



RESPONSE ACTION PLAN

GUARDIAN HOUSE

**17, 19, and 23 South Gay Street
Baltimore City, Maryland**

September 9, 2020; Revised October 9, 2020

Submitted to:

Maryland Department of the Environment, Voluntary Cleanup Program
1800 Washington Boulevard
Baltimore, Maryland 21230

Attn: Mr. Joel Knauff

Prepared for:

LRP Guardian House LLC
c/o Landmark Restoration Partners, LLC
6 East Eager Street
Baltimore, Maryland 21202

Attn: Mr. Jon Pannoni

Prepared by:

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A Practicing GBA Member Firm



September 9, 2020; Revised October 9, 2020

LRP Guardian House LLC
c/o Landmark Restoration Partners, LLC
6 East Eager Street
Baltimore, Maryland 21202

Attn: Mr. Jon Pannoni

Re: Response Action Plan
Guardian House
17, 19, and 23 South Gay Street
Baltimore City, Maryland

Dear Mr. Pannoni:

In accordance with our agreement, dated May 26, 2020, Geo-Technology Associates, Inc. (GTA) has prepared this Response Action Plan (RAP) for Guardian House (“subject property”), located north of Water Street, and east of South Gay Street, in Baltimore City, Maryland. This RAP has been prepared to address indications of soil contamination detected during prior evaluations performed in conjunction with site development. It is GTA’s understanding that the subject property is planned to be developed with a multi-story apartment building with retail at the street level, and minimal surface-level asphalt-paved parking area.

An application for the subject property’s acceptance into the Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP) was received by the MDE on October 2, 2019, and formal acceptance into the VCP is pending.

We appreciate the opportunity to be of assistance on this project. Should you have any questions regarding this information, or should you require additional information, please do not hesitate to contact our office at (410) 792-9446.

Sincerely,
GEO-TECHNOLOGY ASSOCIATES, INC.

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Associate

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Executive Vice President

181495

JRW/SSW/PHH

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cc: Mr. Joel Knauff / Maryland Department of the Environment, Voluntary Cleanup Program

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EXECUTIVE SUMMARY

Geo-Technology Associates, Inc. (GTA) has prepared this Response Action Plan (RAP) for Guardian House (the “subject property”), as described herein. This *Executive Summary* is limited in scope and detail and is presented for the convenience of the reader. Please refer to the written report for details concerning the environmental condition of the subject property, as well as the scope and limitations of this RAP. Do not rely on this *Executive Summary* for any purpose except that for which it was prepared. Rely only on the full report for information about the findings, recommendations, and other concerns.

The subject property comprises approximately 0.38 acres of land located north of Water Street, and east of South Gay Street, in Baltimore City, Maryland. The subject property contains three multi-story adjoining office buildings that are currently vacant and a parking area. Historically, the subject property’s parking area has remained vacant since 1890. Prior to the Great Baltimore Fire of 1904, the subject property contained three buildings occupied by a store, auto machine repair shop, clothing manufacturer, and various offices. The subject property’s existing buildings were constructed between 1904 and 1906 in their current configurations. The buildings have been occupied with various offices, stores, wholesalers, medical practices, a paint manufacturing and packaging facility, and a culinary arts institute.

An application for acceptance into the Maryland Department of the Environment’s (MDE) Voluntary Cleanup Program (VCP) was received by the MDE on October 2, 2019. LRP Guardian House LLC (Applicant) applied to the VCP as an “Inculpable Person”, and the formal acceptance of the application remains pending at the time of completion of this RAP.

Several prior environmental evaluations were performed at the subject property, including two Phase I Environmental Site Assessments (ESAs) and a Phase II ESA. The initial Phase I ESA was performed in 2018 in conjunction with a preliminary geotechnical exploration of the subject property’s subsurface soils where a photo-ionization detector detected elevated concentrations of volatile organic compounds (VOCs) in the shallow soils at the subject property. GTA later performed a Phase II ESA at the subject property in 2020 which identified petroleum, VOCs, semi-VOCs (SVOCs), and metals impacts to the shallow soils in the parking area of the subject property. GTA evaluated the soil vapor at the subject property for VOC and mercury vapors. Sub-slab soil vapor sampling detected several VOCs above the laboratory reporting limits, but the detected concentrations were below the residential Tier 1 target soil vapor values. Elevated concentrations of mercury vapors were not detected in soils (nor in indoor air throughout the basement) at the subject property.

The MDE VCP reviewed GTA’s 2020 Phase II ESA and provided comment regarding remedial options. MDE commented regarding the capping of impacted soils in the parking area on the subject property, stating that capping would not require removal and disposal of soils. However, if impacted soils are to be removed, then additional soil characterization will be required at deeper depth intervals.

This RAP has been prepared to establish a proposed remedy for impacted soil and potential groundwater contamination within the site boundary in conjunction with the planned site development. The proposed remedy for soil consists of capping soils impacted by VOCs, SVOCs, petroleum, and metals; construction observation for correct RAP implementation; using

appropriate construction observation and health and safety measures during the planned construction; off-site disposal at an approved acceptance facility for any excavated surplus soils; and notification to MDE prior to future excavation activities. The proposed remedy for groundwater includes construction observation for correct RAP implementation, using appropriate construction observation and health and safety measures during the planned construction and recorded deed notice restricting groundwater use at the site. The RAP has been prepared for MDE submittal so that a Certificate of Completion may be obtained following the proposed RAP implementation.

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RESPONSE ACTION PLAN

**GUARDIAN HOUSE
BALTIMORE CITY, MARYLAND
SEPTEMBER 9, 2020; REVISED OCTOBER 9, 2020**

1.0 INTRODUCTION

1.1 Overview and Purpose

Geo-Technology Associates, Inc. (GTA) has prepared this Response Action Plan (RAP) for Guardian House (the “subject property”), which is located north of Water Street, and east of South Gay Street, in Baltimore City, Maryland. During previous environmental evaluations, impacted soil was identified above the applicable Maryland Department of the Environment (MDE) Residential Cleanup Standards (RCS).

LRP Guardian House LLC, applied to the MDE Voluntary Cleanup Program (VCP) as an “Inculpable Person” for the subject property. Formal acceptance of the subject property into the VCP by the MDE remains pending; however, this RAP has been prepared with the assumption that the subject property will be accepted into the VCP, and LRP Guardian House LLC is herein identified as the “Participant.” A copy of the MDE acceptance letter is included in *Appendix A*. The proposed future land use is restricted residential (Tier 1B).

This RAP has been prepared to establish a proposed remedy for soil contamination within the site boundary in conjunction with the planned site development. The proposed remedy for soil includes capping soils impacted by volatile organic compounds (VOCs), semi-VOCs, (SVOCs), petroleum, and metals to prevent direct contact exposure; construction observation for correct RAP implementation; using appropriate construction observation and health and safety measures during the planned construction; off-site disposal at an approved acceptance facility for any excavated surplus soils; and notification to MDE prior to future excavation activities. The proposed remedy for groundwater includes construction observation for correct RAP implementation, using appropriate construction observation and health and safety measures during the planned construction, and recordation of a deed notice to restrict groundwater use at the subject property.

The RAP has been prepared for MDE submittal so that a Certificate of Completion (COC) may be obtained following the proposed RAP implementation.

No additional site evaluations will be performed at the subject property unless significant earth moving is required as part of future development for the subject property. If development plans require significant disturbance of these soils at a later date, GTA will submit a formalized Work Plan or a RAP Addendum.

1.2 Limitations

This RAP was prepared by GTA for the sole and exclusive use of LRP Guardian House LLC c/o Landmark Restoration Partners, LLC. GTA acknowledges that this document is being submitted to the MDE VCP and will be part of the public record, and that the MDE VCP is expected to use this report as part of their review process. However, use of this report by any third party is at their sole risk. GTA is not responsible for any claims, damages, or liabilities associated with third-party use.

2.0 GENERAL PROPERTY INFORMATION

2.1 Site Description

The subject property comprises approximately 0.38 acres of land located north of Water Street, and east of South Gay Street, in Baltimore City, Maryland. The subject property contains three multi-story adjoining office buildings that are currently vacant and a parking area. A *Site Location Map* for the subject property is presented as *Figure 1*, and a *2019 Aerial Photograph* is included as *Figure 2*.

According to the records of the Maryland Department of Assessments and Taxation (MDAT), the subject property comprises four lots on Tax Map 4, Section 11, Block 1351. The MDAT property information is summarized in the following table:

PROPERTY SUMMARY INFORMATION				
Lot	Owner	Address	Year Structure Built	Land Area (Acres)
3	Mayor and City Council	10 South Frederick Street	No structures	0.058
14/14A	Mayor and City Council	17 South Gay Street	1905	0.065
15/15A	Mayor and City Council c/o Department of Real Estate	19 South Gay Street	1904	0.113
16/16A	Mayor and City Council	23 South Gay Street	1906	0.141
			Total Acreage	0.377

The prior owner of lots 14A, 15A, and 16A was listed as “15 – 25 South Gay Street.” The MDAT records indicate that the land uses for these lots is “exempt commercial”.

2.2 Proposed Development Affected by the RAP

Based on a review of the available plans and additional information provided by the Participant, GTA understands that the existing structures will be renovated and the subject property will be redeveloped with a mixed-use development; apartments with street-level retail spaces. An *Existing Conditions Plan* is attached as *Figure 3*. The cover page of a *Design Development* plan set prepared by SM+P Architects dated October 4, 2019, illustrates the proposed site improvements, which is based on the “Minimum Density Plan,” is presented as *Proposed Development Plan – Street Façade, Figure 4*.

GTA was provided copies of *Construction Drawings* (CDs) of Guardian House, prepared by SM+P Architects, dated May 22, 2020. The CDs indicate that the current structures on the subject property are planned to be renovated with two, street-level commercial tenant spaces and 66 residential apartment units. The basement level will be comprised of storage areas, trash rooms, maintenance rooms, and one commercial tenant area. The storage rooms are located within 17 and 19 South Gay Street buildings, which abuts the northeastern parking lot area addressed in this RAP. The basement level of 23 South Gay Street will be reserved for possible commercial tenant use. The first floor (street level) will comprise two storefront commercial tenant spaces, entry lobby areas, five residential apartment units, and a few mechanical spaces. One of the first-floor commercial tenant spaces will be located in the western portion of the 17 South Gay Street building, and the other first-floor commercial tenant space will be located in the 23 South Gay Street building. Two lobbies, a leasing office, three residential units, and mechanical/maintenance

rooms will be located on the first floor of the 19 South Gay Street building. An electrical room and water maintenance room, in the eastern portion of the 17 South Gay Street building, abuts the eastern side of the parking lot, and three residential units abut the southern side of the parking lot. The two remaining residential units on the first floor are located in the eastern end of the 23 South Gay Street building. The second through fifth floors will comprise 61 residential units. The fifth floor will include a rooftop deck addition on the western portion of the subject property. An elevator will be located in the west-central portion of the subject property, and two stairwells will be located on the northwestern and southeastern portions of the subject property, respectively. Copies of the CDs showing the basement level and first floor plans are included as *Figures 5 and 6*.

Detailed grading plans were not available at the time of the preparation of this report. However, the reviewed plans and discussions with the Participant indicate that the northeastern parking lot is planned to be milled and re-paved, with modification to subbase and foundational soils performed only if needed for engineering purposes. Management of any surplus soil generated by these activities is detailed in *Section 6.2.3*.

2.3 Topography

The topographic information on the USGS Topographic Quadrangle Map (Baltimore East, MD) for the site vicinity indicates that the ground surface elevations on the site range from approximately 18 feet above Mean Sea Level (MSL) on the north/northwestern portion of the subject property, to approximately 14 feet above MSL on the southeastern portion of the subject property. Surficial drainage is directed toward the south/southeast, subsequently discharging into the Northwest Harbor, which is located approximately 1,000 feet south/southeast of the site. A *Topographic Map* for the site and vicinity, based on the USGS Map, is included as *Figure 7*.

2.4 Soils

According to the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Web Soil Survey (reviewed on June 11, 2020), the site is underlain by soil characterized as “Urban Land” (44UC).

A prior preliminary geotechnical exploration performed by GTA identified fill materials on portions of the subject property (primarily the northeastern parking area) that consisted of silty or clayey to relatively clean sand and gravel and generally contained minor proportions of debris such as masonry rubble, slag, and wood fragments. These fill materials were generally identified within seven feet below existing grades. Native soils beneath the fill materials were generally identified as silty sands and sandy silts, poorly graded sand, well-graded sand, and well-graded gravel.

2.5 Geology and Hydrology

According to the Maryland Geological Survey *Geologic Map of Baltimore County and City, Maryland* (1976), the site vicinity is situated in the Coastal Plain Physiographic Province. The Coastal Plain is characterized by gravel, sand, silt, and clay deposits from historic marine environments. Specifically, the site is indicated to be underlain by Lowlands Deposits, which is described as gravel, sand, silt, and clay.

Hydrologically, the Coastal Plain is underlain by both unconfined and confined aquifers of unconsolidated sediments, which overlie consolidated bedrock and dip toward the southeast. Groundwater storage and movement are functions of the primary porosity of the sediments. Larger storage is provided by gravel and sand, with little to no storage provided by clay. Near-surface, unconfined aquifers typically consist of sediments of higher permeability and are recharged locally, primarily through precipitation that permeates through the unsaturated zone into the aquifer. The water table in unconfined aquifers is therefore highly variable, fluctuating with the seasons and with rates of precipitation. Variations in the groundwater surface and flow generally reflect the topography and relative locations of surface water features. Intermittent confining layers can locally alter the water table conditions. The deeper, confined aquifers are bound by confining layers above and below, creating an artesian system. Confined aquifers are recharged in areas where the formation crops out, generally in more remote areas to the west.

The groundwater flow direction in the site vicinity is assumed to mirror surficial topography. Accordingly, the groundwater flow direction is assumed to be generally toward the

south/southeast in the immediate site vicinity. The prior preliminary geotechnical exploration indicated the shallow water table occurs approximately 14 to 19 feet below ground surface (bgs).

