NEW YORK STATE | Office of Mental Health

KATHY HOCHUL
Governor
ANN MARIE T. SULLIVAN, M.D.
Commissioner

December 23, 2024

Mr. Christopher H. Allen
Environmental Engineer
Superfund and Brownfield Cleanup Section, Division of Environmental Remediation
New York State Department of Environmental Conservation
47-40 21st Street
Long Island City, New York 11101
Transmitted via e-mail

Re: Remedial Work Plan Submission
Building 1 Transformer Rooms 1 & 2 PCB Remediation
Bronx Psychiatric Center Superfund Site # 203005

Dear Mr. Allen:

The New York State Office of Mental Health (OMH) is submitting the "Remedial Work Plan for Transformer Rooms No. 1 & 2 – Building 1 – Bronx Psychiatric Center" dated December 19, 2024, prepared by TRC Engineers, Inc., to the New York State Department of Environmental Conservation (NYSDEC) for approval in accordance with the requirements of the Order on Consent and Administrative Settlement #R2-0668-06-11 for Bronx Psychiatric Center Site #203005. Upon approval of the work plan by the NYSDEC, OMH will proceed with development and implementation of final plans and specifications for the remedial activities identified in the approved work plan.

Please contact Anthony Sigona of TRC Engineers at (212) 221-7822 or Jimmy Ng of OMH at (518) 549-5118, if you should have any questions.

Thank You.

Sincerely,

Marshall Vitale
Director, ASSG

Cc: Jane O'Connell, NYSDEC
Cris-Sandra Maycock, NYSDEC
Justin H. Deming, NYSDOH
Stephanie L. Selmer, NYSDOH
Laura Stella, DASNY
Anthony Sigona, TRC Engineers
Josh Cupriks, TRC Engineers
John Reisinger, OMH Counsel's Office
Jimmy Ng, OMH Environmental Engineer

enclosures a/s

REMEDIAL WORK PLAN

FOR

TRANSFORMER ROOMS NOS. 1 & 2 – BLDG. 1
BRONX PSYCHIATRIC CENTER
1500 WATERS PLACE, BRONX, NY 10461
DASNY Project Number 3816609999

Prepared For:

NEW YORK STATE OF OPPORTUNITY. | Office of Mental Health

Mr. Jimmy Ng, P.E.
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TRC Project No. 411323.0000.0022

December 19, 2024

TRC

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ATTACHMENTS

1.0 INTRODUCTION AND PROJECT OBJECTIVES

This Remedial Work Plan (RWP) has been prepared by TRC Engineers, Inc. (TRC) on behalf of Dormitory Authority of the State of New York (DASNY) and the New York Office of Mental Health (OMH) for Transformer Room No. 1 and Transformer Room No. 2 located inside Building No. 1 (Medical Surgical Building 101 (Thomson Building 1), located at the Bronx Psychiatric Center located at 1200 Waters Place in Bronx County of New York City, tax block 4226, lot 30.

This RWP will outline the scope of work for the implementation of the remedy selected which is specified in the Administrative Record of Decision (ROD) governing the cleanup of Hazardous Waste at this Site according to New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

In order to ensure proper performance of all key objectives of this work plan, TRC Engineers, Inc. (TRC) will review this RWP with New York Office of Mental Health (OMH) and its Environmental Contractor before scheduling this work. The RWP is divided into sequential steps as follows: Transformer Room Sampling, Sampling Room Methodologies, Transformer Room Investigation Report, Project Specifications, Transformer Room Remediation, Soil Excavation and Sampling, Backfilling, and Installation of Concrete Pads (Cover), Solid Waste Management, Transportation and Disposal, and Final Report. The Project Schedule is presented in Attachment 1.

All TRC work will be performed in accordance with the Site-Specific Health and Safety Plan (HASP) presented in Attachment 2 that defines the potential hazards expected to be encountered during the implementation of the scope of work presented in this RWP, as well as the appropriate exposure controls including engineering, administrative, and personal protective equipment required for each task. In addition, the contractor assigned to perform RWP tasks in this plan will be required to prepare a separate HASP.

2.0 BACKGROUND

The Transformer Rooms Nos. 1 & 2 are located at Building No. 1 Medical Surgical Building 101 (Thomson Building 1) on a 0.1-acre portion of the 5-acre Bronx Psychiatric Center campus, which is considered an urban area (the "Site). In March 2019, the Thomson Building 1 Site at the Bronx Psychiatric Center was classified as a Class 2 inactive hazardous waste disposal site and is currently listed as a State Superfund Project in Bronx County and recorded as Site No. 203005. The Site was subsequently reclassified as a Class 3 Site based on the Administrative Record of Decision (ROD) Modification Memo dated February 11, 2020. This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the DEC) for the Bronx Psychiatric Center site and the public's input to the remedy presented by the Department. The DEC and NYS OMH also entered a Consent Order on February 23, 2012, Index # R2-0668-06-11; the Order obligates the responsible party to implement this RWP.

The Administrative Record of the New York State Department of Environmental Conservation (the NYSDEC) is based on the following:

1. *Proposed Remedial Action Plan for the Bronx Psychiatric Center site,* dated September 2018, prepared by the NYSDEC
2. Order on Consent, Index No. R2-0668-06-11, between the NYSDEC and New York State Office of Mental Health, executed on February 23, 2012
3. *Preliminary Site Assessment Report*, dated December 2000, prepared by Dvirka and Bartilucci Consulting Engineers.
4. *Citizen Participation Plan,* dated March 2013 (revised June 2013), prepared by URS Corporation (URS)
5. *Remedial Investigation Work Plan*, dated October 2013, prepared by URS
6. *Remedial Investigation Report*, dated November 2016, prepared by URS
7. *Feasibility Study Report*, dated February 2019, prepared URS

The transformer rooms at the psychiatric center were operated for over 50 years for electric power supply to the building. There are transformers and associated electrical equipment in the transformer rooms. The prior transformers used at the facility contained PCB dielectric fluid, which leaked within the transformer rooms, impacting the concrete floors beneath and near the transformers and the soils below the building floor. The former transformers were replaced, and the current transformers contain non-PCB oil.

Transformer Rooms No. 1 and No. 2 are in the east side of the basement of Building No. 1 Medical Surgical Building 101 (Thomson Building 1). Access to the transformer rooms is limited to maintenance personnel. Transformer Rooms No. 1 and No. 2 currently contain inactive transformers that previously supplied electricity to Building No 1.

In 1995, the concrete floors were encapsulated (sealed) with a two-layer epoxy system in both transformer Rooms No. 1 and 2. The entire floor in Room No. 1 was epoxy sealed, and a limited portion of the floor near the transformer in Room No. 2 was epoxy sealed. Openings between ventilation fan and exterior walls and the space between the floors and electrical equipment were sealed, and surface wipe sampling and maintenance of the epoxy coating were being conducted until October 2023, when access to the Transformer Rooms was compromised due to vandalism.

Currently, Transformer Room No. 1 contains a 13,800-280-volt double-ended unit substation, consisting of primary switches, transformers, and switch gear. Transformer Room No. 2 contains a 13,800-480-volt double-ended unit substation, consisting of primary switches, transformers, and secondary switchgear, as well as switchgear that is served from Room No. 1. The power is disconnected, and building is unoccupied, and the transformers and equipment will be removed to implement the selected remedy specified in the ROD issued by NYSDEC.

3.0 TRANSFORMER ROOM SAMPLING

The Transformers for Building No. 1 Medical Surgical Building 101 (Thomson Building 1) will be surveyed for suspect asbestos-containing materials (ACM), Lead Paint, RCRA metals, PCBs, universal and hazardous waste prior to any proposed remedial work. The transformers and associated equipment must be sampled and properly characterized prior to removal. The actual number of samples collected for each type of material will depend on the quantity and types of suspect ACM, RCRA metals, and PCB containing material identified.

