

Remedial Action Work Plan 719 River Street

RIDEM File No. SR-39-2059

City of Woonsocket
Woonsocket, Rhode Island

February 2023



317 Iron Horse Way
Suite 204
Providence, RI 02908



FUSS & O'NEILL

February 15, 2023

Ms. Rachel Simpson
Senior Environmental Scientist
Rhode Island Department of Environmental Management
Office of Land Revitalization & Sustainable Materials Management
235 Promenade Street
Providence, RI 02908-5767

RE: Remedial Action Work Plan
Plat 8 Lots 5, 35, 37 and 58
719 River Street, Woonsocket, Rhode Island
RIDEM File No. SR-39-2059

Dear Ms. Simpson:

The purpose of this letter is to present the enclosed Remedial Action Work Plan (RAWP) for the above-referenced site. Fuss & O'Neill, Inc. (Fuss & O'Neill) prepared this RAWP on behalf of the Rhode Island Department of Environmental Management and in conjunction with the City of Woonsocket. A check for the Remedial Action Approval Application Fee of \$1,000 is being provided by the City of Woonsocket under separate cover.

Please contact us if you require any additional information or if you have any questions regarding this RAWP.

Sincerely,

Christopher J. Flannery, EIT
Environmental Engineer

Patrick J. Dowling, CPG
Associate | Department Manager

/rlz

Attachments: Remedial Action Work Plan

c: Mr. Michael Debrosse, City of Woonsocket

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1 Introduction

The purpose of this document is to provide a Remedial Action Work Plan (RAWP) in accordance with *Section 1.10* of the Rhode Island Department of Environmental Management (RIDEM) *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations; 250-RICR-140-30-1)*. This RAWP, prepared by Fuss & O'Neill, Inc. (Fuss & O'Neill) on behalf of RIDEM and in conjunction with the City of Woonsocket (City), details remedial actions that are planned for 719 River Street, Woonsocket, Rhode Island (hereafter, the “Site” or “subject site”) to mitigate risk posed to future Site users and environmental receptors by environmental media containing volatile organic compounds (VOC), total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAH), and metals.

2 Background

2.1 Site Property Description

The “Site” or “subject site,” defined herein as 719 River Street, consists of a 5.021-acre assemblage of parcels located at Assessor’s Plat 8, Lots 5, 35, 37 and 58, Woonsocket, Rhode Island. Lot 37 was formerly improved with a two-story, approximately 88,059 square-foot mill building (Building 1). During 2022, a majority of the Building 1 was razed, with the exception of a historical brick section of the building located at the southeastern most portion of the Site. Lot 5 was formerly improved with a one-story, approximately 3,025 square-foot industrial building (Building 2). Building 2 was also razed during 2022. Lots 58 and 35 are undeveloped and consist of vegetation and paved areas. Copies of the property description cards available at the City Tax Assessor's office are attached as *Appendix A*. A map consisting of a portion of a United States Geological Survey (USGS) topographic map showing the Site location is provided as *Figure 1*, and a Site plan is provided as *Figure 2*.

The property was abandoned by the last owner of record, which according to City records, was Dorado Properties, LLC since 1995. However, in 2017, the City of Woonsocket, as the primary creditor of the property, petitioned the RI Superior Court to appoint a Special Master for the Site. Since 2017, the Special Master working in conjunction with the City has legally taken control of the property and has been proceeding with the resolution of outstanding legal and physical issues at the Site, with a goal of clean up and beneficial reuse.

2.2 Site History

Historically, the Site has been occupied by several textile mills, an auto repair facility, and a trucking company. Lot 58 was developed with residential buildings until approximately 1981. Sanborn maps, reviewed as part of an October 2019 *Phase I Environmental Site Assessment (ESA)*, indicated an auto repair facility with a 150-gallon buried tank was located in the southeast portion of the Site and several additional USTs were formerly on the Site. Based on historical aerial photographs between the years of 1919 and 1943 as well as 1954 and 1964, several historical buildings at the Site were razed, the Blackstone River was re-routed, and Lot 35 was filled.

According to the October 2019 *Phase I ESA*, the former Building 2 was heated by coal or wood and the former Building 1 was heated by natural gas.

2.3 Foreseeable Future Use

We understand that the City intends to initiate remediation activities so that the Site can be redeveloped and returned to productive use. The City plans to use the development of the Site as a catalyst to help modernize and increase the aesthetic value of the River Street corridor, which is a linear strip of industrial factories, mills, and auto repairs facilities along the Blackstone River. However, a specific redevelopment proposal has not yet been detailed for the property. The redevelopment plan for the Site may consist of converting the remaining portion of Building 1 and surrounding grounds into a mix of potential uses, potentially including residential, commercial, and/or industrial uses. The City of Woonsocket is also considering redeveloping the Site to be used as a commercial grade solar energy facility.

2.4 Previous Investigation Activities

2.4.1 October 2019 Phase I ESA

A *Phase I ESA* was conducted for the Site in October 2019 by BETA as part of a Target Brownfield Assessment funded by RIDEM. The *Phase I ESA* identified the following Recognized Environmental Conditions (RECs) associated with the Site:

- **REC #1: Historic Use:** The Site was historically used by textile mills, an auto repair facility, and a trucking operation. The database search listed one of the former textile mills as a generator of hazardous waste.
- **REC #2: Vehicles and Trucks:** Suspected oil and/or hazardous materials (OHM) staining was observed near and under many vehicles and trucks located in the northern, western, and central portions of the Site. The vehicles and trucks were located on paved and unpaved areas.
- **REC #3: Underground Storage Tanks (USTs):** Historic records reviewed as part of the Phase I ESA identified at least two USTs and potentially an additional five USTs that exist at the Site.
- **REC #4: Solid Waste/Debris/Fill:** Solid waste and debris was observed at the Site during the *Phase I ESA*, along with evidence of fill.