2.6 Environmental Background

GTA has generated the following documents relating to the environmental conditions of the subject property:

- *Phase I ESA*, dated November 16, 2018;
- *Report of Preliminary Geotechnical Exploration*, dated November 30, 2018;
- *Phase II ESA*, dated May 15, 2020; and
- *Phase I ESA*, dated May 29, 2020.

These documents have been provided to the Participant and the MDE VCP under a separate cover, and the Phase II ESA included soil borings, soil sampling, soil vapor sampling, polychlorinated biphenyls (PCB) wipe sampling, and associated laboratory analysis. Please refer to these documents regarding environmentally pertinent or other details not summarized below.

2.6.1 2018 Phase I ESA

The report identified conditions on the subject property that were generally consistent with those that currently exist. The subject property contained three multi-story adjoining office buildings that are currently vacant and a parking lot. The parking lot on the subject property has been vacant since 1890. Three buildings were located on the subject property prior to the Great Baltimore Fire of 1904 and included a store, auto machine repair shop, a clothing manufacturer, and various offices. The subject property's existing buildings were constructed by 1906 in their current configurations. The structures have been occupied with various offices, stores, wholesalers, medical practices, a paint manufacturing and packaging facility, and a culinary arts institute. No aboveground storage tanks or underground storage tanks (USTs) were identified in association with the subject property.

The surrounding area contained commercial development, parking garages, government buildings, and memorial parks. The surrounding area historically contained various, stores, offices, theaters, tailors, printers, churches, banks, and parking garages in addition to fire and police department buildings. Two dry cleaners were historically located 300 feet north and northwest of the site and operated between 1958 and 1974. Another dry cleaner, located approximately 500 feet to the northwest, operated between 1925 and 1959. Two diesel USTs associated with the Baltimore City Police Headquarters are located approximately 500 feet north of the subject property. Five leaking UST (LUST) cases were identified within 800 feet of the subject property, but based on their locations relative to the subject property, the anticipated direction of groundwater flow, and their

regulatory statuses, the identified regulatory sites were considered unlikely to have adversely impacted the environmental quality of the subject property.

2.6.2 2018 Preliminary Geotechnical Exploration

GTA prepared a *Report of Preliminary Geotechnical Exploration* in conjunction with the 2018 Phase I ESA. During the course of completing subsurface borings, GTA observed what were believed to be petroleum odors associated with the geotechnical exploration to a maximum reported depth of 7 feet bgs. GTA utilized a photoionization detector (PID) to field-screen the soils which detected elevated concentrations of VOCs. Due to the concurrent nature of the two reports, the elevated detections of VOCs were identified as a REC in the 2018 Phase I ESA. As previously noted, the shallow water table was encountered at approximately 14 to 19 feet bgs.

2.6.3 2020 Phase II ESA

The 2020 Phase II ESA was performed per an MDE-approved workplan and as part of acceptance into the VCP. This report also was prepared to evaluate the petroleum-like odors identified in GTA's 2018 Preliminary Geotechnical Exploration discussed in *Section 2.6.2*. GTA collected soil and soil vapor samples and collected surface wipe samples to characterize indoor surfaces for the possible presence of PCBs. GTA performed 11 soil borings and collected eight soil samples to further evaluate the soil in the parking area of the subject property and five sub-slab soil vapor points were installed in the buildings on the subject property to evaluate sub-slab soil vapor conditions. A *Sample Location Plan* is included as *Figure 8*. TPH DRO and several SVOCs, VOCs, and metals were detected above the MDE RCS in the shallower soils from the parking area. Sub-slab soil vapor sampling detected several VOCs above the laboratory reporting limits, but the detected concentrations were below MDE's residential Tier 1 target soil vapor values.

The soil samples collected indicated elevated concentrations of mercury in the soil above the Anticipated Total Concentration (ATC) for mercury in the region; therefore, a screening assessment of potential mercury vapor intrusion was performed. GTA installed three additional soil vapor monitoring locations in the parking area and two interior sub-slab soil vapor points, in addition to re-utilizing the sub-slab locations that had previously been installed within the structures on the subject property. A *Vapor Sample Location Plan* is included as *Figure 9*. Elevated concentrations of mercury vapors were not detected in soils (nor in indoor air throughout the basement) at the subject property.

Surface wipe sampling performed on concrete floors in the vicinity of existing elevator equipment at the subject property did not detect PCBs on the sampled surfaces. The Soil, Soil Vapor, and PCB Wipe Sampling Tables are included as *Tables 1, 2, and 3*, respectively, in this report.

The 2020 Phase II ESA concluded, "Based on the results of the Phase II ESA activities described herein, limited soil impacts have been identified at the subject property, which can be managed during the planned redevelopment of the subject property. GTA recommends that these impacts be reviewed with MDE VCP staff to identify the

appropriate regulatory process for addressing these impacts as part of planned redevelopment and future use of the site.”

2.6.4 2020 Phase I ESA

The 2020 Phase I ESA was performed to update the 2018 ESA. Conditions on and near the subject property were consistent with those discussed in *Section 2.6.1*.

3.0 ADDITIONAL SITE EVALUATION

After MDE’s review of GTA’s 2020 Phase II ESA, it has been determined that the soils beneath the parking area will not require additional characterization if a cap is proposed to be installed. The parking area will be capped with limited excavation planned during construction, but will otherwise not entail significant earthmoving. No free petroleum product was observed during the 2020 Phase II ESA.

If development plans change and the soils beneath the asphalt parking area will be disturbed beyond the limited excavations planned (see *Section 6.1.2*), GTA will submit a RAP Addendum to the MDE VCP for comment and approval. Documentation of these evaluations will be submitted to MDE VCP within separate reports for each evaluation, monthly RAP Implementation Progress Reports, and a RAP Completion Report.

4.0 EXPOSURE ASSESSMENT

TPH-DRO, VOCs, SVOCs, and metals have been detected in on-site soils above the MDE’s RCS. These non-carcinogenic and carcinogenic contaminants are herein collectively identified as contaminants of potential concern (COPC), and are summarized in more detail below. As discussed in *Section 3.0*, no additional environmental evaluations of the subject property are proposed. In the event that additional evaluations are required, and if those evaluations identify additional COPCs, a RAP Addendum will be submitted to MDE VCP for review and approval with the additional COPCs.

4.1 Direct Contact Soil Contamination

SVOCs (specifically 2,4-Dimethylphenol, 2-Methylnaphthalene, Acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene,

dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, phenanthrene, and pyrene), VOCs (specifically 1,2,4-Trimethylbenzene, benzene, ethylbenzene, and naphthalene), TPH-DRO, and metals (antimony, arsenic, copper, lead, and elemental mercury) are the COPCs that have been detected in on-site shallow soils (1-2 feet bgs with additional detections up to 7 feet bgs) above the MDE’s RCS.

There is a potential for site construction workers to come into contact with the COPCs. This contact will be limited by implementing a site-specific Health and Safety Plan (HASP). Capping of the subject property will eliminate the direct contact exposure risk to construction worker and future adult, youth, and child populations. The proposed remedies for the soil contamination (HASP, capping with limited soil removal) are protective of human health, because they are designed to prevent exposure to contamination. Under the current conditions, construction worker and adult, youth, and child populations at the subject property could be exposed to the COPCs; however, once this RAP is complete, all populations will be protected. These proposed remedial strategies are further outlined in *Section 6.1* of this report.

4.2 Potential Exposure Populations and Pathways

The subject property contains three, adjoined, vacant commercial buildings and a parking area. Proposed redevelopment plans include the renovation for a primarily residential mixed-use development. The planned use of the subject property includes “Tier 1B (Restricted Residential)” as defined by the *MDE Voluntary Cleanup Program Guidance Document*.

A site-specific Human Health Risk Assessment for future occupants has not been prepared for this site because the proposed site development activities will eliminate the identified exposure pathways. Potential risks to construction workers may exist through direct contact/ingestion of impacted soil and through inhalation of dust and VOCs. The following exposure pathways have been identified and the summarized remedies are proposed.

Potential Exposed Populations

Media	Exposure Pathway	Potentially Exposed Population	Contaminants
Groundwater	Dermal Exposure	Construction Worker	Likely VOCs and TPH DRO
	Incidental Ingestion	None	

Media	Exposure Pathway	Potentially Exposed Population	Contaminants
	Inhalation	None	
Surface Soil	Dermal Exposure	Adult, Youth, Children, Construction Worker	SVOCs, VOCs, metals, and TPH DRO
	Ingestion	Adult, Youth, Children, Construction Worker	
	Inhalation of Volatiles and Fugitive Dust	Adult, Youth, Children, Construction Worker	
Subsurface Soil	Dermal Exposure	Adult, Youth, Children, Construction Worker	SVOCs, VOCs, metals, and TPH DRO
	Ingestion	Adult, Youth, Children, Construction Worker	
	Inhalation of Volatiles and Fugitive Dust	Adult, Youth, Children, Construction Worker	

4.3 Inhalation of Fugitive Dust and VOC Vapors

During future construction activities, it is possible for soil impacted by COPCs to become airborne. There is a potential for site construction workers to breathe this fugitive dust. The inhalation of fugitive dust will be limited by implementing a site-specific HASP and construction practices that prevent dust generation (e.g., implementation of dust control methodologies). In addition, there is a potential for site construction workers to encounter VOC vapors during on-site intrusive activities. The inhalation/collection of VOC vapors will be limited by implementing a site-specific HASP.

Capping (e.g., asphalt, or concrete) across the parking area of the subject property will act as a limiting alternative, which will eliminate future exposure to inhalation of fugitive dust and VOC vapors to future adult, youth, and child populations. The proposed remedy for inhalation of fugitive dust and VOC vapors is protective of human health since exposure to contamination above regulatory limits will be prevented.

4.4 Exposure to Groundwater Contamination

Groundwater was not encountered or evaluated during prior evaluations. In addition, groundwater at the site is not currently used. While not likely, there is a potential for site construction workers to come into contact with the groundwater during utility excavations. This contact will be limited by implementing a site-specific HASP. Proposed improvements will be

connected to municipal water and sewer services. GTA proposes implementation of a recorded deed restriction prohibiting the use of groundwater at the site. Based on the implementation of the proposed remedies, a direct contact exposure pathway will not exist between future occupants or users, and potential groundwater contamination. The proposed remedies for the impacted groundwater are protective of human health, because contact with groundwater will be restricted.

4.5 Migration of Contamination to Ecological Receptors

Typical ecological receptors to contamination include wetlands and surface water bodies. The site does not contain surface water bodies. The nearest surface water body in the presumed downgradient direction is the Northwest Harbor, which is located approximately 1,000 feet south/southeast of the site. Therefore, the primary migration route of on-site contaminants to ecological receptors is through wind-borne dust and surface water runoff. Once the RAP has been implemented, the migration pathway for contaminants will no longer exist. Based on this information, there does not appear to be a significant risk of migration of contamination to ecological receptors.

5.0 CLEANUP CRITERIA

Presented below are the soil cleanup criteria selected for the subject property, and are based upon current regulatory requirements that will guide these proposed remedial activities. The MDE RCS concentrations for TPH DRO and TPH GRO are referenced in MDE’s *Cleanup Standards for Soil and Groundwater; October 2018; Interim Final Guidance (Update No. 3)*. The applicable cleanup criteria and known maximum detected concentrations for COPCs at the subject property are summarized below.

Applicable Cleanup Criteria

Analyte	Known Maximum Concentration In On-Site Soils	MDE RCS Cleanup Criteria
<i>SVOCs</i>		
2,4-Dimethylphenol	840 mg/kg	130 mg/kg
2-Methylnapthalene	2,800 mg/kg	24 mg/kg
Acenaphthene	410 mg/kg	360 mg/kg
Benzo(a)anthracene	710 mg/kg	1.1 mg/kg
Benzo(a)pyrene	360 mg/kg	0.11 mg/kg
Benzo(b)fluoranthene	250 mg/kg	1.1 mg/kg
Benzo(k)fluoranthene	390 mg/kg	11 mg/kg
Chrysene	590 mg/kg	110 mg/kg

Analyte	Known Maximum Concentration In On-Site Soils	MDE RCS Cleanup Criteria
Dibenz(a,h)anthracene	50 mg/kg	0.11 mg/kg
Dibenzofuran	1,200 mg/kg	7.3 mg/kg
Fluoranthene	2,000 mg/kg	240 mg/kg
Fluorene	1,600 mg/kg	240 mg/kg
Indeno(1,2,3-cd)pyrene	130 mg/kg	1.1 mg/kg
Naphthalene	6,300 mg/kg	3.8 mg/kg
Phenanthrene	3,700 mg/kg	180 mg/kg
Pyrene	1,400 mg/kg	180 mg/kg
VOCs		
1,2,4-Trimethylbenzene	81 mg/kg	30 mg/kg
Benzene	14 mg/kg	1.2 mg/kg
Ethylbenzene	17 mg/kg	5.8 mg/kg
Naphthalene	3,400 mg/kg	3.8 mg/kg
Total Petroleum Hydrocarbons		
TPH-DRO	130,000 mg/kg	230 mg/kg
Total Metals		
Antimony	14 mg/kg	3.1 mg/kg
Arsenic	26 mg/kg	10.1 mg/kg*
Copper	330 mg/kg	310 mg/kg
Lead	2,300 mg/kg	400 mg/kg
Elemental mercury	2.6 mg/kg	1.1 mg/kg

Soil concentrations expressed in milligrams per kilogram (mg/kg), equivalent to parts per million (ppm).

* Cleanup standard for arsenic is being compared to the arsenic Residential Risk-derived Comparison Value (RCV).

Bold = Exceeds cleanup criteria.

