, AND SECONDS. DISTANCES OR ELEVATIONS SHOWN HEREON ARE IN U.S. SURVEY FEET, UNLESS NOTED OTHERWISE.
5. REFERENCES:
   (A) PLAN SET ENTITLED: "THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS, IN RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN" SHEETS 1-48 AS FILED IN THE CITY OF NEW YORK PARKS & RECREATION OFFICE ON 06/29/2018 AS CONTRACT #B126-117M.
   (B) MAP ENTITLED: "EXISTING CONDITIONS SURVEY" PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. ON 10/17/2019.
6. AREA OF SUBJECT PARCEL: 7.22± ACRES OR 314,693 SQUARE FEET.
7. THIS SURVEY IS SUBJECT TO A COMPLETE AND UP TO DATE ABSTRACT OF TITLE, COVENANTS, EASEMENTS, GRANTS AND RIGHTS-OF-WAY NOT VISIBLE AND NOT REFERENCED ARE NOT SHOWN. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, PC SHALL NOT BE LIABLE FOR THE DISTURBANCE TO ANYONE'S RIGHT TO THE USE OF THE PROPERTY OR THE DISTURBANCE OF ANY UTILITIES NOT SHOWN OR REFERENCED ON THIS SURVEY PLAT.
8. UNDERGROUND IMPROVEMENTS IF ANY AND NOT VISIBLE AT THE TIME OF THE SURVEY, HAVE NOT BEEN LOCATED IN THE FIELD OR SHOWN HEREON.
9. LOCATIONS OF ALL UTILITIES AND SUBSTRUCTURES ARE APPROXIMATE ONLY BASED ON SURFACE EVIDENCE AND EXISTING PLANS. THE INFORMATION GIVEN ON THE SURVEY PERTAINING TO UTILITIES AND SUBSTRUCTURES IS NOT CERTIFIED TO ACCURACY OR COMPLETENESS. CONSULT WITH THE APPROPRIATE COMPANY OR AGENCY BEFORE DESIGNING OR CONSTRUCTING IMPROVEMENTS. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, P.C. WILL NOT BE RESPONSIBLE FOR ANY DAMAGE SUBSEQUENTLY CAUSED TO PERSONNEL, STRUCTURES, OR UTILITIES.
10. THIS SURVEY PLAT IS FOR SITE PLAN/ENGINEERING PURPOSES ONLY AND IS NOT INTENDED TO BE USED FOR THE TRANSFER OF TITLE.
11. THE SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE "X" AS PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR THE BOROUGH OF BROOKLYN, STATE OF NEW YORK, COMMUNITY PANEL NO # 36047G1192F, EFFECTIVE DATE OF 09/05/2007. THIS DETERMINATION IS BASED ON SCALED MAP LOCATION AND GRAPHIC PLOTTING.
12. THE PROPERTY LINES SHOWN HEREON ARE BASED ON REFERENCE 5(A).
13. TECTONIC ENGINEERING WAS NOT ONSITE THROUGH THE DURATION OF THE DEMARCATION LAYER EXCAVATION. PORTIONS OF THE DEMARCATION LAYER SPOT ELEVATIONS, OUTSIDE OF FIELDS, SHOWN HEREON ARE BASED ON INFORMATION AND GUIDANCE PROVIDED BY LAWS CONSTRUCTION.

CONTRACTOR INFORMATION:
LAWS CONSTRUCTION CORP.
34 IRVINGTON STREET
PLEASANTVILLE, NY 10570

CONTRACT NUMBER: B126-117M

0 1 2 3
ORIGINAL SIZE IN INCHES

Rev	Date	Revision	Approved
0	02/23/23	ISSUED	
1	03/09/23	PER COMMENTS	
2	12/19/23	PER COMMENTS	

DRAWING CONTROL

Designed by:	N/A	Drawn by:	RD	Checked by:	DS

Purpose	Released by	Date
○ For Comment		
○ For Approval		
○ For Bid		
○ For Construction		

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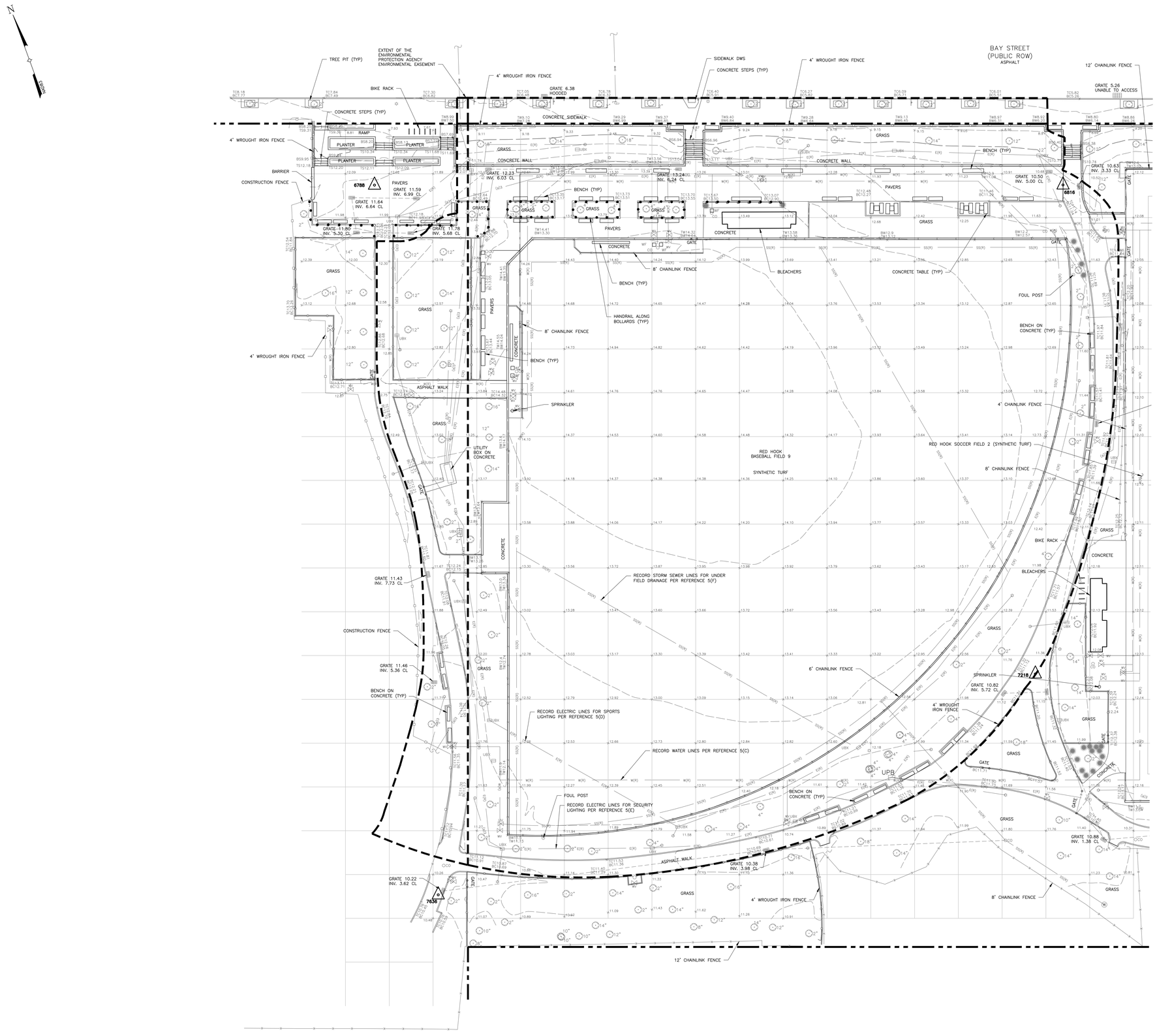
STATE OF NEW YORK · JAY M. KIMLER · LICENSED LAND SURVEYOR · NO. 050695
JAY M. KIMLER, P.L.S. 50695

DEMARCATION LAYER SURVEY

THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN

Date	Work Order	Drawing No.	Rev
12/19/2023	10085.01	SU-106	2
Scale 1" = 20'			



LOCATION MAP

SCALE: 1" = 2000'

