

FORMER UNITED HOSPITAL
406 BOSTON POST ROAD
PORT CHESTER, NY

Remedial Design Investigation Work Plan
Groundwater Monitoring & Treatment

NYSDEC BCP Site Number: C360202
AKRF Project Number: 200057

Prepared For:

New York State Department of Environmental Conservation
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JUNE 2026

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CERTIFICATION

I, Marc Godick, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Remedial Design Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Marc S. Godick, LEP



7/1/2026

Name

Signature

Date

1.0 INTRODUCTION

This Remedial Design Investigation (RDI) Work Plan for Groundwater Monitoring and Treatment has been prepared by AKRF, Inc. (AKRF) on behalf of Boston Post Road Owner LLC and BR RA Port Chester LLC (the Volunteers) for the Former United Hospital Brownfield Cleanup Program (BCP) Site (BCP Site No. C360202), located at 406 Boston Post Road in Port Chester, NY (hereafter referred to as the “Site”). The Site comprises an area of 12.03 acres and was historically identified as Section 141.052, Block 1, Lot 2 on the Town of Rye, Village of Port Chester Tax Map. Historically, the Site consisted of multiple abandoned buildings associated with the former New York United Hospital Medical Center and associated paved and landscaped areas. Demolition of the former buildings, including removal of deep foundation elements, and completion of remedial excavation activities, was substantially completed as of December 2025 in accordance with the NYSDEC-approved Remedial Action Work Plan (RAWP). Redevelopment-related work to facilitate future construction is ongoing, including minor excavation, grading, and backfilling across the approximately 15.45-acre redevelopment parcel [inclusive of the 12.03-acre BCP Site (former Lot 2) and the two adjacent non-BCP parcels (former Lots 2.1 and 2.4)]. The Site location is shown on Figure 1, and Site Plans showing the former building overlay and future tax lot overlay, respectively, are provided as Figures 2 and 3.

As documented in the NYSDEC-approved April 2024 Remedial Investigation Report (RIR) and RAWP, groundwater was not encountered above bedrock in any of the soil borings advanced during the RI; however, groundwater is present within the bedrock layer, and generally flows in a southerly direction, with a south-southwesterly component in the northwestern portion of the Site. While no evidence of non-aqueous phase liquid (NAPL) was encountered on groundwater during the RI, a thin, non-measurable layer of residual petroleum was detected at RI-MW-02BR in the northern portion of the Site during gauging in December 2024; this area was identified as an area of concern (AOC) for soil and groundwater (AOC-6) based on historical use and storage of petroleum in this area. Per- and polyfluoroalkyl substances (PFAS) compounds were detected above their respective guidance values in all groundwater samples collected during the RI, including PFOS [7.98 to 26 nanograms per liter (ng/L)] and PFOA (8.55 to 705 ng/L), with the conditions at RI-MW-01BR being designated as an AOC for groundwater (AOC-10). Three total and dissolved metals (iron, manganese, and sodium) were also detected at concentrations above groundwater comparison criteria in groundwater samples from across the Site; however, the detections were attributed to naturally occurring background conditions, and were not considered a contaminant of concern. No volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, herbicides, or polychlorinated biphenyl (PCBs) were detected at concentrations exceeding groundwater comparison criteria in any of the groundwater samples collected during the RI. Groundwater elevation contour maps are included as Figures 4A and 4B, the AOCs being addressed under the RAWP are shown on Figure 5, and the compounds detected above comparison criteria in groundwater samples collected during the RI are shown on Figures 6 and 7.

This RDI Work Plan describes the proposed activities to establish baseline groundwater conditions following completion of large-scale remedial excavation activities, and to determine if treatment is warranted to address residual contamination that may be present in the northern (AOC-6D) and/or northwestern (AOC-10) portions of the Site. The results of the baseline groundwater sampling activities described herein would be used to finalize the remedial design for groundwater treatment. The conceptual plan shown on Figure 8, as per the RAWP, outlines the proposed treatment of AOC-10 via the injection of colloidal granular activated carbon (GAC) to address PFAS. Notwithstanding, based upon the baseline groundwater sampling conducted in accordance with this work plan, a Groundwater Treatment Design Report outlining the quantity of injection wells, reagents, quantities, application methods, etc. would be developed and submitted to NYSDEC for review and approval prior to any treatment work.

2.0 SITE DESCRIPTION AND HISTORY

2.1 Site Description and Surrounding Land Use

The Site is located at 406 Boston Port Road in the Village of Port Chester, Westchester County, NY, and comprises an area of 12.03-acres inclusive of one historic tax lot identified as Section 141.052, Block 1, Lot 2 on the Town of Rye, Village of Port Chester Tax Map. Historically, the Site consisted of multiple abandoned buildings associated with the former New York United Hospital Medical Center, including a multi-winged hospital building, a magnetic resonance imaging (MRI) building, an office building, a laundry building, a power/boiler plant building, a garage, and other ancillary buildings. Demolition of the former buildings, including removal of deep foundation elements, and completion of remedial excavation activities, was substantially completed as of December 2025 in accordance with the April 2024 RAWP. Redevelopment work above the composite cover system is ongoing, including minor excavation, grading, and backfilling.

The Site is bounded to the north and northeast by Abendroth Park and a former hospital parking lot (Lot 2.4), respectively, followed by residential properties; to the south by a vacant lot, which contained the recently demolished former hospital staff residential building (Lot 2.1), and High Street, followed by a nursing/rehabilitation facility and the Boston Post Road approach to Interstate 287; to the east by Boston Post Road, followed by a commercial shopping center; and to the west by Interstate 287, followed by residential properties and St. Mary's Cemetery. The surrounding area is primarily residential and commercial, with some educational uses and parkland.

No sensitive receptors are located immediately adjacent to the site. The nearest sensitive receptors (i.e., schools, daycares, or hospitals) include Jan's Kidz 'N' Motion Site III (approximately 950 feet northwest of the Site at 84 Grant Street in Rye Brook, NY), Rye Country Day School (approximately 1,050 feet southwest of the Site at 3 Cedar Street in Rye, NY), John F. Kennedy Elementary School (approximately 1,200 feet northeast of the Site at 40 Olivia Street in Port Chester, NY), and Tots Place, Inc. (approximately 1,200 feet north of the Site at 8 Brent Avenue in Port Chester, NY). The nearest surface waters to the Site are Blind Brook Stream (approximately 2,000 feet to the west) and the Long Island Sound (approximately 4,300 feet to the southeast).

2.2 Proposed Site Remediation and Redevelopment

The proposed redevelopment project consists of construction of a mixed-use development, including residential and commercial uses. According to preliminary redevelopment plans, the project would include approximately 775 residential apartments, 200 assisted and senior living units, a 120-room hotel, 18,000 square feet of retail space, and associated parking lots. Current redevelopment plans are still being finalized; therefore, the number of residential apartments, assisted/senior living units, hotel rooms, and retail space, flex office space, and parking square footages are subject to change.

The remedy outlined in the April 2024 RAWP included excavation and off-site disposal of the upper 2 feet of soil/fill material across the Site, with localized deeper excavations to address hotspots (AOC-2 through AOC-9) related to historic petroleum storage and/or elevated concentrations of SVOCs and metals; all hotspot excavations were extended to bedrock. Shallow bedrock removed to facilitate future construction work was crushed into smaller aggregate that was subsequently used as backfill material following placement of demarcation, where applicable. Redevelopment-related work to facilitate future construction is ongoing, including minor excavation, grading, and backfilling; however, the work is not anticipated to significantly disturb the composite cover system and/or underlying demarcation layer.

2.3 Site History

According to previous environmental reports, the Site was partially developed as a hospital as early as 1915 (originally identified as United Hospital, and subsequently New York United Hospital Medical Center). Over time, various additions and standalone buildings were constructed, and other historic structures were demolished, with the hospital ceasing operations circa 2004. The Site remained vacant until demolition of the former buildings. The footprint of former buildings that have been demolished are shown on Figure 2.

3.0 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

As outlined in the April 2024 RIR, the RI field activities included two phases of work due to access constraints and safety issues associated with the former buildings at the Site. The initial phase of the RI included the investigation of exterior portions of the Site (completed in August 2022), and the second phase of the RI included the investigation of areas within the footprint of the former buildings after demolition (completed in November 2023); a Supplemental Groundwater Investigation (SGWI) to document groundwater conditions within shallow bedrock was completed subsequent to the RI (completed in May 2024). The findings of the RI and SGWI were summarized in the NYSDEC-approved RIR.

3.1 Remedial Investigation Summary

The first and second phases of the RI included the following scope of work:

- Completion of a geophysical survey across accessible exterior portions of the Site to investigate the potential presence of underground storage tanks (USTs) and/or buried aboveground storage tanks (ASTs) from past on-site uses, and to clear boring locations of underground utilities.
- Advancement of 59 soil borings (RI-SB-01 through RI-SB-59) and collection of 132 soil samples [plus associated quality assurance/quality control (QA/QC) samples] for laboratory analysis. Of the 132 soil samples collected, 120 samples were analyzed for VOCs, SVOCs, pesticides, herbicides, PCBs, Target Analyte List (TAL) metals, hexavalent chromium, cyanide, 1,4-dioxane, and PFAS; six samples were analyzed for VOCs, SVOCs, pesticides, herbicides, PCBs, TAL metals, hexavalent chromium, cyanide, and 1,4-dioxane; three of the samples were analyzed for TAL metals; and three samples were analyzed for VOCs and SVOCs.
- Developed and sampled two groundwater monitoring wells (SESI-GW-2 and SESI-GW-3) that were previously installed at the Site by others. The groundwater samples were analyzed for VOCs, SVOCs, pesticides, herbicides, PCBs, TAL metals (total and dissolved), cyanide, 1,4-dioxane, and PFAS.
- Installation of 11 temporary soil vapor points (RI-SV-01 through RI-SV-11) and collection of 11 soil vapor samples and two ambient air samples (AA-01_20220829 and AA-01_20231108) for laboratory analysis. The soil vapor and ambient air samples were analyzed for VOCs.

Based on discussions with representatives of the NYSDEC during an on-site meeting on April 10, 2024, groundwater conditions across the 12.03-acre Site were not adequately characterized with the sampling of the two existing groundwater monitoring wells (SESI-GW-2 and SESI-GW-3). Therefore, a SGWI consisting of the installation and sampling of bedrock wells was conducted. The SGWI included the following scope of work:

- Installation of six bedrock wells (RI-MW-01BR through RI-MW-06BR) to facilitate the collection of groundwater samples.
- Sampling the six bedrock wells and two existing groundwater monitoring wells for laboratory analysis. The groundwater samples were analyzed for VOCs, SVOCs, pesticides, herbicides, PCBs, TAL metals (total and dissolved), cyanide, 1,4-dioxane, and PFAS.
- Surveying the locations and elevations of the six bedrock wells and two existing groundwater monitoring wells to facilitate groundwater elevation contour mapping.

3.2 Geologic and Hydrogeologic Conditions

3.2.1 Stratigraphy

Historic fill (sand, silt, gravel, and cobbles, with varying amounts of brick, concrete, fabric, glass, metal, roots, and wood) was observed extending from ground surface down to depths ranging from approximately 2 to 14.5 feet bgs. The fill layer is generally underlain by

shallow bedrock, which was encountered in each of the soil borings advanced at depths ranging from approximately 2 to 15 feet bgs. A thin veneer of apparent native soil (sand, silt, gravel, and weathered bedrock) was observed between the fill layer and bedrock in several locations.