6.0 SELECTED TECHNOLOGIES AND INSTITUTIONAL CONTROLS

Potential exposure pathways have been identified between the contaminated soil and construction worker and future adult, youth, and child populations. These exposure pathways will be eliminated through the preparation of a HASP; construction observation for correct RAP implementation using appropriate health and safety measures during the planned construction; excavation and potential off-site disposal of impacted materials encountered during development activities; capping of the parking area; and engineering and institutional controls (e.g. deed restrictions on use of groundwater and notifications prior to excavation). The engineering and institutional controls are summarized below:

Engineering and Institutional Controls

ENGINEERING CONTROLS	INSTITUTIONAL CONTROLS
HASP preparation and implementation for construction workers.	Restricted residential land use requirement (per the VCP land use definition).
Permanent site capping requirements.	Groundwater use prohibition.
Soil excavation and off-site disposal.	One-Call system (Miss Utility) notification
	Inspection and maintenance requirement for site caps.
	Soil excavation notification.
	MDE notification of transfer of property ownership.

Limiting alternatives to future potential exposure will be performed through placement of deed restrictions prohibiting the use of groundwater beneath the property, the prior notification of soil excavation, and cap inspection and maintenance requirements. Additionally, future site improvements will be connected to municipal water and sewer services.

6.1 Health and Safety Measures

A HASP will be prepared and implemented to reduce direct contact exposure of construction workers to the COPCs during construction. Appropriate construction practices for dust control will be utilized to limit worker exposure to contaminants borne on dust and windblown particulates. On-site construction monitoring will be provided during earthwork activities to ensure that the soil is handled properly and document on-site activities.

6.2 Soil Contamination

Construction plans indicate that milling and re-paving of the parking area is currently planned. The plans also indicate the addition of a basement access stairwell to 17 South Gay Street is planned at the western side of the structure/eastern side of the parking area. As discussed in *Section 2.6.3*, recent surface and subsurface soil sampling and analysis identified elevated concentrations of SVOCs, VOCs, metals, and petroleum constituent in the soils in the parking area on the subject property. Impacted material generated during the installation of the stairwell or any other necessary excavations is proposed to be placed below the capped area of the parking lot; however, materials encountered during construction activities may require off-site disposal if unable to be placed beneath the cap. The *Designated Capped Area* is illustrated on *Figure 10*.

6.2.1 Soil Capping

The northeastern parking area is proposed to be capped with new asphalt pavement. The cap will consist of 4 inches of typical asphalt pavement. A 6-inch gravel subbase is proposed under the asphalt cap; however, the subbase layer depth may vary depending on construction material testing and geotechnical engineering parameters. A *Cap Design Sketch* is presented as *Figure 11*.

A basement access stairwell is proposed to be constructed on the northwestern side of the parking area. The stairwell will be constructed with concrete, leading into the basement level.

6.2.2 Soil Excavation

Soil excavated during construction of the basement access stairwell or other areas will be screened for reuse under the capped area. The excavation area for stairwell construction will be 16 feet long by 10 feet wide and 12 feet deep. The excavated soils will be staged and stockpiled on a designated area as described below in *Section 6.2.3*. Samples will be collected from the generated soil materials for laboratory characterization analysis to evaluate whether it should be classified as impacted or non-impacted. The stockpiled soils will be covered by plastic sheeting until characteristics are determined. The samples will be submitted for laboratory analysis of TPH-DRO, VOCs, SVOCs, metals, and other waste characterization parameters as required by the facilities being considered for off-site disposal (e.g., Soil Safe, Clean Earth, etc.). MDE will be provided with the results of the characterization sampling, and disposal manifests identifying the disposal facility and the volume of material removed.

6.2.3 Soil Disposal

Excess soil from the subject property requiring off-site disposal will be staged in an established soil staging area that will be constructed in a predetermined area of the subject property (anticipated to be within the on-site parking area). At a minimum, 10-mil plastic sheeting must be available on-site for excavated contaminated materials that are encountered that require disposal. The 10-mil plastic sheeting will be placed at the

established soil staging area, and the contaminated soil will be placed on-top of the sheeting. As an alternative, a designated, roll-off dumpster(s) lined with a minimum 10-mil plastic sheeting may be utilized and staged within the designated construction area.

In addition to the established on-site erosion controls associated with the subject property's development, the soil staging areas will also have additional controls for erosion and prevention of cross contamination. The staging areas will be constructed using methods to limit migration of the contaminants and contain water that separates from the soil or other materials. The staging areas will be constructed using a plastic 10-mil liner system with stone berms, or its equivalent. Depending on quantities and anticipated weather, the soil will be covered and secured with plastic while awaiting off-site disposal.

In the event that soil will need to be transported off-site, the likely off-site disposal facilities proposed for receiving contaminated soil are as follows:

Soil Safe, Inc. (Soil Safe) or
16001 Mattawoman Drive
Brandywine, Maryland 20613
(301) 782-3036
<http://www.soilsafe.com>
Point of Contact: Amy Ralston

Clean Earth Inc. (Clean Earth)
6250 Dower House Road
Upper Marlboro, Maryland 20772
(215) 734-1400
www.cleanearthinc.com
Point of Contact: Paula Cross

Use of either facility as an off-site disposal facility is contingent on waste characterization soil sample results. If on-site soils are determined to be non-hazardous in a waste disposal scenario or have COPC concentrations below the levels in the facility's permit, the soil will be excavated, loaded, and transported to the selected licensed waste disposal facility. Additional/alternate disposal facilities may also be utilized. Information regarding these facilities will be provided to MDE prior to the transport of impacted soil off-site.

Excavation is anticipated at other locations of the site, outside the northeastern parking area, which are not known to be impacted (i.e., for utility installation/connection). Excavated soils from these locations are anticipated to be reused as backfill and placed under a cap.

6.3 Groundwater Contamination

The planned site development includes connection to a public water supply; therefore, groundwater use by future occupants will not occur. There is a potential for site construction workers to come into contact with the groundwater during construction activities. This contact will be limited by implementing a site-specific HASP. Otherwise, direct contact between the groundwater and construction workers and future occupants is not anticipated.

A groundwater use prohibition will be established for the site and recorded in the local land records. The proposed remedy for the groundwater contamination (groundwater use prohibition) is protective of human health, because contact with the potentially contaminated groundwater will be prevented.

6.3 Institutional Controls

Institutional controls will be listed on the COC issued by the MDE VCP for the successful completion of RAP activities. These institutional controls will include on-going requirements for the maintenance of the cap, restrictions on the use of groundwater beneath the property, and other restrictions the MDE deems necessary based on implementation of the approved RAP. A restriction on maintenance and excavation through the cap will be recorded in the local land records. The future owners and occupants will act as an independent third party that will notify MDE of any request for excavation at the site.

The proposed remedies for the soil and groundwater contamination are protective of human health, because the remedies are designed to prevent exposure to contamination.

7.0 EVALUATION CRITERIA FOR THE SELECTED TECHNOLOGIES

This RAP has been prepared to address potential exposure risks due to direct contact, ingestion, and/or inhalation for soil, soil vapor, and groundwater contamination at the subject property. The proposed remedy for soil and soil vapor includes construction observation for correct RAP implementation, using appropriate construction observation and health and safety measures during the planned construction, capping to prevent direct contact exposure, and notification to MDE prior to future excavation activities. The proposed remedy for groundwater includes construction observation for correct RAP implementation, and using appropriate

construction observation and health and safety measures during the planned construction, and a deed notice to restrict groundwater use at the subject property.

7.1 Certificate of Completion

The end point of the proposed remedial actions will be the completion of the planned site development (establishing the hardscaped caps) and implementation of institutional and engineering controls pursuant to this RAP. These activities will be documented in a RAP Completion Report. Upon submitting this report, the Participant will request a COC.

7.2 Contingency Measures

The RAP will be implemented upon approval from the MDE. The Client and its contractors should comply with applicable local, State, and Federal regulations by obtaining necessary approvals and required permits during the RAP process.

In the event that the future soil and/or groundwater concentrations of COPC exceed their designated cleanup criteria and/or cannot be adequately controlled during the RAP implementation process or contamination and/or exposure risks/pathways not previously identified are identified, the following contingency measures will be taken:

- Notify MDE within 24 hours.
- Postpone implementation of the RAP.
- Evaluate new site conditions identified.
- Amend RAP to address new site conditions identified.

Notified departments will include:

MDE Voluntary Cleanup Program
Land Management Administration
1800 Washington Boulevard
Baltimore, Maryland 21230
(410) 537-3493

MDE Oil Control Program
Land Management Administration
1800 Washington Boulevard
Baltimore, Maryland 21230
(410) 537-3442

It is not anticipated that the installation of utilities and utility connections at the subject property will require dewatering. However, if groundwater is encountered, the site may be required to obtain a NPDES Permit that will specify the discharge limits. This NPDES Permit will

be obtained by GTA (or GTA will assist the Participant in obtaining the NPDES Permit), in connection with the on-site construction activities, and will be utilized for dewatering activities on the site. If dewatering is necessary, GTA will submit an addendum to the RAP.

8.0 PROPOSED RESPONSE ACTIONS

The following table provides a summary of the technologies selected to address the contamination found on-site.

Remedial Response Actions

POTENTIAL EXPOSURE RISKS	PROPOSED RESPONSE ACTION
Dermal contact, ingestion, and inhalation of impacted soil by construction workers	Implementation of HASP; construction monitoring; excavation and disposal of soil impacted by COPC.
Dermal contact, ingestion, and inhalation of impacted soil by future occupants	Permanent capping of soil impacted by COPC.
Ingestion and dermal contact of groundwater by construction workers	Implementation of HASP; construction monitoring.
Ingestion and dermal contact of groundwater by future residents	Groundwater use restriction.

8.1 Reporting Requirements

The VCP project manager will be notified in writing or electronically within five calendar days of the beginning RAP implementation activities. Monthly RAP Implementation Progress Reports will be submitted to the VCP documenting RAP activities. These monthly RAP Implementation Progress Reports will generally be submitted by the 15th day of the following month. At the completion of the RAP implementation of each phase of the development, details of the site development, on-site construction monitoring, and clean materials information will be submitted in a RAP Completion Report of the development phase, and will include a written request for issuance of the COC for the completed development phase.

If necessary, sampling work plans, clean imported fill work plans, and/or RAP addenda will be submitted to the MDE VCP for review and approval. Clean imported fill work plans will be prepared in general accordance with the MDE's *VCP – Clean Imported Fill Material Fact Sheet*.

8.2 Maintenance

The proposed remedy includes the installation of asphalt and concrete caps that will require periodic maintenance activities. The maintenance plan that will be implemented by future owners or occupants of the site is presented below.

Physical maintenance requirements will include maintenance of the capped area to prevent degradation of the cap and unacceptable exposure to the underlying soil. Yearly inspections of the cap will be conducted. The property owner will be responsible for on-site cap maintenance inspections, performing maintenance to the cap, and maintaining cap inspection records. Maintenance records will include, at a minimum, the date of the inspection, name of the inspector, any noted issues, and subsequent resolution of the issues. Areas of the asphalt cap that have degraded to a Pavement Condition Index of 4.0 will be repaired in a timely manner. A *Cap Inspection Form* is attached in *Appendix C*.

MDE will be verbally or electronically notified within 24 hours following the discovery of unplanned emergency conditions at the subject property which will penetrate the cap, and will be provided with written documentation within 10 days of the repair. In addition, MDE will be provided written notice a minimum of five business days prior to planned activities at the site that will penetrate the cap, with the repairs completed within 15 days, and written documentation submitted to MDE within 10 days of the repair. Written notice of planned excavation activities will include the proposed date(s) for the excavation, location of the excavation(s), health and safety protocols (as required), MDE certified clean fill source and documentation (as required), and proposed characterization and disposal requirements (as required). The property owner will maintain on-site records of the yearly inspections and will include information on any repairs to the capping. The property owner or occupants will be required to notify MDE in writing of any proposed construction or excavation activities that breach any site cap.

8.3 Excavations

Soil excavated from the site is anticipated to be utilized elsewhere on-site beneath a capped area or removed from the site for disposal, at a regulated facility. Documentation of the disposed materials will be provided to the MDE following construction and in the monthly RAP

Implementation Progress Reports. Generalized details regarding soil relocation of impacted soil are presented in *Section 6.1.2*. Clean backfill documentation will be provided to the MDE prior to its use on the property. During any future excavation activity that breeches a site cap, a HASP will be in place outlining appropriate measures to protect worker health and safety. Excavated material will be disposed of in accordance with applicable local, State, and federal laws and regulations or placed back beneath an approved cap.

9.0 PERMITS, NOTIFICATIONS, AND CONTINGENCIES

The Client will comply with federal, State and local laws and regulations by obtaining necessary approvals and permits to conduct activities and implement this RAP. The MDE VCP will be verbally notified within 48 hours (72 hours in writing) of planned changes to the RAP implementation schedule. However, in the event of unplanned or emergency changes to the RAP implementation schedule such as previously undiscovered contamination, previously undiscovered storage tanks and other oil-related issues, and citations from regulatory entities related to health and safety practices, the MDE VCP and OCP will be verbally notified within 24 hours. Notifications shall be made to the VCP Project Manager and/or VCP Division Chief at 410-537-3493, and the MDE OCP at (410) 537-3442.

The MDE VCP and OCP will be provided with documentation and analytical reports generated as a result of any unidentified contamination. The Client understands that previously undiscovered contamination and/or previously undiscovered storage tanks or other oil-related issues may require an amendment to this RAP.

10.0 HEALTH AND SAFETY

10.1 Site Security

The subject property will be secured with fencing prior to beginning construction activities in order to prevent trespassing during non-working hours. Excavations resulting from redevelopment work must be secured with perimeter fencing if they are to be left open for more than one workday. Any breaches to the fence required by construction activities must be promptly re-secured.

10.2 Health and Safety Plan

A site-specific HASP must be developed, implemented, and maintained on-site. The HASP must itemize environmental risks, such as dust inhalation, soil vapors (especially VOCs, and petroleum), and the potential for encountering contaminated soil. Personnel must be made aware of the HASP. The HASP must be submitted to the MDE prior to the commencement of work.