The proposed survey and sampling will not include an assessment of soil or groundwater impacts beneath the Transformers which was previously performed prior to the ROD. The additional sampling in the Transformer Rooms will be used for waste characterization of materials to be removed during remedial activities.

3.1 Asbestos Sampling

The asbestos survey will involve the inspection of all building materials present within the two (2) transformer rooms, including but not limited, to the transformers and associated equipment, vandalized components, debris, and any fire-rated doors. The asbestos survey will involve sampling of all suspect building materials impacted by the work. Homogeneous materials will be classified according to color, appearance and texture and evidence of being installed at the same general time. The suspect homogeneous asbestos containing materials (ACM) will be categorized into one of the three following groups:

- Surfacing Materials - sprayed or trowelled onto structural members (such as beams, columns, decking) for fire protection; on ceilings and walls for fireproofing; or for acoustical or decorative purposes.
- Thermal System Insulation (TSI) - applied to hot and cold-water systems and HVAC systems to prevent heat transfer and water condensation. This includes insulation on piping, pipe joints, and ducts.
- Miscellaneous Materials - all other suspect ACM including, but not limited to, gaskets, pumps, valves, roofing materials, caulk, tar, mastics and transite insulations.

The asbestos sampling will be performed by New York State Department of Labor (NYSDOL) and New York City Department of Environmental Protection (NYCDEP) certified asbestos inspectors/investigators.

The asbestos samples will be transported to a New York State Environmental Laboratory Approved Program (NYS ELAP) laboratory, following proper chain-of-custody procedures for analysis by New York State Polarized Light Microscopy (PLM) Method 198.1, non-friable organically bound (NOB) Method 198.4 or transmission electron microscopy (TEM) Method 198.6, as applicable.

3.2 Lead Paint Survey

A visual inspection of the Transformer Rooms will be performed for suspect Lead Paint.

- Preparation of a Lead Paint summary of field notes, location diagrams, observations and estimated quantities of suspect lead paint will be submitted with the supplemental environmental survey report for the property.

3.3 RCRA Metal Sampling

Disposal of porous floor debris may contain lead-based paint, as well as other regulated heavy metals typically associated with electrical equipment and is subject to the requirements under both the NYSDEC Solid and Hazardous Waste Management regulations (6 NYCRR 360 and 6 NYCRR 371) and the USEPA RCRA Hazardous Waste Management regulations (40 CFR Parts 260 through 268).

TRC will collect one (1) representative bulk sample of representative porous floor debris and non-metallic (non-recyclable) materials being removed from each Transformer Room. The sample will be placed in a container and delivered to a New State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory following proper chain-of-custody procedures. The sample will be analyzed following the Toxicity Characteristic Leaching Procedure (TCLP) for leachable RCRA (8) metals (arsenic, barium, cadmium, chromium, lead, selenium, silver, and mercury).

The TCLP analysis will provide a preliminary characterization of the projected waste stream for the non-recyclable debris materials as either hazardous or non-hazardous waste. The preliminary hazardous waste sampling can be used as final if TRC visually verifies that the waste stream is the same as what was originally sampled. TRC shall perform final waste characterization to obtain disposal facility acceptance prior to disposal by the contractor if required.

3.4 PCB Sampling

3.4.1 PCB Bulk Sampling

The accumulation of any liquid and sediment in the Transformer Rooms may be contaminated. This may include the potential release of di-electric or silicone oils, and potential PCB contamination. Bulk samples of residual liquid and sediment from the surface of concrete and/or drainage low points will be collected.

A total of six (6) discrete liquid and/or sediment samples will be collected using a dedicated disposable Teflon scoop for each liquid and/or sediment sample. The samples will be containerized in appropriately labeled and sealed laboratory-supplied glassware.

Liquid/sediment samples will be submitted for laboratory analysis acceptable to both New York State Department of Environmental Conservation (NYSDEC) and United States Environmental Protection Agency (USEPA).

3.4.2 PCB Wipe Sampling

Wipe Samples: A total of twelve (12) discreet PCB wipe sample will be collected from non-porous surfaces identified within Transformer Rooms 1 and 2 which comprise of vandalized equipment and materials which will be removed for off-site recycling and/or disposal.

Each wipe sample using hexane-rinsed cotton gauze wipe will be placed in a separate, pre-cleaned glass jar with a Teflon-lined cap for submission to the laboratory under standard chain-of-custody procedures for submission to an independent laboratory certified to perform PCB analysis according to New York State Department of Health (NYSDOH) ELAP program.

Wipe samples will be analyzed using gas chromatography (GC) in accordance with USEPA SW846 Method 8082A following Soxhlet Extraction (SW846 Method 3540C).

Laboratory reporting limits for each Aroclor in each sampling media are:

- *Surface Wipe Samples* – reporting limit of 0.1 µg/100 cm^2.

- Surface wipe samples will be compared to EPA's high occupancy wipe sample criteria of 10 µg/100 cm^2 (40 CFR 761.3, 761.123 and 761.30).

3.4.3 Transformer PCB Oil Sampling

TRC will collect samples of di-electric or silicone-based oil inside the transformers for laboratory analysis. The laboratory analysis of the di-electric, silicone and/or synthetic oils will be sampled and analyzed for PCBs to determine the concentration of PCBs. Although the site records indicate they are non-PCB transformers, the sampling of these transformers is recommended by the USEPA for legal disposal.

3.5 Sampling Methodologies

All work shall be completed in accordance with this RWP, referenced sampling/analytical methods, the HASP, and the New York Department of Environmental Conservation Sampling Guidelines and Field Sampling Procedures Manual dated September 1992. No deviations from this RWP or the HASP shall be made without prior receipt of alternate technical direction issued by TRC Project Manager and/or OMH.

3.6 Training & Medical/Fit Tests

All management and field personnel conducting sampling activities in this RWP have experience in the implementation of hazardous waste remediation and related field sampling programs. All TRC staff working on-site will comply with the HASP in effect at the time and will have completed Hazard Communication training specific to the project.

3.7 General Field Requirements

- All Electrical Equipment shall be fully de-energized and inspected by a licensed electrician to ensure the safety of all employees and contractors working in the Transformer Building for the duration of this sampling and remedial work under this project.
- During sampling, high powered flashlights or equivalent temporary lighting will be used to supplement poor lighting.
- The "Buddy System" will be strictly enforced for work in building. At no time will personnel be present in the building alone.
- All personnel performing the work will have appropriate training and be familiar with the content of the HASP and safety protocols for the Site.
- Proper protective clothing such as Tyvek® Suits and half-face purifying respirators will be utilized, as necessary. The respirator filters/cartridges shall provide oil resistant P100 and organic vapor protection.
- To prevent cross-contamination, neoprene, butyl, or Viton gloves (> 8 hour breakthrough for PCBs) shall be always used when handling PCB samples.
- TRC will provide all sampling equipment and sampling supplies and consumables necessary to perform the sampling, including sample containers, labels, disposable gloves, and templates.

3.8 TRC Mobile Data Solutions

TRC has developed, under our TRC Mobile Data Solutions program, a customizable data collection and

reporting process for our project teams to utilize to efficiently collect and report field data.

- Real Time Information - TRC's real time retrieval allows project staff to coordinate efficiently to provide real-time data on the project.
- The TRC Mobile Data Solutions tool has undergone rigorous internal testing
- TRC-designed mobile applications are customized for asbestos, lead-based paint and hazardous materials surveys, abatement oversight and air monitoring projects, building water intrusion assessments, industrial hygiene evaluations, due-diligence projects, SPCC inspections, groundwater monitoring, etc.

3.9 Sampling and Analytical Procedures

Analytical methods to be utilized in the analysis of samples collected during this sampling event shall comply with federal, state, and local requirements. TRC will utilize a chain-of-custody, which will accompany all samples to the laboratories. TRC personnel will complete Field Records on TRC Mobile Data Solutions.