3.2.2 Hydrogeology

Based on the RI, along with the findings from previous environmental investigations of the Site, groundwater is present within the bedrock layer, and generally flows in a southerly direction. Perched water was historically encountered intermittently above bedrock at depths ranging from approximately 7.5 to 13 feet bgs; however, groundwater was not encountered above bedrock in any of the soil borings advanced during the RI.

During the SGWI, which included the installation of six bedrock wells across the Site, bedrock was encountered at depths ranging from approximately 2 to 13.5 feet bgs, with the first water bearing zone identified approximately 2 to 11.5 feet below the bedrock surface (an average of approximately 5 feet into bedrock). Based on the water level gauging, which identified groundwater at depths ranging from approximately 3.7 to 11 feet bgs, groundwater levels rose approximately 3 to 11 feet above the depth of the observed first water bearing zone; therefore, the bedrock aquifer is under some degree of hydrologic pressure, which may not be uniform across the Site. Based on the well elevation survey, the inferred groundwater flow direction is in a generally southerly direction toward the Long Island Sound, with a south-southwesterly component in the northwestern portion of the Site. The well elevation survey data and associated inferred groundwater contours are shown on Figures 4A and 4B.

The remedial excavation to address AOC-8 in the northwestern portion of the Site extended to bedrock, which was encountered at depths ranging from approximately 6 to 10 feet bgs. Perched water was observed on the surface of bedrock during excavation at AOC-8, adjacent to AOC-10 (PFAS in groundwater); however, water was not observed during excavation in adjacent areas that extended below bedrock. Based on historical surface topography, the northwestern portion of the Site was an apparent drainage basin for surrounding areas at higher elevations – including portions of the Site and off-site areas to the north and west. Further, an apparent former drywell or similar drainage structure constructed of brick was noted along the northern boundary of the Site, adjacent to the northwestern corner of the AOC-8 excavation, which may connect to drainage structures in the adjacent Abendroth Park. Therefore, the observed conditions and historical reports of perched water in this area are attributed to localized surface infiltration/drainage that created the intermittent presence of perched water above bedrock.

3.3 Contamination Conditions

The data compiled during the RI was compared to the following Standards, Criteria, and Guidance (SCGs) to determine the nature and extent of the contamination associated with the Site:

Soil - NYSDEC Part 375 Unrestricted Use (UU), Protection of Groundwater (PGW), and Restricted Residential (RR) Soil Cleanup Objectives (SCOs); PFAS Guidance Values

Groundwater - NYSDEC Class GA Ambient Water Quality Standards and Guidance Values (AWQSGVs) – TOGS 1.1.1; PFAS Guidance Values.

Soil Vapor - No regulatory or published guidance values for VOCs in soil vapor; however, soil vapor data was used to assess potential exposure to receptors.

3.3.1 Conceptual Model of Site Contamination

Based on the findings from the RI, along with the findings from previous environmental investigation of the Site, the nature and extent of contaminated soil, groundwater, and soil vapor at the Site have been determined. The primary contaminants of concern (CoCs) for the Site, including the detected location, affected media, and associated comparison criteria, are summarized in Table 1.

Table 1
Summary of the Contaminants of Concern

Contaminant of Concern	Location	Media	NYSDEC Comparison Criteria
SVOCs			
Benzo(a)Anthracene	Site-wide & Petroleum-related AOCs	Soil/Fill Material	Part 375 UUSCOs and RRSCOs
Benzo(a)Pyrene			
Benzo(b)Fluoranthene			
Benzo(k)Fluoranthene			
Chrysene			
Dibenz(a,h)Anthracene			
Indeno(1,2,3-c,d)Pyrene			
Potential LNAPL			Groundwater
Pesticides & PCBs			
Dieldrin	Site-wide	Soil/Fill Material	Part 375 UUSCOs
P,P'-DDD			
P,P'-DDE			
P,P'-DDT			
Total PCBs			
Metals			
Arsenic	Site-wide	Soil/Fill Material	Part 375 UUSCOs and RRSCOs DER-10 §1.3(70); 6 NYCRR 375 §1.2(au), 6 NYCRR 371
Cadmium			
Hexavalent Chromium			
Copper			
Lead			
Manganese			
Mercury			
Nickel			
Zinc			
Iron			
Magnesium			
Manganese			
Sodium			
VOCs			
Acetone **	Site-wide **	Soil/Fill Material	Part 375 UUSCOs and PGWSCOs
1,2,4-Trimethylbenzene	Petroleum-related AOCs	Soil/Fill Material	
Total Xylenes			
Potential LNAPL		Groundwater	Class GA AWQSGVs
PFAS			
Perfluorooctanesulfonic acid (PFOS)	Site-wide	Soil/ Fill Material	PFAS Guidance Values
Perfluorooctanoic acid (PFOA)		Groundwater	
Notes: SVOCs – semi-volatile organic compounds; VOCs – volatile organic compounds; LNAPL – light non-aqueous phase liquid; PFAS – per- and polyfluoroalkyl substances; UUSCOs – unrestricted soil cleanup criteria; RRSCOs – restricted-residential soil cleanup criteria; AWQSGVs – ambient water quality standards and guidance values; ** - common laboratory agent; therefore, this detection may not be reflective of on-site contamination.			

The apparent random horizontal and vertical distribution of copper, manganese, and nickel in subsurface soil samples (2 to 15 feet bgs) suggested that the detections are also related to naturally occurring background conditions and not considered a source of contamination, or CoCs for areas that did not achieve Track 1; remedial work to achieve unrestricted use in Track 1 areas continued until these metals (and all other constituents) were below their UUSCOs and/or bedrock was encountered.

As noted in Section 3.2.2, perched water observed during excavation at AOC-8, adjacent to AOC-10 (PFAS in groundwater); however, water was not reported during excavation in adjacent areas that extended below bedrock. The northwestern portion of the Site appears to have served as a drainage basin for surrounding areas at higher elevations, and an apparent former drywell or similar drainage structure was noted along the northern boundary of the Site, adjacent to the northwestern corner of the AOC-8 excavation. Therefore, the observed conditions and historical reports of perched water in this area are attributed to localized surface infiltration/drainage that created the intermittent presence of perched water above bedrock, which may be related to the elevated detection of PFAS in groundwater in this area.

The primary CoCs are related to:

1. Historical uses of former buildings/structures at the Site, including: hospital wards, coal/storage building, a gas tank building/structure, an administration building, storage buildings, auto buildings, and unknown buildings located across the Site (refer to Figure 2);
2. Historical uses of the most recent buildings at the Site, including: utility vault, loading dock, boiler rooms, a carpentry shop, an incinerator, a laundry room, a morgue, and medical/diagnostic services in the central portion of the Site; a power/boiler plant, a maintenance/engineering office, and unknown former buildings in the northern portion of the Site; and unknown former buildings in the eastern and western portions of the Site;
3. Historical chemical use associated with laboratories, clinics, printing/development of x-rays, and maintenance activities at the Site;
4. Historical petroleum bulk storage in the northern and central portions of the Site, and suspected petroleum storage associated with current and former buildings at the Site; and
5. Potential petroleum impacts in soil associated with known and suspected petroleum storage at the Site.
6. Potential PFAS impacts to groundwater from surface water runoff from the Site and/or adjacent off-site areas to the north and west to subsurface soil and underlying bedrock, specifically in the apparent localized surface watershed in the northwestern portion of the Site.

3.3.2 Description of Areas of Concern

Based on the results of the RI and the findings from previous environmental investigations of the Site, ARKF identified AOCs to be addressed during implementation of the April 2024 RAWP. The AOCs are summarized in Table 2 and shown on Figure 5.

Table 2
Areas of Concern

AOC	Description	Area / Volume of Material to be Excavated
Site-Wide AOCs		
1	Historic Fill Material (0-2 feet bgs)	Historic fill material was documented across the entire 12.03-acre Site.
AOCs in Anticipated Future Track 1 (Unrestricted Use) Areas		
2	Hotspot at RI-SB-16 (SVOCs)	Excavate an approximate 4,600-square foot area to bedrock.
3	Hotspot at RI-SB-36 (metals)	Excavate an approximate 4,400-square foot area to bedrock.
4	Hotspot at AKRF SB-13 (metals)	Excavate an approximate 2,000-square foot area to bedrock.
AOCs in Anticipated Future Track 4 (Restricted-Residential Use) Areas		
5A	Source Area at RI-SB-25 (petroleum)	Excavate an approximate 6,900-square foot area to bedrock. Remove UST
5B	Suspected Closed-In-Place UST adjacent to former carpentry shop / boiler house / incinerator	
6A	Source Area at RI-SB-09 (petroleum - USTs at former boiler/power plant)	Excavate an approximate 10,000-square foot area to bedrock. Remove USTs. Address residual groundwater contamination via recovery, direct application of an oxygen-releasing compound and/or chemical oxidant (ORC®, Persulfox® and/or similar product) to excavation area to promote aerobic biodegradation/destruction of residual petroleum contamination, and/or in-situ injections (bioremediation and/or chemical oxidation), followed by groundwater monitoring.
6B	Suspected Closed-in-Place 1,000-gallon UST at former boiler / power plant	
6C	Suspected Closed-in-Place 4,000-gallon UST at former boiler / power plant	
6D	Residual petroleum product and oily water at RI-MW-02BR	
7	550-Gallon Gasoline UST & suspected pump island adjacent to former carpentry shop/boiler house / incinerator	Excavate an approximate 450-square foot area to bedrock. Remove UST
8	Source Area at RI-SB-02 and SESI_TW-1 (petroleum)	Excavate an approximate 3,600-square foot area to bedrock.
9	TCLP lead at Waste Characterization Grid 17	Additional delineation sampling in accordance with disposal facility requirements to limit the area classified as hazardous waste.
10	Elevated PFAS at RI-MW-01BR	In-situ groundwater treatment via injection of a colloidal GAC product to address elevated detections of PFAS, followed by groundwater monitoring.
Notes: AOC = area of concern; UST = underground storage tank; bgs = below ground surface; PFAS = per- and polyfluoroalkyl substances; TCLP = Toxicity Characteristic Leaching Procedure; GAC = granular activated carbon		

This RDI Work Plan describes the proposed activities to establish current baseline conditions following completion of large-scale remedial excavation activities at the aforementioned AOCs (AOC-1 through AOC-9), and to determine if treatment is warranted to address residual groundwater contamination that may remain in the northern (AOC-6D) and/or northwestern (AOC-10) portions of the Site. If treatment is warranted, the results of the baseline groundwater sampling activities described herein would be used to finalize the preliminary remedial design for groundwater treatment outlined in the April 2024 RAWP.

4.0 SUMMARY OF THE APPROVED REMEDIAL ACTION WORK PLAN

The NYSDEC-approved April 2024 RAWP summarized the nature and extent of contamination as determined from data gathered during the RI and previous environmental investigations of the Site. The key components of the remedy outlined in the RAWP are summarized in the following sections.