Based on the RECs identified in the *Phase I ESA*, Fuss & O'Neill, on behalf of the City, conducted a *Phase II Environmental Site Assessment/Site Investigation* at the Site as part of the City's Community Wide Brownfield Assessment Grant from the United States Environmental Protection Agency (USEPA). The results of this assessment were documented in a *Site Investigation Report (SIR)* in November 2021.

The *Phase II ESA/Site Investigation* included the advancement of seventeen soil borings and the installation of six monitoring wells. Sixteen soil samples were collected and analyzed for volatile organic

compounds (VOC), polycyclic aromatic hydrocarbons (PAH), priority pollutant 13 metals, total petroleum hydrocarbons (TPH) and polychlorinated biphenyls (PCBs). Six groundwater samples were collected and analyzed for VOC. In August 2021, Fuss & O'Neill conducted the advancement of ten additional soil borings to gain further understanding of the lateral extent of a confirmed petroleum release in the area north of the mill building. Sampling locations are depicted in *Figure 2*.

2.4.2 November 2021 Site Investigation Report

In November 2021, Fuss & O'Neill completed a *Site Investigation Report (SIR)* for the Site. Fuss & O'Neill identified arsenic, lead, PAH and TPH in soil at the Site, which were attributable to the presence of urban fill materials consisting of soil containing traces of brick, concrete, asphalt, coal, and ash that was historically deposited throughout the Site at depths of up to approximately 10 to 20 feet below grade.

In addition to the Site-wide fill conditions, a release of petroleum was identified in the area north of the former Building 1. Soil containing TPH above the GB-LC was identified in samples collected from above the groundwater table in the area adjacent to Building 1, as depicted in *Figure 2*. During drilling activities, petroleum contaminated soil and groundwater was observed from approximately 5 to 20 fbg in soil borings SB-5, SB-7, MW-8, SB-17, SB-18, SB- 20, SB-23, SB-25, and SB-27. Additionally, 4.5 feet of non-aqueous phase liquid (NAPL) was observed in MW-8. The investigation indicated that two large USTs were identified directly north of the mill building within the observed plume of petroleum in the subsurface.

An approximation of the delineation of the observed subsurface petroleum, which was consistent in appearance and texture to No. 6 fuel oil, was presented in the *SIR* and is shown in *Figure 2*. The extent to which the petroleum extends beneath Building 1 has not been confirmed at this time.

No VOC were detected in groundwater samples collected from the Site at concentrations exceeding the RIDEM Method 1 GB-GO. Free-phase petroleum was only identified in MW-8, which is located downgradient of the two suspected UST's and within the delineation plume.

The investigation included a ground-penetrating radar (GPR) survey of the Site to identify buried structures, primarily targeted at identifying the presence of underground storage tanks (USTs). The GPR survey indicated five potential USTs exist at the Site. For the most part, the actual volume of the USTs is unknown. However, approximate volumes of the USTs were estimated based on the approximate dimensions of the subsurface anomalies identified at each location by the GPR survey, which therefore may be overestimated. The results of the GPR survey are summarized below:

- **Two potential USTs located north of Former Building 1:** Evidence of an approximately 20,000-to-30,000-gallon UST and an approximately 10,000 to 12,000-gallon UST was observed north of the former footprint of Building 1. In addition, fill ports, vent pipes, and an access hatch were observed at the ground surface within the boundary of the anomalies.
- **Potential UST located south of Former Building 1:** Evidence of an approximately 150-to-300-gallon UST was observed south of the former footprint of Building 1 in the vicinity of a

former auto repair facility. According to the 1950 to 1970 Sanborn mapping, a 150-gallon tank was identified at this location.

- **Potential UST located north of Former Building 2:** Evidence of an approximately 1,000 to 1,500-gallon UST was observed north of the former footprint of Building 2. According to the 1950 to 1970 Sanborn mapping, a gasoline tank was identified north of Building 2.
- **Potential UST located on Lot 5:** Evidence of an approximately 4,000-to-5,000-gallon UST was located in the southern portion of Lot 5 within a concrete foundation. Based on historic aerials and Sanborn mapping, the UST was located within a former auto garage.

2.4.3 September 2022 Corrective Action Plan

Five USTs used to store petroleum products are anticipated to exist at the site. A significant area of petroleum impacted soil has been observed to the north of the former Building 1 and presumed to correlate with a release from one or both of the USTs located in the center of the release area. To address the presence of these USTs and the petroleum impacted areas, a *Corrective Action Plan (CAP)* was prepared and submitted to RIDEM on September 30, 2022. The overall proposed petroleum remediation approach, as detailed in the *CAP* consists of the following activities:

- Conduct a Limited Design Investigation (LDI) to complete the delineation of the southern extent of the petroleum release in the area that was previously inaccessible due to the presence of former Building 1.
- Conduct UST closures through removal and off-site disposal.
- Conduct petroleum remediation consisting of excavation of soil and on-site treatment and reuse via soil solidification and stabilization methods.

2.5 Conceptual Site Remedy

The preferred conceptual remedial approach for the Site was documented in the November 2021 *SIR* and in the September 2022 *CAP* by Fuss & O'Neill. On January 13, 2022, RIDEM issued a *Remedial Decision Letter*, which signified that the Site Investigation has been completed, identified the preferred remedial alternative and authorized the development of a *RAWP*.

The remedial approach outlined by Fuss & O'Neill is exhibited in two separate phases of remediation, as detailed in the 2022 *CAP* and the *RAWP* documented herein. The activities described in the 2022 *CAP* will be implemented first to address the USTs and petroleum contamination at the Site. Then, the additional remedial actions documented in this *RAWP* will be conducted concurrently with the permanent redevelopment of the site once a redevelopment plan is confirmed.