3.10 Sampling Media and Materials

3.10.1 Bulk and Wipe Sampling

Bulk and Wipe samples shall be collected in laboratory-supplied pre-cleaned glass jars for PCBs and RCRA metal samples. Asbestos samples will be collected into new unused resealable plastic bags.

3.10.2 Containers

All glass sample containers will meet the QA/QC specifications in EPA's Office of Solid Waste and Emergency Response (OSWER) Directive 9240.0-05A, "Specifications and Guidance for Contaminant Free Sample Containers".

3.10.3 Sample Labels

Sample labels will clearly identify the sample, and should include the following:

- Laboratory
- Sample identification number
- Sample collection date and time
- Designation of sample
- Sample preservative

4.0 TRANSFORMER ROOM SUPPLEMENTAL INVESTIGATION REPORT

TRC will prepare a supplemental environmental survey report for the property. This report will include the following:

- Executive Summary.
- Background - detailing facility information, inspector's name(s), certifications and date of survey, and general sampling and analysis procedures employed.

- Inspection Results Summary - identifying materials (with associated locations) confirmed or suspected to be ACM, Lead Paint, RCRA metals, PCBs, universal and hazardous waste.
- Inspection Assessment Results - detailing homogeneous materials, material condition, number of samples collected per group and results.
- Quantity Schedule identifying quantities of ACM, Lead Paint, RCRA metals, PCBs, universal & hazardous waste.
- Areas Not Accessible - identifying all areas where suspect ACM may be present but was not able to be accessed; and
- Report Appendices - including all report documentation, such as analytical results, chain of custody forms, calculation sheets, etc.

5.0 STRUCTURAL ENGINEERING

TRC's structural engineer will review the structural drawings provided by New York State Office of Mental Health (OMH) Medical Surgical Building 101 (Thomson Building 1), Dated December 4, 1958, along with URS's "Review of Structural Analysis" for Building 1, Transformer Rooms 1& 2, dated October 25, 2017. TRC will perform a structural analysis for removal of PCB contaminated concrete and soils in Building 1.

TRC will evaluate the impact of the excavation and removal of the PCB contaminated concrete, soil and groundwater on the pile foundation and the structural system. This will involve analyzing the original 2017 design loading versus the proposed loading condition during the excavation. The analysis will compare the ratio between the two different values for the load reduction when the structure is vacated. Safety factors (the typical ultimate versus allowable pile capacity) will be determined for the design pile capacity. This overall safety factor, combined with the slenderness ratio will be reviewed to determine the extent of disturbance anticipated by the proposed excavation work. Prior to the excavation work, the structure will be vacant without any additional interior demolition and unoccupied during the proposed remediation work.

5.1 Structural Engineering Report

TRC will prepare a structural engineering report for the scope of work being performed. This report will include the following:

- Executive Summary.
- Background - detailing facility information, engineer's name(s), certifications and date of survey, and general structural analysis procedures employed.
- Inspection Results Summary – identifying the location of the existing foundation pile caps and grade beams within the work area.
- Inspection Analysis - comparison of the original 2017 design loading to the proposed condition loading condition during the proposed excavation.
- Conclusion and Recommendations – Review feasible area for removal of the concrete slab and soil to required depths within the foundation lines.
- Report Appendices - including all report documentation such as calculations, calculation sheets, engineering drawings, etc.
- Design Drawings for Concrete Pad (Cover). Drawings shall include demolition plan, outlining the extent of removal of existing slab required for RWP purpose, documentation of existing slab thickness, rebars etc, if existing drawings are not available scanning can be done to estimate

reinforcement layers and spacing, specs for back fill type and compaction after completion of remediation work, Specs and details of new reinforced concrete slab.

6.0 PROJECT SPECIFICATIONS

Based on the findings of the Transformer Investigation Report in Section 4.0, and Structural Engineering Report in Section 5.0 applicable DASNY Project Specifications will be selected:

- Removal of asbestos-containing materials present in the Transformer Rooms shall be performed by a New York State Department of Labor licensed asbestos abatement contractor, and should be handled, stored, and disposed of according to all local, state, and federal regulations.
- Asbestos Removal - Section 02 82 00
- Lead Abatement Specification – Section 02 83 00
- Non - Liquid PCB Materials Removal - Section 02 84 00
- Identification and Disposal of Hazardous Waste – Section 02 86 00
- Removal and Disposal of Universal Waste - Section 02 87 00
- Removal. Transport and Disposal of Contaminated Soil – Section 02 61 00
- DASNY Design Professional's Guide 2023.

7.0 REMEDIATION WORK

The scope of work for the implementation of this remedy has been selected as specified in the Administrative Record of Decision (ROD) governing the cleanup of Hazardous Waste at this Site according to New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375. All applicable Training & Medical/Fit Testing and General Field Requirements from Sampling Section 3.0 will be enforced during remediation work.

7.1 General Field Requirements

- All Electrical Equipment shall be fully de-energized and inspected by a licensed electrician to ensure the safety of all employees and contractors working on this project.
- Sufficient high-powered flashlights or temporary lighting will be used to supplement poor lighting.
- The "Buddy System" will be strictly enforced for work in building. At no time will personnel be present in the building alone.
- All personnel performing the work will have appropriate training and be familiar with the content of the approved Contractor Site HASP and safety protocols for the Site.
- Proper protective clothing such as Tyvek® Suits and half-face purifying respirators will be utilized, as necessary. The respirator filters/cartridges shall provide oil resistant P100 and organic vapor protection.
- To prevent cross-contamination, neoprene, butyl, or Viton gloves (> 8 hour breakthrough for PCBs) shall be always used when handling PCB samples.
- OSHA Confined-Space Entry health and safety equipment and training procedures.

7.2 Daily Activities

- All field personnel shall attend a daily kick-off meeting prior to work commencement. The daily meetings will include a safety talk, and remediation work planned for the day.
- An entry/exit log shall be utilized for all workers in each transformer room for safety and emergency purposes.
- The Contractor will provide a daily log of activities and planned next day's work to TRC's project manager via email.
- The Project Manager will review all data generated daily.

7.3 Transformer Room Remediation

The remediation of the Transformer Rooms aside from asbestos abatement (based on asbestos sampling) shall consist of the removal and clearing of all contents (transformers and equipment) from transformer rooms to prepare removal of the concrete pads. The following are sequential order for this activity.

1. Remove overgrown vegetation to create access to remove transformer and waste materials from the building.
2. Establish Egress to the Transformer Rooms. Temporary removal of Fire Rated Doors for widening of entrance and reinforcement of Basement exterior foundation wall. These door shall be assessed for suspect materials (i.e., asbestos, lead paint) such as insulation.
3. Clean and remove non-porous scrap metal; Additional PCB-wipe sampling may be necessary to confirm the materials have been thoroughly cleaned for recycling.
4. Remove the other porous materials and debris as TSCA Regulated PCB Remediation Waste and/or Potentially Hazardous Waste depending on the results of waste characterization sampling activities.
5. The four (4) transformers along with all associated equipment will be de-energized and removed from Transformer Rooms 1 & 2, as non-porous scrap metal for recycling depending on waste characterization.