4.1 Summary of the Approved Remedy

1. The approximately 15.45-acre redevelopment parcel [inclusive of the 12.03-acre BCP Site (Lot 2) and the two adjacent non-BCP parcels (Lots 2.1 and 2.4)] will be subdivided into 11 individual parcels [Future Lots 1 through 9, Future Mallory Way (a public roadway to be “Deeded to Village for Highway Purposes”, and the narrow strip of land along eastern Site boundary to be “Deeded for Highway Purposes”)]. As shown on Figure 3, the Site will encompass all or part of 10 of the 11 new parcels, with the proposed remedial work designed to achieve the Track 1 (Unrestricted), Track 2 (Restricted Residential), and/or Track 4 (Site-Specific) SCOs within the boundaries of the anticipated future parcels as outlined below:
 - a. Future Lot 1 [BCP portion; 2.563 acres (111,655-square feet)]: Track 1
 - b. Future Lot 3 [0.726 acres (31,625-square feet)]: Track 4
Future Lot 4 [BCP portion; 0.949 acres (41,344-square feet)]: Track 4
Future Lot 5 [0.292 acre (12,735-square feet)]: Track 4
Future Lot 6 [3.594 acres (156,550-square feet)]: Track 4
Future Lot 7 [BCP portion; 2.352 acres (102,450-square feet)]: Track 4
Future Lot 8 [0.499 acre (21,725-square feet)]: Track 4
Future Mallory Way (public road to be “Deeded to the Village for Highway Purposes”) [BCP portion; 0.468 acre (20,384-square feet): Track 4
Future Land for “Highway Purposes” (narrow strip along the eastern Site boundary to be “Deeded for Highway Purposes”) [BCP portion; 0.219 acre (9,562-square feet): Track 4
 - c. Future Lot 9 [0.129 acre (5,640-square feet)]: Track 2
2. Excavation of three areas of concern (AOCs) within/adjacent to Future Lot 1 (Track 1 area) to address metals and/or SVOCs that were detected above their respective UUSCOs, including:
 - a. AOC-2: SVOC hotspot. Excavate an approximately 4,600-square foot area to bedrock.
 - b. AOC-3: metals hotspot. Excavate an approximately 4,400-square foot area to bedrock.
 - c. AOC-4: metals hotspot. Excavate an approximately 2,000-square foot area to bedrock.
3. Removal of any hazardous waste and known/suspected USTs and any associated grossly contaminated soil from petroleum-source AOCs in the Track 4 area, including:
 - a. AOC-5 (5A and 5B): field evidence of petroleum contamination and identification of suspected closed-in-place 2,000-gallon UST. Excavate an approximately 6,900-square foot area to bedrock (approximately 8 feet bgs) and remove UST.
 - b. AOC-6 (6A, 6B, and 6C): residual petroleum-contaminated soil from former 25,000-gallon USTs, field evidence of petroleum contamination, suspected closed-in-place 1,000-gallon UST, and suspected closed-in-place 4,000-gallon UST. Excavate an approximately 10,000-square foot area to bedrock (approximately 12 feet bgs) and remove USTs.
 - c. AOC-7: suspected 550-gallon UST and suspected pump island. Excavate an approximately 450-square foot area to bedrock (approximately 12 feet bgs) and remove UST.

- d. AOC-8: field evidence of low-level petroleum contamination. Excavate an approximately 3,600-square foot area to bedrock (approximately 10 feet bgs).
 - e. AOC-9: area identified during waste characterization sampling containing TCLP lead above the hazardous waste threshold. Additional delineation sampling will be conducted in accordance with disposal facility requirements to limit the area classified as hazardous waste.
4. Monitoring and Treatment of petroleum-contaminated groundwater during and/or after completion of the remedial excavation work at AOC-6, including:
 - a. A thin, non-measurable layer of residual petroleum was detected at RI-MW-02BR (AOC-6D) in December 2024. If encountered during remedial excavation work, residual petroleum product and/or oily water would be recovered for off-site disposal and/or pumped and treated for discharge in accordance with all Federal, State, and Local regulations.
 - b. If excavation work extends into the saturated zone and/or apparent capillary fringe (smear zone), the remedial work would include application of an oxygen-releasing compound and/or chemical oxidant (ORC[®], Persulfox[®] and/or similar product) to promote aerobic biodegradation/destruction of residual petroleum contamination.
 - c. Alternatively, in-situ groundwater treatment using bioremediation and/or chemical oxidation injections would be implemented to address residual petroleum contamination in groundwater. The treatment program would be based on observations during the remedial excavation activities (described above), whether shallow groundwater is encountered to allow for the placement of bulk groundwater treatment reagents (at the time of remedial excavation), and an initial round of baseline groundwater monitoring.
 - d. Following remedial excavation work, a minimum of three groundwater monitoring wells will be installed in AOC-6 and subsequently monitored, including one at the approximate location of RI-MW-02BR and two at downgradient locations selected in consultation with the NYSDEC.
5. The USTs noted above will be removed in accordance with applicable Federal, State, and Local requirements, including updating applicable NYSDEC Petroleum Bulk Storage (PBS) facility records, which is managed by the Westchester County Department of Health (WCDOH).
6. Monitoring and treatment of elevated PFAS concentrations detected in groundwater in the northwestern portion of the Site (AOC-10), including:
 - a. In-situ groundwater treatment consisting of the injection of a GAC product would be implemented to address elevated detections of PFAS at RI-SB-01BR in the northwestern portion of the Site (AOC-10). The treatment program would be refined following remedial excavation activities and an initial round of baseline groundwater monitoring. A Groundwater Treatment Design Report will be prepared and submitted to NYSDEC for review and approval, which will include the reagents, quantities, application methods, etc.
 - b. At a minimum, three groundwater monitoring wells will be installed at AOC-10 following excavation and backfilling work, including a replacement for RI-MW-01BR and at two downgradient locations selected in consultation with the NYSDEC.
7. Screening for indications of contamination (by visual means, odor, and monitoring with a PID) during all ground-intrusive work, including soil disturbance and loading activities.
8. Characterization and off-site disposal of excavated material slated to be removed from the Site in accordance with all Federal, State, and Local rules and regulations for handling, transport,

and disposal. Waste disposal facilities will be selected based on the data collected to date and the results of the future waste classification sampling.

9. All material removed from the Site will be performed in accordance with all Federal, State, and Local rules and regulations for handling, transport, and disposal. Waste disposal facilities will be selected based on the data collected to date and the results of the future waste characterization sampling program.
10. Apart from the material from the Track 1 and Track 4 hotspots (AOCs 2-9), all excavated material that meets the Track 4 Site-Specific SCOs that is generated in the Track 1 area or during the construction work in the Track 4 areas will be staged for reuse within the Track 4 areas (below the composite cover system), as appropriate. Further, any bedrock generated during construction work at the Site that is free of field evidence of contamination (i.e., odors, staining, etc.) and adhered soil will be reused in the Track 1 and/or Track 4 areas, as appropriate.
11. Importation of clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) and the NYSDEC-issued PFAS sampling protocol. Analytical results for proposed import material (if required) will be compared to Table 375-6.8(b) of 6 NYCRR Part 375 and submitted to NYSDEC via a *Request to Import/Reuse Soil or Fill* form for review and approval prior to importation and placement on-site.
12. All localized dewatering and/or support of excavation needed to complete the remedial actions (or to install the foundation and utilities for new construction) will be implemented in accordance with all Federal, State, and Local regulations. Water generated during large-scale construction activities will be discharged to the Westchester County combined sewer in compliance with a Westchester County Department of Environmental Facilities (WCDEF) discharge permit, or otherwise containerized for characterization (in accordance with intended disposal facility sampling requirements) and off-Site disposal. Dewatered fluids will not be recharged back to the land surface or subsurface of the Site. Discharge of water generated during remedial construction to surface waters (i.e., a local pond, stream or river) is prohibited without a State Pollutant Discharge Elimination System (SPDES) permit.
13. Implement a NYSDEC-approved Community Air Monitoring Program (CAMP) during all ground-intrusive work at the Site to monitor levels of VOCs and airborne particulates within the active work zones and around the perimeter of the Site.
14. All responsibilities associated with the remedial actions described herein, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State, and Local rules and regulations.
15. Collection of post-remediation endpoint samples from bottom and sidewalls of the remedial excavation areas to evaluate the performance of the remedy with respect to attainment of the Track 1 and/or Track 4 cleanup objectives (sampling for the Track 2 area was completed as part of the COU-Antennae Area work).
16. As a component of the redevelopment project, a composite cover system will be constructed across the Track 4 portions of the Site. The cover system will consist of the concrete building slabs underlain by an aggregate layer beneath all buildings; poured concrete and or asphalt underlain by an aggregate layer in all paved areas; and 2 feet of clean soil in all landscaped areas. As the development schedule allows, the remedial work will be conducted concurrently with the construction work; however, since the Site is large (12.03 acres), it is anticipated that a temporary cover system consisting of at least 2 feet of clean soil will be constructed in some parts of the Site following documentation of attainment of the Track 4 cleanup objectives. All excavation and/or ground intrusive work that occurs in areas of the Site that do not achieve the

Track 1 SCOs following issuance of the Certificate of Completion, including final cover system installation, will be completed under a NYSDEC-approved Site Management Plan (SMP), which will provide a detailed description of the procedures required to manage residual contamination to ensure that the institutional controls (ICs) and engineering controls (ECs) included in this RAWP continue to be protective of human health and the environment.

17. A demarcation layer will be placed on top of the remaining soil/prepared subgrade in all Track 4 areas, prior to installation of the composite cover system elements.
18. Potential future vapor intrusion concerns will be evaluated after the new buildings are constructed and their HVAC systems are operational. Appropriate documentation demonstrating compliance with the NYSDOH Final Guidance on Soil Vapor Intrusion will be provided (e.g., documentation that new buildings contain below-grade/separately ventilated parking levels, completion of a soil vapor intrusion investigation, etc.).
19. An Environmental Easement (EE) encompassing the Track 2 and Track 4 portions of the Site will be recorded with the Westchester County Clerk's Office. The EE will: require the remedial parties/Site owners to complete and submit a periodic certification of institutional controls (ICs) and engineering controls (ECs) to NYSDEC in accordance with NYCRR Part 375-1.8 (h)(3); allow for the future redevelopment and use of the Track 2 and Track 4 portions of the Site for restricted residential use; restrict use of groundwater as a source of potable or process water without necessary water quality treatment, as determined by NYSDOH and Westchester County Department of Health; and require compliance with a site-specific, NYSDEC-approved, SMP for any future ground-intrusive work that would disturb the Track 2 and Track 4 areas.
20. An SMP associated with the Track 2 and Track 4 areas of the Site that identifies all use restrictions and ECs for the Site, and details the steps and media-specific requirements necessary to ensure the ICs and ECs remain in place and effective (inspection, monitoring, reporting, etc.), will be prepared. The SMP will include, but not be limited to:
 - a. A provision for the evaluation of potential soil vapor intrusion at future occupied buildings at the Site, and associated requirement to implement applicable actions to address all potential concerns identified;
 - b. An excavation work plan for any future excavation in areas of remaining contamination;
 - c. A monitoring plan to assess the performance and effectiveness of the remedy;
 - d. The steps necessary for the periodic review and certifications of the ICs and ECs.

4.2 Remedial Action (RA) Groundwater Treatment

Based on the findings from the RI and other environmental investigations of the Site, two AOCs associated with groundwater contamination (AOC-6D and AOC-10) were identified. As noted, remedial excavation to address petroleum contamination identified at AOC-6 extended to bedrock and included the removal of USTs. While no evidence of non-aqueous phase liquid NAPL was encountered during the RI or SGWI, a thin, non-measurable layer of residual petroleum was detected at RI-MW-02BR, located in AOC-6, during gauging in December 2024; groundwater was not encountered during remedial excavation work at AOC-6. PFAS compounds were detected above their respective guidance values in all groundwater samples, including elevated detections of PFOA and PFOS at RI-SB-01BR in the northwestern portion of the Site (AOC-10). Groundwater monitoring and treatment will be conducted, as warranted, to address the conditions at AOC-6D and AOC-10 as shown on Figure 8, and as described below.