As defined in the September 2022 *CAP*:

- UST closure and remediation of petroleum impacted soil will be conducted at the Site in the form of on-Site soil stabilization and reuse of petroleum impacted soil identified proximal to the location of two (2) UST, north of Building 1.

As defined in the *RAWP*:

- Supplemental soil remediation will be conducted at the Site via encapsulation of residual Site soils and urban fill by a RIDEM approved engineered control consisting of a minimum of two (2) feet of clean fill or an equivalent level of protection, i.e. building foundations, one (1) foot of clean fill over a geotextile fabric in landscaped areas, six (6) inches of crushed stone over a geotextile fabric in enclosed areas improved by solar installations, and/or four (4) inches of hardscape (asphalt or concrete) over six (6) inches of clean fill.
- An Environmental Land Usage Restriction (ELUR) shall be recorded for the entire property (Plat Map 8 / Lots 5, 35, 37, and 58). The ELUR shall require the performance of annual inspections to document the status of the ELUR and the condition of the engineered controls. The ELUR shall also include a RIDEM approved post-remediation Soil Management Plan (SMP) which will address any future activities that may disturb on-Site soils. The ELUR shall be recorded for the entire property in the Land Evidence Records for the City of Woonsocket, and a recorded copy forwarded back to the RIDEM within fifteen (15) days of recording.

This remedial strategy is compatible with the redevelopment of the Site as a potential mixed use residential, commercial, or industrial property.

3 Remedial Action Work Plan

Fuss & O'Neill prepared this *RAWP* to address the requirements of *Section 1.10* of the *Remediation Regulations*. To facilitate RIDEM review of the *RAWP*, each of the following sections addresses a specific section of the *Remediation Regulations*, noting the relevant section in parentheses, where applicable.

3.1 Site-Wide Soil Management and Remediation Oversight Practices

Construction, remediation, and associated Site-preparation activities to be implemented at the Site that require disturbance or handling of existing soil will be conducted in accordance with the soil management protocols documented herein as well as other applicable federal, state, and local regulations. These activities will be performed using typical earth-moving equipment, including backhoes, excavators, and dump trucks. Care will be taken to minimize vehicles and equipment entering the excavation area to reduce tracking of material and the need for decontamination. Construction equipment will be decontaminated as necessary prior to removal from the Site.

Throughout the course of Site construction and remediation activities, best management practices will be implemented at all times to control and minimize the potential for the migration of existing soil through surface run-off or airborne dust. These steps will include wetting existing soil as warranted during soil disturbance activities and construction of erosion and sedimentation control barriers. These controls will be removed from the Site upon completion of the proposed remediation project and/or permanent stabilization of disturbed areas.

Soil stockpiles will be placed on and covered with polyethylene/plastic sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against stormwater and/or wind erosion (e.g., hay bales, silt fencing, rocks, etc.). Excavated soil will be staged and temporarily stored in designated areas of the Site. Stockpiles of on-Site soil will be segregated into separate piles (or cells or containers) that are either designated for off-Site disposal or, where appropriate, intermediate grading material that will be placed beneath the soil cap. Soil designated for off-Site disposal is to remain on-Site for analytical testing in order to determine the appropriate disposal and/or management options. Soil designated for off-Site disposal will be done so at a licensed facility in accordance with all local, state, and federal laws.

An Environmental Professional will be notified prior to the commencement of soil disturbance activities at the Site. If soil that is visibly impacted or suspected to be impacted by releases of oil and/or hazardous materials (OHM) is discovered during construction activities, the Environmental Professional will be notified prior to disturbance of such soil.

The Environmental Professional will conduct routine inspections during the course of Site remediation activities to ensure that the remedy is being implemented in accordance with the *RAWP*. Once remediation commences and throughout the duration of remediation activities, monthly status reports will be submitted to RIDEM via e-mail summarizing the progress of remediation.

3.2 Proposed Remedy (Section 1.10.3)

There is currently no confirmed redevelopment plan for the subject Site. However, it is known that the City of Woonsocket is looking to convert the remaining portion of Building 1 and surrounding grounds into a mix of potential uses, including residential, commercial, and/or industrial uses. The City of Woonsocket is also considering redeveloping the Site to be used as a solar array. Vegetated buffers may be required to comply with applicable local and state environmental and wetland regulations and zoning codes and will be installed where necessary.

The proposed remedy for the Site includes limited soil excavation and off-Site disposal and the construction of a Site-wide remediation soil cap consisting of a combination of landscaped and hardscaped areas. Excavation activities will be limited to excavation and grading activities necessary to facilitate the shaping, grading, and thickness requirements of the remediation cap. The remediation cap will be constructed in accordance with typical RIDEM requirements, and the details included in *Appendix B*. There are no confirmed redevelopment or construction plans for the Site at this time. Environmental capping extents are depicted in *Figure 3* and will take place as development occurs for the

property. When available, any redevelopment or construction plans for the Site will be forwarded to RIDEM.

A potential wetland area is mapped on the subject Site as depicted in *Figure 2*. This potential wetland area is depicted on the RIDEM Environmental Resource Mapper as a combination of Marsh/Wet Meadow and Scrub-Shrub Swamp. However, this subject area of the site has historically been significantly altered and cleared in the past, and it is unclear whether the areas in question are jurisdictional wetlands. Inspection, delineation, flagging and survey of the potential wetland area will need to be conducted by a wetland biologist to confirm the presence of jurisdictional wetlands, determine the extents of the wetland boundaries and the associated buffer zones, and determine the function and value of any wetland areas on Site.. The construction of any site-wide capping that takes place within a designated wetland area or buffer zone will be conducted in accordance with the RIDEM *Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act (Remediation Regulations; 250-RICR-150-15-3)*. Based upon the outcome of the evaluation of the potential wetland area, an alternative strategy for management of regulated soil within the wetland, potentially including maintaining the wetland in its current configuration in conjunction with the implementation of access restrictions, may be warranted. Feedback from RIDEM Water Resources regulators may be necessary to make this determination.