11.0 IMPLEMENTATION SCHEDULE

The VCP Project Manager will be notified in writing within five calendar days of the beginning RAP implementation activities, and monthly RAP Implementation Progress Reports will be submitted to the VCP project manager during the implementation of this RAP. The VCP project manager will be verbally notified within 48 hours (72 hours in writing) of any changes (planned or emergency) to the RAP implementation schedule.

The proposed schedule to implement the RAP is presented below. The VCP may request a new implementation schedule if RAP activities have not begun within 12 months of the participant receiving approval of this RAP.

RAP Implementation Schedule

RESPONSE ACTION ACTIVITY	TENTATIVE SCHEDULE*
RAP Review/Approval	September – October 2020
Public Participation Period	October – November 2020
MDE RAP Kickoff Meeting	October – November 2020
HAZMAT Abatement	October – December 2020
Exterior and Interior Demolition	November – December 2020
Interior Wood Framing	November 2020 – January 2021
Mechanical, Electrical, and Plumbing	December 2020 – June 2021
Site Utilities	December 2020 – March 2021
Interior Finishes	January 2021 – August 2021
Elevator Installation	February 2021 – June 2021
Landscape and Hardscape	March 2021 – September 2021
Submit and maintain RAP security (Letter of Credit, Performance Bond, etc.)	10 Days after receiving RAP approval and annually thereafter (dependent on type of RAP security)
Begin Submittal of Monthly RAP Progress Reports	January 2021**
Complete Construction	September 2021
RAP Completion Report to MDE	4 th Quarter 2021
Initial Request issuance of COC	4 th Quarter 2021

(*) = The tentative schedule presented above is subject to change beyond the Applicant's control. Deviations from this proposed schedule will be communicated to MDE.

(**) = Based on initiation of exterior construction/improvement activities in December 2020

It should be noted that the construction schedule is highly contingent on the site development team. GTA will review the above RAP Implementation Schedule with the site development team and, if necessary, will submit a revised schedule to the MDE VCP. As requested, the revised schedule will be more specific with regards to site development methodology, duration of soil exposure, and cap installation timing.

12.0 ADMINISTRATIVE REQUIREMENTS

12.1 Written Agreement

If the RAP is approved by the MDE, the Participant agrees, subject to the withdrawal provisions of Section 7-512 of the Environment Article, to comply with the provisions of the RAP. The Participant understands that if he fails to implement and complete the requirements of the approved RAP and schedule, the MDE may reach an agreement with the Participant to revise the schedule of completion in the approved RAP or, if an agreement cannot be reached, the Department may withdraw approval of the RAP. A *Written Agreement* from the Participant is included as *Appendix B*.

12.2 Zoning Certification

LRP Guardian House LLC certifies that the subject property meets all applicable provisions and zoning requirements, as required by Section 7, Subtitle 5 of the Environmental Article, *Annotated Code of Maryland*. A certified statement from LRP Guardian House LLC is included as *Appendix D*.

12.3 Public Participation

On behalf of LRP Guardian House LLC, GTA will submit an MDE-approved RAP public notice to *The Baltimore Daily Record* and *the Baltimore Sun*, weekly newspapers with coverage that includes Baltimore, Maryland. The notice will be published Sunday, September 13, 2020 and Sunday, September 20, 2020.

The RAP public notice indicates that LRP Guardian House LLC will hold a public informational meeting on the proposed RAP via on-line teleconference (as necessitated by the

Governor of Maryland's Executive Order limitations on public gatherings due to the COVID-19 pandemic) on October 14, 2020 at 6:00 PM. The site history, detected on-site contamination, planned future use of the site, and a description of the proposed remedies will be presented at the meeting.

During the 30-day public comment period after publishing the public notice, a property sign will be placed along South Gay Street. This sign depicts the same information provide in the public notice outlined above. The sign will be removed following the 30-day public comment period. Documentation of the sign placement and legibility will be provided to the MDE for approval.

12.4 Performance Bond or Other Security

As required by the VCP, LRP Guardian House LLC will provide either a Performance Bond or Letter of Credit in the amount of \$25,000 to MDE covering the cost of securing and stabilizing the property. The site is currently vacant. Securing and stabilizing the property includes activities necessary to:

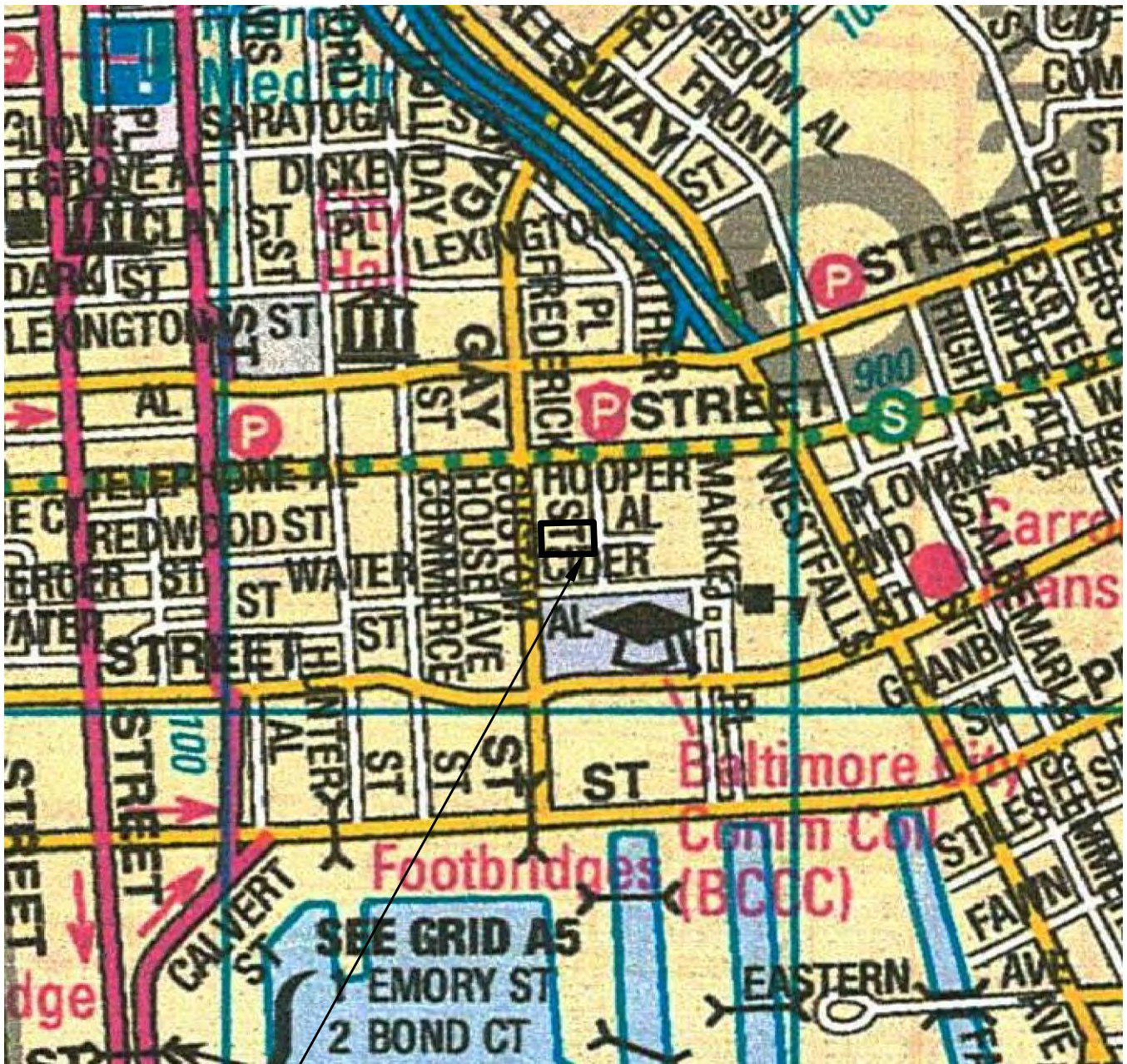
- Post appropriate warnings and notices about conditions on the property;
- Restrict access to contaminated portions of the property;
- Prevent exposure to contaminated soil prior to continuing implementation of a response action plan;
- Prevent dust or other movement of contaminated soil or contaminants off of the property prior to continuing implementation of a response action plan;
- Backfill open excavations where applicable;
- Prevent and abate any other dangerous conditions prior to continuing implementation of a response action plan; and,
- Maintain the above-referenced measures in effective working order.

LRP Guardian House LLC understands that the obligation for the performance bond or other security remains in effect for the subject property and does not become void until issuance of the final Certificate of Completion for the subject property, or 16 months after withdrawal of this application from the VCP. Landmark Restoration Partners, LLC acknowledges that failure to maintain the performance bond or other security for the property will result in the withdrawal of the application from the VCP.

******* END OF REPORT *******



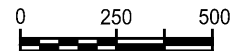
FIGURES



Approximate Subject
Property Boundary

Notes

1. Map Copyright © ADC The Map People, (800) 829-6277
2. Permitted Use Number 031282B



Approximate Scale
1 inch = 500 feet



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GUARDIAN HOUSE

BALTIMORE CITY, MARYLAND

SITE LOCATION MAP

PROJECT: 181495

DATE: MAY 2020

SCALE: 1" = 500'

DESIGN BY: JRW

REVIEW BY: SSW

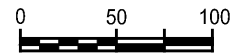
FIGURE: 1



Approximate Subject
Property Boundary

Notes

1. Base image obtained from Google Earth (©2020 Google).



Approximate Scale
1 inch = 100 feet



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GUARDIAN HOUSE

BALTIMORE CITY, MARYLAND

2019 AERIAL PHOTOGRAPH

PROJECT: 181495

DATE: MAY 2020

SCALE: 1" = 100'

DESIGN BY: JRW

REVIEW BY: SSW

FIGURE: 2



Notes

1. Image was adapted from *Existing Plans Sketch*, dated October 2018, prepared by SM+P Architects, Inc.



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GUARDIAN HOUSE
 BALTIMORE CITY, MARYLAND

EXISTING CONDITIONS PLAN

PROJECT: 181495

DATE: SEPTEMBER 2020

SCALE: NA

DESIGN BY: ADM

REVIEW BY: SSW

FIGURE: 3



Notes

1. Image was adapted from *Design Development Plans*, dated October 2019, prepared by SM+P Architects, Inc.



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GUARDIAN HOUSE
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**PROPOSED DEVELOPMENT PLAN -
 STREET FACADE**