4.2.1 Petroleum-Contaminated Groundwater: AOC-6D

The former petroleum source area in the northern portion of the Site (AOC-6) consisted of an approximately 10,000-square foot area that was excavated to bedrock. Groundwater was not encountered during the remedial excavation activities; therefore, direct application of an oxygen-releasing compound and/or chemical oxidant (ORC®, Persulfox® and/or similar product) to the excavation area to promote aerobic biodegradation/destruction of residual petroleum contamination was not feasible and/or appropriate.

The baseline groundwater monitoring program for AOC-6 includes installation of four bedrock groundwater monitoring wells at the approximate locations shown on Figure 8, including one at the approximate location of RI-MW-02BR, which was abandoned in accordance with CP-43 prior to the start of large-scale excavation work, two at downgradient locations, and one at an upgradient location. Following installation, each bedrock well will be developed via pumping and surging to remove accumulated fines and establish a hydraulic connection with the surrounding aquifer. The wells will be sampled a minimum of one week following their development in accordance with EPA's low-flow sampling procedures using a submersible or peristaltic pump.

If the results of the baseline groundwater sampling indicate that in-situ treatment is warranted, a Groundwater Treatment Design Report will be prepared and submitted to NYSDEC for review and approval, which will include the reagents, quantities, application methods, etc.

4.2.2 PFAS-Contaminated Groundwater: AOC-10

AOC-10 is estimated to encompass an area of approximately 5,000 square feet surrounding RI-MW-01BR. The remedial excavation work that was completed in this area extended to a minimum of 2 feet bgs, with localized deeper excavation for future building foundations and other site improvements. Following excavation, much of the area was backfilled with approximately 10 feet of clean fill to raise grade for future construction. Groundwater was not encountered during the excavation activities within the footprint of AOC-10, portions of which extended below bedrock; however, perched water was observed on the surface of bedrock at the adjacent AOC-8. As documented in the RAWP, in-situ groundwater treatment consisting of the injection of a colloidal GAC product (e.g., PlumeStop® or similar) would be implemented to address elevated detections of PFAS at AOC-10.

The baseline groundwater monitoring program for AOC-10 includes installation of six bedrock groundwater monitoring wells at the approximate locations shown on Figure 8, including one at the approximate location of RI-MW-01BR, which was abandoned in accordance with CP-43 prior to the start of large-scale excavation work, three at downgradient locations, and two at upgradient locations. Following installation, each bedrock well will be developed via pumping and surging to remove accumulated fines and establish a hydraulic connection with the surrounding aquifer. The wells will be sampled a minimum of one week following their development in accordance with EPA's low-flow sampling procedures using a submersible or peristaltic pump.

If the results of the baseline groundwater sampling indicate that in-situ treatment is warranted, a Groundwater Treatment Design Report will be prepared and submitted to NYSDEC for review and approval, which will include the reagents, quantities, application methods, etc.

5.0 RDI WORK ACTIVITIES

This RDI Work Plan describes the activities required to establish baseline conditions following completion of large-scale remedial excavation activities, and to determine if treatment is warranted to address current groundwater conditions in the northern (AOC-6D) and/or northwestern (AOC-10) portions of the Site. If treatment is warranted, the results of the baseline groundwater sampling activities will be used to finalize the preliminary remedial design for groundwater treatment outlined in the RAWP. The proposed scope of work includes the installation of bedrock wells in/around each AOC, including replacement of the original wells that were abandoned in accordance with CP-43 prior to excavation work and presumed up- and downgradient locations, followed by one pre-treatment sampling and fluid level gauging event to establish baseline conditions. The RDI field program will be conducted in accordance with the Quality Assurance Project Plan (QAPP), Health and Safety Plan (HASP), and CAMP included in the April 2024 RAWP; these documents are included as Appendix A, B, and C, respectively, to this work plan.

5.1 Bedrock Well Installation

Based on the findings from the RI and remedial excavation activities, bedrock is expected to be encountered at depths ranging from approximately 2 to 12 feet bgs in the vicinity of the proposed bedrock wells (see Table 3 for the anticipated depth to bedrock at each location).

The proposed bedrock wells will be installed using a Geoprobe™ rig (or similar) that is capable of advancing augers through unconsolidated soil/fill, and then air rotary or sonic tooling will be used to facilitate installation of 4-inch diameter steel casing from ground surface to at least 5 feet into competent bedrock at each location. The bottom of the casings will be set using a slurry grout that will cure for at least 24 hours prior to resuming drilling.

After the grout has cured, a boring will be advanced through the outer casing and continuous bedrock cores will be collected by spinning the coring barrel fitted with a custom shoe into the bedrock at 5-foot intervals until the first water bearing fracture is encountered. The bedrock cores will be placed in a core box and logged for geology and fracture content. The well depths and screen intervals may be adjusted based upon examination of the rock cores and bedrock geotechnical logging (as described below). AKRF will notify the NYSDEC via phone/email in the event that water bearing fractures are not observed to 40 feet bgs, and will leave the borehole open for a period of approximately 24 hours to confirm whether or not water accumulates. If water is not present after 24 hours, AKRF will consult with the NYSDEC to determine if continued drilling is warranted or if the open borehole can be abandoned/closed as appropriate (e.g., cement-bentonite grout within bedrock and uncontaminated fill/sand in unconsolidated zone).

After completing the coring process, the boring for the bedrock well will be over drilled using a truck-mounted drill rig to advance an approximately 3.9-inch diameter roller bit. The bedrock wells will be constructed with 2-inch diameter PVC, which will include 5 feet of 0.02 slotted well screen installed into the first water bearing zone in competent bedrock. The annular space around the well screen will be backfilled with sand filter pack extending from the bottom of the well to 1 to 2 feet above the screen. The annular space around the well riser will be sealed with bentonite extending 5 feet above the sand filter pack and completed to ground surface and within the exterior casing with a non-shrinking cement mixture to grade. The bentonite seal will be given approximately 24 hours to set and expand. Each well will be provided with a locking well cap and be finished with a flush mount cover.

Following installation, each bedrock well will be developed via pumping and surging to remove accumulated fines and establish a hydraulic connection with the surrounding aquifer. Development will continue until turbidity within the well is less than 50 nephelometric turbidity units (NTUs)

for three successive readings and water quality indicators (pH, temperature, and specific conductivity) have stabilized, or until at least three well volumes have been purged from the well.

The rationale for the proposed groundwater sample locations is summarized in Table 3 and their approximate locations are shown on Figure 8.

Table 3
Proposed Groundwater Sample Locations and Rationale

Sample Location	On-Site Location	Anticipated Depth to Bedrock	Rationale
AOC-6D-GW-UG-01	Northern portion of Site (AOC-6)	10-12 ft bgs	Investigate current groundwater conditions in former petroleum source area, and at up- and downgradient locations, to determine if treatment of residual contamination is warranted.
RI-MW-02BR			
AOC-6D-GW-DG-01			
AOC-6D-GW-DG-02			
AOC-10-GW-UG-01	Northwestern portion of Site (AOC-10)	2-10 ft bgs	Investigate current groundwater conditions in the area where elevated concentrations of PFAS were detected, and at up- and downgradient locations, to determine if treatment of residual contamination is warranted.
AOC-10-GW-UG-02			
RI-MW-01BR			
AOC-10-GW-DG-01			
AOC-10-GW-DG-02			
AOC-10-GW-DG-03			
Notes: ft bgs = feet below ground surface.			

5.2 Groundwater sampling and Analysis

In accordance with EPA low-flow sampling protocols, the wells will be sampled a minimum of one week following their development. Prior to sampling the bedrock wells, an electronic interface probe will be used to measure the water level in each well, and a bailer will be used to measure any separate phase liquid that is detected. The monitoring wells will be purged and sampled in accordance with EPA's low-flow sampling procedures using a submersible or peristaltic pump. The purge water will be monitored for turbidity and water quality indicators [i.e., pH, dissolved oxygen, oxidation-reduction potential (ORP), temperature, and specific conductivity] with measurements collected approximately every five minutes. The criteria for stabilization will be three successive readings within $\pm 10\%$ for pH, temperature, and specific conductivity.

The groundwater samples will be collected and containerized in accordance with NYSDEC and EPA protocols. Each sample container will be properly preserved, labeled, and placed in an ice-filled cooler for delivery via courier under standard custody procedures to a NYSDOH ELAP-certified laboratory for analysis with Category B deliverables. Based on the CoCs, the groundwater samples collected will be analyzed for VOCs by EPA Method 8260, SVOCs by EPA Method 8270, and PFAS by EPA Method 537.1.

Purge water from the installation, development, and sampling activities will be containerized in properly labeled DOT-approved 55-gallon drums for off-site disposal at a permitted facility. Disposable sampling equipment that comes in contact with environmental media will be disposed with municipal trash as non-hazardous refuse.

5.3 Quality Assurance/Quality Control and Data Usability Review

As required for Category B deliverables, additional samples will be included for QA/QC purposes. The QA/QC samples will be collected in accordance with the QAPP included in the RAWP, and will include one field blank, one field duplicate, and one matrix spike/matrix spike duplicate (MS/MSD) to be analyzed for the same list of parameters as the groundwater samples. In addition, a laboratory-supplied aqueous trip blank will accompany each sample shipment and will be analyzed for VOCs only. Upon receipt of the analytical data package from the laboratory, it will

be reviewed by a third-party data validator, who will prepare a Data Usability summary Report (DUSR). A copy of the QAPP is included as Appendix A to this work plan.

5.4 Decontamination and Investigation-Derived Waste (IDW) Management

All non-dedicated sampling equipment will be decontaminated between sampling locations by scrubbing and rinsing twice a biodegradable soap (e.g., Alconox) and tap water, and rinsing a final time with distilled water. Non-dedicated equipment used for groundwater sampling of emerging contaminants will be decontaminated using laboratory-certified PFAS-free water.

All IDW will be containerized in NYSDOT-approved 55-gallon drums. The drums will be sealed at the end of each work day and labeled with the date, the well number(s), the type of waste (i.e., drill cuttings, decontamination fluids, development water, or purge water), and the name of an AKRF point-of-contact. All drums will be labeled “pending analysis” until laboratory data is available. The drums will be properly disposed of off-site at a permitted facility following receipt of the analytical results.

5.5 Monitoring Well Survey

The bedrock wells will be surveyed by a New York State-licensed surveyor to determine their accurate locations and elevations. Two elevation measurements will be taken at each well – the at-grade elevation adjacent to the well cover and the elevation of the top of the PVC casing – to facilitate preparation of a groundwater contour map and to determine the direction of groundwater flow. The elevation datum for the wells will be based on NAVD88.

5.6 Health and Safety, Air Monitoring, and Daily Reporting

All work outlined in the RDI work plan will be conducted in accordance with the HASP and CAMP included in the RAWP. Air monitoring during the installation of bedrock wells will include collecting continuous VOC and particulate measurements within the work zone and around the perimeter of the Site. Response actions will be implemented as required based on perimeter air monitoring results in accordance with the NYSDOH Generic CAMP and as described in the CAMP included in the RAWP. Copies of the HASP and CAMP are included as Appendix B and C to this work plan.