Changes may be incorporated that may alter the configuration of the engineered barrier based on the future redevelopment plans for the Site. However, the overall objective of an engineered Site-wide soil cap, as discussed herein, will remain. The final capping configuration will be provided to RIDEM in a Remedial Action Closure Report (RACR) at the completion of the project.

An integral part of the remediation strategy will be the implementation of an ELUR with an associated Post-Remediation SMP for the entire Site. The implementation of an ELUR will require that future uses of the Site be compatible with the soil cap and will require regular inspection and maintenance of the integrity of the remediation cap. Procedures to be followed subsequent to the completion of construction activities at the Site will be documented in the Post-Remediation SMP. Drafts of the ELUR and Post-Remediation SMP are included in *Appendix C and D* respectively and will also be submitted for RIDEM review at the completion of the remedial activities documented herein.

3.3 Remedial Objectives (Section 1.10.2)

3.3.1 Groundwater Objectives

Identification of free-phase petroleum product in monitoring wells was identified in groundwater samples collected from the Site. Active remediation of groundwater beneath the Site is not part of the remedy detailed herein, but was included as part of the remedial approach defined in the *CAP*. The implementation of an ELUR for the Site will include the prohibition of the use of groundwater as a potable water source.

3.3.2 Surface Water and Sediment Objectives

Surface waters are not located on the Site. Therefore, no surface water or sediment remediation is planned for the project. During Site redevelopment, erosion controls (e.g., straw wattles) and dust mitigation measures (e.g., stockpile management and surface wetting) will be employed to limit the potential for contaminants entrained in on-Site soil to migrate to the adjacent Blackstone River via windborne or waterborne erosion.

3.3.3 Soil Objectives

The overall remedial objective for soil at the Site includes excavation, soil recycling and on-Site reuse, as well as removal and off-Site disposal of the soil containing OHM that is necessary to construct the proposed redevelopment. The soil recycling and on-Site reuse remedial approach is further documented in the *CAP*. The redevelopment will subsequently include a Site-wide remediation cap that will mitigate the potential for direct exposure to remaining underlying soil containing OHM at concentrations exceeding the RIDEM Residential Direct Exposure Criteria (R-DEC) and/or Industrial/Commercial Direct Exposure Criteria (I/C-DEC). The implementation of an ELUR and associated Post-Remediation SMP will also restrict access to soil, will prohibit the use of groundwater, and will require regular inspection and maintenance of the integrity of the remediation cap. Capping materials will comply with the RIDEM R-DEC or otherwise be classified as Clean Soil as defined herein.

3.3.4 Air Objectives

The remedial activities planned at the Site will not involve discharges of vapors into ambient air. Dust management activities, including soil stockpile and debris management practices and surface wetting, will be employed to minimize the formation of airborne dust containing OHM.

3.4 Remediation of Impacted Groundwater (Section 1.10.4)

Active remediation of groundwater beneath the Site was not included as part of the remedial approach defined herein. The petroleum remediation approach for the subject Site is addressed in the *CAP*.

3.5 Limited Design Investigation (Section 1.10.05)

No additional design investigations have been conducted to date beyond those documented in the reports discussed in *Section 2.4* above. However, a Limited Design Investigation will be implemented prior to the start of remedial activities as part of the petroleum remediation further detailed in *Section 1.3* of the *CAP*.

3.6 Points of Compliance and Compliance Determination (Sections 1.10.6 and 1.10.18)

3.6.1 Capping Extents

Overall, soil excavation activities will be limited to select removal of soil and grading activities necessary to facilitate the proposed Site improvements and installation of the Site-wide cap. Depending on conclusions drawn about by the wetland biologist, capping within wetland boundaries and buffer zones will follow RIDEM rules and regulations discussed above in *Section 3.2*. Capping extents are to be within the property boundary shown in *Figure 2*.

During construction of the cap, an Environmental Professional will perform routine inspections of capping activities to confirm and document that the cap is installed in accordance with the specifications described herein. These inspections will include confirmation of the appropriate extents and thicknesses of the overall cap. The results of these inspections will be provided to RIDEM in monthly status reports submitted via e-mail and in the *RACR* at the end of the project.

3.6.2 Clean Soil

One of the remedial objectives is to mitigate the potential for direct exposure to soil containing OHM at concentrations exceeding the RIDEM R-DEC and/or I/C-DEC. To ensure that this remedial objective is met, imported fill materials which are used at the Site must meet the definition of Clean Soil as documented in the RIDEM *Remediation Regulations* or be considered to be categorically Clean Soil in accordance with applicable regulations, as discussed below. For the purposes of this project, Clean Soil is defined as follows:

- Imported fill material that meets the definition of Clean Soil as documented in the RIDEM *Remediation Regulations*, as further discussed below.
- Compost that meets the requirements for Class “A” compost in accordance with RIDEM Solid Waste Regulation No. 8, October 2005. Rule 8.8.03 of this regulation allows for unrestricted use of compost classified as Class “A.”
- New or recycled asphalt, new concrete, waste concrete (un-painted with no steel reinforcing), or stone.
- Any combination of two or more of the materials listed above that, prior to being combined, meets the requirements for Clean Soil, as defined above.

3.6.2.1 Imported Fill Material

To evaluate compliance with the R-DEC/I-DEC, and thus consistency with the Clean Soil definition prior to importation, samples of imported fill material to be used for the construction of the cap and

overlying topsoil will be collected at a minimum frequency of one sample per 2,000 cubic yards to be imported, per source of material. Prior to importation to the Site, each sample will be submitted for laboratory analysis for:

- VOC by USEPA Method 8260/5035
- SVOC by USEPA Method 8270
- Polychlorinated biphenyls (PCBs) by USEPA Method 8082
- Priority Pollutant 13 Metals (PP13 Metals – antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc) by USEPA Method 6010/7471

The analytical results for the imported soil samples will be reviewed by an Environmental Professional to confirm compliance with the RIDEM R-DEC prior to importation. Soil represented by samples that do not comply with RIDEM R-DEC based on laboratory analytical results will be rejected for importation to the Site.