7.3.1 Procedures for Remedial Work

a) Prior to mobilization the contractor shall assure that its employees have received safety equipment training for applicable equipment for this project, i.e., ladders, forklift, crane, and scaffolds training, along with Hazard Communication training as required to perform the work described by this protocol.
b) The contractor shall submit to TRC all Safety Data Sheets (SDS) for all chemical products proposed to be used in the cleaning process.
c) Hazardous Material Technicians will remove debris on the floor in each of the rooms.
d) Debris will be segregated as non-porous scrap metal or porous PCB Remediation Waste.
e) Porous debris and non-porous metals will be placed in lined containers.
f) Perform double wash/rinse procedure according to 40 CFR Part 761 Subpart S—Double Wash/Rinse Method for Decontaminating Non-Porous Surfaces includes two washing steps and two rinsing steps cleaning of non-porous scrap metal surfaces by spraying a mild detergent, (i.e., Simple Green™) and hand cleaning materials staged on plastic lined pallets.
g) All used cleaning materials, personnel protective equipment (PPE) containing cleaning agents /water, epoxy paint chips and all other waste will be placed into 55-gallon drum(s).

h) The 55-gallon drum(s) will be moved to a designated onsite temporary storage areas.
i) Contaminated waste generated from the cleanup of the Transformer Rooms will be labelled and transported and disposed of as TSCA regulated PCB remediation waste and/or Hazardous Waste according to 6 NYCRR Part 364.
j) Scrap metal will be cleaned and tested via wipe sampling prior to being recycled as per Project Specifications Section 6.0 above.

7.4 Concrete Pad Demolition and Removal

The maximum feasible removal of concrete slabs from Transformer Room 1 and 2 is depicted on Figures 1-4. The actual extent of concrete pad removal will be based on the recommendations of the Structural Report. The outline of the concrete slab areas in both Transformer Rooms are from the building drawings prepared by Urbahn, Brayton & Burrows, Hart & Jerman Associated Architects, dated December 4, 1958. The initial feasible area for removal of the concrete slab is within the foundation lines. The bottom elevation of the concrete slab is expected to be above groundwater based on historical data. The maximum concrete slab area to be removed is estimated to be 900 square feet in Transformer Room 1 and 1,000 square feet in Transformer Room 2. The total volume of concrete to be removed may vary depending on the thickness of the concrete slab which is estimated as 9 to 12-inches thick. The greatest volume of removal is 56 cubic yards with an assumed weight of 110 tons if the slab is steel-reinforced.

The concrete pad will need to be containerized and characterized for disposal as TSCA PCB Remediation Waste. In New York State Hazardous Waste Code B007 is designated for other PCB wastes, including contaminated soil, solids, sludges, clothing, rags, and dredge material.

7.5 Soil Excavation

To achieve re-classification of the site from a Class 3 to a Class 4 Inactive Hazardous Waste Disposal Site, the post-excavation PCB soil concentrations in the Transformer Rooms must demonstrate to NYSDEC that the PCB concentrations in subsurface soil beneath the building meet the cleanup criteria of 10 ppm.

The soils underneath the transformers will be excavated and end point samples will be collected. All on-site soils which exceed restricted-residential soil cleanup objectives (SCOs) for PCBs (1 ppm) shallow soil (0-2 feet) and 10 ppm in subsurface soil, as set forth in NYSDEC's CP-51 and Part 375-6.8, will be excavated and transported off-site for disposal.

The removal of the soil below the concrete slabs from Transformer Room 1 and 2 is depicted on Figures 2-4, which outline the areas around the existing grade beams and pile caps which will require additional shoring and protection to maintain building integrity. The area outlined to depict the removal of soil below the concrete slabs in Transformer Rooms 1 and 2 is based on the building drawings prepared by Urbahn, Brayton & Burrows, Hart & Jerman Associated Architects, dated December 4, 1958. The feasible area for removal of the soil below the concrete slabs are drawn within the foundation lines. The elevation of the soil at the required depth of the excavation below the concrete slab is expected to be below the groundwater.

The soil area to be removed is estimated to be less than 900 square feet in Transformer Room 1, and less than 1,000 square feet in Transformer Room 2. The total volume of soil to be removed will vary depending on the depth of groundwater and corresponding de-watering activity required, soil type(s), types of shoring

and shielding required. The soil excavation required to remove and safely access PCB contaminated soil greater than 10 ppm, based on remedial investigations and the ROD selected for this site.

The soil will need to be containerized and characterized for disposal as TSCA PCB Remediation Waste. In New York State Hazardous Waste Code B007 is designated for other PCB wastes, including contaminated soil, solids, sludges, clothing, rags, and dredge material.

7.5.1 Engineering Shoring Plan

A temporary shoring plan will be prepared by a NYS licensed Professional Engineer working for the remedial contractor for the excavation and backfilling of soil beneath the existing concrete pads located in the transformer rooms. The shoring plan will require an investigation of the underlying soil and groundwater along with review of the existing foundation pile caps and grade beams within the work area. Excavation will be performed around the piles and potentially below the pile caps, and grade beams in the Transformer Rooms. The removal of PCB contaminated soils exhibiting PCB concentrations greater than 10 ppm at depths greater than 2 feet below the concrete slab may require additional shielding to protect workers, and foundation pile caps and grade beams. Shielding may include trench boxes or other types of supports to prevent soil cave-ins. Protection of building foundation and maintaining overall soil stability is essential.

7.5.1.1 Soil Classification

The Occupational Safety and Health Act (OSHA) provides federal regulations under 29 CFR Subpart P of Part 1926 for excavation of soil in relation to soil types. This involves determination of the maximum allowable or permitted slopes of the sidewalls of excavations. The slope can be expressed in terms of the tangent or degrees of the angle that the walls form with the horizontal. Imminent danger and slope failure is anticipated if the actual slope of the walls exceeds the allowed maximum without additional shielding to protect workers.

Soils that are Type C must not be sloped to greater than >34°, and Type B soils must not be sloped to greater than >45°. Type A soils must not be sloped greater than >63°; if the wall is greater than >12 ft. high, it must not be sloped greater than >53°. Type C represents the lowest strength soil, and it requires a flatter slope than Type A and Type B soil to attain the same stability.

Both the USCS and the U.S. Dept. Of Agriculture (USDA) Textural Soil Classification System are complementary methods used to analyze and classify soils. The USDA system is emphasized in the federal OSHA regulations, but the USCS is more consistent with the definitions and engineering terms of the regulatory codes. The Unified Soil Classification System (USCS) is a soil classification system used in engineering and geology to describe the texture and grain size of a soil.

7.5.1.2 Requirements for Protective Systems

Additional shielding is specified by OSHA in 29 CFR Subpart P of Part 1926 to protect workers and permit access for soil sampling at the maximum depths required for soil excavation during the remedial activities. The shielding requirements for protecting employees working in excavations from cave-ins may require additional protective systems is to be performed in accordance with the requirements set forth in 1926.652.

Shielding systems include trench boxes, steel plates, and/or combination of protective systems. Shielding does not protect against soil failures. Shielding systems do not support the face of excavations, rather they protect the workers inside of them. For that reason, shielding systems do not allow anyone to work outside the protection of the system being used. These systems must be used in accordance with manufacturer recommendations.

- The requirements for excavations when using shielding (lower portion) in combination with sloping in Type A soil less than or equal to 20 feet deep (20' deep maximum). The maximum allowable slope for Type A soil is 1 to 0.75 (1' rise to 0.75' run).
- The requirements for excavations when using shielding (lower portion) in combination with sloping in Type B soil less than or equal to 20 feet deep (20' deep maximum). The maximum allowable slope for Type B soil is 1 to 1 (1' rise to 1' run).
- The requirements for excavations when using shielding (lower portion) in combination with sloping in Type C soil less than or equal to 20 feet deep (20' deep maximum). The maximum allowable slope for Type C soil is 1 to 1.5 (1' rise to 1.5' run).

7.5.2 Groundwater Dewatering and Treatment Plan

Based on estimated depth of groundwater expected at or near the bottom of the concrete slab, dewatering will be required for this project to stabilize work area and permit removal of PCB contaminated soil. Excavation within the groundwater interfacing elevations requires dewatering activities to control water intrusion and maintain slope stability. Based on applicable regulations the dewatering plan must be prepared by a NYS licensed professional engineer familiar with hydrology. The location for nearest New York City Department of Environmental Protection (NYCDEP) combined sanitary stormwater sewer must be identified and required sampling and effluent treatment must be performed during all dewatering activities.