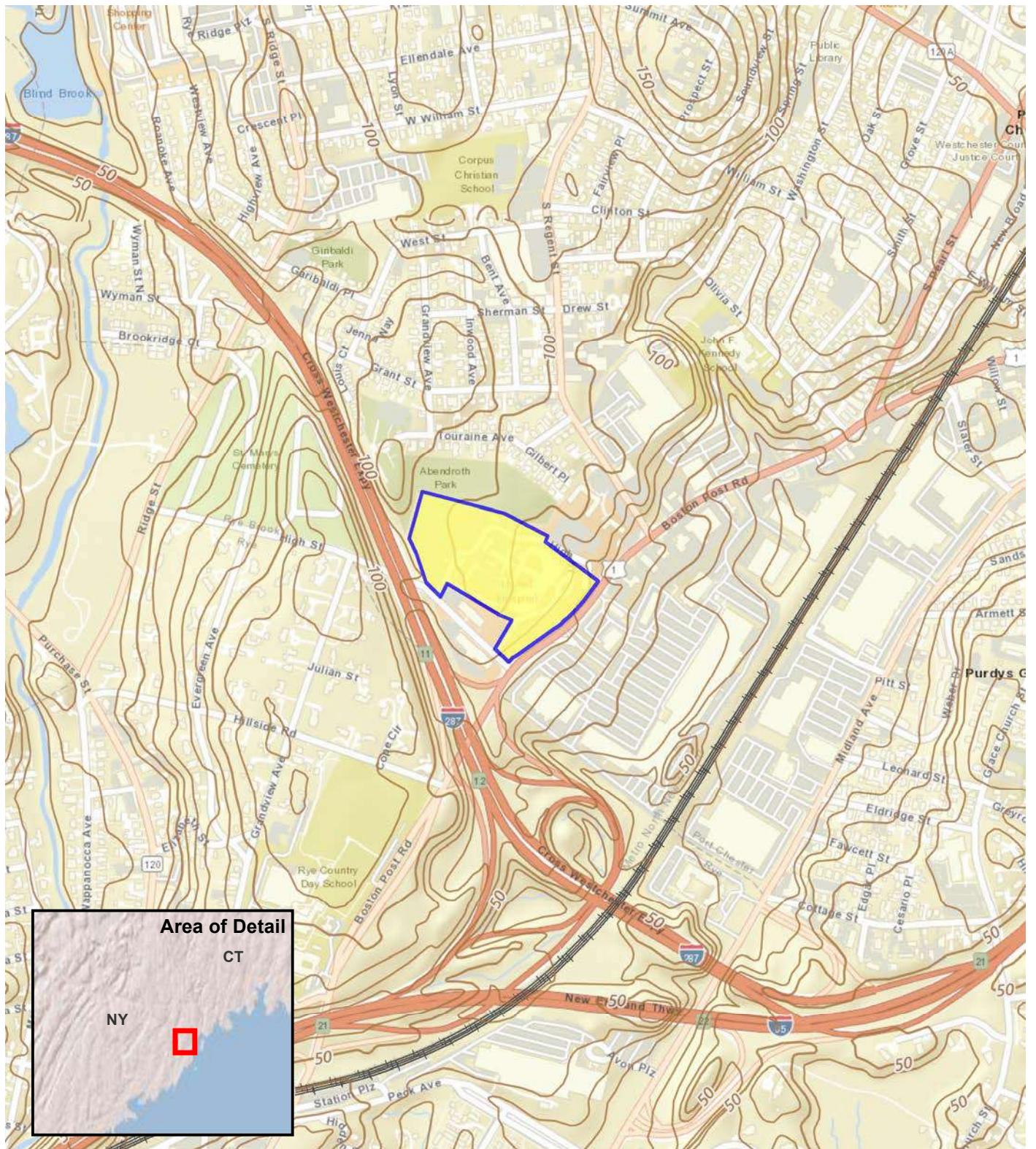
Daily progress reports will be submitted to the NYSDEC following each work day during implementation of the RDI field activities to summarize work progress, field findings, and air monitoring results. Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the work plan, or other sensitive or time critical information. However, if applicable, such conditions will also be included in the daily reports. Emergency conditions and changes to the work plan will be addressed directly to NYSDEC via personal communication.

6.0 REMEDIAL DESIGN INVESTIGATION REPORT

Following completion of the aforementioned RDI activities and receipt of laboratory analytical results, an RDI Report will be prepared to document the completed field activities, summarize the field screening and laboratory analytical data, and provide recommendations for additional monitoring and/or treatment, if warranted. The well survey data and water level measurements will be used to create a groundwater elevation contour map to determine the inferred groundwater flow direction. Field and laboratory analytical results will be presented and compared with regulatory standards and/or guidance values. Monitoring well construction, development, and sampling logs, and laboratory analytical reports will be provided as appendices.

If the results of the baseline groundwater sampling indicate that treatment of residual groundwater contamination is warranted, a Groundwater Treatment Design Report outlining the quantity of injection wells, reagents, quantities, application methods, etc. will be prepared and submitted to NYSDEC for review and approval prior to any treatment work.

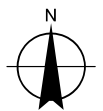
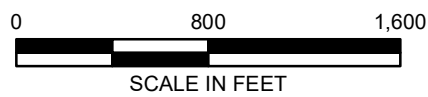
FIGURES



Service Layer Credits: ESRI World Street Map, 2020.

LEGEND

 BCP SITE BOUNDARY



akrf

440 Park Avenue South, New York, NY 10016

Former United Hospital
406 Boston Post Road
Port Chester, New York

SITE LOCATION

DATE

3/7/2025

PROJECT NO.

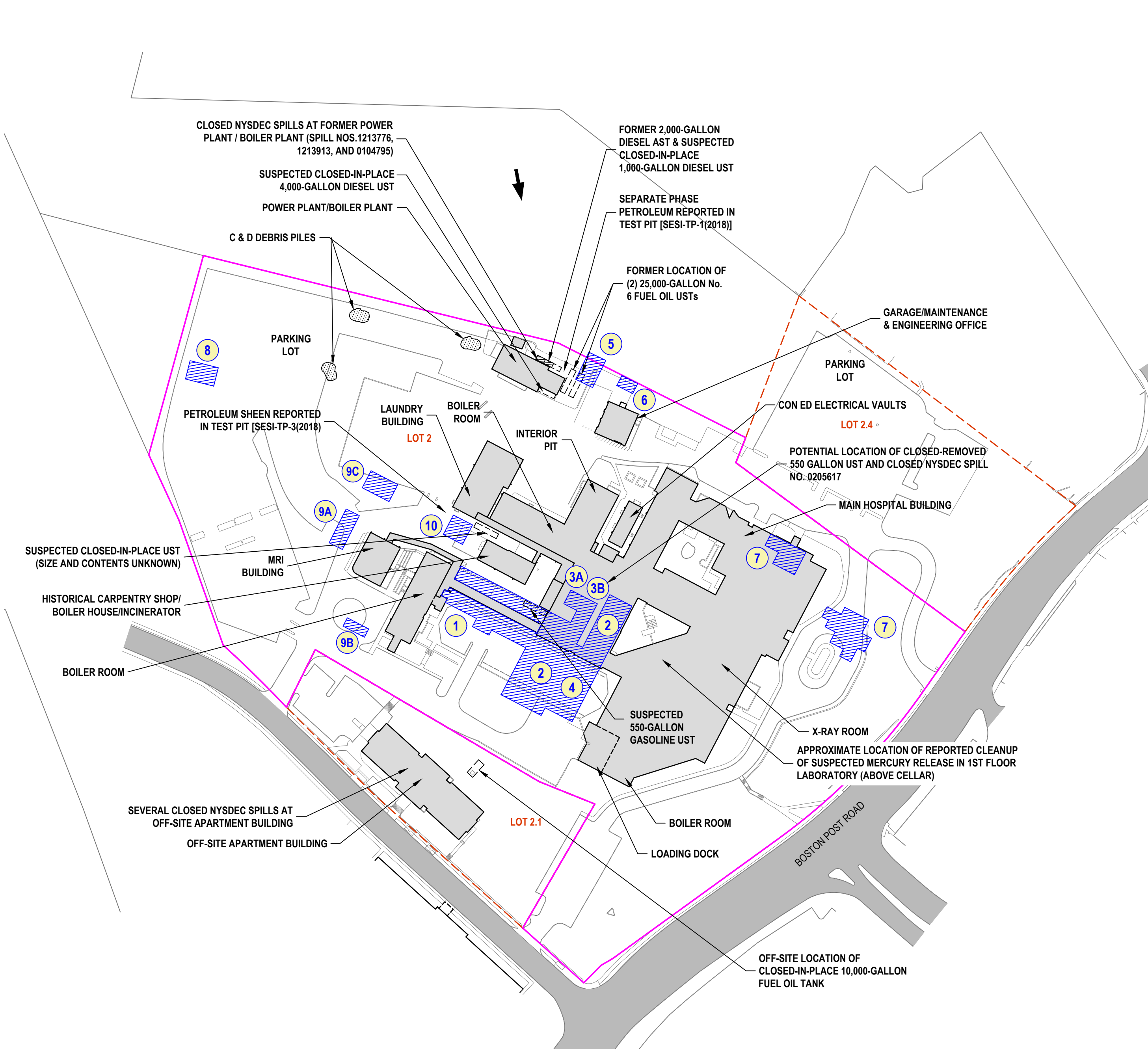
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FIGURE

1

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MAP SOURCES:
1. CAD drawing A051141B 406 Boston Post Road, Port Chester Email 03-21-2017.dwg received from Rose Associates, Inc. on March 17, 2020.
2. https://giswww.westchestergov.com



FORMER BUILDING STRUCTURES			
Building No.	Description	Approximate Construction Date	Approximate Demolition Date
1	Macy's Home for Nurses	1915 or prior	Between 1950 and 1990
2	Hospital Wards	1915 or prior	Between 1950 and 1990
3A	Coal/Storage Building	1915 or prior	Between 1919 and 1934
3B	Gas Tank	Between 1919 and 1934	Between 1950 and 1990
4	Administration Building	Between 1915 and 1919	Between 1950 and 1990
5	One of two small buildings to the east of the Engineering Office	Between 1919 and 1934	Between 1950 and 1990
6	One of two small buildings to the east of the Engineering Office	Between 1919 and 1934	Between 1950 and 1990
7	Two small buildings to the south of the hospital (Use Unknown)	Between 1915 and 1919	Between 1950 and 1990
8	Small Building (Use Unknown)	Between 1919 and 1934	Between 1950 and 1990
9A	Three small buildings to the north of the hospital - labeled as "Storage"	Between 1919 and 1934	Between 1934 and 1950
9B	Three small buildings to the north of the hospital - labeled as "Storage"	Between 1919 and 1934	Between 1934 and 1950
9C	Three small buildings to the north of the hospital - labeled as "Auto"	Between 1919 and 1934	Between 1934 and 1950
10	Morgue	Between 1919 and 1934	Between 1950 and 1990

Former United Hospital
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Port Chester, New York

DATE
3/7/2025
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200057
FIGURE
2

SITE PLAN - FORMER BUILDING OVERLAY

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440 Park Avenue South, New York, NY 10016

©2025 AKRF, Inc. Q:\Projects\200057 - FORMER UNITED HOSPITAL\Technical\Hazmat\RAMPCAD\200057_Fig 4 Site Plan - Future Tax Lot Overlay.dwg 3/7/2025 4:02 PM lsa save: mvelleur

Future Tax Lot Subdivision Plan		
Future Tax Lot ID	Description	Redevelopment Plan
Proposed Track 1 Area		
1	BCP portion; 2.563 acres (111,655-square feet)	Construction of two multi-story residential buildings on a podium containing two levels of below-grade parking, with exterior landscaped and paved areas
Proposed Track 2 Area		
9	0.129 acre (5,640-square feet)	Construction of a telecommunications antennae tower and associated infrastructure, with some exterior paved area. Construction of the antennae and associated structures commenced following completion of the remedial work outlined in the NYSDEC-approved Change of Use (COU) for the new antennae (COU-Antennae Area)
Proposed Track 4 Areas		
3	0.726 acre (31,625 square feet)	this area will consist of a landscaped area that will be bound by Future Mallory Way and Boston Post Road (including the narrow strip along the Site's eastern boundary that will be "Deeded for Highway Purposes").
4	BCP portion; 0.949 acres (41,344-square feet)	construction of a multi-story assisted-living facility containing two levels of below-grade parking, with exterior landscaped and paved areas.
5	0.292 acre (12,735-square feet)	construction of a multi-story, slab-on-grade, commercial building that will occupy almost the entire lot, with some exterior paved areas around the perimeter of the building.
6	3.594 acres (156,550-square feet)	construction of a multi-story residential building containing one level of below-grade parking, with exterior landscaped and paved areas.
7	BCP portion; 2.352 acres (102,450-square feet)	This area will consist of the interior roadways and other paved areas that link the individual tax lots.
8	0.499 acre (21,725-square feet)	Construction of a multi-story residential building containing one level of below grade parking that will occupy almost the entire lot, with some exterior paved areas around the perimeter of the building.
Future Mallory Way (public road)	BCP portion; 0.468 acre (20,384-square feet)	Construction of a public roadway that will be "Deeded to the Village for Highway Purposes".
Future Land for "Highway Purposes" (narrow strip along eastern Site boundary)	BCP portion; 0.219 acre (9,562-square feet)	This area will be deeded for "Highway Purposes", likely to be used in the future to widen or otherwise modify the existing sidewalk along Boston Post Road.