3.7 Design Standards and Technical Specifications (Section 1.10.10)

3.7.1 Remediation Cap Specifications

The remediation cap at the Site will be constructed in accordance with federal, state, and local regulations, the specifications detailed herein and in *Appendix B*. In particular, the specific design standards and technical specifications are discussed below. Compliance with this *RAWP* will be documented in the *RACR* prepared after Site remediation activities are complete.

3.7.2 Remediation Cap Layout

The material to be used to construct the soil cap will vary depending on the area of the Site that the material is being used to cap, as described below. Horizontal extents are depicted in the Site Plan in *Figure 3*.

3.7.3 Remediation Cap Types

These cap types are considered the minimum requirements for capping in accordance with the *Remediation Regulations*.

- **Landscaped Area Cap:** The cap types that will be used at landscaped areas within the Site boundary will consist of either two feet of imported Clean Soil overlying existing soil, or a minimum of 12 inches of imported Clean Soil, overlying geotextile fabric, overlying existing soil.
- **New Hardscape Area Cap:** The cap type that will be constructed at hardscaped areas within the Site boundary will consist of a minimum of four inches of bituminous asphalt or concrete overlying a minimum of six inches of structural sub-base fill meeting the definition of Clean Soil, overlying existing soil. .

- **Existing Asphalt Cap:** Existing asphalt pavement at portions of the Site may remain and not be further modified as part of the redevelopment project. The existing asphalt surface will serve as the cap in those areas. Pavement that is to remain as part of the cap shall be in good condition, and potholes, damage, and significant cracks shall be repaired. Where necessary, pavement repairs will be required and will include actions such as crack sealing, patching, and asphalt resurfacing in order to construct a competent cap. Cracks will be repaired with rubberized sealant and potholes or other irregularities shall be repaired.
- **Existing Concrete Cap:** Concrete foundations of existing buildings to remain in place and other viable concrete slab surfaces within the Site boundary may remain and not be further modified as part of the redevelopment project. The existing concrete slab will serve as the cap in those areas. The concrete that is to remain as part of the cap shall be in good condition, and significant voids and cracks shall be repaired.
- **Crushed Stone and Fabric Cap:** In the event that the Site is to be redeveloped for the use as a commercial solar array, Site capping within fenced restricted access areas may consist of the installation of a minimum of six inches of clean crushed stone overlying a geotextile fabric, overlying existing soil. Alternatively, the Landscape Area Cap outlined above may be employed in these areas.

Clean Soil imported to the Site will be subject to the sampling and approval requirements discussed in *Section 3.6.2*. Remediation cap details of the various cap types to be installed at the Site is provided herein as *Soil Capping Details* in *Appendix B*.

3.7.4 Remediation Cap Construction

Following Site preparation activities discussed below in *Section 3.8*, the ground surface will be flagged to demarcate the locations of the various cap types that will be constructed throughout the Site. While groundwater monitoring is not a part of the remedial approach described in this *RAWP*, specific monitoring wells may be retained for future monitoring activities as required as part of the *CAP* and petroleum remediation process under the jurisdiction of the RIDEM UST Program. The abandonment of any existing monitoring wells not required as part of a post remediation program as detailed in the petroleum *CAP*, will be completed during construction of the cap in accordance with *Section 3.22(H)* of the RIDEM *Groundwater Quality Rules* (250-RICR-150-05-3).

At areas of the Site to be landscaped with a one-foot cap, geotextile fabric will be applied to the prepared ground surface. Imported Clean Soil material will then be applied across the capping area and compacted until the appropriate thickness is achieved. The thickness requirements referenced in the above cap type descriptions will apply to the final compacted cap layers. Asphalt, concrete, or screened loam to support vegetation in landscaped areas will then be added and compacted to complete the cap. Grass, trees, and other plantings will be planted concurrent with or just after construction of the landscaped cap. Coordination with the project landscape architect will be conducted to select plant types and sizes to facilitate planting in a manner which minimizes disturbance of existing soil beneath the cap. Plantings may warrant the removal of portions of the underlying geotextile fabric to accommodate root balls and future root growth.

At areas of the Site to be capped with new hardscape features, the cap will consist of a minimum of four inches of new bituminous asphalt or concrete overlying a minimum of six inches of Clean Soil. Existing areas of impervious pavement that will remain will be resurfaced to extend the effective pavement life and will be milled and overlaid with a new asphalt surface. In these cases, layers of competent pavement beneath the milled surface or the existing gravel base beneath the existing asphalt surface may remain in place if it meets the physical requirements of the pavement installation requirements. Existing concrete and concrete slab to remain as part of the Site-wide cap must be competent and all voids and cracks are to be repaired.

Once the final remediation cap is constructed, existing soil within the Site boundary will be situated beneath the remediation cap. Existing soil determined or inferred to not comply with the RIDEM R-DEC that is not situated beneath the appropriate cap type at the completion of construction will be managed in accordance with the protocols discussed in *Section 3.9*.

3.7.5 Geotextile Fabric

Areas improved with a one-foot landscape cap or solar array cap will require the installation of geotextile fabric to be placed within the cap thickness and beneath imported Clean Soil material. The geotextile fabric will be certified by the manufacturer to meet the puncture strength (i.e., 120 pounds) requirements documented in *Section 1.13* of the RIDEM *Remediation Regulations*. An Environmental Professional will perform routine inspections of capping activities to confirm and document that the cap is installed in accordance with the specifications described herein. These inspections will include confirmation that geotextile fabric is placed throughout the applicable capped areas.