GENERAL NOTES

1. THIS PLAN IS BASED ON A FIELD SURVEY BY TTECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. COMPLETED ON 09/05/2023.
2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988.
3. MERIDIAN AND COORDINATES REFER TO NEW YORK STATE PLANE, NAD 83, NEW YORK LONG ISLAND AND ARE BASED ON GPS OBSERVATIONS.
4. ANGLES OR BEARINGS SHOWN HEREON ARE FORMATTED IN DEGREES, MINUTES, AND SECONDS. DISTANCES OR ELEVATIONS SHOWN HEREON ARE IN U.S. SURVEY FEET, UNLESS NOTED OTHERWISE.
5. REFERENCES:
   - (A) PLAN SET ENTITLED: "THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS, IN RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN" SHEETS 1-48 AS FILED IN THE CITY OF NEW YORK PARKS & RECREATION OFFICE ON 06/29/2018 AS CONTRACT #B126-117M.
   - (B) MAP ENTITLED: "EXISTING CONDITIONS SURVEY" PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. ON 10/17/2019.
   - (C) MAP ENTITLED: "WATER SUPPLY LAYOUT PLAN" PREPARED BY TRC ENGINEERS, INC. ON 06/29/18.
   - (D) MAP ENTITLED: "SPORTS LIGHTING PLAN" PREPARED BY TRC ENGINEERS, INC. ON 06/29/18.
   - (E) MAP ENTITLED: "SITE SECURITY LIGHTING PLAN" PREPARED BY TRC ENGINEERS, INC. ON 06/29/18.
   - (F) MAP ENTITLED: "FIELD UNDERDRAINAGE PLAN 1" PREPARED BY TRC ENGINEERS, INC. ON 06/29/18.
6. AREA OF PARENT PARCEL: 7.224± ACRES OR 314,693 SQUARE FEET.
7. THIS SURVEY IS SUBJECT TO A COMPLETE AND UP TO DATE ABSTRACT OF TITLE, COVENANTS, EASEMENTS, GRANTS AND RIGHTS-OF-WAY NOT VISIBLE AND NOT REFERENCED ARE NOT SHOWN. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, PC SHALL NOT BE LIABLE FOR THE DISTURBANCE TO ANYONE'S RIGHT TO THE USE OF THE PROPERTY OR THE DISTURBANCE OF ANY UTILITIES NOT SHOWN OR REFERENCED ON THIS SURVEY PLAT.
8. UNDERGROUND IMPROVEMENTS IF ANY AND NOT VISIBLE AT THE TIME OF THE SURVEY, HAVE NOT BEEN LOCATED IN THE FIELD OR SHOWN HEREON.
9. LOCATIONS OF ALL UTILITIES AND SUBSTRUCTURES ARE APPROXIMATE ONLY BASED ON SURFACE EVIDENCE AND EXISTING PLANS. THE INFORMATION GIVEN ON THE SURVEY PERTAINING TO UTILITIES AND SUBSTRUCTURES IS NOT CERTIFIED TO ACCURACY OR COMPLETENESS. CONSULT WITH THE APPROPRIATE COMPANY OR AGENCY BEFORE DESIGNING OR CONSTRUCTING IMPROVEMENTS. TECTONIC ENGINEERING AND SURVEYING CONSULTANTS, P.C. WILL NOT BE RESPONSIBLE FOR ANY DAMAGE SUBSEQUENTLY CAUSED TO PERSONNEL, STRUCTURES, OR UTILITIES.
10. THIS SURVEY PLAT IS FOR SITE PLAN/ENGINEERING PURPOSES ONLY AND IS NOT INTENDED TO BE USED FOR THE TRANSFER OF TITLE.
11. THE SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE "X" AS PER THE NATIONAL FLOOD INSURANCE RATE MAP FOR THE BOROUGH OF BROOKLYN, STATE OF NEW YORK, COMMUNITY PANEL NO # 3604970192F, EFFECTIVE DATE OF 09/05/2007. THIS DETERMINATION IS BASED ON SCALED MAP LOCATION AND GRAPHIC PLOTTING.
12. THE PROPERTY LINES SHOWN HEREON ARE BASED ON REFERENCE 5(A).
13. ALL RECORD UTILITY LINES SHOWN HEREON ARE BASED ON CAD FILES PROVIDED, AND NOT FIELD LOCATED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C.

LEGEND

PROPERTY LINE		BOLLARD	
EASEMENT LINE		GATEPOST	
INDEX CONTOUR LINE		UTILITY POLE	
CONTOUR LINE		CATCH BASIN	
CHAIN LINK FENCE		CLEAN OUT	
CONSTRUCTION FENCE		MANHOLE (UNKNOWN)	
WROUGHT IRON FENCE		WATER VALVE	
CURB LINE		UNKNOWN VALVE	
CURB TYPE TRANSITION		HYDRANT	
EDGE OF CONCRETE		STANDPIPE	
EDGE OF GRAVEL		SIGN	
EDGE OF PAVEMENT		LIGHT POST	
GUIDE RAIL		PEDESTRIAN SIGNAL	OPS
OHW OVERHEAD WIRES		UNKNOWN PULLBOX	UPX
STORM SEWER		WATER FOUNTAIN	WF
E(R) ELECTRIC (UNDERGROUND) (RECORD)		TREE	
W(R) WATER (UNDERGROUND) (RECORD)		ORNAMENT	
SS(R) STORM SEWER (RECORD)		CONTROL POINT	
STRUCTURE			
BC/TC 11.46 / 11.92	BOTTOM/TOP OF CURB ELEVATION		
BW/TW 11.54 / 12.01	BOTTOM/TOP OF WALL ELEVATION		
11.9	SPOT ELEVATION		

BENCHMARK TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
6788	184221.16	982668.17	11.96	TR 6788 XCUT
6816	184086.13	983037.44	10.84	TR 6816 XCUT
7218	183829.43	982926.69	11.19	TR 7218 MN
7636	183828.19	982563.12	10.21	TR 7636 MN

CONTRACT NUMBER: B126-117M

Rev	Date	Revision	Approved
0	12/11/23	ISSUED	

DRAWING CONTROL

Designed by:	N/A	Drawn by:	RD	Checked by:	DS

Purpose	Released by	Date
○ For Comment		
○ For Approval		
○ For Bid		
○ For Construction		

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Tectonic Engineering Consultants, Geologists & Land Surveyors,D.P.C.
70 Pleasant Hill Road
P.O. Box 37
Mountainville, NY 10953
Phone: (845) 534-5959*
(800) 829-6531
www.tectonicengineering.com

STATE OF NEW YORK — JAY M. KOWLER — NO. 050695 — LICENSED LAND SURVEYOR

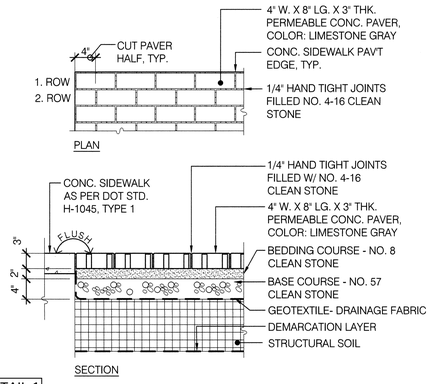
JAY M. KOWLER, P.L.S. 50695

FINAL CONDITIONS SURVEY

THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN

Date	Work Order	Drawing No.	Rev
12/11/2023	10085.01	SU-111	0

Scale: 1" = 20'

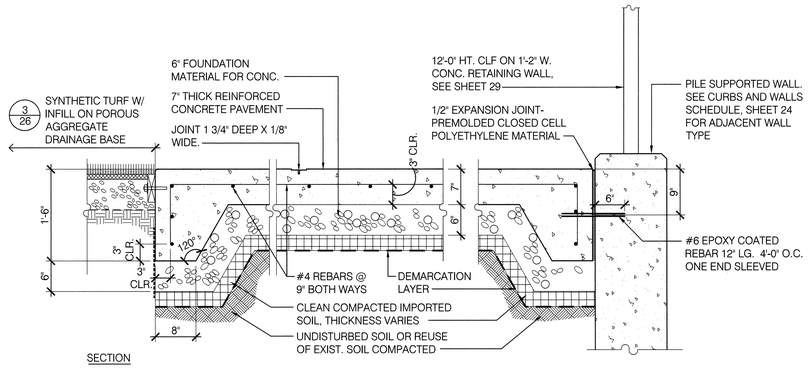


DETAIL 1 AB-01

Permeable Concrete Pavers

Scale: 1" = 1'-0"

0 3" 6" 1' 2'

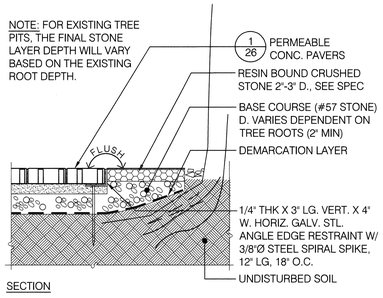


DETAIL 2 AB-01

Reinforced Conc. Pavement/ Foundation Slab

Scale: 1" = 1'-0"