MAP SOURCES:
1. CAD drawing 2024-06-19_United Hospital_Subdivision Plan.dwg received from SLR International Corporation on June 19, 2024.
2. https://giswww.westchestergov.com
3. 2018 and 2019 Borings, Soil Vapor Points, Temporary Groundwater Wells, and Test Pits taken from SESI Drawing Numbers FIG 1.4 (dated 11-14-19), FIG-3.1, FIG-3.2, FIG-3.3 (dated 12/17/18).



LEGEND

- BCP SITE BOUNDARY
- FUTURE TAX LOT BOUNDARY
- NON-BCP PORTION OF THE REDEVELOPMENT PROJECT
- INFERRED GROUNDWATER FLOW DIRECTION

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Port Chester, New York

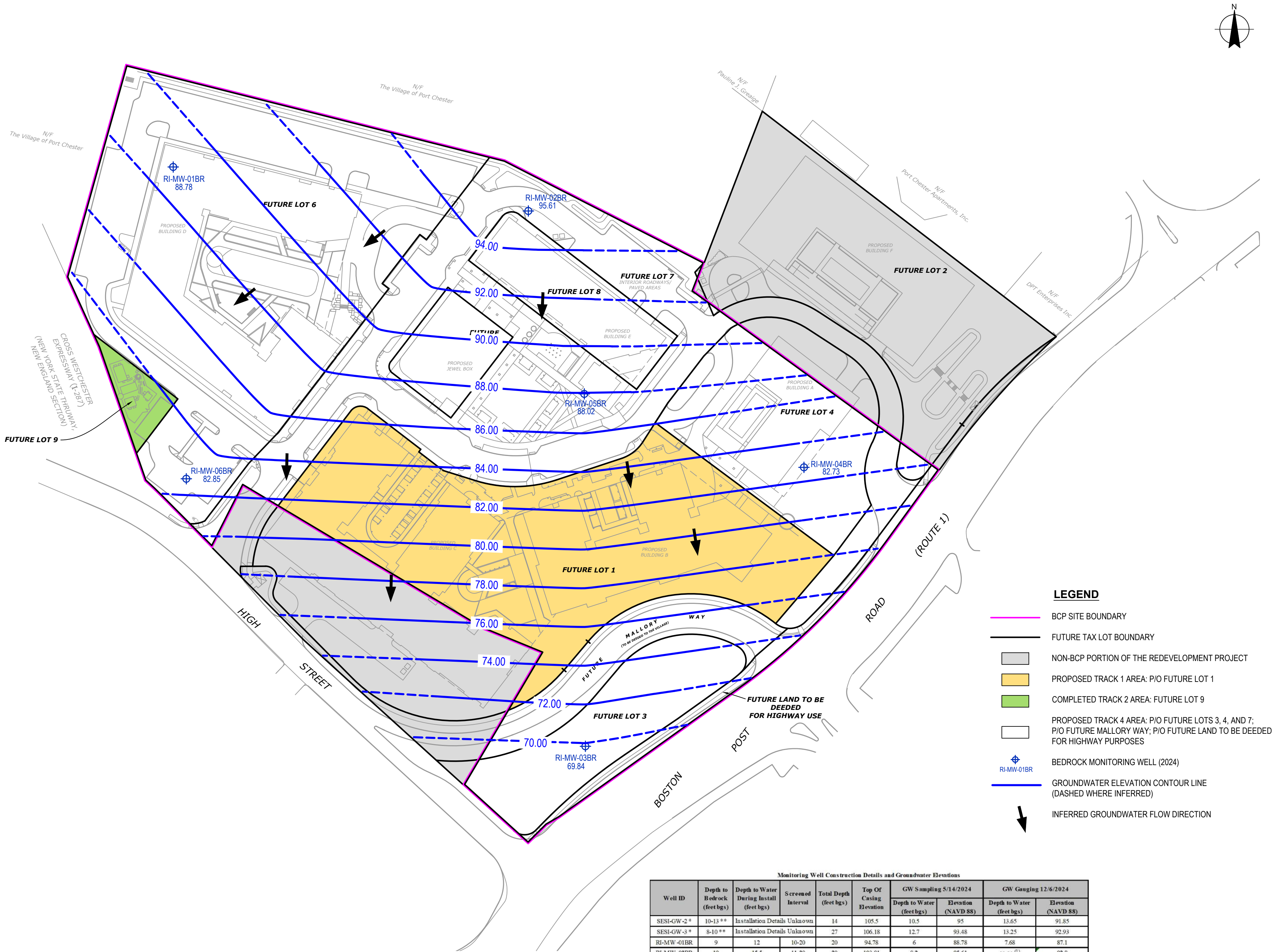
akrf
440 Park Avenue South, New York, NY 10016

SITE PLAN - FUTURE TAX LOT OVERLAY

DATE
3/7/2025
PROJECT NO.
200057
FIGURE
3

©2025 AKRF, Inc. Q:\Projects\200057 - FORMER UNITED HOSPITAL\Technical\Hazmat\RAWP\CAD\200057 Fig 8A Groundwater Elevation Contour Map May14 2024.dwg last save: mvelaux 3/7/2025 3:51 PM

MAP SOURCES:
1. CAD drawing 2024-06-19, *United Hospital_Subdivision Plan.dwg* received from SLR International Corporation on June 19, 2024.
2. <https://giswww.westchestergov.com>



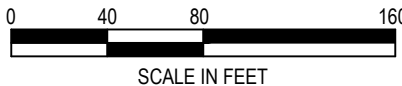
LEGEND

- BCP SITE BOUNDARY
- FUTURE TAX LOT BOUNDARY
- NON-BCP PORTION OF THE REDEVELOPMENT PROJECT
- PROPOSED TRACK 1 AREA: P/O FUTURE LOT 1
- COMPLETED TRACK 2 AREA: FUTURE LOT 9
- PROPOSED TRACK 4 AREA: P/O FUTURE LOTS 3, 4, AND 7; P/O FUTURE MALLORY WAY; P/O FUTURE LAND TO BE DEEDED FOR HIGHWAY PURPOSES
- BEDROCK MONITORING WELL (2024)
- GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)
- INFERRED GROUNDWATER FLOW DIRECTION

Monitoring Well Construction Details and Groundwater Elevations

Well ID	Depth to Bedrock (feet bgs)	Depth to Water During Install (feet bgs)	Screened Interval	Total Depth (feet bgs)	Top Of Casing Elevation	GW Sampling 5/14/2024		GW Gauging 12/6/2024	
						Depth to Water (feet bgs)	Elevation (NAVD 88)	Depth to Water (feet bgs)	Elevation (NAVD 88)
SESI-GW-2 *	10-13 **	Installation Details Unknown		14	105.5	10.5	95	13.65	91.85
SESI-GW-3 *	8-10 **	Installation Details Unknown		27	106.18	12.7	93.48	13.25	92.93
RI-MW-01BR	9	12	10-20	20	94.78	6	88.78	7.68	87.1
RI-MW-02BR	10	15.5	11-20	20	103.81	8.2	95.61	11.01 ⁽¹⁾	92.8
RI-MW-03BR	13.5	16	14.5-23	23	77.34	7.5	69.84	7.44	69.9
RI-MW-04BR	9	14	13-23	23	93.73	11	82.73	10.61	83.12
RI-MW-05BR	2	14.5	13.5-24	23.5	91.72	3.7	88.02	3.68	88.04
RI-MW-06BR	12.5	14.5	13.5-24	23.5	90.35	7.5	82.85	8.61	81.74

Notes: bgs = below ground surface; NAVD88 = North American Vertical Datum of 1988.
* = Wells installed by SESI circa 2018/2019; however, details regarding the installation and construction of the wells are not available.
** = Depth to Bedrock is estimated based on the findings from the soil borings advanced in the vicinity of each well during the RI.
(1) = Trace, non-measurable LNAP was detected with an oil/water interface probe at RI-MW-02BR, located in a petroleum-related AOC (AOC-6A, 6B, and 6C).



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406 Boston Post Road
Port Chester, New York

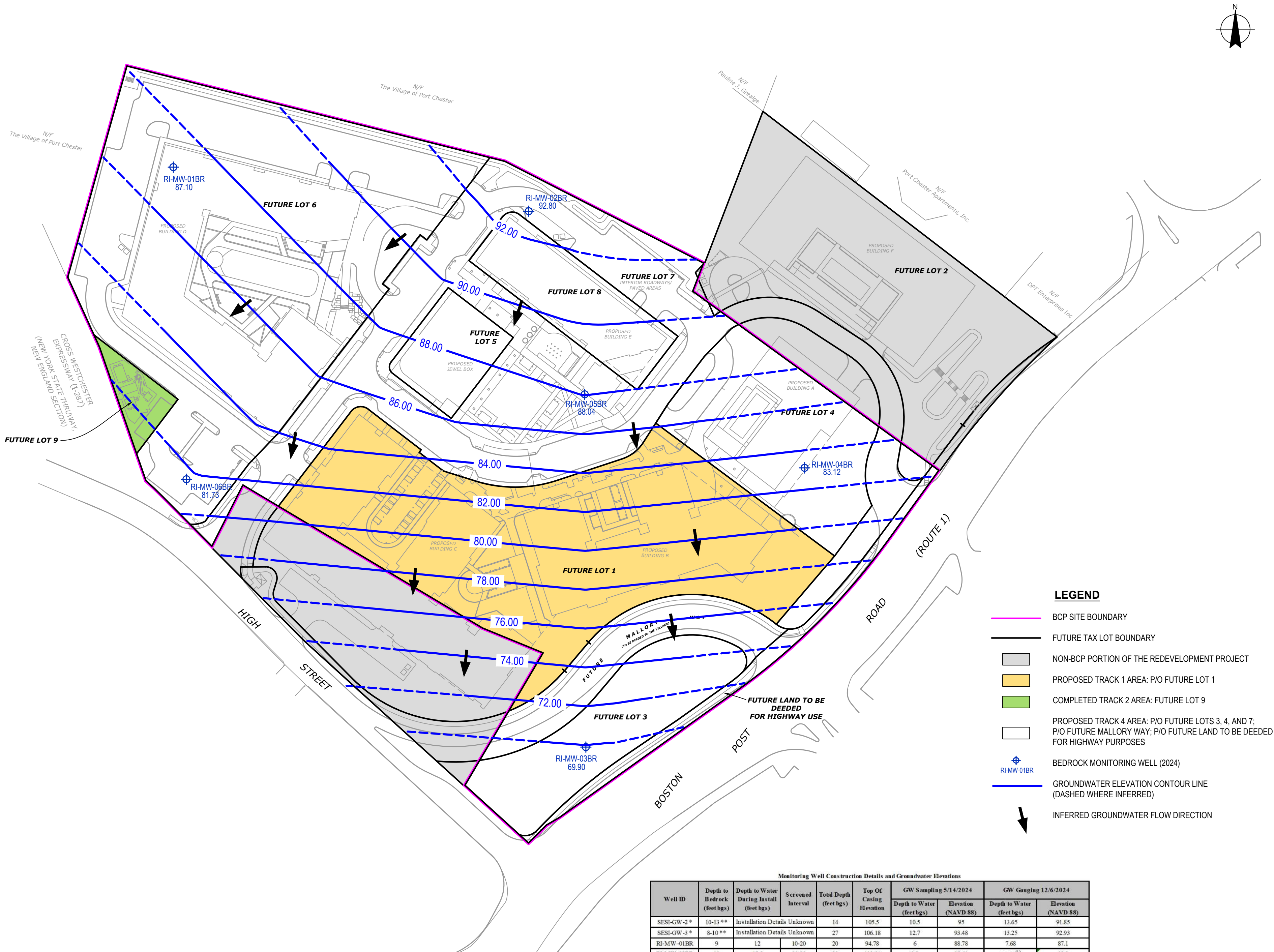
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440 Park Avenue South, New York, NY 10016