Discharging to combined sanitary stormwater sewer requires a Discharge Permit obtained from NYCDEP and approval from NYSDEC for impacting stormwater sewer. Self-Certification Form will be submitted to the Bureau of Customer Service based on an estimated discharge of (less than) <10,000 gallons per day.

- Contractor will be responsible for all components of the groundwater de-watering program:
  - Secure NYCDEP de-watering permit and required approval from NYSDEC pursuant to the existing Order on Consent
  - Identify proposed ELAP certified lab(s) to be used for analysis of samples required for dewatering permits.
  - Develop a site map showing proposed piezometers and/or groundwater monitoring wells used for groundwater monitoring and sample locations as needed for permitting processes.
  - Install piezometer(s) and/or groundwater monitoring wells required to adequately measure depth of groundwater, estimate rate of recharge and sample for discharge parameters by field and laboratory analysis.
  - Perform any required well installation, record boring logs, develop, and properly dispose of waste according to NYSDEC requirements.
  - Determine background and upgradient groundwater quality by groundwater monitoring and sampling activities according to federal, state, and local discharge requirements.
  - Conduct limited groundwater sampling applicable to DER-10 technical guidance and - Quality Assurance Project Plan (QAPP) Guidelines to satisfy discharge permitting.

- TRC will review the de-watering work plan and QAPP for the project objectives and compliance.

7.5.3 Transformer Room Soil Sampling

Most of the contamination identified by prior investigations are limited to the areas around the drains in the transformer rooms. Removal of the soil contamination to the areal extent of the grade beams is not expected to exceed a PCB concentration of 10 ppm below depths greater than 4 to 6 feet from bottom of concrete pad.

The objective is removing all the contaminated soil after the accessible portions of the concrete pad have been removed without compromising the building foundation and safety of the personnel involved. The concrete pad will be replaced with a clean concrete slab, as specified in the Record of Decision (ROD) dated March 30, 2019. Based on this decision, the NYSDEC will accept the Soil Cleanup Objective (SCO) of 1 part per million (ppm) for surface soil to be met within the zone of the concrete slab area. Therefore, below the new concrete pad, the subsurface soil must meet the NYSDEC's Commissioner's Policy 51 (CP-51) guidance value of 10 ppm.

7.5.3.1 Soil Sampling Procedures

Soil sampling following excavation of suspected PCB contaminated soils below the concrete pad is intended to reach a clean level where the areal and vertical extent of soil has PCB concentrations less < 10 ppm.

Sampling locations will be biased toward locations expected to have the greatest degree of contamination at the source areas, i.e., drainage points. However, the post-remedial sampling is intended to also provide sufficient coverage of the entire excavation to allow decisions relative to classification of the site. The results of the sampling for PCB soils inside the building room excavations will also determine whether there is any potential for any remaining PCBs to migrate to and impact the environment outside of the building.

- An Environmental Professional along with HAZ MAT team using confined-space entry permit procedures will conduct PCB soil sampling and will collect end-point excavation samples to be used to determine post-remedial site conditions.
- Soil samples shall be collected along the sidewalls and bottom of the excavation of each transformer room. Soil samples shall be collected from 0 - 2 inches below the surface of the sidewalls and bottom.
- Soil samples will be collected using dedicated disposable plastic trowels and placed in laboratory-supplied 8-ounce glass jars with Teflon lids. Dedicated sampling equipment will be used to prevent cross-contamination between sampling locations. All soil sampling equipment will be properly disposed of with other wastes that is generated during the soil investigation.
- All samples to be submitted for laboratory analysis will be collected, properly cooled, and packaged to prevent breakage. Soil samples will be transported under Chain-Of-Custody to a DOH Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory and analyzed for PCB Arochlors in accordance with EPA Method 8082A.

- The purpose of the soil investigation is to assess the concentration of any PCBs remaining in the soil at the depth of the existing floor elevation to confirm PCBs at concentrations ≤1 ppm PCBs.
- The purpose of the soil investigation is to also assess the concentration of any PCBs remaining in the soil at depth below (greater than) the existing floor elevation to confirm PCBs at concentrations ≤10 ppm PCBs.
- All the results of PCB soil sampling will be compared with NYSDEC's Commissioner's Policy 51 (CP-51) to determine whether additional soil excavation and sampling is required.
- All soils below the building slab elevation in Transformer Rooms No. 1 and 2 which exceed the restricted residential SCOs for PCBs will be excavated and transported off-site for disposal. The volume of contaminated soil removed from the site will be determined after implementation of the ROD and subsequent results of the PCB soil sampling and laboratory results.
- The results of soil sampling will not impact the requirements for an environmental easement with a restriction of groundwater use at the site, a cover system, and site management to protect human health.

7.6 Transportation and Disposal of Waste

Transportation and Disposal of Waste to Authorized transportation, storage, and disposal facilities (TSDF) according to 6 NYCRR Part 360 and/or 373 depending on laboratory results.

1) As the work progresses, remove waste containers from the work area and place in a secured and lockable trailer, dumpster, or other shipping container meeting DOT requirements for transport of PCB-containing waste. The hard top or tarp covered waste container shall be lined with two layers of fire-retardant plastic. PCB-containing waste shall remain under the positive control of the Contractor and must never be left unattended in an area or on a vehicle where unauthorized persons could gain access.
2) All waste and debris shall be placed in covered or sealed containers to ensure that dust is not dispersed during transport. Separate PCB containing material debris and collected HEPA dust/debris from other waste (e.g., poly) to minimize the amount of hazardous waste.
3) All wastewaters not being managed by the applicable on-site de-watering permit(s) shall be collected in appropriate containers and characterized. If the testing shows levels of greater than > 1 part per billion (ppb) PCBs, it will be managed according to TSCA Requirements for PCB Remediation Waste.
4) Wastewater treatment (media) solid wastes shall also be placed in appropriate hazardous waste containers. If the testing shows levels of >1 ppb PCBs, it will be managed according to TSCA Requirements for PCB Remediation Waste.
5) All excavated soil and concrete waste shall be disposed of in accordance with all applicable local, State and Federal regulations. Specifically, waste shall be treated as TSCA regulated PCB Bulk Product or PCB Remediation Waste. In addition, where required, the specific waste streams shall be characterized.
6) All hazardous and TSCA Regulated waste shall be disposed of using USEPA Generator ID# (To Be determined) assigned to this site.
7) Disposal Certificates: Contractor shall submit a letter from a permitted TSCA and/or Hazardous Waste Facility, stating that the facility has agreed to accept the waste generated by the work; is

authorized to accept the waste under the laws of the State of residence; has the required capacity to treat and dispose of the material; and shall provide or ensure the ultimate disposal method indicated on Uniform Hazardous Waste Manifest.

7.6.1 Procedures for Waste Disposal

i). Contractor shall submit a Part 364Waste Transporter Permit, confirming the requirements of NYSDEC Division of Materials Management, to haul to the selected Waste Disposal Facility.

ii). Contractor shall submit a statement from the selected Waste Disposal Facility that the waste containers proposed for use are acceptable to the facility.

iii). Contractor shall submit a copy of the Hazardous waste manifest signed by the transporter and the Treatment, Storage and Disposal (TSD) facility accepting the waste.

iv). Contractor shall submit evidence to the authority that those preparing/signing manifests have received DOT Hazardous Materials Shipping Training (initial and refresher every 3 years).

v). Prior to removal of any PCB-containing impacted materials the Contractor shall notify Environmental Consultant and request a pre-removal inspection. Posting of warning signs, plasticizing of work area, and all other preparatory steps shall be taken prior to notification of the Environmental Consultant.

vi). After completion of the removal and cleaning of the work area of equipment and staged materials, a visual inspection for general housekeeping shall be performed by the Contractor. If the removal and cleaning of work area is approved by the Contractor's Supervisor, the Contractor shall then request a visual inspection in writing from the Environmental Consultant.