0 3" 6" 1' 2'

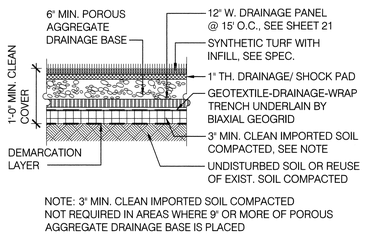


DETAIL 3 AB-01

Bonded Aggregate

Scale: 1" = 1'-0"

0 3" 6" 1' 2'



NOTE: 3" MIN. CLEAN IMPORTED SOIL COMPACTED NOT REQUIRED IN AREAS WHERE 9" OR MORE OF POROUS AGGREGATE DRAINAGE BASE IS PLACED

DETAIL 4 AB-01

Synthetic Turf with Infill

Scale: 1" = 1'-0"

0 3" 6" 1' 2'

STATE OF NEW YORK
FRANK P. VILLANO
LICENSED PROFESSIONAL ENGINEER
078540
EXCELSIOR

AS-BUILT CERTIFICATION:

CONSTRUCTED BY:	LAWS CONSTRUCTION CORP.
CONSTRUCTED FOR:	THE CITY OF NEW YORK DEPARTMENT OF PARKS AND RECREATION
PROJECT TITLE:	THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS, IN RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN
CONTRACT No.:	B126-117M
DATE:	AUGUST 28, 2023

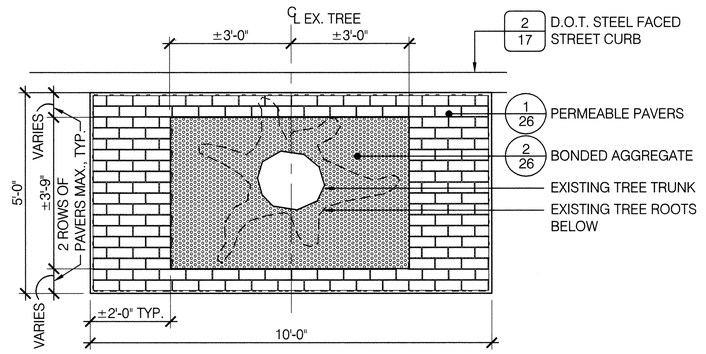
THE REMEDIATION & RECONSTRUCTION OF BALL FIELD 9 & SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN

LAWS CONSTRUCTION
Sitework - Utilities
Heavy Highway - Parks
34 IRVINGTON STREET
PLEASANTVILLE, NEW YORK 10570
PHONE: (914) 741-2100
www.lawscc.com

DATE: 8/28/2023

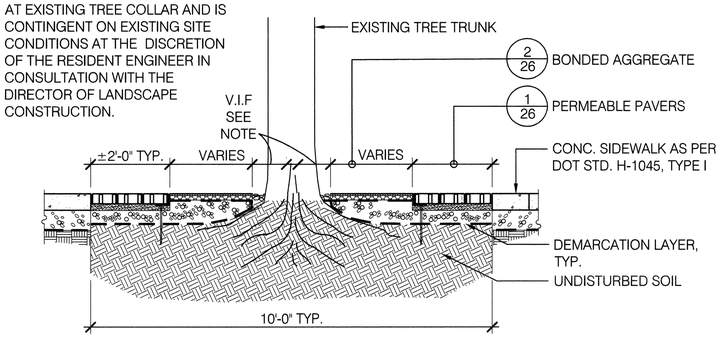
AS-BUILT
COVER CROSS SECTIONS

Drawing No.: AB-01.0



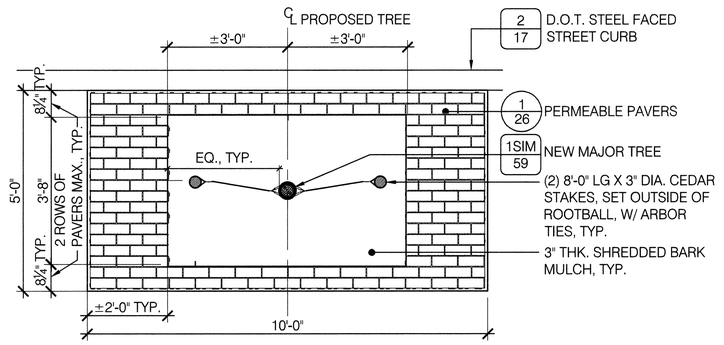
PLAN

NOTE:
BONDED AGGREGATE SHALL BE POURED UP TO ±2" RING OF MULCH AT EXISTING TREE COLLAR AND IS CONTINGENT ON EXISTING SITE CONDITIONS AT THE DISCRETION OF THE RESIDENT ENGINEER IN CONSULTATION WITH THE DIRECTOR OF LANDSCAPE CONSTRUCTION.