PROJECT: 181495

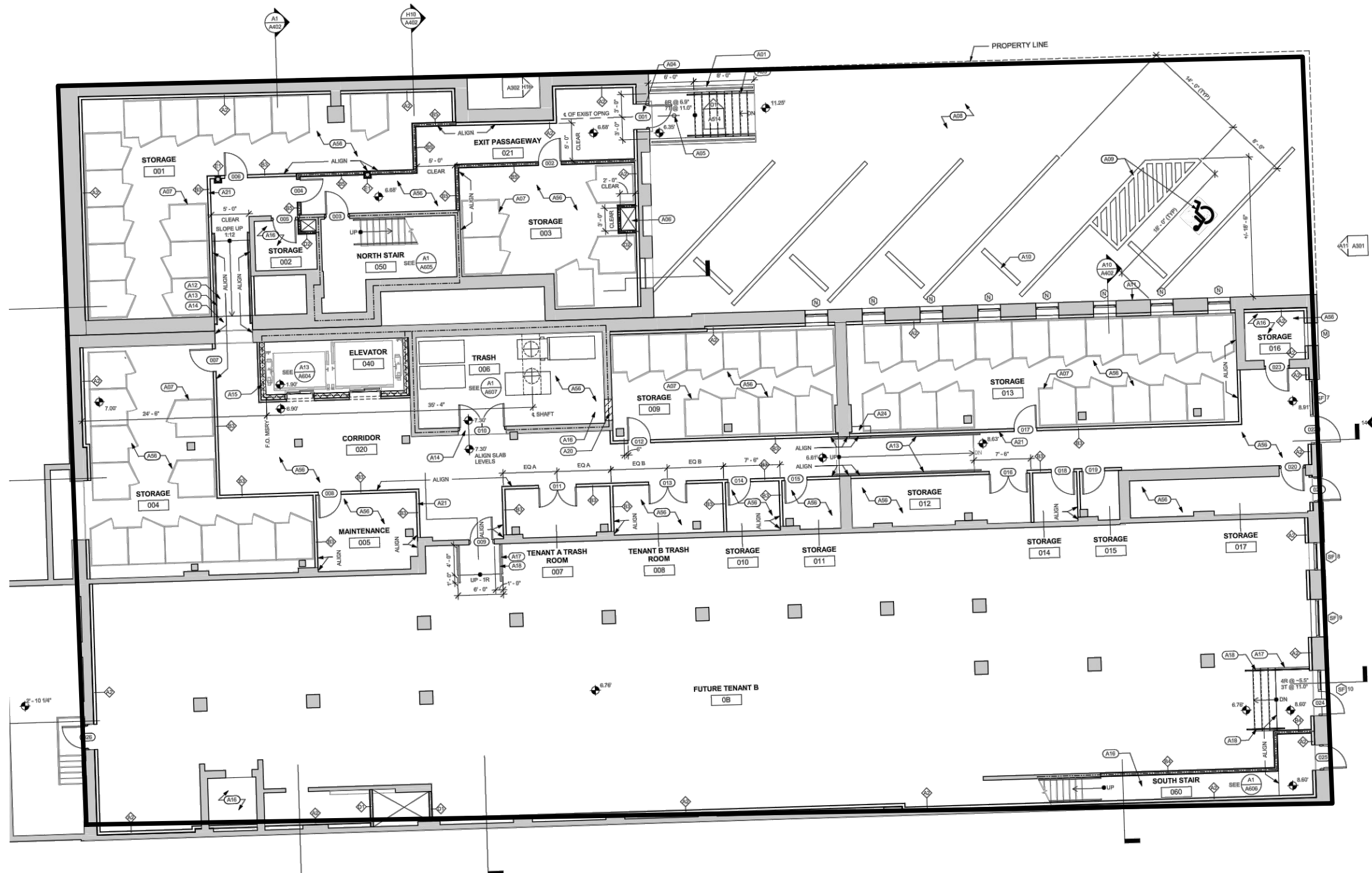
DATE: SEPTEMBER 2020

SCALE: NA

DESIGN BY: ADM

REVIEW BY: SSW

FIGURE: 4

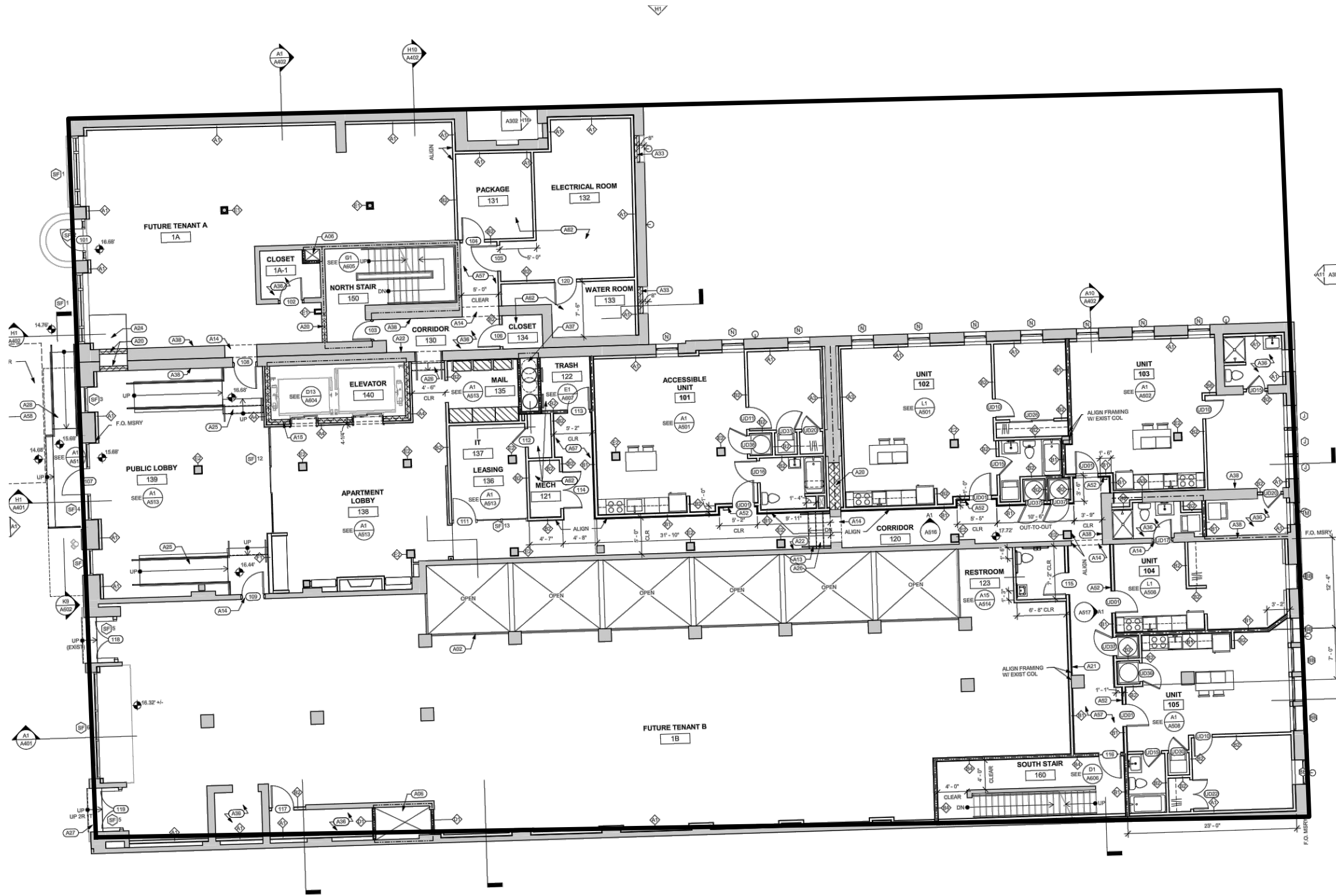


Notes

1. Image was adapted from *Construction Drawings*, dated May 2020, prepared by SM+P Architects, Inc.

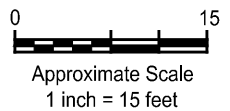
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GUARDIAN HOUSE
 BALTIMORE CITY, MARYLAND
**PROPOSED DEVELOPMENT PLAN -
 BASEMENT LEVEL**



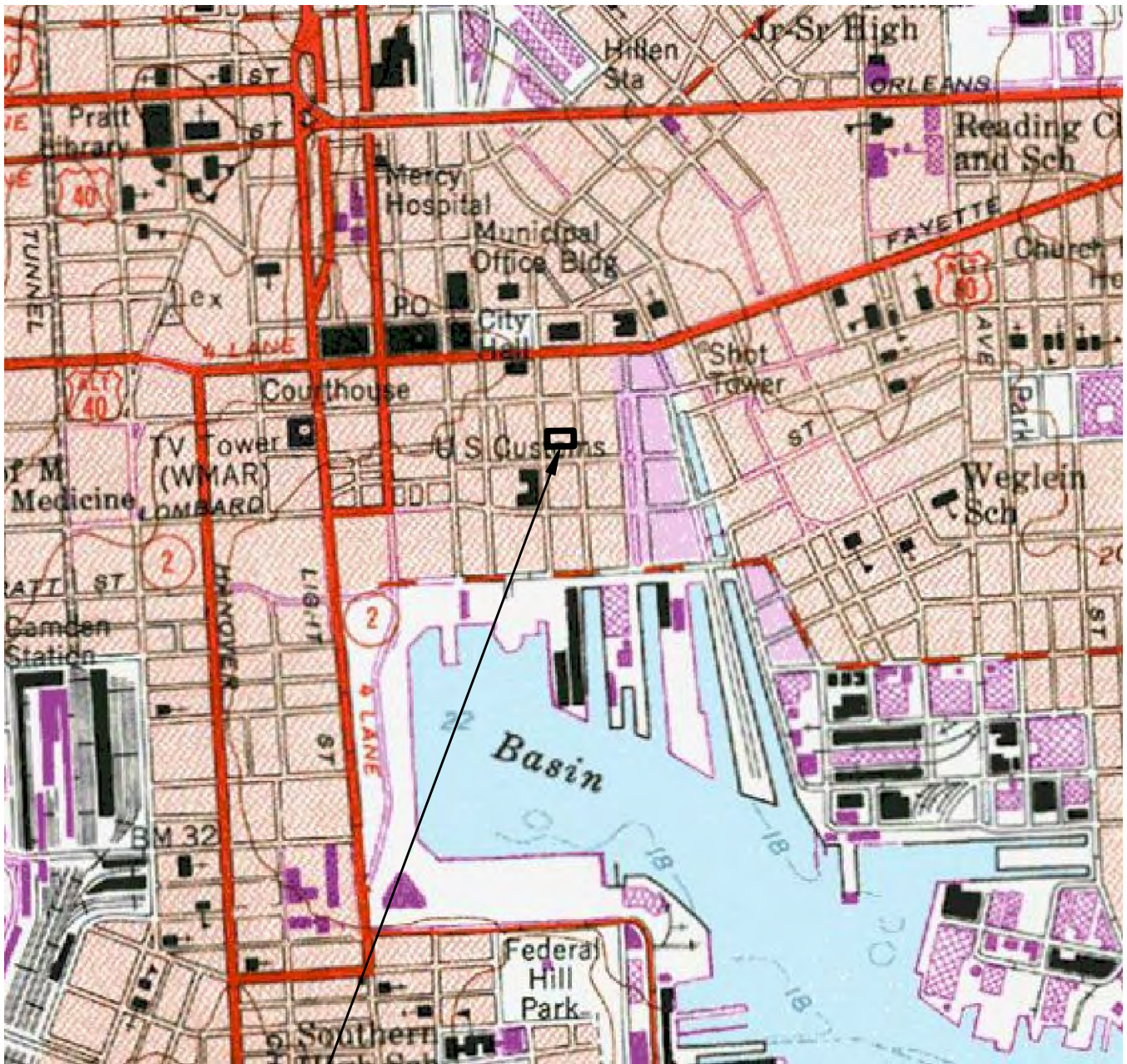
Notes

1. Image was adapted from *Construction Drawings*, dated May 2020, prepared by SM+P Architects, Inc.

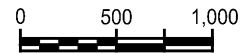


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GUARDIAN HOUSE
 BALTIMORE CITY, MARYLAND
PROPOSED DEVELOPMENT PLAN -
FIRST FLOOR



Approximate Subject
Property Boundary



Approximate Scale
1 inch = 1,000 feet



Notes

1. Based on the USGS Baltimore East, MD 7.5 Minute Quadrangle Map.
2. Copyright 2013 MyTopo, Inc.



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GUARDIAN HOUSE

BALTIMORE CITY, MARYLAND

TOPOGRAPHIC MAP

PROJECT: 181495

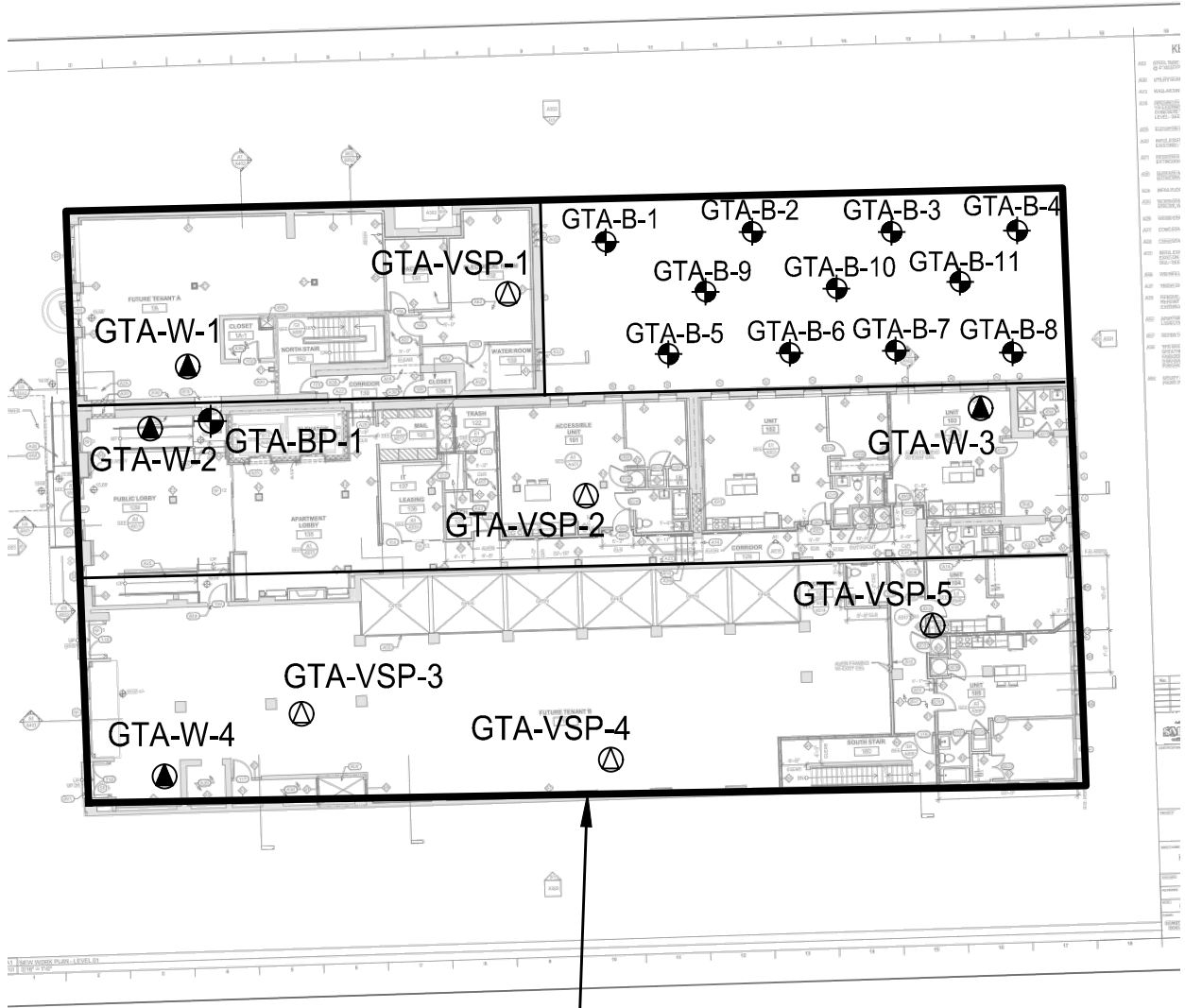
DATE: MAY 2020

SCALE: 1" = 1000'

DESIGN BY: JRW

REVIEW BY: SSW

FIGURE: 7



Legend

□ Building

● Soil Boring/Grab Sample

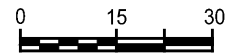
● Wipe Sample

△ Subslab Vapor Pin

— Approximate Subject Property Boundary

Notes

1. Based on a 2017 aerial photograph and site observations.
2. Property boundaries and site conditions are approximate.



Approximate Scale
1 inch = 30 feet



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GUARDIAN HOUSE
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SAMPLE LOCATION PLAN