3.8 Set-Up Plan (Section 1.10.11)

Clearing and grubbing within the Site will be conducted at necessary locations. Prior to remedy implementation, appropriate measures will be taken to manage and minimize the potential for migration of hazardous materials through surface run-off or air-borne dust. This will be achieved by the installation of erosion controls, wetting soil, or other appropriate measures, as necessary. Material staging areas, including the locations of stockpiled or containerized contaminated media, will be designated at the Site. These areas will be secured and protected from runoff with appropriate best management practices including use of polyethylene sheeting and perimeter erosion controls, as appropriate.

Existing pavement or concrete may be demolished, pulverized, and screened. Depending on structural requirements, the pulverized existing pavement may be re-used on-Site as structural fill beneath paved surfaces or as general fill beneath other capped surfaces for grading purposes as needed.

3.9 Effluent Disposal (Section 1.10.12)

Existing soil excavated from within the Site that is not secured beneath the appropriate cap type following construction of the full Site redevelopment will be disposed off-Site at an appropriately licensed receiving facility. Any pavement or concrete demolition debris which is not re-used, and other

such materials generated during cap construction will be disposed off-Site at an appropriately licensed facility in accordance with applicable local, state, and federal laws.

The soil slated for off-Site disposal will be stockpiled at a designated staging area. The staging area will be selected and secured to limit unauthorized access to the materials. Soil will be placed on and covered with a minimum of six-mil. polyethylene/plastic sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against stormwater and/or wind erosion (hay bales, silt fencing, rocks, etc.).

The necessary disposal characterization sampling of excavated material will be conducted for the analytical parameters and frequency specified by the selected receiving facility. Soil excavated from the Site and designated for off-Site disposal must be done so at an appropriately licensed disposal facility in accordance with local, state, and federal laws. The transport and disposal of existing soil from the Site is subject to the review and approval of an Environmental Professional to certify compliance with this document and to assure compliance with RIDEM's anti-degradation guidance. Upon receipt of the laboratory analytical results and approval from the Environmental Professional and the disposal facility, soil will be transported off-Site under appropriate waste shipping documentation (i.e., manifest, bill of lading) and disposed in accordance with local, state, and federal regulations as well as the receiving facility's acceptance criteria. Copies of shipping documentation for regulated material removed from the Site will be included in the *RACR*.

3.10 Remediation Schedule (Section 1.10.7)

Installation of engineered controls on the Site will be performed concurrently with other permanent redevelopment activities. Consequently, the schedule of remediation implementation will be contingent upon the overall construction schedule. Although the remediation and construction schedule has not yet been finalized, remediation activities are not anticipated to begin until after the UST removal process and petroleum soil remediation activities detailed in the *CAP* are completed, and the construction of the ultimate final redevelopment of the property commences. Once finalized, the construction schedule will be submitted to RIDEM under separate cover when a schedule has been established for the Site.

3.11 Contractors and Consultants (Section 1.10.8)

The City, or ultimately the developer if the property has changed hands, will retain an Environmental Professional to conduct oversight and documentation of the remediation activities discussed herein. The contractor(s) that will be retained to perform the remediation activities have not been selected to date. RIDEM will be notified of the selected remediation contractor(s) upon selection.

3.12 Remediation Operating Log (Section 1.10.14)

During the course of Site preparation, soil excavation and disposal, and cap construction, the Environmental Professional will conduct routine Site visits to confirm and document that the remediation is conducted in accordance with the specifications described herein. The results of this remediation monitoring will be provided to RIDEM in monthly status reports submitted via e-mail.

Records of Site preparation, remediation, and restoration activities will be maintained in an Operating Log during the course of remedial activities. The Operating Log will document the implementation of the remedial actions and remedial oversight. Additionally, instances of the implementation of the Contingency Plan or Health and Safety Plan, as discussed below, will also be recorded in the Operating Log.

3.13 Contingency Plan and Site Security (Sections 1.10.13 and 1.10.15)

3.13.1 Health and Safety

Contractors and workers performing soil management activities at the remediation Site will be required to comply with Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements in accordance with Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120 and 1926.65, to the extent that those regulations apply to the work they are performing. Procedures for management of contact with soil at the Site will be detailed in Site-specific Health and Safety Plans (*HASPs*), prepared in accordance with OSHA 29 CFR 1910.120 and 1926.65.

Applicable Site-specific information, including the above-mentioned reports and the *RAWP* documented herein, will be made available to contractors performing remedial activities at the Site. These documents will allow the contractors to develop their Site-specific *HASPs*.

3.13.2 Emergency Response

The remedial actions proposed for the Site are not expected to result in the collection and storage of liquid hazardous materials which could result in a sudden release incident at the Site. However, in order to address potential unforeseen environmental incidents during construction, emergency response planning was conducted.

The primary contingency plan manager at the Site will be Mr. Michael Debrousse, the City of Woonsocket Director of Planning and Development. Mr. Debrousse will act as the primary contact for any emergencies or unexpected incidents encountered during remediation implementation. Any unexpected incidents will be managed both to protect the health and safety of on-Site workers as well as the general public. Furthermore, unexpected incidents will be managed in accordance with applicable

local, state, and federal regulations. Fuss & O'Neill will assist Mr. Debroisse as necessary in the evaluation of unexpected incidents and associated response actions relative to potentially applicable regulations. The contact information for Mr. Debroisse and the local emergency services includes the following:

Mr. Michael Debroisse: 401-767-9213
Woonsocket Police Department: 401-766-1212 or 911
Woonsocket Fire Department: 401-765-2500 or 911

3.13.3 Security Measures and Equipment Management

During remediation activities, the Site will be left in a secure and stable condition following each workday. Temporary or permanent fencing and signage will be utilized to restrict unauthorized access to the construction zone during remedial activities.