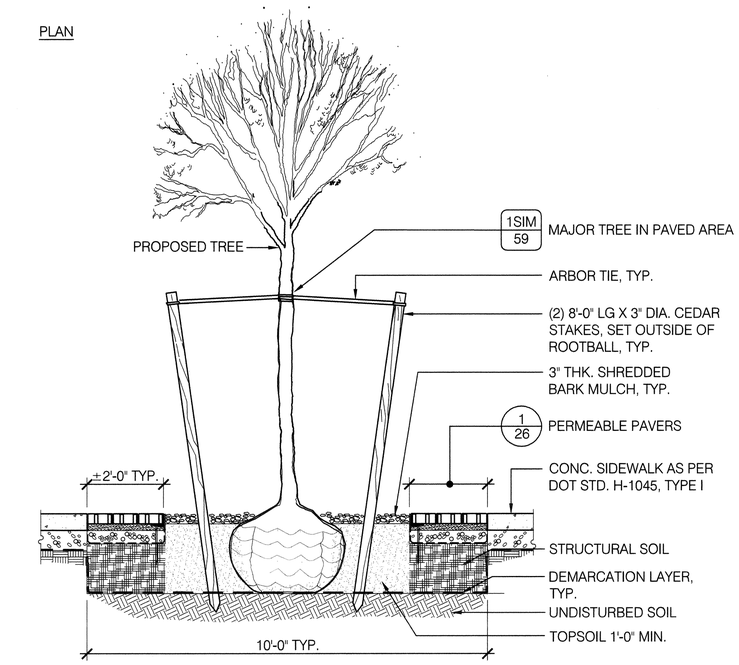


SECTION

DETAIL 1 AB-02 **Street Tree Pit - Existing Tree**
Scale: NTS

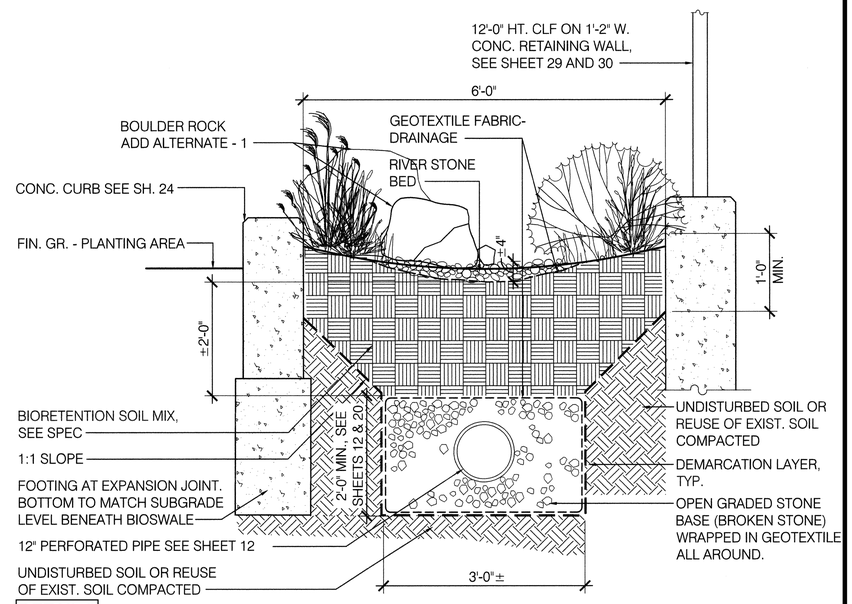


PLAN



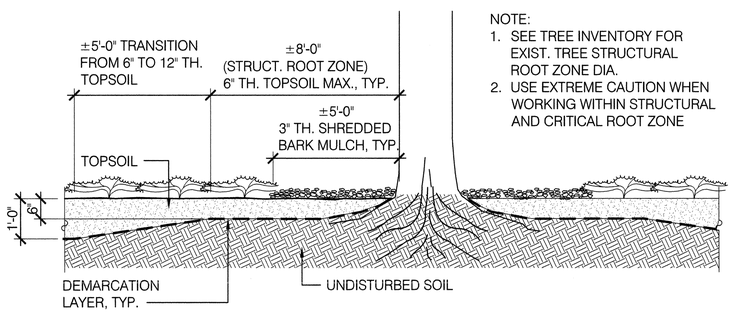
SECTION

DETAIL 2 AB-02 **Street Tree Pit - New Tree**
Scale: NTS

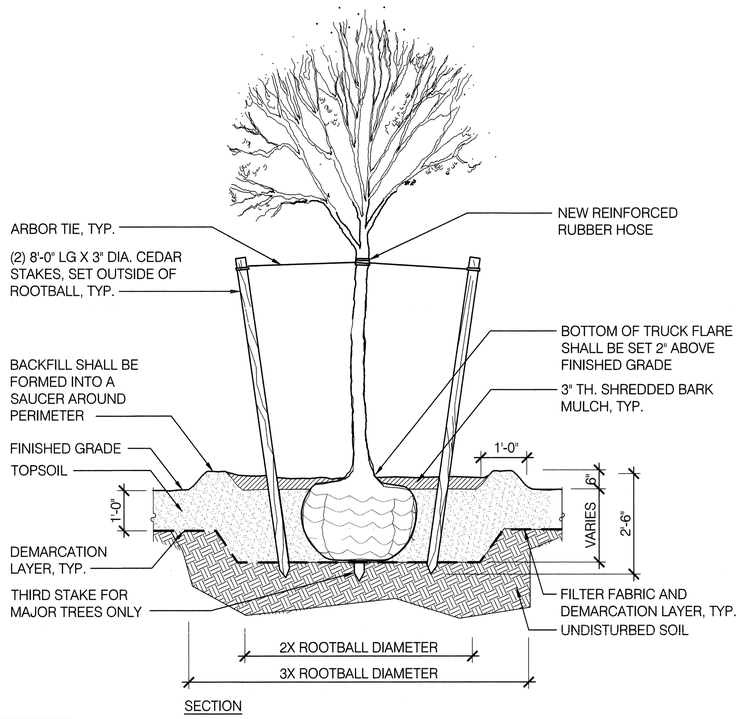


DETAIL 3 AB-02 **Bioswale - Section**
Scale: 3/4" = 1'-0"

0 6" 1' 2'



DETAIL 4 AB-02 **Remedial Cover at Planting Strip - Existing Tree**
Scale: NTS



SECTION

DETAIL 5 AB-02 **Remedial Cover at Planting Strip - New Tree**
Scale: NTS

AS-BUILT CERTIFICATION:

CONSTRUCTED BY: LAWS CONSTRUCTION CORP.
CONSTRUCTED FOR: THE CITY OF NEW YORK DEPARTMENT OF PARKS AND RECREATION
PROJECT TITLE: THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS, IN RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN
CONTRACT No.: B126-117M
DATE: AUGUST 28, 2023

STATE OF NEW YORK · FRANK P. VILLANO · 078540 · LICENSED PROFESSIONAL ENGINEER

Frank P. Villano

THE REMEDIATION & RECONSTRUCTION OF BALL FIELD 9 & SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN

LAWS CONSTRUCTION
Sitework - Utilities
Heavy Highway - Parks
34 IRVINGTON STREET
PLEASANTVILLE, NEW YORK 10570
PHONE: (914) 741-2100
www.lawscc.com

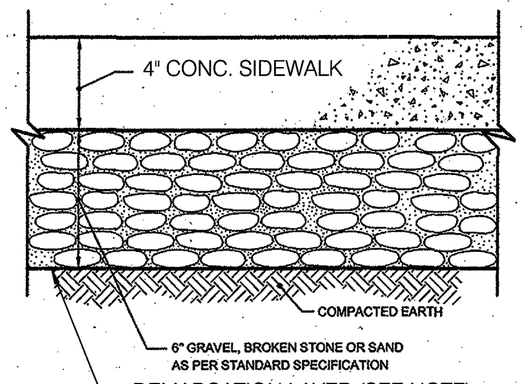
DATE: 8/28/2023

AS-BUILT
COVER CROSS SECTIONS

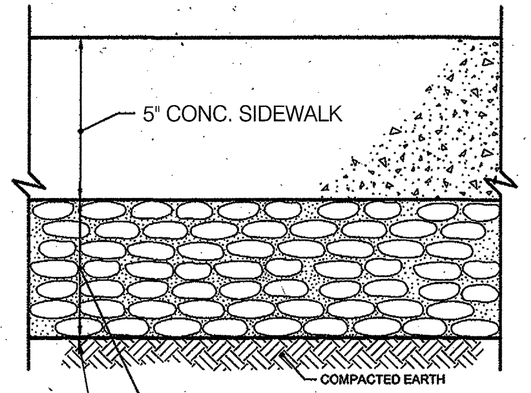
Drawing No.: AB-02.0

AS-BUILT CERTIFICATION:

CONSTRUCTED BY: LAWS CONSTRUCTION CORP.
CONSTRUCTED FOR: THE CITY OF NEW YORK DEPARTMENT OF PARKS AND RECREATION
PROJECT TITLE: THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS, IN RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN
CONTRACT No.: B126-117M
DATE: AUGUST 28, 2023



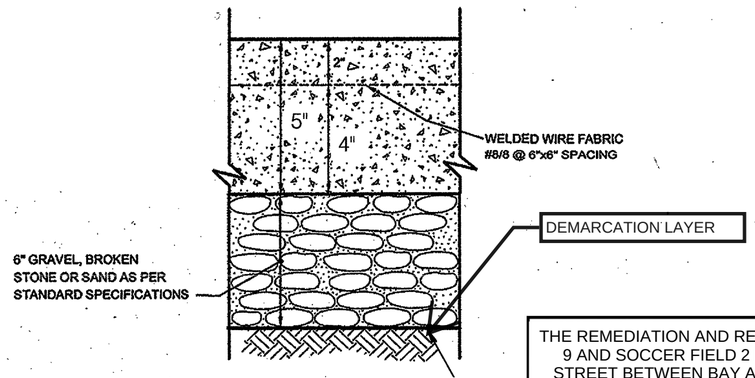
TYPE I - SIDEWALK, OUTSIDE DRIVEWAY AND CORNER QUADRANTS
N.T.S.



TYPE II - SIDEWALK, IN DRIVEWAY AND IN CORNER QUADRANTS
N.T.S.

NOTES:

1. ALL MATERIALS AND CONSTRUCTION METHODS USED ARE TO CONFORM TO SECTION #4.13 OF THE NYC DEPARTMENT OF TRANSPORTATION (DOT) STANDARD HIGHWAY SPECIFICATIONS.
2. WELDED WIRE FABRIC, WHERE SPECIFIED, SHALL BE ASTM DESIGNATION A-185, GAUGE # 8/8 AT 6"x6" SPACING, AND CONFORM TO SECTION # 2.25 OF THE NYCDOT STANDARD HIGHWAY SPECIFICATIONS.
3. IN AREAS OF THE SIDEWALK WHERE THE EXISTING CONCRETE GRAVEL SUB BASE MATERIAL WILL BE REUSED THE DEMARCATION LAYER WILL BE PLACED ABOVE EXISTING SUB BASE MATERIAL.



TYPE III - SIDEWALK WITH WELDED WIRE FABRIC
N.T.S.