8.0 BACKFILLING AND INSTALLATION OF CONCRETE PAD (COVER)

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the design grades at each of the basement transformer room. Notification of Clean Fill form will need to be completed and submitted to NYS DEC if > 10 cubic yards of fill is required. The basement transformer rooms will be re-graded to accommodate installation of a concrete cover system to match the existing conditions.

A new steel reinforced concrete pad cover of sufficient thickness and compressive strength (i.e., greater than 4,000 psi) for building equipment and structural requirements will be installed in the two (2) Transformer Rooms. An independent 3rd party testing and inspection firm will be retained to confirm the construction is completed as intended.

9.0 POST REMEDIATION PCB SURFACE WIPE SAMPLING

Upon confirmation that the new concrete cover is satisfactory, TRC will perform post-remedial PCB surface wipe sampling. A total of eight (8) floor samples from Transformer Rooms 1 & 2 will be spatially located on concrete floor following the curing of the concrete. The samples will be collected from the horizontal concrete surface in representative locations.

Surface wipe samples will be compared to EPA's high occupancy wipe sample criteria of 10 µg/100 cm^2 (40 CFR 761.3, 761.123 and 761.30).

9.1.1 Target Laboratory Reporting Limits

Laboratory reporting limits for each Aroclor in each sampling media are:

- *Surface Wipe Samples* – reporting limit of 0.1 µg/100 cm^2.

9.1.2 Documentation and Records

Example field documentation form (e.g., sampling forms, chains of custody, daily logs, etc.) will be compiled in the results reports along with photographs.

10.0 REMEDIAL WORK REPORTING

Based on the implementation of this RWP, a Remedial Report shall be prepared. This report shall include field data, sample collection data, analytical results, and associated data validation results. A critical component of the Remedial Work Reporting shall be the evaluation and interpretation of the results of the Implementation of the Remedial Work, including waste classifications, estimates of waste quantities and waste disposal and/or recycling alternatives. The Report shall include:

- A general description of the subject properties with a focus on the Transformer Rooms,
- A detailed description of the inventory and sampling program,
- A detailed description of the inventory and waste materials porous and non-porous (including estimated quantities disposed/recycled and representative photographs) from all remedial work,
- Site plans or sketches denoting referenced locations, including bulk and wipe sample locations,
- Table(s) summarizing the findings by material, estimated quantity, location and analytical parameters, and material classification for management/disposal purposes.
- Analytical data for all samples pre and post remedial (included in an appendix).
- Chain of custody forms and lab reports included an appendix.
- All waste manifests, bill of ladings, certificates of disposal, certificates of recycling, etc.
- Contractor daily reports (included in an appendix).
- Findings and recommendations.
- General description of final site conditions of Transformer Rooms and Concrete Covers.

ATTACHMENT 1

PROJECT SCHEDULE

PROJECT SCHEDULE

The following identifies projected time frames for each task described in this RWP. The time frames assume authorization for all tasks and concurrent implementation of many sub-tasks; however, many sub-tasks have critical path predecessor requirements. In addition, subtask efforts can be prioritized to provide interim reports for the most time critical issues.

Weeks 1- 2: Project Initiation
- Remedial Work Plan (RWP) Submittal
- Pre-Workplan Site Reconnaissance and Health and Safety Plan (1 week)

Weeks 3–4: Survey, Bulk & Wipe Sampling
- Asbestos, Lead Paint, PCBs & RCRA Metals (1 week)

Weeks 3–4: Structural Engineering
- Site Investigations (1 week)

Weeks 5-7: Laboratory Analysis (Two-week turn-around-time (TAT))

Weeks 8-10: Data Management and Interpretation
- Transformer Room Report
- Structural Engineering Report

Weeks 10-30: Contractor Request for Proposal & Bid Process

Weeks 30-35: NYCDOB Permits for Demolition of Transformer Rooms

Weeks 30-35: NYCDEP Dewatering Permits for Soil Exaction

Weeks 35-50: Remedial Work Plan Implementation
- Removal of Vegetation and Site Egress (Week 35 - 36)
- Segregation of Scrap Metal and Non-Porous Waste Materials (Week 36-37)
- Removal of Transformers (Week 37-38)
- Cleaning of Transformer Rooms (Week 38-39)
- Removal of Concrete Pads (Week 39-40)
- Excavation of Soil (Week 40-42)
- Soil Sampling (Week 40-42)
- Review of Soil Lab Analysis (Week 41-43)
- Backfilling (Week 43-44)
- Installation of Concrete Pads (Cover) (Week 45-47)
- Transportation and Disposal of Waste to Authorized transportation, storage, and disposal facilities (TSDF) (Week 47-50).