PROJECT: 181495x1

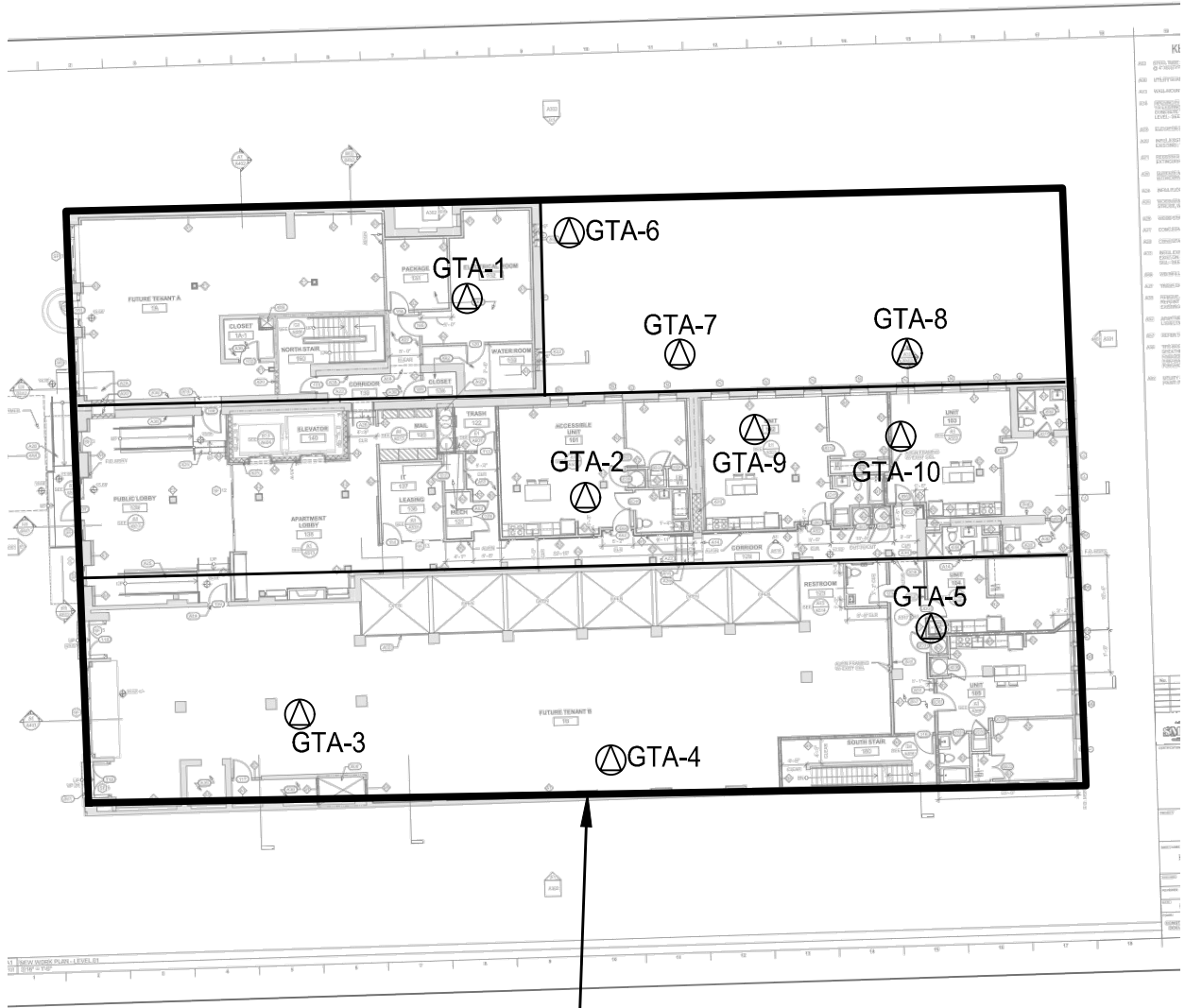
DATE: APRIL 2020

SCALE: 1" = 30'

DESIGN BY: JRW

REVIEW BY: SSW

FIGURE: 8



Legend

□ Building

⊕ Soil Boring/Grab Sample

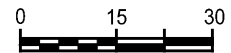
● Wipe Sample

⊙ Subslab Vapor Pin

— Approximate Subject Property Boundary

Notes

1. Based on a 2017 aerial photograph and site observations.
2. Property boundaries and site conditions are approximate.



Approximate Scale
1 inch = 30 feet

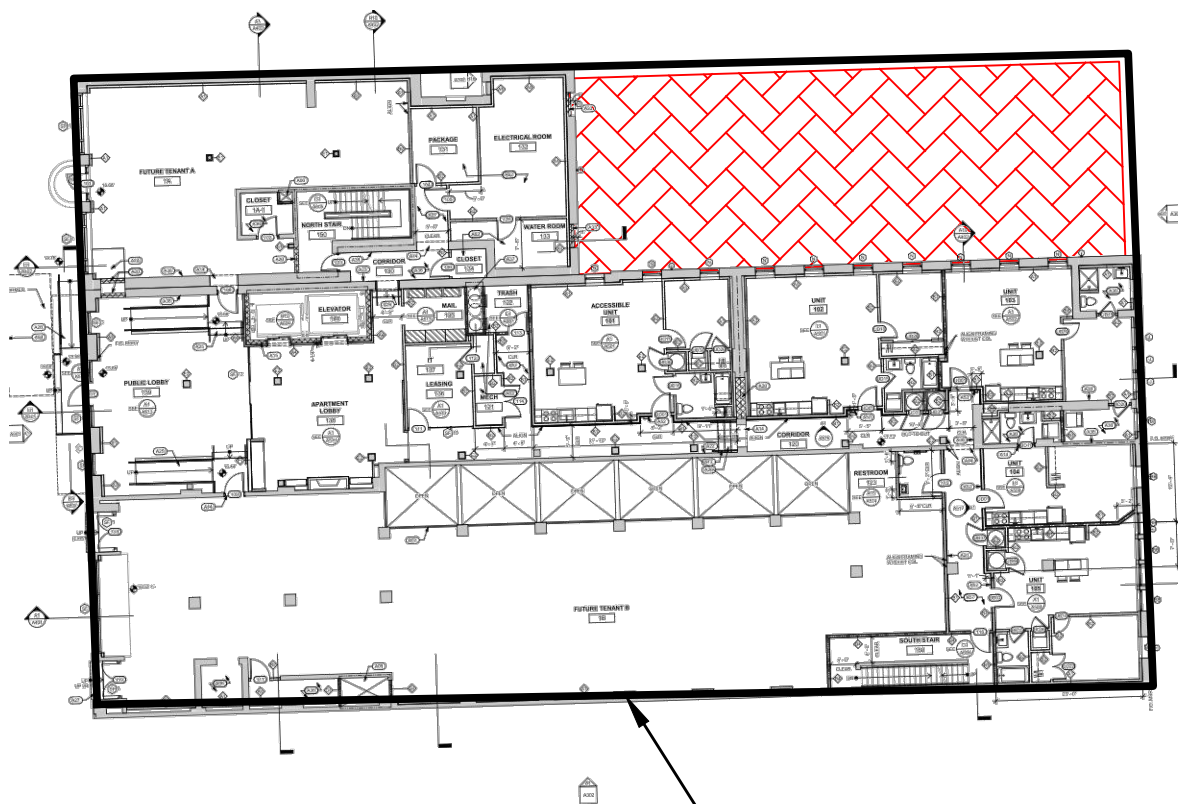


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LAUREL, MARYLAND 20707
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GUARDIAN HOUSE
BALTIMORE CITY, MARYLAND

VAPOR SAMPLE LOCATION PLAN



Approximate Subject Property Boundary

Legend

 Proposed Designated Capped Area

Notes

1. Base image obtained from Schamu Machowski and Patterson Architects, Inc. *Existing Plans Sketch* for South Gay Street Redevelopment.



Approximate Scale
1 inch = 30 feet



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GUARDIAN HOUSE

BALTIMORE CITY, MARYLAND

PROPOSED DESIGNATED CAPPED AREA

PROJECT: 181495

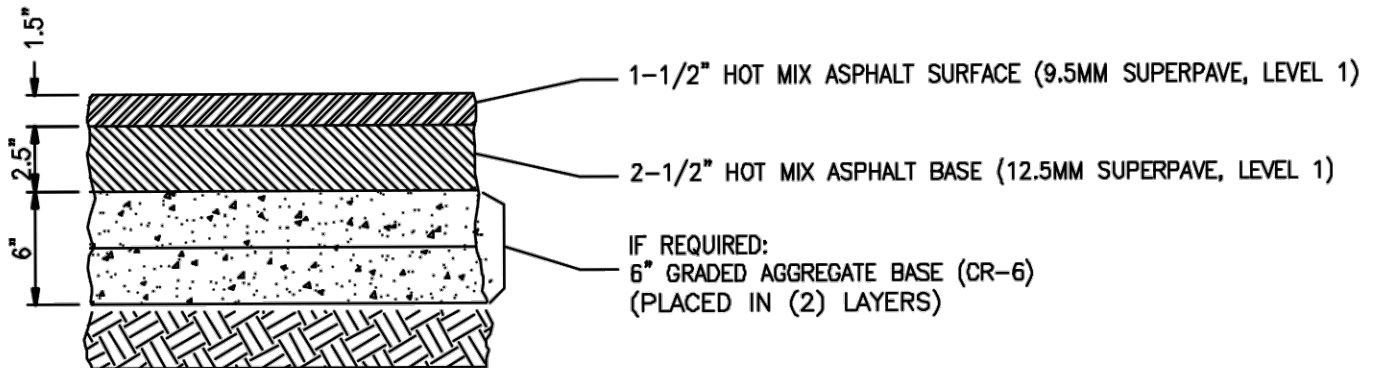
DATE: MAY 2020

SCALE: 1" = 30'

DESIGN BY: JRW

REVIEW BY: SSW

FIGURE: 10



NOTE:
PRIME COAT AS SHOWN ON PLANS OR AS
DIRECTED BY THE ENGINEER

LIGHT DUTY ASPHALT PAVING SECTION

NOT TO SCALE

Notes

1. Details are not for construction.
2. Details are provided for informational purposes only and are subject to final design.



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GUARDIAN HOUSE

BALTIMORE CITY, MARYLAND

CAP DESIGN SKETCH

PROJECT: 181495

DATE: JUNE 2020

NOT TO SCALE

DESIGN BY: JRW

REVIEW BY: SSW

FIGURE: 11



TABLES

Table 1
Soil Analysis Summary

Sample Location	GTA-B-2	GTA-B-4	GTA-B-5	GTA-B-7	GTA-BP-1	Comparison Values	
Depth (feet)	1-2	1-2	1-2	1-2	0.5 - 1	RCS	ATC Eastern
Semi-Volatile Organic Compounds (SVOCs)							
2,4,5-Trichlorophenol	<19	<36	<79	<2.0	<0.018	630	NA
2,4,6-Trichlorophenol	<19	<36	<79	<2.0	<0.018	6.3	NA
2,4-Dichlorophenol	<19	<36	<79	<2.0	<0.018	19	NA
2,4-Dimethylphenol	52	46	840	<2.0	<0.018	130	NA
2,4-Dinitrophenol	<190	<360	<790	<20	<0.18	13	NA
2,4-Dinitrotoluene	<77	<150	<320	<7.8	<0.072	1.7	NA
2,6-Dinitrotoluene	<77	<150	<320	<7.8	<0.072	0.36	NA
2-Chloronaphthalene	<19	<36	<79	<2.0	<0.018	480	NA
2-Chlorophenol	<19	<36	<79	<2.0	<0.018	39	NA
2-Methyl phenol	32	<36	450	<2.0	<0.018	NE	NA
2-Methylnaphthalene	780	600	2,800	48	<0.0090	24	NA
2-Nitroaniline	<77	<150	<320	<7.8	<0.072	NE	NA
2-Nitrophenol	<19	<36	<79	<2.0	<0.018	NE	NA
3&4-Methylphenol	60	44	810	2.1	<0.018	NE	NA
3,3-Dichlorobenzidine	<19	<36	<79	<2.0	<0.018	1.2	NA
3-Nitroaniline	<77	<150	<320	<7.8	<0.072	NE	NA
4,6-Dinitro-2-methyl phenol	<190	<360	<790	<20	<0.18	NE	NA
4-Bromophenylphenyl ether	<19	<36	<79	<2.0	<0.018	NE	NA
4-Chloro-3-methyl phenol	<19	<36	<79	<2.0	<0.018	NE	NA
4-Chloroaniline	<19	<36	<79	<2.0	<0.018	2.7	NA
4-Chlorophenyl Phenyl ether	<19	<36	<79	<2.0	<0.018	NE	NA
4-Nitroaniline	<77	<150	<320	<7.8	<0.072	NE	NA
4-Nitrophenol	<190	<360	<790	<20	<0.18	NE	NA
Acenaphthene	120	100	410	6.8	<0.0090	360	NA
Acenaphthylene	450	340	1,700	19	<0.0090	NE	NA
Acetophenone	<19	<36	<79	<2.0	<0.018	NE	NA
Anthracene	310	350	1,300	13	<0.0090	1,800	NA
Atrazine	<77	<150	<320	<7.8	<0.072	2.4	NA
Benzo(a)anthracene	190	250	710	9.2	0.013	1.1	NA
Benzo(a)pyrene	110	150	360	6.8	0.0090	0.11	NA
Benzo(b)fluoranthene	82	100	250	4.7	0.011	1.1	NA
Benzo(g,h,i)perylene	47	63	120	7.1	<0.0090	NE	NA
Benzo(k)fluoranthene	110	150	390	5.4	0.0094	11	NA
Biphenyl (Diphenyl)	95	81	400	4.6	<0.018	NE	NA
Butyl benzyl phthalate	<19	<36	<79	<2.0	0.18	NE	NA
Caprolactam	<77	<150	<320	<7.8	<0.072	NE	NA
Carbazole	50	94	450	<2.0	<0.018	NE	NA
Chrysene	190	240	590	8.7	0.020	110	NA
Di-n-butyl phthalate	<19	<36	<79	<2.0	0.051	NE	NA
Di-n-octyl phthalate	<77	<150	<320	<7.8	0.39	NE	NA
Dibenz(a,h)Anthracene	16	22	50	1.3	<0.0090	0.11	NA
Dibenzofuran	190	200	1,200	4.6	<0.018	7.3	NA
Diethyl phthalate	<19	<36	<79	<2.0	<0.018	5,100	NA
Dimethyl phthalate	<19	<36	<79	<2.0	<0.018	NE	NA
Fluoranthene	500	680	2,000	20	0.023	240	NA
Fluorene	430	420	1,600	16	<0.0090	240	NA
Hexachlorobenzene	<19	<36	<79	<2.0	<0.018	0.21	NA
Hexachlorobutadiene	<19	<36	<79	<2.0	<0.018	1.2	NA
Hexachlorocyclopentadiene	<77	<150	<320	<7.8	<0.072	0.18	NA
Hexachloroethane	<19	<36	<79	<2.0	<0.018	1.8	NA
Indeno(1,2,3-c,d)Pyrene	45	57	130	4.0	<0.0090	1.1	NA