STATE OF NEW YORK
FRANK P. VILLANO
078540
LICENSED PROFESSIONAL ENGINEER

Frank P. Villano

DETAIL 1
AB-03

NYC DOT Concrete Sidewalk

Scale: NTS

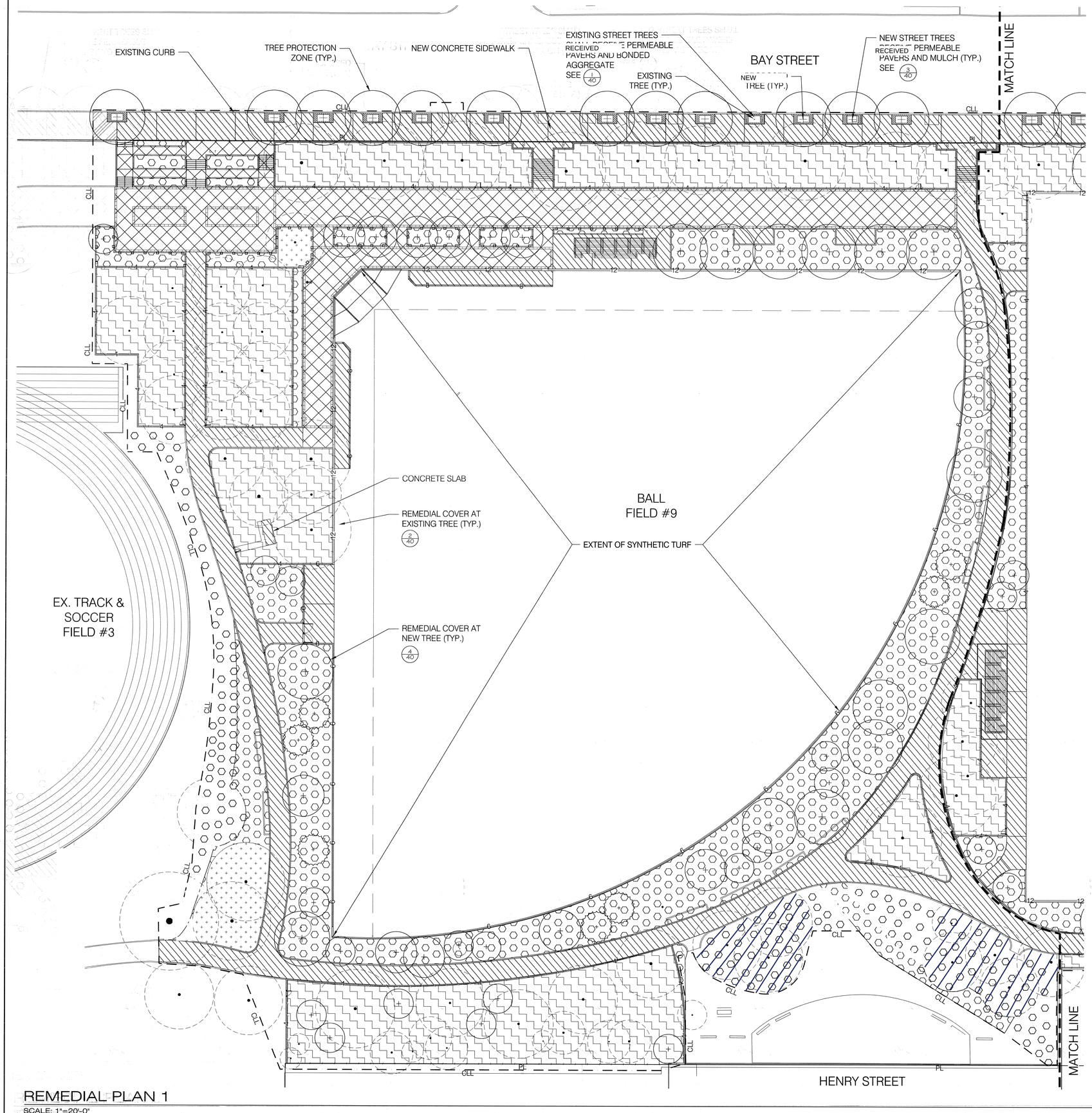
THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS IN THE RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN

LAWS CONSTRUCTION
Sitework - Utilities
Heavy Highway - Parks
34 IRVINGTON STREET
PLEASANTVILLE, NEW YORK 10570
PHONE: (914) 741-2100
www.lawscc.com

DATE: 8/28/2023

AS-BUILT
COVER CROSS SECTIONS

Drawing No.: AB-03.0



REMEDIAL PLAN 1

SCALE: 1"=20'-0"

LEGEND (SYMBOLS NOT TO SCALE):

	HATCHING	TYPE OF COVER	REMEDIAL COVER
DETAIL 4 AB-01.0		SYNTHETIC TURF	MINIMUM OF 1-FOOT THICK LAYER OF CLEAN COVER WITH UNDERLYING DEMARCATION LAYER.
DETAIL 5 AB-02.0		NATURAL TURF / PLANTING	MINIMUM OF 1-FOOT THICK LAYER OF CLEAN SOIL COVER WITH UNDERLYING DEMARCATION LAYER.
		EXISTING PAVING (TO REMAIN)	APPROXIMATELY 10-INCH THICK LAYER OF CONCRETE AND SUBBASE.
DETAIL 1 AB-01.0		NEW CONCRETE PAVERS	MINIMUM OF 10-INCH THICK LAYER OF CONCRETE PAVERS AND SUBBASE WITH UNDERLYING DEMARCATION LAYER.
DETAIL 2 AB-01.0 & DETAIL 1 AB-03.0		NEW ASPHALT OR CONCRETE PAVING	MINIMUM OF 10-INCH THICK LAYER OF ASPHALT OR CONCRETE AND SUBBASE WITH UNDERLYING DEMARCATION LAYER.
DETAIL 2 & DETAIL 4 AB-02.0		EXISTING TREES FENCING	DEMARCATION LAYER, 0-12-INCHES OF CLEAN TOPSOIL AND COVER WITH 3-INCH THICK LAYER OF MULCH AND GROUND COVER. 4-FOOT HIGH FENCE.
		EXISTING TREES (NO FENCING)	DEMARCATION LAYER AND 12-INCHES OF CLEAN TOPSOIL. NO FENCE.
DETAIL 1 AB-02.0 & DETAILS 1&3 AB-01.0		EXISTING TREE WITHIN TREE PITS WITH PERMEABLE PAVERS	DEMARCATION LAYER, CLEAN TOPSOIL AND COVER WITH 2-INCH THICK LAYER OF BONDED AGGREGATE AND PERMEABLE PAVERS.
DETAIL 2 AB-02.0 & DETAIL 1 AB-01.0		NEW TREE WITHIN TREE PIT	DEMARCATION LAYER, CLEAN TOPSOIL AND COVER WITH MULCH AND PERMEABLE PAVERS.
		Existing Tree No Fencing	Demarcation Layer and 0-12 Inches of Clean Top Soil. No Fence. Remediation to be completed during bulkhead reconstruction.

EXISTING EVERGREEN TREE TREE PROTECTION ZONE

NEW TREE TREE PROTECTION ZONE

EXISTING TREE TREE PROTECTION ZONE

DETAIL No. DETAIL SHEET No.

REV 4	12/19/2023 REVISED HATCH
REV 3	10/4/2023 REVISED HATCH
REV 2	9/28/2023 ADDED HATCH
REV 1	9/18/2023 PER REVIEWER COMMENTS

NOTES:

1. REFER TO DETAIL SHEETS FOR MORE DETAIL REGARDING REMEDIAL COVER
2. UTILITIES NOT SHOWN

AS-BUILT CERTIFICATION:

CONSTRUCTED BY: LAWS CONSTRUCTION CORP.
CONSTRUCTED FOR: THE CITY OF NEW YORK DEPARTMENT OF PARKS AND RECREATION
PROJECT TITLE: THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS, IN RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN
CONTRACT No.: B126-117M