Weeks 50-51: Inspection of Concrete Surfaces & PCB Wipe Sampling

Weeks 51-52: Remedial Report

ATTACHMENT 2

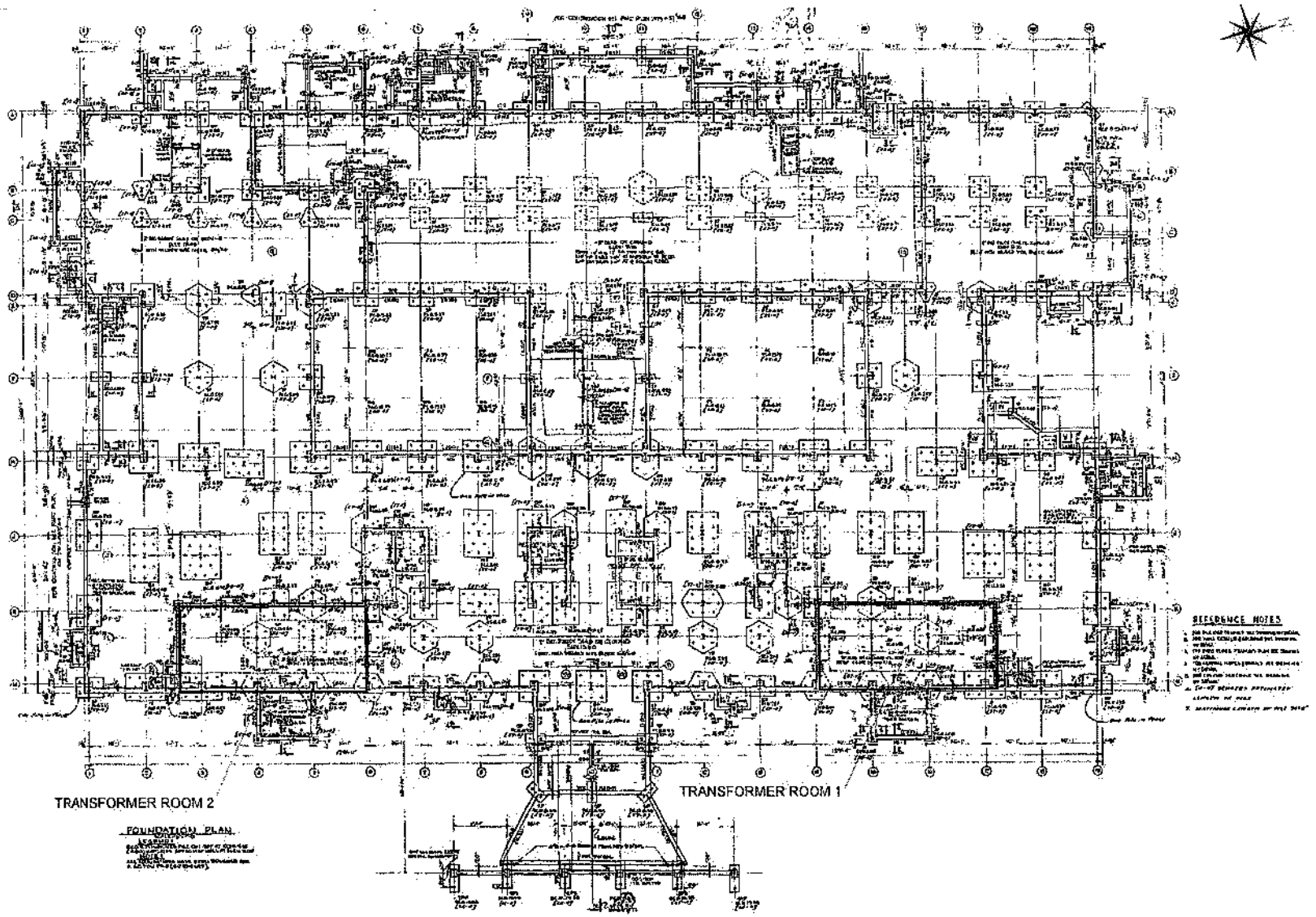
HEALTH AND SAFETY PLAN

ATTACHMENT 3

SPECIFICATIONS

ATTACHMENT 4

FIGURES



FOUNDATION PLAN

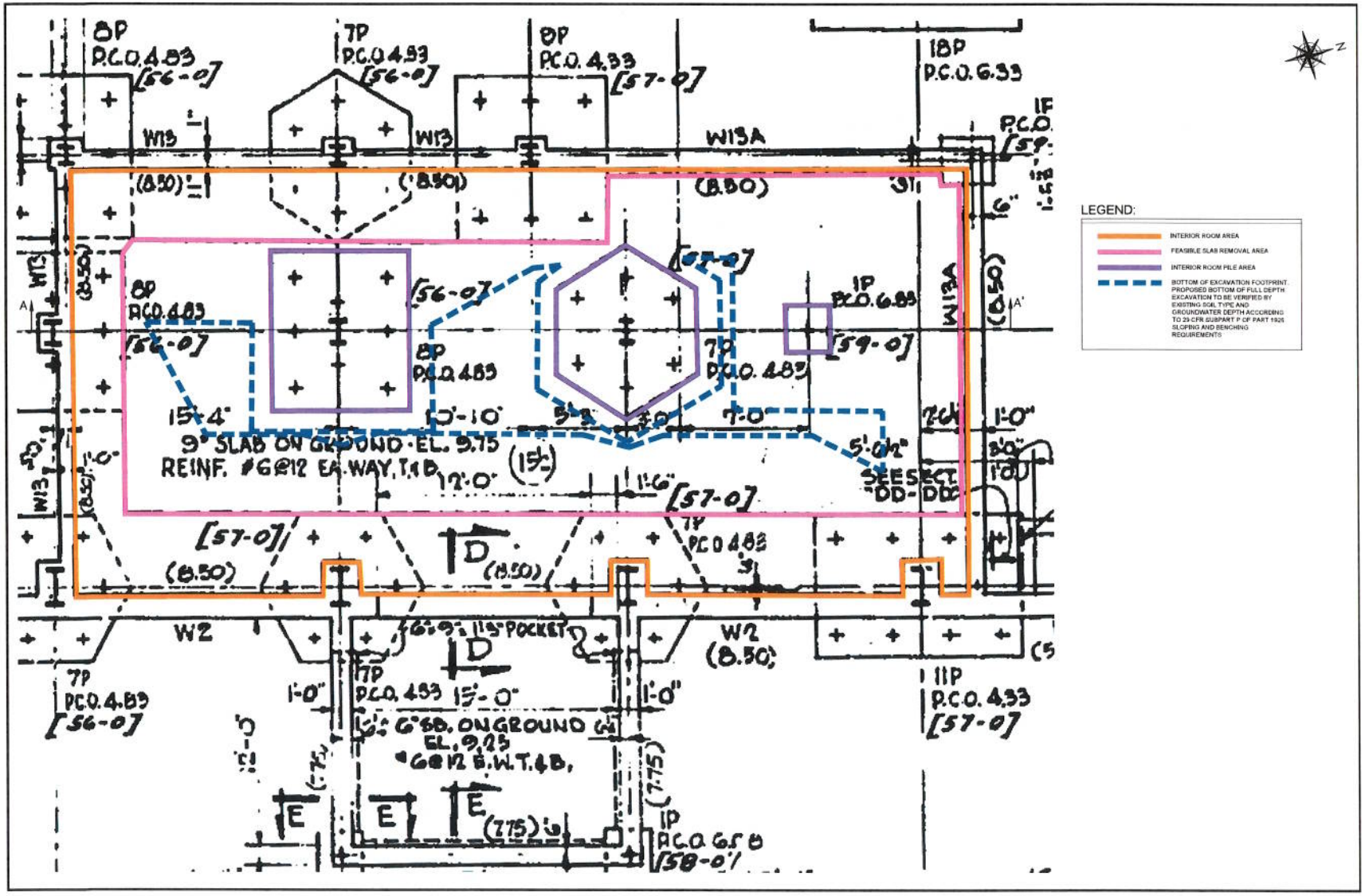
100% SUBMISSION
NOT FOR CONSTRUCTION

REVISIONS

THOMSON BUILDING
FOUNDATION PLAN
AND TRANSFORMER
ROOMS 1 & 2

100% SUBMISSION
TS AS 9/24/2024

FIGURE 1



DASNY

BUILDING OWNER:
DORMITORY AUTHORITY STATE OF NEW YORK

ENVIRONMENTAL CONSULTANT:
TRC ENGINEERS, INC.