Table 1
Soil Analysis Summary

Sample Location	GTA-B-2	GTA-B-4	GTA-B-5	GTA-B-7	GTA-BP-1	Comparison Values	
Depth (feet)	1-2	1-2	1-2	1-2	0.5 - 1	RCS	ATC Eastern
Isophorone	<19	<36	<79	<2.0	<0.018	57	NA
N-Nitrosodi-n-propyl amine	<19	<36	<79	<2.0	<0.018	0.078	NA
N-Nitrosodiphenylamine	<19	<36	<79	<2.0	<0.018	110	NA
Naphthalene	1,200	950	6,300	60	<0.0090	3.8	NA
Nitrobenzene	<19	<36	<79	<2.0	<0.018	5.1	NA
Pentachlorophenol	<77	<150	<320	<7.8	<0.072	1.0	NA
Phenanthrene	1,100	1,300	3,700	39	0.012	180	NA
Phenol	25	<36	270	<2.0	<0.018	1,900	NA
Pyrene	490	620	1,400	23	0.021	180	NA
Pyridine	<19	<36	<79	<2.0	<0.018	NE	NA
bis(2-chloroethoxy) methane	<19	<36	<79	<2.0	<0.018	NE	NA
bis(2-chloroethyl) ether	<19	<36	<79	<2.0	<0.018	0.23	NA
bis(2-chloroisopropyl) ether	<19	<36	<79	<2.0	<0.018	NE	NA
bis(2-ethylhexyl) phthalate	<19	<36	<79	<2.0	0.55	6	NA
Polychlorinated Biphenyls (PCBs)							
PCB-1016	<0.059	<0.054	<0.062	<0.059	<0.054	0.41	NA
PCB-1221	<0.059	<0.054	<0.062	<0.059	<0.054	0.20	NA
PCB-1232	<0.059	<0.054	<0.062	<0.059	<0.054	0.17	NA
PCB-1242	<0.059	<0.054	<0.062	<0.059	<0.054	0.23	NA
PCB-1248	<0.059	<0.054	<0.062	<0.059	<0.054	0.23	NA
PCB-1254	<0.059	<0.054	<0.062	<0.059	<0.054	0.12	NA
PCB-1260	<0.059	<0.054	<0.062	<0.059	<0.054	0.24	NA
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	<0.12	<0.11	<0.12	<0.12	<0.0011	810	NA
1,1,2,2-Tetrachloroethane	<0.12	<0.11	<0.12	<0.12	<0.0011	0.60	NA
1,1,2-Trichloroethane	<0.12	<0.11	<0.12	<0.12	<0.0011	0.15	NA
1,1,2-Trichlorotrifluoroethane	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
1,1-Dichloroethane	<0.12	<0.11	<0.12	<0.12	<0.0011	3.6	NA
1,1-Dichloroethene	<0.12	<0.11	<0.12	<0.12	<0.0011	23	NA
1,2,3-Trichlorobenzene	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
1,2,4-Trichlorobenzene	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
1,2,4-Trimethylbenzene	38	30	81	35	<0.0011	30	NA
1,2-Dibromo-3-chloropropane	<0.12	<0.11	<0.12	<0.12	<0.0011	0.0053	NA
1,2-Dibromoethane	<0.12	<0.11	<0.12	<0.12	<0.0011	0.036	NA
1,2-Dichlorobenzene	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
1,2-Dichloroethane	<0.12	<0.11	<0.12	<0.12	<0.0011	0.46	NA
1,2-Dichloropropane	<0.12	<0.11	<0.12	<0.12	<0.0011	1.6	NA
1,3,5-Trimethylbenzene	13	10	24	10	<0.0011	27	NA
1,3-Dichlorobenzene	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
1,4-Dichlorobenzene	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
2-Butanone (MEK)	<0.58	<0.55	<0.59	<0.58	<0.0054	2,700	NA
2-Hexanone (MBK)	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
4-Methyl-2-Pentanone (MIBK)	<0.12	<0.11	<0.12	<0.12	<0.0011	3,300	NA
Acetone	<2.3	<2.2	<2.4	<2.3	<0.022	6,100	NA
Benzene	4.0	14	13	3.0	<0.0011	1.2	NA
Bromochloromethane	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
Bromodichloromethane	<0.12	<0.11	<0.12	<0.12	<0.0011	0.29	NA
Bromoform	<0.12	<0.11	<0.12	<0.12	<0.0011	19	NA
Bromomethane	<0.12	0.11	<0.12	<0.12	<0.0011	0.68	NA
Carbon Disulfide	<0.12	<0.11	<0.12	<0.12	<0.0011	77	NA
Carbon tetrachloride	<0.12	<0.11	<0.12	<0.12	<0.0011	0.65	NA
Chlorobenzene	<0.12	<0.11	<0.12	<0.12	<0.0011	28	NA



Table 1
Soil Analysis Summary

Sample Location	GTA-B-2	GTA-B-4	GTA-B-5	GTA-B-7	GTA-BP-1	Comparison Values	
Depth (feet)	1-2	1-2	1-2	1-2	0.5 - 1	RCS	ATC Eastern
Chloroethane (Ethyl Chloride)	<0.12	<0.11	<0.12	<0.12	<0.0011	1,400	NA
Chloroform	<0.58	<0.55	<0.59	<0.58	<0.0054	0.32	NA
Chloromethane	<0.12	<0.11	<0.12	<0.12	<0.0011	11	NA
Cyclohexane	0.36	<0.11	<0.12	<0.12	<0.0011	NE	NA
Dibromochloromethane	<0.12	<0.11	<0.12	<0.12	<0.0011	8.3	NA
Dichlorodifluoromethane	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
Ethylbenzene	3.0	2.0	5.3	17	<0.0011	5.8	NA
Isopropylbenzene	1.1	0.81	1.2	1.3	<0.0011	NE	NA
Methyl Acetate	<2.9	<2.7	<3.0	<2.9	<0.027	NE	NA
Methyl-t-Butyl Ether	<0.12	<0.11	<0.12	<0.12	<0.0011	47	NA
Methylcyclohexane	1.2	0.32	0.37	0.16	<0.0011	NE	NA
Methylene chloride	<0.58	<0.55	<0.59	<0.58	<0.0054	35	NA
Naphthalene	810	1,100	3,400	820	<0.0011	3.8	NA
Styrene	7.8	3.6	12	3.2	<0.0011	600	NA
Tetrachloroethene	<0.12	<0.11	<0.12	<0.12	<0.0011	8.1	NA
Toluene	11	13	26	13	<0.0011	490	NA
Trichloroethene	<0.12	<0.11	<0.12	<0.12	<0.0011	0.41	NA
Trichlorofluoromethane	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
Vinyl Chloride	<0.58	<0.55	<0.59	<0.58	<0.0054	0.059	NA
cis-1,2-Dichloroethene	<0.12	<0.11	<0.12	<0.12	<0.0011	16	NA
cis-1,3-Dichloropropene	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
m&p-Xylene ⁽¹⁾	22	12	57	28	<0.0022	58	NA
o-Xylene ⁽¹⁾	12	7.2	25	13	<0.0011	58	NA
trans-1,2-Dichloroethene	<0.12	<0.11	<0.12	<0.12	<0.0011	160	NA
trans-1,3-Dichloropropene	<0.12	<0.11	<0.12	<0.12	<0.0011	NE	NA
Total Petroleum Hydrocarbons (TPH)							
Diesel Range Organics (DRO)	57,000	38,000	130,000	3,500	<11	230	NA
Gasoline Range Organics (GRO)	17	15	12	17	<0.11	230	NA
Priority Pollutant Metals							
Antimony	14	3.0	<2.9	<2.0	<2.6	3.1	6.0
Arsenic	26	18	9.7	13	3.9	10.1 ⁽²⁾	3.6
Beryllium	0.62	0.67	<0.57	0.55	0.75	16	0.66
Cadmium	2.7	1.3	<0.57	<0.39	<0.53	7.11	0.73
Chromium ⁽³⁾	56	35	8.2	29	68	12,000	30
Copper	310	330	38	310	27	310	12
Lead	2,300	750	640	1,600	44	400	45
Mercury	0.80	2.2	1.3	9.6	0.53	1.1	0.51
Nickel	19	18	7.2	12	22	150	13
Selenium	2.6	2.1	1.3	1.7	<0.53	39	2.2
Silver	0.48	0.90	<0.57	2.6	<0.53	39	0.94
Thallium	<0.46	<0.44	<0.57	<0.39	<0.53	0.078	3.9
Zinc	1,100	850	99	200	81	2,300	63



Table 1
Soil Analysis Summary

Sample Location	GTA-B-2	GTA-B-4	GTA-B-5	GTA-B-7	GTA-BP-1	Comparison Values	
Depth (feet)	1-2	1-2	1-2	1-2	0.5 - 1	RCS	ATC Eastern
Speciated Metals							
Hexavalent Chromium	<1.1	--	--	--	<1.1	0.3	30
Elemental Mercury	--	0.571	--	2.6	--	1.1	0.51

Notes:

This table is only to be used in conjunction with the report for which it was prepared. See the report text for background information, assumptions, limitations, etc.

Samples collected on April 2, 2020

Results in milligrams per kilogram (mg/kg), equivalent to parts per million (ppm)

RCS = Maryland Department of the Environment (MDE) Residential Cleanup Standards for soil as presented in MDE's Cleanup Standards for Soil and Groundwater; October 2018; Interim Final Guidance (Update No. 3)

ATC = Anticipated Typical Concentration for soils in Eastern Maryland

Shaded and bold values represent exceedance of MDE RCS (and ATC, if applicable)

NA = Not applicable

NE = MDE standard not established

-- = Not sampled

⁽¹⁾ = The comparison values for these chemicals are for total xylenes. The o-, m-, an p- components are not included in the MDE document.

⁽²⁾ = Arsenic is being compared to the Residential risk-derived comparison value (RCV)

⁽³⁾ = Total chromium values are compared to the trivalent chromium RCS values, based on the results of the hexavalent chromium analysis.

The comparison value for mercury is referenced as the elemental mercury RCS.



Table 2
Soil Vapor Analysis Summary

	Sample Identification					Residential Comparison Values	
	GTA-VSP-1	GTA-VSP-2	GTA-VSP-3	GTA-VSP-4	GTA-VSP-5	Tier 1 Target Soil Vapor	Tier 2 Target Soil Vapor
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	<2.7	<2.7	<2.7	<2.7	<2.7	104,000	520,000
1,1,2,2-Tetrachloroethane	<3.4	<3.4	<3.4	<3.4	<3.4	10	48
1,1,2-Trichloroethane	<2.7	<2.7	<2.7	<2.7	<2.7	4	21
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	<3.8	<3.8	6.5	<3.8	<3.8	104,000	520,000
1,1-Dichloroethane	<2.0	<2.0	<2.0	<2.0	<2.0	360	1,800
1,1-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<2.0	4,200	21,000
1,2,4-Trichlorobenzene	<3.7	<3.7	<3.7	<3.7	<3.7	42	210
1,2,4-Trimethylbenzene	<2.5	<2.5	<2.5	<2.5	<2.5	1,260	6,300
1,2-Dibromoethane (EDB)	<3.8	<3.8	<3.8	<3.8	<3.8	0.9	4.7
1,2-Dichlorobenzene	<3.0	<3.0	<3.0	<3.0	<3.0	4,200	21,000
1,2-Dichloroethane	<2.0	<2.0	<2.0	<2.0	<2.0	22	110
1,2-Dichloropropane	<4.6	<4.6	<4.6	<4.6	<4.6	84	420
1,2-Dichlorotetrafluoroethane (Freon 114)	<3.5	<3.5	<3.5	<3.5	<3.5	NE	NE
1,3,5-Trimethylbenzene	<2.5	<2.5	<2.5	<2.5	<2.5	1,260	6,300
1,3-Butadiene	<1.1	<1.1	<1.1	<1.1	<1.1	19	94
1,3-Dichlorobenzene	<3.0	<3.0	<3.0	<3.0	<3.0	NE	NE
1,4-Dichlorobenzene	<3.0	<3.0	<3.0	<3.0	<3.0	52	260
1,4-Dioxane (P-Dioxane)	<9.0	<9.0	<9.0	<9.0	<9.0	112	560
2,2,4-Trimethylpentane	<2.3	<2.3	<2.3	<2.3	<2.3	NE	NE
2-Butanone (Methyl Ethyl Ketone)	<3.7	<3.7	<3.7	<3.7	3.9	104,000	520,000
2-Hexanone (Methyl Butyl Ketone)	<5.1	<5.1	<5.1	<5.1	<5.1	620	3,100
4-Ethyltoluene	<2.5	<2.5	<2.5	<2.5	<2.5	NE	NE
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	<5.1	<5.1	<5.1	<5.1	<5.1	62,000	310,000
Acetone	25	<24	<24	<24	290	640,000	3,200,000
Allyl Chloride (3-Chloropropene)	<1.6	<1.6	<1.6	<1.6	<1.6	20	100