STATE OF NEW YORK
FRANK P. VILLANO
078540
LICENSED PROFESSIONAL ENGINEER

Frank P. Villano

CONTRACT B-126-117M

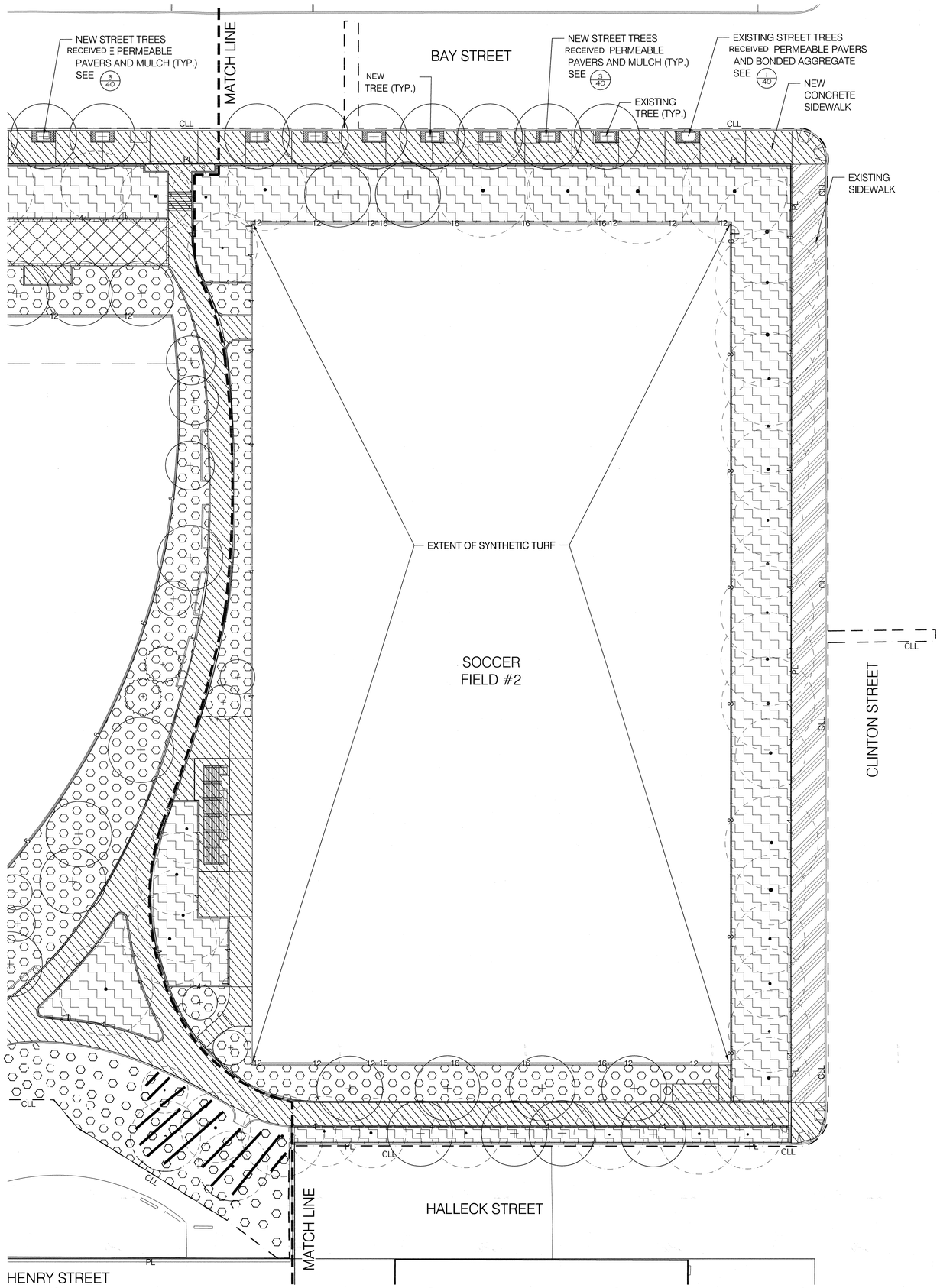
REMEDIATION & RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS IN RED HOOK RECREATION PARK, BOROUGH OF BROOKLYN

LAWS CONSTRUCTION
Sitework - Utilities
Heavy Highway - Parks
34 IRVINGTON STREET
PLEASANTVILLE, NEW YORK 10570
PHONE: (914) 741-2100
www.lawscc.com

DATE: 8/28/2023

AS-BUILT COVER CROSS SECTIONS

Drawing No.: AB-04.4



REMEDIAL PLAN 2

SCALE: 1"=20'-0"

LEGEND (SYMBOLS NOT TO SCALE):

HATCHING	TYPE OF COVER	REMEDIAL COVER
DETAIL 4 AB-01.0	SYNTHETIC TURF	MINIMUM OF 1-FOOT THICK LAYER OF CLEAN COVER WITH UNDERLYING DEMARCATION LAYER.
DETAIL 5 AB-02.0	NATURAL TURF / PLANTING	MINIMUM OF 1-FOOT THICK LAYER OF CLEAN COVER WITH UNDERLYING DEMARCATION LAYER.
	EXISTING PAVING (TO REMAIN)	APPROXIMATELY 10-INCH THICK LAYER OF CONCRETE AND SUBBASE.
DETAIL 1 AB-01.0	NEW CONCRETE PAVERS	MINIMUM OF 10-INCH THICK LAYER OF CONCRETE PAVERS AND SUBBASE WITH UNDERLYING DEMARCATION LAYER.
DETAIL 2 AB-01.0 & DETAIL 1 AB-03.0	NEW ASPHALT OR CONCRETE PAVING	MINIMUM OF 10-INCH THICK LAYER OF ASPHALT OR CONCRETE AND SUBBASE WITH UNDERLYING DEMARCATION LAYER.
DETAIL 2 & DETAIL 4 AB-02.0	EXISTING TREES (FENCING)	DEMARCATION LAYER, 0-12-INCHES OF CLEAN TOPSOIL AND COVER WITH 3-INCH THICK LAYER OF MULCH AND GROUND COVER. 4-FOOT HIGH FENCE.
	EXISTING TREES (NO FENCING)	DEMARCATION LAYER AND 12-INCHES OF CLEAN TOPSOIL. NO FENCE.
DETAIL 1 AB-02.0 & DETAILS 1&3 AB-01.0	EXISTING TREE WITHIN TREE PITS WITH PERMEABLE PAVERS	DEMARCATION LAYER, CLEAN TOPSOIL AND COVER WITH 2-INCH THICK LAYER OF BONDED AGGREGATE AND PERMEABLE PAVERS.
DETAIL 2 AB-02.0 & DETAIL 1 AB-01.0	NEW TREE WITHIN TREE PIT	DEMARCATION LAYER, CLEAN TOPSOIL AND COVER WITH MULCH AND PERMEABLE PAVERS.
	EXISTING TREES (NO FENCING)	Demarcation Layer and 0-12 Inches of Clean Top Soil. Remediation to be completed during bulkhead reconstruction.

EXISTING EVERGREEN TREE TREE PROTECTION ZONE

NEW TREE TREE PROTECTION ZONE

EXISTING TREE TREE PROTECTION ZONE

DETAIL No. DETAIL SHEET No.

CLL CONTRACT LIMIT LINE

REV 3 10/4/2023 REVISED HATCH
REV 2 9/28/2023 ADDED HATCH
REV 1 9/18/2023 PER REVIEWER COMMENTS

NOTES:

1. REFER TO DETAIL SHEETS FOR MORE DETAIL REGARDING REMEDIAL COVER
2. UTILITIES NOT SHOWN

AS-BUILT CERTIFICATION:

CONSTRUCTED BY: LAWS CONSTRUCTION CORP.
CONSTRUCTED FOR: THE CITY OF NEW YORK DEPARTMENT OF PARKS AND RECREATION
PROJECT TITLE: THE REMEDIATION AND RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS, IN RED HOOK RECREATION AREA, BOROUGH OF BROOKLYN
CONTRACT No.: B126-117M

STATE OF NEW YORK
FRANK P. VILLANO
LICENSED PROFESSIONAL ENGINEER
078540

Frank P. Villano

CONTRACT B-126-117M

NORTH

0 5' 10' 20' 40'

REMEDIATION & RECONSTRUCTION OF BALL FIELD 9 AND SOCCER FIELD 2 LOCATED WEST OF CLINTON STREET BETWEEN BAY AND HALLECK STREETS IN RED HOOK RECREATION PARK, BOROUGH OF BROOKLYN

LAWS CONSTRUCTION
Sitework - Utilities
Heavy Highway - Parks
34 IRVINGTON STREET
PLEASANTVILLE, NEW YORK 10570
PHONE: (914) 741-2100
www.lawscc.com

DATE: 8/28/2023

AS-BUILT COVER CROSS SECTIONS

Drawing No.: AB-05.3

Appendix D

ANNUAL SITE INSPECTION LOG
FORMER COLUMBIA SMELTING A.K.A. RED RECREATION AREA
BALL FIELDS 5-8 AND BALL FIELD 9, BROOKLYN, NY

Inspected by: Robert Bowden Weather/Temperature: 65°, Sunny, Wind NE 7 mph

Date: 10/31/24 Recent Significant Weather Events? Yes (No)