REVISIONS

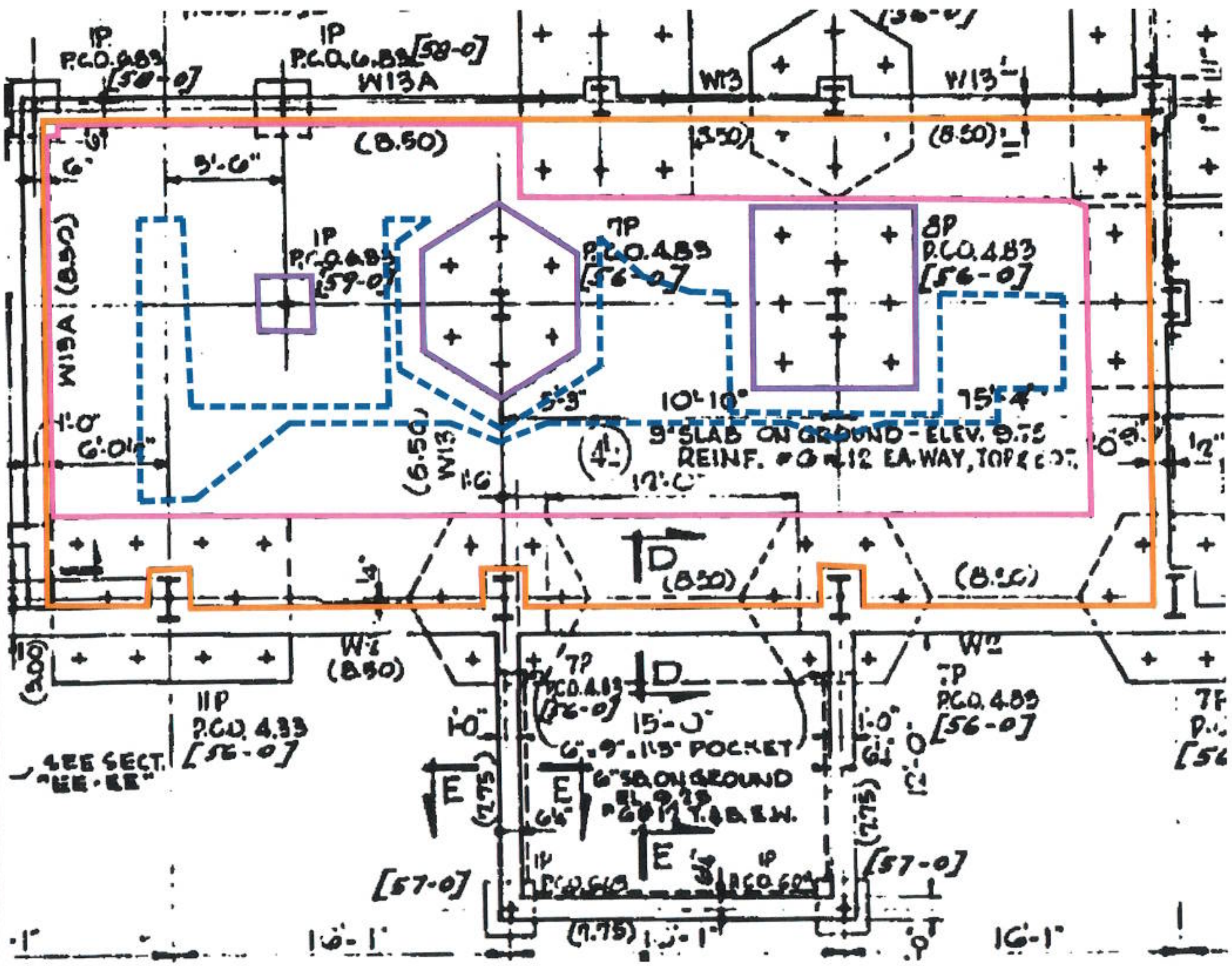
No.	Description	Date

Client: NYS OFFICE OF MENTAL HEALTH
OFFICE OF MENTAL HEALTH FORENSIC PSYCHIATRIC CENTER
TO NEW SCOTLAND AVENUE
ALBANY, NY 12208

Project Title:
BRONX FORENSIC PSYCHIATRIC BUILDING 9M
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

TRANSFORMER ROOM 1 - FOUNDATION PLAN

Phase	
100%	SUBMISSION
Drawn By: FS	Checked By: AS
Date: 9/24/2024	
Seal & Signature	DASNY Project No: 3389409999
	FIGURE: 2
	Drawing: 2 of 5



LEGEND:

(orange line)	INTERIOR ROOM AREA
(pink line)	FEASIBLE SLAB REMOVAL AREA
(purple line)	INTERIOR ROOM PILE AREA
(blue dashed line)	BOTTOM OF EXCAVATION FOOTPRINT. PROPOSED BOTTOM OF FULL DEPTH EXCAVATION TO BE VERIFIED BY EXISTING SOIL TYPE AND GROUNDWATER DEPTH ACCORDING TO 29 CFR SUBPART P OF PART 1926 SLOPING AND BENCHING REQUIREMENTS

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515 Broadway, Albany, NY 12207-2964
28 Liberty Street, 55th Floor, NY, NY 10005
539 Franklin Street, Buffalo, NY 14202-1109
WWW.DASNY.ORG

BUILDING OWNER:
DORMITORY AUTHORITY STATE OF NEW YORK

ENVIRONMENTAL CONSULTANT:
TRC ENGINEERS, INC.

REVISIONS

No.	Description	Date

Client: NYS OFFICE OF MENTAL HEALTH
75 NEW SCOTLAND AVENUE
ALBANY, NY 12208

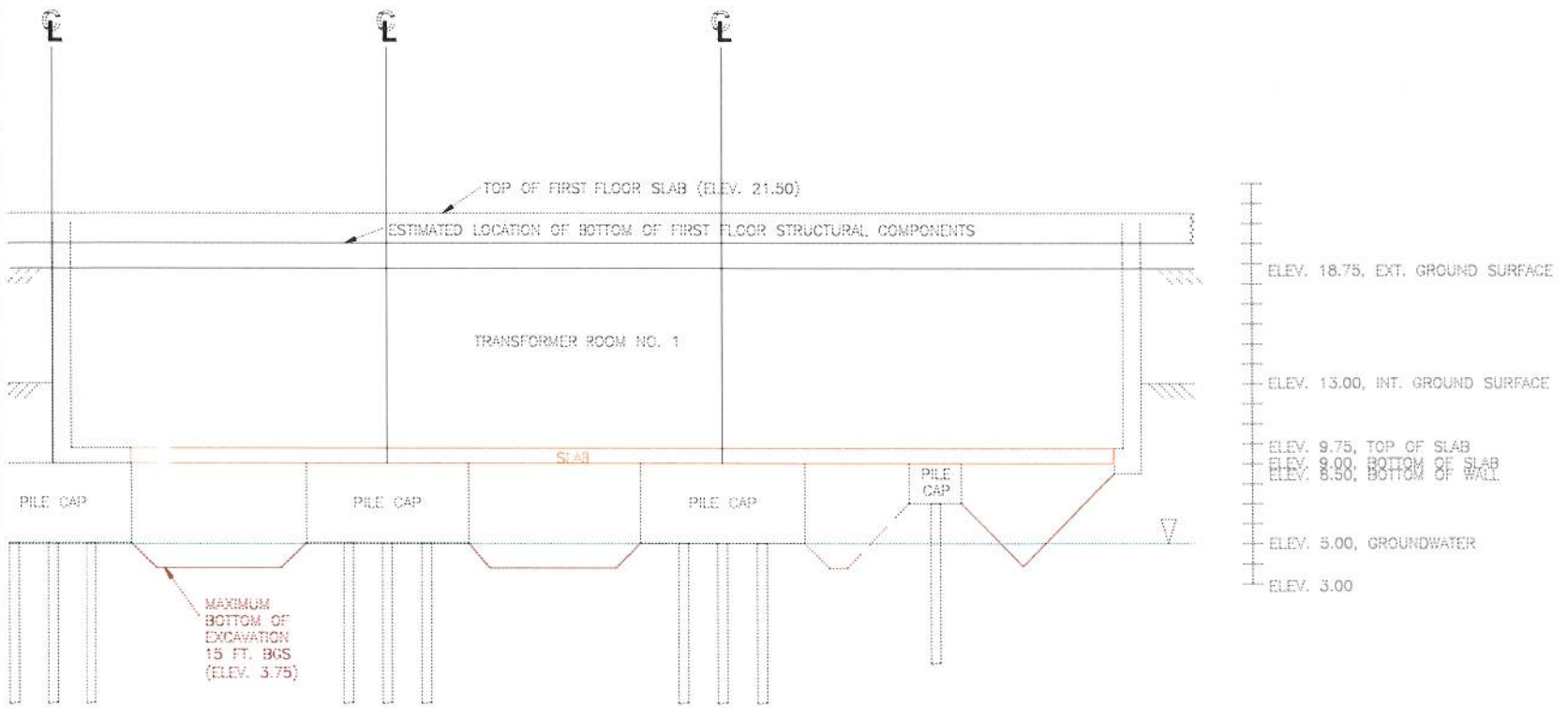
Project Title:
BRONX PSYCHIATRIC CENTER, BUILDING 14
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

TRANSFORMER ROOM 2 - FOUNDATION PLAN

Phase: 100% SUBMISSION
Drawn By: FS
Checked By: AS
Date: 9/24/2024
DASNY Project No.: 3393409999
Seal & Signature

FIGURE 3

Drawing 3 of 5



SECTION A–A'

100% SUBMISSION
NOT FOR CONSTRUCTION

DASNY

BUILDING OWNER:
DORMITORY AUTHORITY STATE OF NEW YORK

ENVIRONMENTAL CONSULTANT:
TRC ENGINEERS, INC.

REVISIONS

No.	Description	Date

Client: NYS OFFICE OF MENTAL HEALTH

Project Title:
BRONX MENTAL HYGIENE BUILDING 81
TRANSFORMER ROOMS NO. 1 & 2
1500 WATER PLACE
BRONX, NY

TRANSFORMER ROOM 1 - SLAB AND SOIL REMOVAL PLAN

Phase: 100% SUBMISSION

Drawn By: FS | Checked By: AS | Date: 9/24/2024

Seal & Signature

TRC Project No.: 338408999

FIGURE 4

Drawing 4 of 5