GROUNDWATER ELEVATION CONTOUR MAP - MAY 14, 2024

DATE
3/7/2025
PROJECT NO.
200057
FIGURE
4A

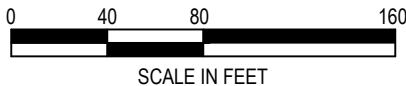
©2025 AKRF, Inc. Q:\Projects\200057 - FORMER UNITED HOSPITAL\Technical\Hazmat\RAMPCAD\200057_Fg_BB_Groundwater Elevation Contour Map December 6 2024.dwg 3/7/2025 3:53 PM last save: mvelieux 3/7/2025 3:53 PM

MAP SOURCES:
1. CAD drawing 2024-06-19, United Hospital_Subdivision Plan.dwg received from SLR International Corporation on June 19, 2024.
2. https://giswww.westchestergov.com



Monitoring Well Construction Details and Groundwater Elevations									
Well ID	Depth to Bedrock (feet bgs)	Depth to Water During Install (feet bgs)	Screened Interval	Total Depth (feet bgs)	Top Of Casing Elevation	GW Sampling 5/14/2024		GW Gauging 12/6/2024	
						Depth to Water (feet bgs)	Elevation (NAVD 88)	Depth to Water (feet bgs)	Elevation (NAVD 88)
SESI-GW-2 *	10-13 **	Installation Details Unknown		14	105.5	10.5	95	13.65	91.85
SESI-GW-3 *	8-10 **	Installation Details Unknown		27	106.18	12.7	93.48	13.25	92.93
RI-MW-01BR	9	12	10-20	20	94.78	6	88.78	7.68	87.1
RI-MW-02BR	10	15.5	11-20	20	103.81	8.2	95.61	11.01 ⁽¹⁾	92.8
RI-MW-03BR	13.5	16	14.5-23	23	77.34	7.5	69.84	7.44	69.9
RI-MW-04BR	9	14	13-23	23	93.73	11	82.73	10.61	83.12
RI-MW-05BR	2	14.5	13.5-24	23.5	91.72	3.7	88.02	3.68	88.04
RI-MW-06BR	12.5	14.5	13.5-24	23.5	90.35	7.5	82.85	8.61	81.74

Notes: bgs = below ground surface; NAVD88 = North American Vertical Datum of 1988.
* = Wells installed by SESI circa 2018/2019; however, details regarding the installation and construction of the wells are not available.
** = Depth to Bedrock is estimated based on the findings from the soil borings advanced in the vicinity of each well during the RI.
(1) = Trace, non-measurable LNAP was detected with an oil/water interface probe at RI-MW-02BR, located in a petroleum-related AOC (AOC-6A, 6B, and 6C).



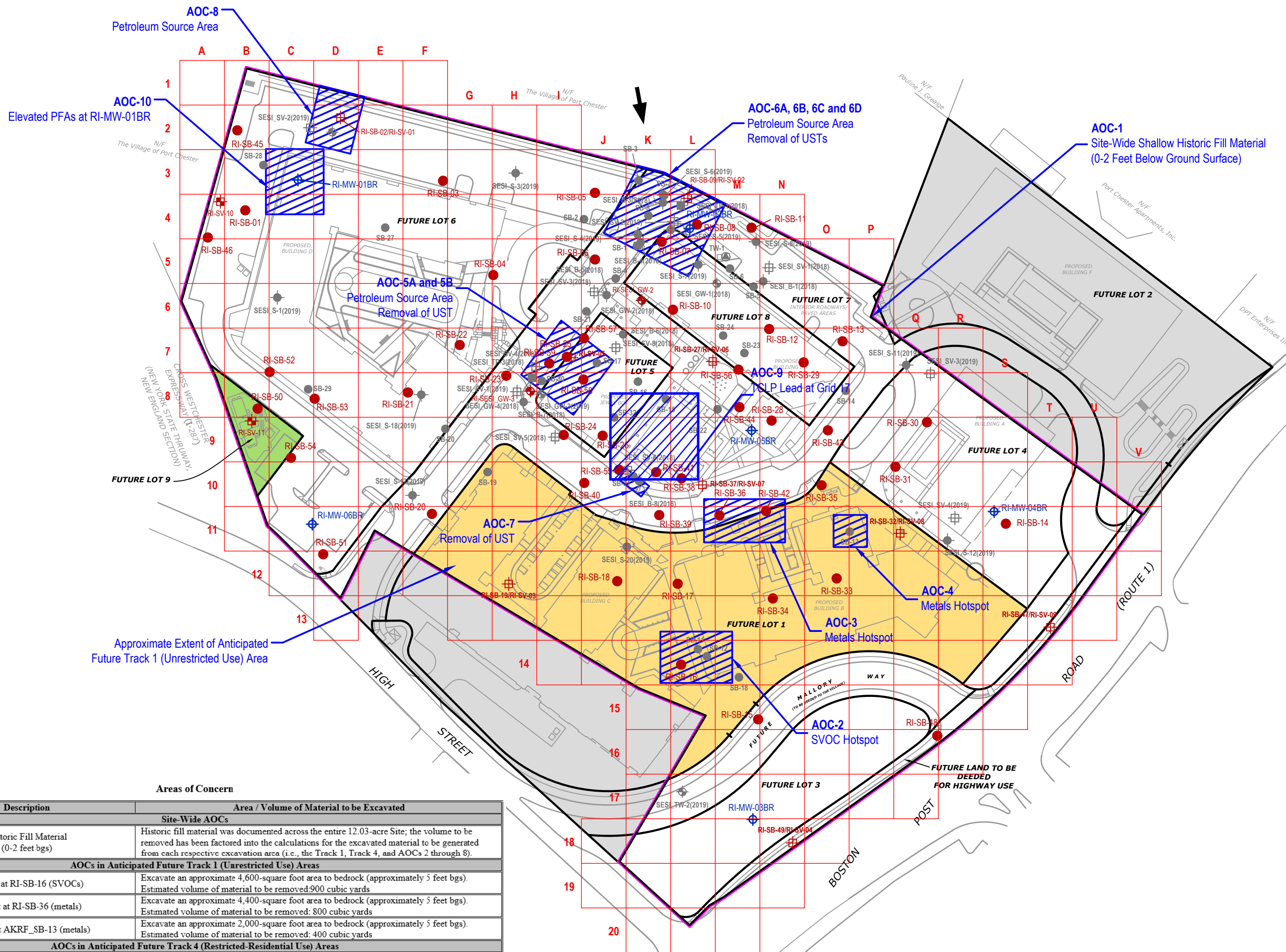
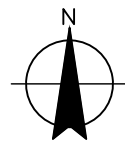
Former United Hospital
406 Boston Post Road
Port Chester, New York

DATE
3/7/2025
PROJECT NO.
200057
FIGURE
4B

GROUNDWATER ELEVATION CONTOUR MAP - DECEMBER 6, 2024

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LEGEND

- BCP SITE BOUNDARY
- FUTURE TAX LOT BOUNDARY
- NON-BCP PORTION OF THE REDEVELOPMENT PROJECT
- PROPOSED TRACK 1 AREA: P/O FUTURE LOT 1
- COMPLETED TRACK 2 AREA: FUTURE LOT 9
- PROPOSED TRACK 4 AREA: P/O FUTURE LOTS 3, 4, AND 7; P/O FUTURE MALLORY WAY; P/O FUTURE LAND TO BE DEEDED FOR HIGHWAY PURPOSES
- APPROXIMATE EXTENT OF AREAS OF CONCERN (AOCs) FOR FUTURE REMEDIAL ACTION
- AKRF TEMPORARY GROUNDWATER WELL LOCATION (2020)
- AKRF SOIL BORING LOCATION (2020)
- SESI SOIL AND TEMPORARY GROUNDWATER WELL LOCATION (2019)
- SESI BORING LOCATION (2019)
- SESI MONITORING WELL LOCATION (2018)
- SESI BORING LOCATION (2018)
- SESI TEST PIT LOCATION (2018)
- SESI SOIL VAPOR POINT LOCATION (2018 & 2019)
- AKRF REMEDIAL INVESTIGATION SOIL BORING LOCATION
- AKRF REMEDIAL INVESTIGATION SOIL VAPOR POINT LOCATION
- AKRF REMEDIAL INVESTIGATION SOIL BORING/ SOIL VAPOR POINT LOCATION
- AKRF REMEDIAL INVESTIGATION GROUNDWATER SAMPLE LOCATION [SESI GROUNDWATER MONITORING WELL LOCATION (2018/2019)]
- BEDROCK MONITORING WELL (2024)
- ALPHANUMERIC GRID
- INFERRED GROUNDWATER FLOW DIRECTION