If Yes, Describe: —

			Condition Status		Corrective Action Required	Comment Number	Correction Date
			Satisf	Unsatisf			
SOIL COVER AREAS	PLANTING BED - HENRY STREET	Vegetation cover	(Y)	N	—		
		Erosion	(Y)	N	—		
		Mulch coverage sufficient?	Y	(N)	Additional mulch needed	(1)	
		Settlement or subsistence?	Y	(N)	—		
		Visible orange demarcation layer (safety fence)?	Y	(N)	—		
		Any recent excavation/disturbance?	Y	(N)	—		
		If yes, was cover adequately repaired/vegetated?	Y	N			
	PLANTING BED - BAY STREET	Vegetation cover	(Y)	N			
		Erosion	(Y)	N			
		Mulch coverage sufficient?	Y	(N)			
		Settlement or subsistence?	Y	(N)			
		Visible orange demarcation fabric?	Y	(N)			
		Any recent excavation/disturbance?	Y	(N)			
		If yes, was cover adequately repaired/vegetated?	Y	N			
	PLANTING BED - HICKS STREET	Vegetation cover	(Y)	N	—		
		Erosion	(Y)	N	—		
		Mulch coverage sufficient?	Y	(N)	Additional mulch needed	(1)	
		Settlement or subsistence?	Y	(N)	—		
		Visible orange demarcation fabric?	Y	(N)	—		
		Any recent excavation/disturbance?	Y	(N)	—		
		If yes, was cover adequately repaired/vegetated?	Y	(N)			
	PLANTING BED - LORRAINE STREET	Vegetation cover	(Y)	N	—		
		Erosion	(Y)	N	—		
		Mulch coverage sufficient?	Y	(N)	Additional mulch needed	(1)	
		Settlement or subsistence?	Y	(N)	—		
		Visible orange demarcation fabric?	Y	(N)	—		
		Any recent excavation/disturbance?	Y	(N)	—		
		If yes, was cover adequately repaired/vegetated?	Y	N			
TREE PITS	PITS FOR NEW TREES	Vegetation cover	(Y)	N	Satisfactory		
		Erosion	(Y)	N			
		Mulch coverage sufficient?	(Y)	N			
		Settlement or subsistence?	Y	(N)			
		Visible orange demarcation fabric?	Y	(N)			
		Any recent excavation/disturbance?	Y	(N)			
		If yes, was cover adequately repaired/vegetated?	Y	N			
	PITS FOR EXISTING TREES	Vegetation cover	(Y)	N	Satisfactory		
		Erosion	(Y)	N			
		Mulch coverage sufficient?	(Y)	N			
		Bonded Aggregate In Good Condition?	Y	(N)			
		Visible orange demarcation fabric?	Y	(N)			
		Any recent excavation/disturbance?	Y	(N)			
		If yes, was cover adequately repaired?	Y	N			

Enter detailed comments at the end of the log

Inspector Initials: RB

Date: 10/31/24

ANNUAL SITE INSPECTION LOG
FORMER COLUMBIA SMELTING A.K.A. RED RECREATION AREA
BALL FIELDS 5-8 AND BALL FIELD 9, BROOKLYN, NY

			Condition Status		Corrective Action Required	Comment Number	Correction Date
			Satisf	Unsatisf			
PAVED AREAS	CONCRETE, ASPHALT, PAVERS	Surface Condition (e.g., cracks, missing pieces)	(Y)	N	Satisfactory		
		Depressions/settlement	(Y)	N			
		Exposed underlying soil	Y	(N)			
		Visible white demarcation fabric	Y	(N)			
		Any recent pavement repairs?	Y	(N)			
		If yes, was pavement adequately repaired?	Y	N			
ATHLETIC FIELDS	BALL FIELDS 5-8 AND 9	Artificial turf condition (e.g., tears, missing pieces)	(Y)	N	Satisfactory		
		Exposed underlying shock pad/gravel/soil	Y	(N)			
		Visible orange demarcation fabric	Y	(N)			
		Any recent turf repairs?	Y	(N)			
		If yes, was turf adequately repaired?	Y	N			
STORMWATER CONTROL DEVICES	BIOSWALE	Sediment or debris accumulation	Y	(N)	-		
		Vegetative cover	Y	N	- Additional grasses needed	(2)	
		Erosion	Y	(N)	-		
		Visible orange demarcation fabric	Y	(N)	-		
	CATCH BASINS/ DRAIN INLETS	Inlet clear of obstructions	(Y)	N	Satisfactory		
		Sediment accumulation in sump	Y	(N)			
		Trash/debris accumulation in sump	Y	(N)			
		Visible orange demarcation fabric	Y	(N)			
RECORDKEEPING / REPORTING		Verify site use is park/active recreational usage	(Y)	N			
		Verify site groundwater use not occurring	(Y)	N			
		Annual Periodic Review Report submitted/last date	Y	(N)	To be submitted 2025		
		Emergency Contact List maintained at site park office	Y	N			

Inspector Signature: RC Bowden **Inspector Name:** Robert Bowden

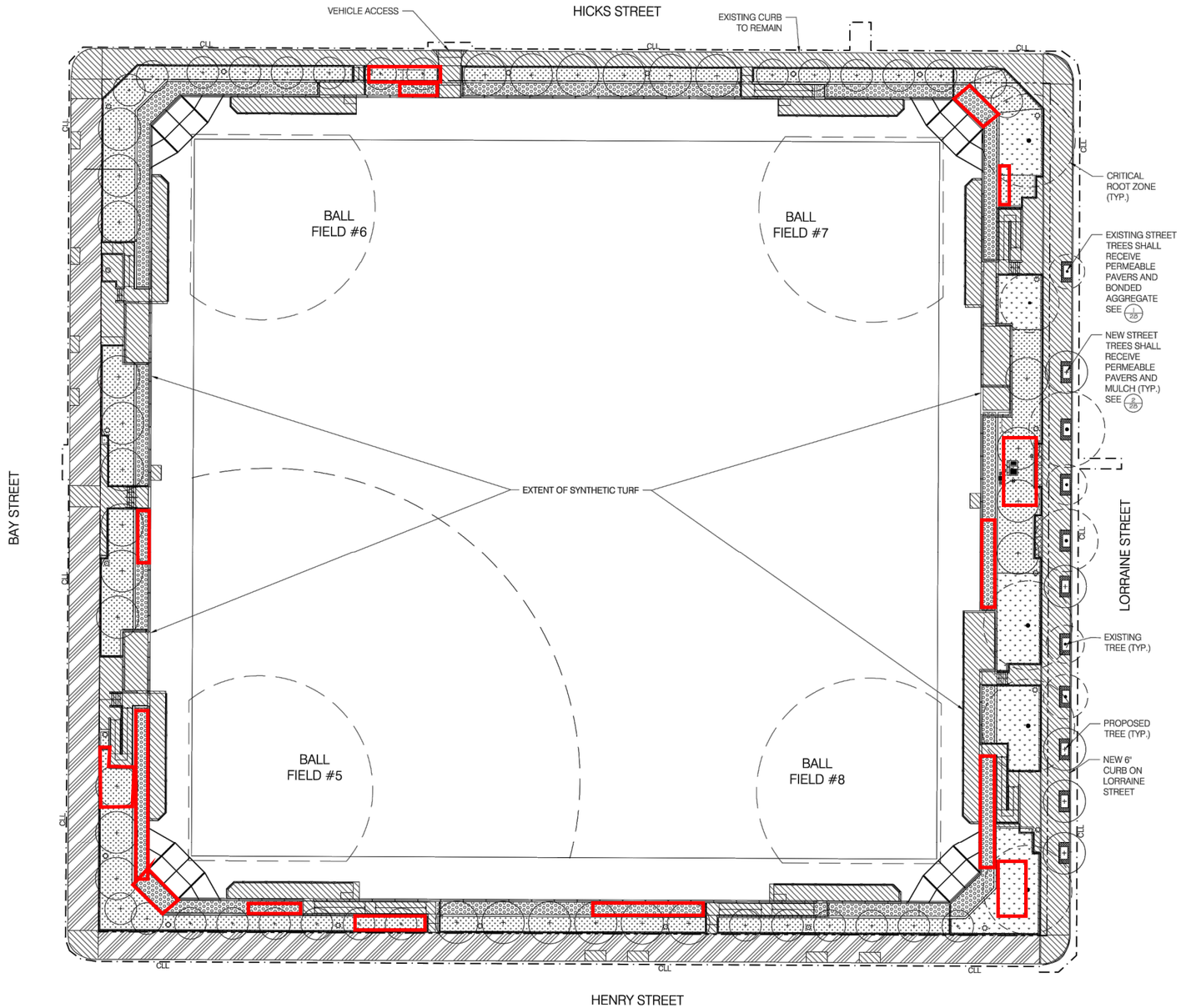
Date: 10/31/24 **NYPE License #:** 105565

ANNUAL SITE INSPECTION LOG
FORMER COLUMBIA SMELTING A.K.A. RED RECREATION AREA
BALL FIELDS 5-8 AND BALL FIELD 9, BROOKLYN, NY

COMMENTS	
NUMBER	**COMMENT**
①	Additional mulch needed at Planting Beds and Bioswales along Henry Street, Bay Street, Hicks Street, and Lorraine Street, surrounding Ball Fields 5-8. There should be 3" of mulch above all bioswale and planting bed areas. ↳ Refer to Figure mark-up for areas lacking mulch (Photos 3-11).
②	Bioswale areas lacking grasses in many areas — should have grasses in all areas, but missing grasses / mulch. (Photos 3, 4, 6, 8, 10, 11).