Table 2
Soil Vapor Analysis Summary

	Sample Identification					Residential Comparison Values	
	GTA-VSP-1	GTA-VSP-2	GTA-VSP-3	GTA-VSP-4	GTA-VSP-5	Tier 1 Target Soil Vapor	Tier 2 Target Soil Vapor
Benzene	<0.80	2.5	<0.80	<0.80	<0.80	72	360
Benzyl Chloride	<2.6	<2.6	<2.6	<2.6	<2.6	11	57
Bromodichloromethane	11	<3.3	<3.3	<3.3	<3.3	15	76
Bromoethene (Vinyl Bromide)	<2.2	<2.2	<2.2	<2.2	<2.2	18	88
Bromoform	<5.2	<5.2	<5.2	<5.2	<5.2	520	2,600
Bromomethane	<1.9	<1.9	<1.9	<1.9	<1.9	104	520
Carbon Disulfide	<31	<31	<31	<31	<31	14,600	73,000
Carbon Tetrachloride	<3.1	<3.1	<3.1	<3.1	<3.1	94	470
Chlorobenzene	<2.3	<2.3	<2.3	<2.3	<2.3	1,040	5,200
Chloroethane (Ethyl Chloride)	<1.3	<1.3	<1.3	<1.3	<1.3	200,000	1,000,000
Chloroform	91	<2.4	52	<2.4	<2.4	24	120
Chloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	1,880	9,400
Cyclohexane	<1.7	<1.7	<1.7	<1.7	<1.7	126,000	630,000
Dibromochloromethane	<4.3	<4.3	<4.3	<4.3	<4.3	NE	NE
Dichlorodifluoromethane (Freon 12)	<2.5	3.0	2.6	<2.5	<2.5	2,000	10,000
Ethyl Acetate	<1.8	<1.8	<1.8	<1.8	<1.8	1,460	7,300
Ethylbenzene	<1.1	<1.1	<1.1	<1.1	170	220	1,100
Hexachlorobutadiene	<5.3	<5.3	<5.3	<5.3	<5.3	26	130
Isopropylbenzene (Cumene)	<2.5	<2.5	<2.5	<2.5	<2.5	8,400	42,000
Methyl-t-butyl ether	<0.90	<0.90	<0.90	<0.90	<0.90	2,200	11,000
Methylene Chloride	<35	<35	<35	<35	<35	12,600	63,000
Naphthalene	<1.3	<1.3	<1.3	<1.3	<1.3	17	83
Propylene	<4.3	<4.3	<4.3	<4.3	<4.3	62,000	310,000
Styrene	<11	<11	<11	<11	<11	20,000	100,000
Tetrachloroethene (PCE)	<3.4	<3.4	<3.4	<3.4	<3.4	840	4,200
Tetrahydrofuran	<1.5	<1.5	<1.5	<1.5	<1.5	42,000	210,000



Table 2
Soil Vapor Analysis Summary

	Sample Identification					Residential Comparison Values	
	GTA-VSP-1	GTA-VSP-2	GTA-VSP-3	GTA-VSP-4	GTA-VSP-5	Tier 1 Target Soil Vapor	Tier 2 Target Soil Vapor
Toluene	<0.94	<0.94	<0.94	<0.94	3.9	104,000	520,000
Trichloroethene (TCE)	<2.7	<2.7	<2.7	<2.7	<2.7	42	210
Trichlorofluoromethane (Freon 11)	<2.8	<2.8	<2.8	<2.8	14	NE	NE
Vinyl Acetate	<1.8	<1.8	<1.8	<1.8	<1.8	4,200	21,000
Vinyl Chloride	<1.3	<1.3	<1.3	<1.3	<1.3	34	170
cis-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<2.0	NE	NE
cis-1,3-Dichloropropene ⁽¹⁾	<2.3	<2.3	<2.3	<2.3	<2.3	140	700
m,p-Xylenes	<2.2	<2.2	<2.2	<2.2	760	2,000	10,000
n-Heptane	<2.0	<2.0	<2.0	<2.0	<2.0	8,400	42,000
n-Hexane	<35	<35	<35	<35	<35	14,600	73,000
n-Propylbenzene	<2.5	<2.5	<2.5	<2.5	<2.5	20,000	100,000
o-Xylene	<1.1	<1.1	<1.1	<1.1	130	2,000	10,000
trans-1,2-Dichloroethene	<2.0	<2.0	<2.0	<2.0	<2.0	NE	NE
trans-1,3-Dichloropropene ⁽¹⁾	<2.3	<2.3	<2.3	<2.3	<2.3	140	700

Notes:

This table is only to be used in conjunction with the report for which it was prepared. See the report text for background information, assumptions, limitations, etc.

Samples collected on April 2, 2020

Results expressed in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

RSL = Regional Screening Level, from USEPA November 2019

Adjusted RSL uses CR = 10^{-5} rather than 10^{-6}

CR = cancer risk (increase in cancer risk due to exposure to chemical of potential concern)

Residential Tier 1 Target Soil Vapor calculated using the Adjusted RSL x 20 (per MDE guidance), equivalent to $\alpha = 0.05$

Residential Tier 2 Target Soil Vapor calculated using the Adjusted RSL x 100 (per MDE guidance), equivalent to $\alpha = 0.01$

Non-carcinogens are expressed with hazard index (HI) = 1.0

NE = RSL not established



Table 3
PCBs Wipe Analysis Summary

Sample Location	GTA-W-1	GTA-W-2	GTA-W-3	GTA-W-4	Comparison Values
Depth (feet)	0-1	1-2	1-2	0-1	USEPA Cleanup Levels
Polychlorinated Biphenyls (PCBs)					
PCB-1016	<5.0	<5.0	<5.0	<5.0	10
PCB-1221	<5.0	<5.0	<5.0	<5.0	10
PCB-1232	<5.0	<5.0	<5.0	<5.0	10
PCB-1242	<5.0	<5.0	<5.0	<5.0	10
PCB-1248	<5.0	<5.0	<5.0	<5.0	10
PCB-1254	<5.0	<5.0	<5.0	<5.0	10
PCB-1260	<5.0	<5.0	<5.0	<5.0	10

Notes:

This table is only to be used in conjunction with the report for which it was prepared. See the report text for background information, assumptions, limitations, etc.

Samples collected on April 2, 2020

Results in micrograms per 100 cm² (µg/100 cm²)

USEPA = United States Environmental Protection Agency

Shaded and bold values represent exceedance of USEPA Cleanup Level





APPENDIX A
VCP Acceptance Letter



Maryland

Department of the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor

Ben Crumbles, Secretary
Horacio Tablada, Deputy Secretary

August 7, 2020

ELECTRONIC DELIVERY

Mr. George Watson
LRP Guardian House, LLC
6 East Eager Street
Baltimore, Maryland 21202

Re: Voluntary Cleanup Program Application
LRP Guardian House, LLC Property
17, 19, and 23 South Gay Street
Baltimore, Maryland 21202
BMI: MD1990

Dear Mr. Watson:

The Voluntary Cleanup Program (“VCP”) of the Maryland Department of the Environment (“Department”) has completed its evaluation of the VCP application package submitted for the LRP Guardian House, LLC Property (the “Property”) located at 17, 19, and 23 South Gay Street in Baltimore, Maryland. The Department accepts the 0.38-acre Property for participation in the VCP and confirms the inculpable person status of LRP Guardian House, LLC for this property pursuant to Title 7, Subtitle 5 of the Environment Article, Annotated Code of Maryland. The Property is approved for participation in the VCP for future Restricted Tier 1 Residential purposes.

Since the property does not qualify for a No Further Requirements Determination, a proposed response action plan (“RAP”) must be developed, approved by the Department, and implemented to address risks to human health and the environment resulting from: (1) the presence of volatile organic compounds (“VOCs”) and petroleum constituents in soil and groundwater; (2) the presence of polyaromatic hydrocarbons (“PAHs”) and metals in soil; and (3) the potential presence of metals and additional PAHs in soil beneath the building slab at the Property.

Please note that the proposed RAP submitted to the Department for review must include appropriate soil management and disposal activities for soils excavated for the installation of the subgrade stairwell proposed as part of the redevelopment of the Property, per the VCP’s telephone conversation with Mr. Shepard Winckler of Geo-Technology Associates, Inc. (“GTA”) on July 16, 2020.

Submission of the proposed RAP and implementation of all statutory requirements must occur within 18 months of receipt of this letter. The guidelines for preparation of the proposed RAP can be found on the Department’s website and the statutory requirements can be found in Section 7-508 of the Environment Article. Simultaneously with submission of the proposed RAP to the

Mr. George Watson

Page 2

Department for review and approval, you must comply with the public participation requirements by posting a sign at the property and publishing a notice in a daily or weekly newspaper of general circulation in the geographic area where the participating property is located. Both notices for the proposed RAP must include the date and location of the public informational meeting.

You are requested to forward a draft of the sign and newspaper notice for the proposed RAP to the VCP for review and approval prior to publication and posting at the property. Please contact Joel Knauff, the project manager, to discuss development of the proposed RAP and the exact date for submitting the proposed RAP to the Department for review and approval.

Upon satisfactory implementation and completion of the requirements set forth in the approved RAP and any subsequent addendums, the Department will issue a Certificate of Completion for the property which must be recorded in the land records of the City of Baltimore within 30 days following receipt.

In accordance with the provisions of Section 7-506(g)(1) of the Environment Article, you are requested to inform the Department in writing, within 30 days of receipt of this letter, whether LRP Guardian House, LLC intends to proceed as a participant in the VCP. If the Department does not receive the notice of intent to proceed within the 30-day period, the application for participation in the VCP shall be deemed withdrawn pursuant to Section 7-506(g)(2) of the Environment Article.

If you have any questions regarding the requirements, development of the proposed RAP or other aspects of the program, please contact Mr. Joel Knauff via email at joel.knauff@maryland.gov or telephone voicemail at (410) 537-3463. Likewise, I can be reached via email at barbara.brown1@maryland.gov or telephone voicemail at (410) 537-3212.

Sincerely,

Barbara Brown

Barbara Brown, Section Head
Voluntary Cleanup Program

cc: Mr. Shepard Winckler, GTA
Dr. Letitia Dzirasa, Baltimore City Commissioner of Health
Mr. Joel Knauff, Project Geologist, Voluntary Cleanup Program



APPENDIX B
Written Agreement

WRITTEN AGREEMENT

"If the RAP is approved by the MDE, the participant agrees, subject to the withdrawal provisions of Section 7-512 of the Environment Article, to comply with the provisions of the response action plan. Participant understands that if he fails to implement and complete the requirements of the approved plan and schedule, the Maryland Department of the Environment may reach an agreement with the participants to revise the schedule of completion in the approved response action plan or, if an agreement cannot be reached, the Department may withdraw approval of the plan."



LRP Guardian House LLC
George Watson
Authorized Member

September 8, 2020

Date



APPENDIX C
Cap Inspection Form

CAP INSPECTION FORM

Location:	Date/Time:
Inspector:	Weather:

PAVEMENT

Overall Condition	
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Specific Areas of Note (use PCI, below, and attach sketches/ photographs, as needed)

Area	PCI	Comments

Pavement Condition Index (PCI)

Response?	PCI	Characterization	Description
Optional	1	New, crack-free surface	Black in color, smooth texture
	2	Oxidation has started	Short hairline cracks start to develop. Dark gray color.
	3	Oxidation in advanced state	Hairline cracks are longer and wider. Gray in color.
Required	4	Oxidation complete	Crack area 1/4" wide and crack lines have found base faults.
	5	Moisture penetrating through 1/4" cracks. Loose material (stone and sand) evident.	Texture of surface becoming rough. Preventive maintenance.
	6	Cracks widen and join.	Cracks and shrinkage evident at curb and gutter lines.
	7	Potholes develop in low spots.	Gatoring areas begin to break up. Overall texture very rough.
	8	Potholes developing.	Pavement breaking up.
	9	Heaving due to excessive moisture in base.	Distorts entire surface.
	10	General breakup of surface.	

SIDEWALKS/CURBS

	Sidewalks	Curbs and Gutters
Overall Condition		
Check all that apply	<input type="checkbox"/> Sound <input type="checkbox"/> Cracked <input type="checkbox"/> Deteriorated <input type="checkbox"/> Root Intrusion	<input type="checkbox"/> Sound <input type="checkbox"/> Cracked <input type="checkbox"/> Deteriorated <input type="checkbox"/> Root Intrusion
Other Comments		

LANDSCAPED AREAS

Overall Condition	
Check all that apply	<input type="checkbox"/> Sound <input type="checkbox"/> Erosion <input type="checkbox"/> Healthy Plant Condition <input type="checkbox"/> Mortality <input type="checkbox"/> Animal Burrows
Trees	<input type="checkbox"/> Healthy <input type="checkbox"/> Poor Health <input type="checkbox"/> Dead <input type="checkbox"/> Fallen <input type="checkbox"/> Other _____
Shrubs	<input type="checkbox"/> Healthy <input type="checkbox"/> Poor Health <input type="checkbox"/> Dead <input type="checkbox"/> Fallen <input type="checkbox"/> Other _____
Vent Risers and Piping at Light Poles	<input type="checkbox"/> Good Condition <input type="checkbox"/> Cracked <input type="checkbox"/> Broken/ Damaged <input type="checkbox"/> Other _____

RESPONSE ACTIONS

Responses Required	
Work Completed (Description, Date, Contractor, etc.)	
List Attached Photographs/Sketches	



APPENDIX D
Zoning Certification

CERTIFIED STATEMENT RE: COUNTY AND MUNICIPAL ZONING REQUIREMENTS

"The participant hereby certifies that the property meets all applicable county and municipal zoning requirements.

The participant acknowledges that there are significant penalties for falsifying any information required by MDE under Title 7, Subtitle 5 of the Environmental Article, Annotated Code of Maryland, and that this certification is required to be included in a response action plan for the Voluntary Cleanup Program pursuant to Title 7, Subtitle 5 of the Environmental Article, Annotated Code of Maryland."



LRP Guardian House LLC
George Watson
Authorized Member

September 8, 2020

Date