Heavy equipment utilized for excavation will remain on-Site during the course of remediation activities. However, heavy equipment that has become contaminated due to remedial activities will be decontaminated within the limits of the remediation area to the extent feasible, prior to removal from the Site. Equipment decontamination procedures will be specified in the *HASP* developed by the remedial contractors and will generally consist of cleaning contaminated equipment to remove adhered soil or sediment. If decontamination of equipment must be conducted outside of the specific area of on-going remediation, the decontamination will be conducted on an impermeable liner, and the rinse water will be collected. The rinse water will be containerized, characterized, and disposed off-Site at an appropriately licensed receiving facility within 90 days of the decontamination activities.

3.14 Shut-Down, Closure, and Post-Closure Requirements (Section 1.10.16)

Upon completion of remedial activities described above and establishment of vegetation in landscaped areas, heavy machinery and other equipment will be removed from the Site. Erosion control barriers will be left on-Site until stabilization of the Site is deemed complete by the Environmental Professional. Once stabilization is considered complete, the erosion control measures will be removed from the Site.

The Environmental Professional will submit a *RACR* to RIDEM certifying that the remediation was completed in accordance with the specifications and requirements detailed herein. The *RACR* will include description of excavation and off-Site disposal, a depiction of the final restoration limits, and analytical data for imported Clean Soil samples. If necessary, substantial variances from this *RAWP* that occurred during remedial implementation will be documented in the *RACR*.

3.15 Institutional Controls (Section 1.10.17)

Upon completion of remedial activities and submission of the *RACR* to RIDEM, a RIDEM-approved ELUR will be recorded on the deed to the Site property. The primary objective of the ELUR will be to restrict certain activities at the Site and to ensure that the engineered controls are maintained and remain compliant with RIDEM requirements.

Requirements for annual inspections and reporting will also be specified in the ELUR. These measures will record the condition of the cap and outline necessary repairs. These measures will also ensure that other terms of the ELUR, such as prohibition of the use of groundwater beneath the Site as potable water, are adhered to. Documentation of the inspections will be submitted to RIDEM on an annual basis, in accordance with the requirements of the ELUR.

Disturbances of the remediation cap and underlying soil conducted after cap construction must be conducted in accordance with the Post-Remediation SMP, which will be attached to the ELUR. The Post-Construction SMP will define the procedures necessary for management of the remediation cap and identifies the steps required if disturbance of the cap or existing soil beneath the cap is necessary in the future. The requirements of the Post-Remediation SMP will also limit the potential for direct exposure to soil containing contaminants at concentrations exceeding the R-DEC by regulating future excavation and soil disturbance activities.

Draft versions of the ELUR and Post-Remediation SMP are provided in *Appendix C and D*, respectively. Upon project completion, revised drafts will be prepared and submitted to RIDEM for review and approval, prior to filing.

4 Certifications (Section 1.10.19)

I hereby certify the accuracy of the information contained in the above referenced report to the best of my knowledge.

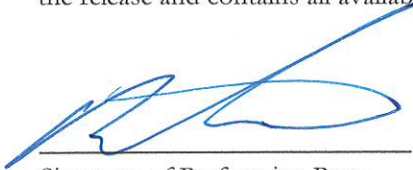


Signature of Consultant
Patrick Dowling, CPG
Fuss & O'Neill, Inc.

Associate
Title

2/17/2023
Date

I hereby certify that the report is a complete and accurate representation of the contaminated site and the release and contains all available facts surrounding the release to the best of my knowledge.



Signature of Performing Party
City of Woonsocket

Director of Planning
Title
& Development

3/23/23
Date

5 Limitations of Work Product

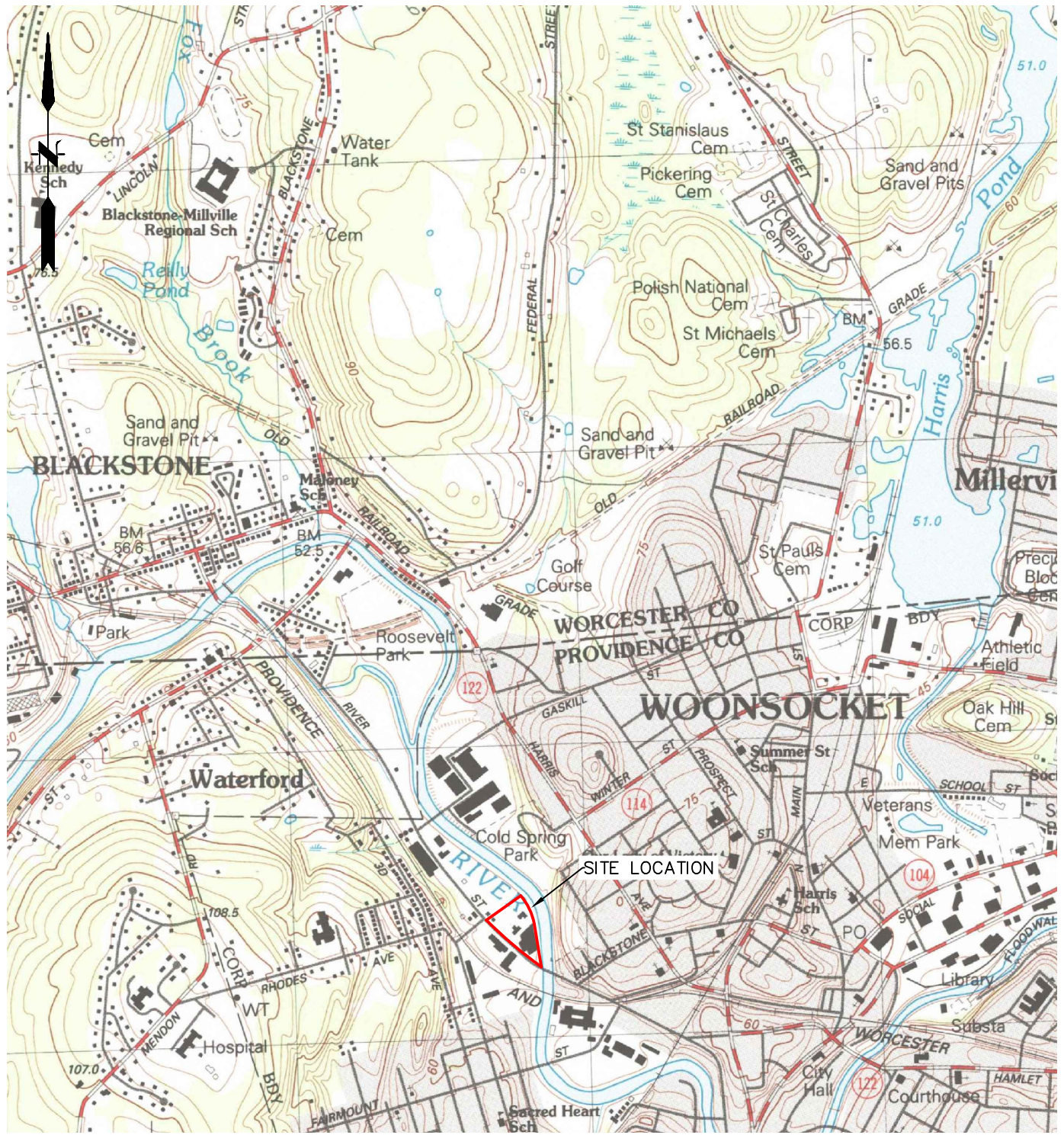
This document was prepared for the sole use of the Rhode Island Department of Environmental Management, the only intended beneficiaries of our work. Those who may use or rely upon the report and the services (hereafter “work product”) performed by Fuss & O’Neill, Inc. and/or its subsidiaries or independent professional associates, subconsultants and subcontractors (collectively the “Consultant”) expressly accept the work product upon the following specific conditions.