Inspector Initials: RB

Date: 10/31/24



LEGEND (SYMBOLS NOT TO SCALE):

SHADING/HATCHING	TYPE OF COVER	REMEDIAL COVER
	SYNTHETIC TURF	MINIMUM OF 1-FOOT THICK LAYER OF CLEAN COVER WITH DEMARCATION LAYER BELOW.
	BIOSWALE	GRASSES WITH 3-INCH THICK LAYER OF MULCH ABOVE A MINIMUM 1-FOOT THICK LAYER OF CLEAN COVER WITH DEMARCATION LAYER BELOW.
	EXISTING PAVING (TO REMAIN)	APPROXIMATELY 10-INCH THICK LAYER OF CONCRETE AND SUBBASE. REMOVE AND REPLACE WITH MINIMUM OF 10-INCH THICK LAYER OF CONCRETE AND SUBBASE WITH DEMARCATION LAYER AS BID ALTERNATE.
	NEW PAVING (SEE NOTE 5)	MINIMUM OF 10-INCH THICK LAYER OF CONCRETE AND SUBBASE WITH DEMARCATION LAYER.
	EXISTING MATURE TREES WITHIN PLANTING STRIPS	REMOVE 0-6-INCHES OF SOIL AS PER THE HAND/PNEUMATIC EXCAVATION SPECIFICATION. PLACE DEMARCATION LAYER. CLEAN TOPSOIL AND COVER WITH 3-INCH THICK LAYER OF MULCH AND GROUND COVER. 4-FOOT FENCE.
	NEW TREES AND/OR PLANTINGS WITHIN PLANTING STRIPS	GROUND COVER WITH 3-INCH THICK LAYER OF MULCH ABOVE A MINIMUM 1-FOOT THICK LAYER OF CLEAN COVER WITH DEMARCATION LAYER BELOW.
	EXISTING MATURE TREE WITHIN TREE PITS	REMOVE 0-6-INCHES OF SOIL AS PER THE HAND/PNEUMATIC EXCAVATION SPECIFICATION. PLACE DEMARCATION LAYER, CLEAN TOP SOIL AND COVER WITH 2-INCH THICK LAYER OF BONDED AGGREGATE OR PERMEABLE PAVERS.
	NEW TREE WITHIN TREE PIT	REMOVE MINIMUM OF 12-INCHES OF SOIL. PLACE DEMARCATION LAYER, CLEAN TOP SOIL AND COVER WITH MULCH AND PERMEABLE PAVERS.

Area requiring additional mulch and/or grass installation (must be 3" mulch across all planting areas and bioswales)

NEW TREE

EXISTING TREE TO REMAIN CRITICAL ROOT ZONE

DPR STANDARD DETAIL No.
DPR STANDARD DETAIL SHEET No.

CUSTOM DETAIL No.
CUSTOM DETAIL SHEET No.

CLL CONTRACT LIMIT LINE

NOTES:

1. REFER TO DETAIL SHEETS FOR MORE DETAIL REGARDING REMEDIAL COVER SYSTEM.
2. UTILITIES NOT SHOWN.
3. DRAWING SHALL BE USED FOR REMOVAL WORK ONLY AND SHALL NOT BE USED FOR ANY OTHER PURPOSE.
4. UNDER NEW YORK STATE EDUCATION LAW ARTICLE 145 (ENGINEERING), SECTION 7209 (2), IT IS A VIOLATION OF THIS LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.
5. EXISTING SIDEWALK PAVING ALONG BAY AND HENRY STREETS SHALL BE REMOVED AND REPLACED AS BID ALTERNATE # 1.
6. ALL REMEDIAL COVERS SHALL BE INSTALLED PER PROJECT SPECIFICATIONS AND DRAWING DETAILS AND OTHER CONTRACT DOCUMENTS.
7. CONTRACTOR SHALL ADHERE TO ALL REQUIREMENTS OF THE ENVIRONMENTAL NOTES SHEET.

SOURCE:
DRAWING SOURCED FROM SHEET NO. 10 OF 42 DRAWING NO. H201.00 TITLED "REMEDIAL PLAN" PREPARED FOR THE CITY OF NEW YORK PARKS AND RECREATION AND PREPARED BY TRC ENGINEERS, INC. DATED MAY 2, 2017.

0 60' 120'
SCALE: 1" = 60'
SHEET SIZE: 11" BY 17"

PROJECT:
CITY OF NEW YORK PARKS AND RECREATION - CAPITAL PROJECTS DIVISION
CONSTRUCTION COMPLETION REPORT
RED HOOK PARK - BALL FIELDS 5, 6, 7, 8, & 9
BOROUGH OF BROOKLYN, NY

TITLE:
BALL FIELDS 5-8 REMEDIAL PLAN

DRAWN BY:	H. DELGADO	PROJ NO.:	246184.0000.0000
CHECKED BY:	A. RAPOSO		FIGURE 7
APPROVED BY:	J. PERONTO		
DATE:	MARCH 2023		

TRC
1430 Broadway, 10th Floor
New York, NY 10018
Phone: 212.221.7822
www.TRCcompanies.com

FILE NO.: Fig 7 - BF5-8 Remedial Plan (BF5-8&BF9).dwg

Site Inspection Photograph Log – Red Hook Ball Fields 5-8 and Ball Field 9
October 31, 2024

Photo 1: Inspection of Turf Area of Ball Fields 5-8.

Photo 2: Inspection of Turf Area of Ball Field 9.

Photo 3: Additional mulch and grasses needed at Bioswale Area along Hicks Street.

Photo 4: Additional mulch and grasses needed at Bioswale Area at corner of Hicks Street and Lorraine Street.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:	TRC
618174	R. Bowden	1 of 3	NYC Parks and Rec	Red Hook BF 5-8 & 9 Brooklyn, NY	

Site Inspection Photograph Log – Red Hook Ball Fields 5-8 and Ball Field 9
October 31, 2024

Photo 5: Additional mulch needed at Planting Area along Lorraine Street.

Photo 6: Additional mulch and grasses needed at Bioswale Area along Lorraine Street.

Photo 7: Additional mulch needed at Planting Area along Henry Street.

Photo 8: Additional mulch and grasses needed at Bioswale Area along Henry Street.

Site Inspection Photograph Log – Red Hook Ball Fields 5-8 and Ball Field 9
October 31, 2024

Photo 9: Additional mulch needed at Planting Area along Bay Street.

Photo 10: Additional mulch and grasses needed at Bioswale Area and Planting Area along Bay Street.

Photo 11: Additional mulch and grasses needed at Bioswale Area along Bay Street.

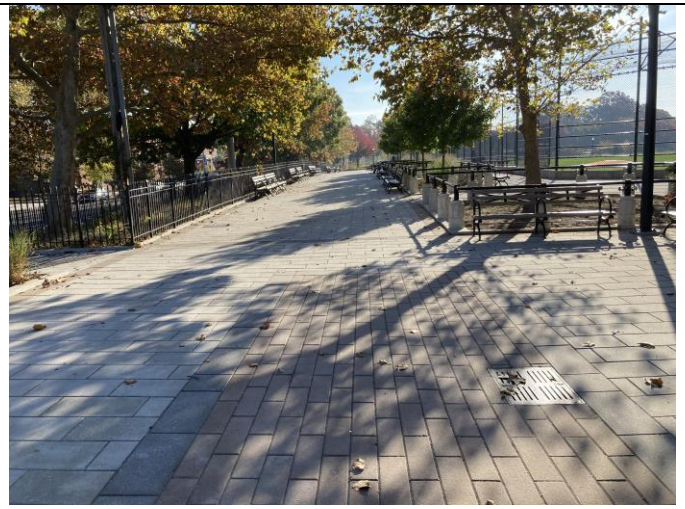


Photo 12: Inspection of pavers adjacent to Ball Field 9 site.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Name & Address:
618174	R. Bowden	3 of 3	NYC Parks and Rec	Red Hook BF 5-8 & 9 Brooklyn, NY