Areas of Concern		
AOC	Description	Area / Volume of Material to be Excavated
Site-Wide AOCs		
1	Historic Fill Material (0-2 feet bgs)	Historic fill material was documented across the entire 12.03-acre Site; the volume to be removed has been factored into the calculations for the excavated material to be generated from each respective excavation area (i.e., the Track 1, Track 4, and AOCs 2 through 8).
AOCs in Anticipated Future Track 1 (Unrestricted Use) Areas		
2	Hotspot at RI-SB-16 (SVOCs)	Excavate an approximate 4,600-square foot area to bedrock (approximately 5 feet bgs). Estimated volume of material to be removed: 900 cubic yards.
3	Hotspot at RI-SB-36 (metals)	Excavate an approximate 4,400-square foot area to bedrock (approximately 5 feet bgs). Estimated volume of material to be removed: 800 cubic yards.
4	Hotspot at AKRF_SB-13 (metals)	Excavate an approximate 2,000-square foot area to bedrock (approximately 5 feet bgs). Estimated volume of material to be removed: 400 cubic yards.
AOCs in Anticipated Future Track 4 (Restricted-Residential Use) Areas		
5A	Source Area at RI-SB-25 (petroleum)	Excavate an approximate 6,900-square foot area to bedrock (approximately 8 feet bgs). Remove UST.
5B	Suspected Closed-In-Place UST adjacent to former carpentry shop / boiler house / incinerator building	Remove UST. During characterization of this AOC for waste disposal, TCLP lead was detected above the hazardous waste threshold. Additional delineation sampling will be conducted in accordance with disposal facility requirements to limit the area classified as hazardous waste.
6A	Source Area at RI-SB-09 (petroleum - USTs at former boiler/power plant)	Excavate an approximate 10,000-square foot area to bedrock (approximately 12 feet bgs). Remove USTs.
6B	Suspected Closed-In-Place 1,000-gallon UST at former boiler / power plant	Estimated volume of material to be removed: 2,000 cubic yards.
6C	Suspected Closed-In-Place 4,000-gallon UST at former boiler / power plant	Address residual groundwater contamination via recovery, direct application of an oxygen-releasing compound and/or chemical oxidant (ORC® Peraculfax® and/or similar product) to excavation area to promote aerobic biodegradation/destruction of residual petroleum contamination, and/or in-situ injections (bioremediation and/or chemical oxidation), followed by groundwater monitoring with a minimum network of three monitoring wells. (d)
6D	Residual petroleum product and oily water at RI-MW-02BR	Excavate an approximate 450-square foot area to bedrock (approximately 12 feet bgs). Remove UST.
7	550-Gallon Gasoline UST & suspected pump island adjacent to former carpentry shop/boiler house / incinerator building	Estimated volume of material to be removed: 200 cubic yards.
8	Source Area at RI-SB-02 and SESI_TW-1 (petroleum)	Excavate an approximate 3,600-square foot area to bedrock (approximately 10 feet bgs). Estimated volume of material to be removed: 1,300 cubic yards.
9	TCLP lead at Waste Characterization Grid 17	During waste characterization sampling in Grid 17, located in the central portion of the Site with approximate dimensions of 100 feet by 100 feet, TCLP lead was detected above the hazardous waste threshold. Additional delineation sampling will be conducted in accordance with disposal facility requirements to limit the area classified as hazardous waste.
10	Elevated PFAS at RI-MW-01BR	In-situ groundwater treatment consisting of the injection of a colloidal GAC product to address elevated detections of PFAS, followed by groundwater monitoring with a minimum network of three monitoring wells. (d)

Notes: AOC = area of concern; UST = underground storage tank; bgs = below ground surface; PFAS = per- and polyfluoroalkyl substances; TCLP = Toxicity Characteristic Leaching Procedure; GAC = granular activated carbon; (d) = final number of monitoring wells and their locations will be determined in consultation with NYSDEC and included in the future Site Management Plan.

MAP SOURCES:

1. CAD drawing 2024-06-19_United Hospital_Subdivision Plan.dwg received from SLR International Corporation on June 19, 2024.

2. <https://giswww.westchestergov.com>

3. 2018 and 2019 Borings, Soil Vapor Points, Temporary Groundwater Wells, and Test Pits taken from SESI Drawing Numbers FIG 1.4 (dated 11-14-19), FIG-3.1, FIG-3.2, FIG-3.3 (dated 12/17/18).

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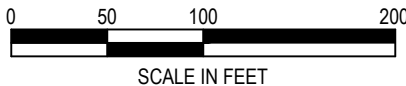
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Port Chester, New York

AREAS OF CONCERN & ALPHANUMERIC GRID

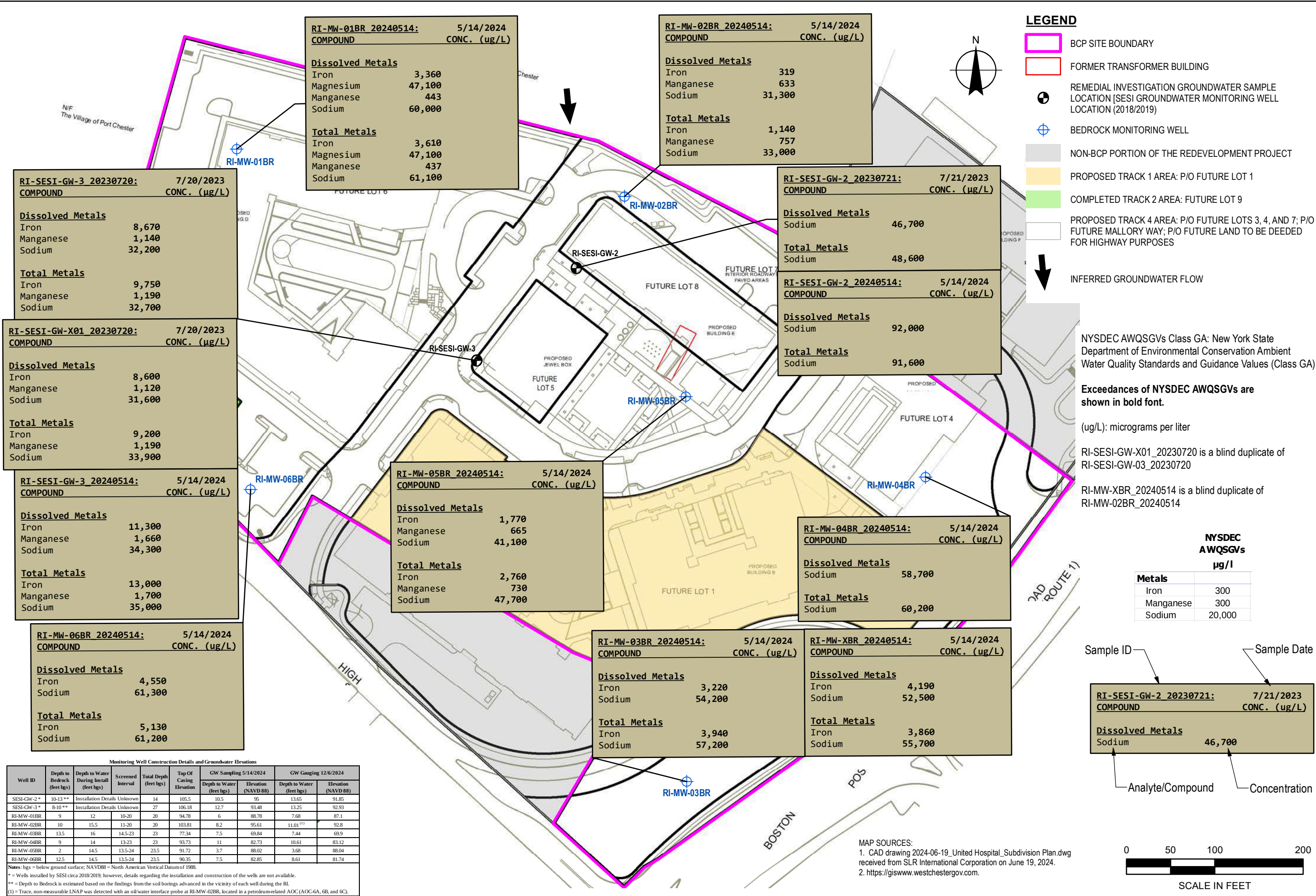
DATE
4/15/2025

PROJECT NO.
200057

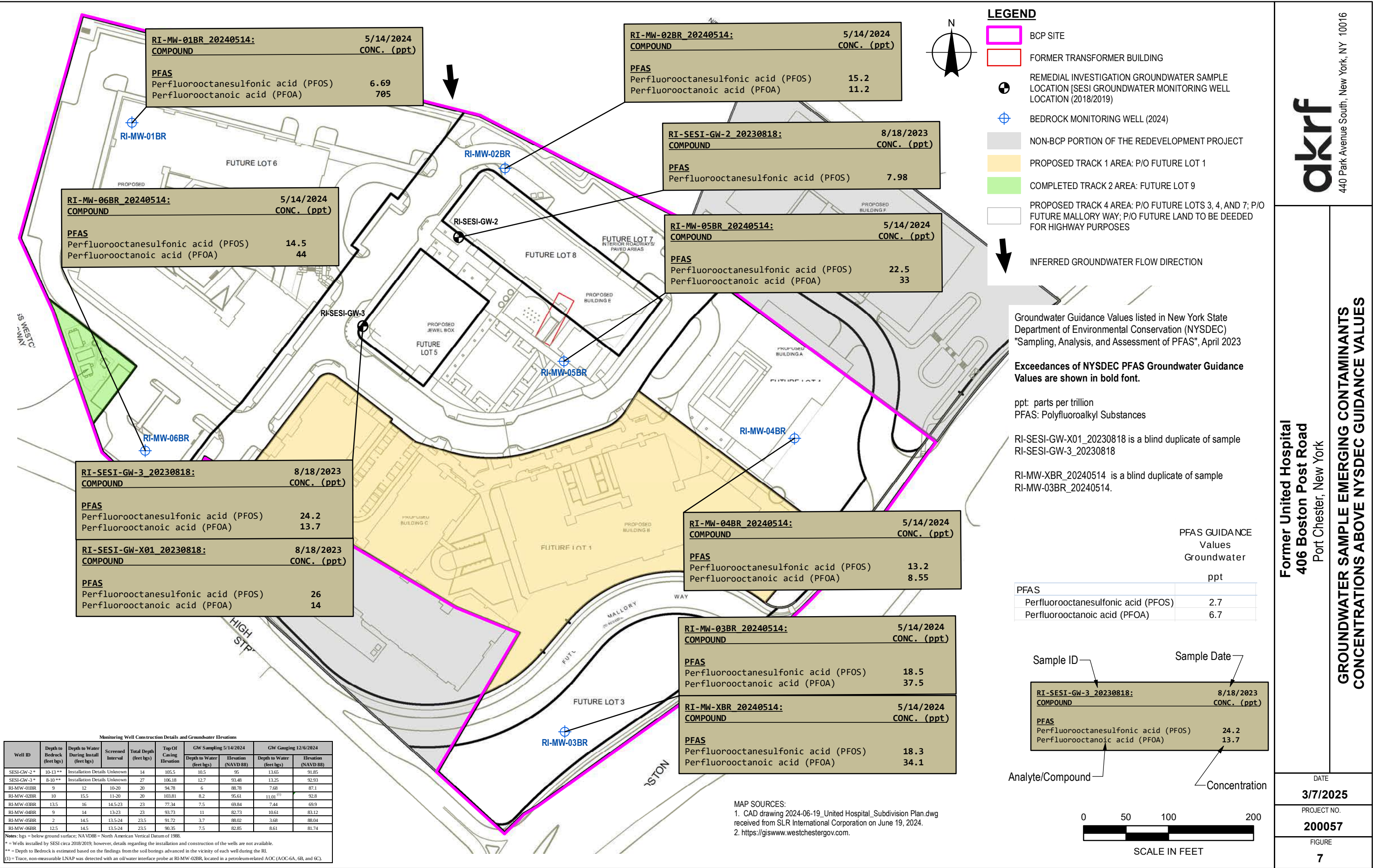
FIGURE
5



© 2025 AKRF Q:\Projects\200057 - FORMER UNITED HOSPITAL\Technical\GIS and Graphics\Hazmat\RAWP\200057 Figure 9 Groundwater Sample Concentrations Above NYSDEC AWQSGVs.mxd 3/7/2025 3:54:57 PM mveilleux



© 2025 AKRF Q:\Projects\20057 - FORMER UNITED HOSPITAL\Technical\GIS and Graphics\Hazmat\RAWP\20057 Figure 10 Groundwater Sample Emerging Contaminants Concentrations above NYSDEC Guidance Values.mxd 3/7/2025 3:56:37 PM mveilleux



Monitoring Well Construction Details and Groundwater Elevations									
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