1. Consultant represents that it prepared the work product in accordance with the professional and industry standards prevailing at the time such services were rendered.
2. The work product may contain information that is time sensitive. The work product was prepared by the Consultant subject to the particular scope limitations, budgetary and time constraints and business objectives of the Client which are detailed therein or in the contract between Consultant and Client. Changes in use, tenants, work practices, storage, Federal, state, or local laws, rules or regulations may affect the work product.
3. The observations described and upon which the work product was based were made under the conditions stated therein. Any conclusions presented in the work product were based solely upon the services described therein, and not on scientific or engineering tasks or procedures beyond the scope of described services.
4. In preparing its work product, Consultant may have relied on certain information provided by state and local officials and information and representations made by other parties referenced therein, and on information contained in the files of state and/or local agencies made available at the time of the project. To the extent that such files which may affect the conclusions of the work product are missing, incomplete, inaccurate or not provided, Consultant is not responsible. Although there may have been some degree of overlap in the information provided by these various sources, Consultant did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this project. Consultant assumes no responsibility or liability to discover or determine any defects in such information which could result in failure to identify contamination or other defects in, at or near the Site. Unless specifically stated in the work product, Consultant assumes no responsibility or liability for the accuracy of drawings and reports obtained, received or reviewed.
5. If the purpose of this project was to assess the physical characteristics of the subject Site with respect to the presence in the environment of hazardous substances, waste or petroleum and chemical products and wastes as defined in the work product, unless otherwise noted, no specific attempt was made to check the compliance of present or past owners or operators of the subject Site with Federal, state, or local laws and regulations, environmental or otherwise.
6. If water level readings have been made, these observations were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in water levels may occur due to variations in rainfall, passage of time and other factors and such fluctuations may affect the conclusions and recommendations presented herein.

7. Except as noted in the work product, no quantitative laboratory testing was performed as part of the project. Where such analyses have been conducted by an outside laboratory, Consultant has relied upon the data provided and, unless otherwise described in the work product, has not conducted an independent evaluation of the reliability of these tests.
8. If the conclusions and recommendations contained in the work product are based, in part, upon various types of chemical data, then the conclusions and recommendations are contingent upon the validity of such data. This data (if obtained) has been reviewed and interpretations made by the Consultant. If indicated in the work product, some of these data may be preliminary or screening-level data and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time and other factors.
9. Chemical analyses may have been performed for specific parameters during the course of this project, as described in the work product. However, it should be noted that additional chemical constituents not included in the analyses conducted for the project may be present in soil, groundwater, surface water, sediments or building materials at the subject Site.
10. Ownership and property interests of all documents, including reports, electronic media, drawings and specifications, prepared or furnished by Consultant pursuant to this project are subject to the terms and conditions specified in the contract between the Consultant and Client, whether or not the project is completed.
11. Unless otherwise specifically noted in the work product or a requirement of the contract between the Consultant and Client, any reuse, modification or disbursement of documents to third parties will be at the sole risk of the third party and without liability or legal exposure to Consultant.
12. In the event that any questions arise with respect to the scope or meaning of Consultant's work product, immediately contact Consultant for clarification, explanation or to update the work product. In addition, Consultant has the right to verify, at the party's expense, the accuracy of the information contained in the work product, as deemed necessary by Consultant, based upon the passage of time or other material change in conditions since conducting the work.
13. Any use of or reliance on the work product shall constitute acceptance of the terms hereof.

Figures

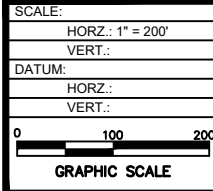
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 LAYER STATE:



MAP REFERENCES AND NOTES

THIS MAP WAS PREPARED FROM THE FOLLOWING 7.5 x 15 MINUTE USGS TOPOGRAPHIC QUADRANGLES: UXBRIDGE MASSACHUSETTS

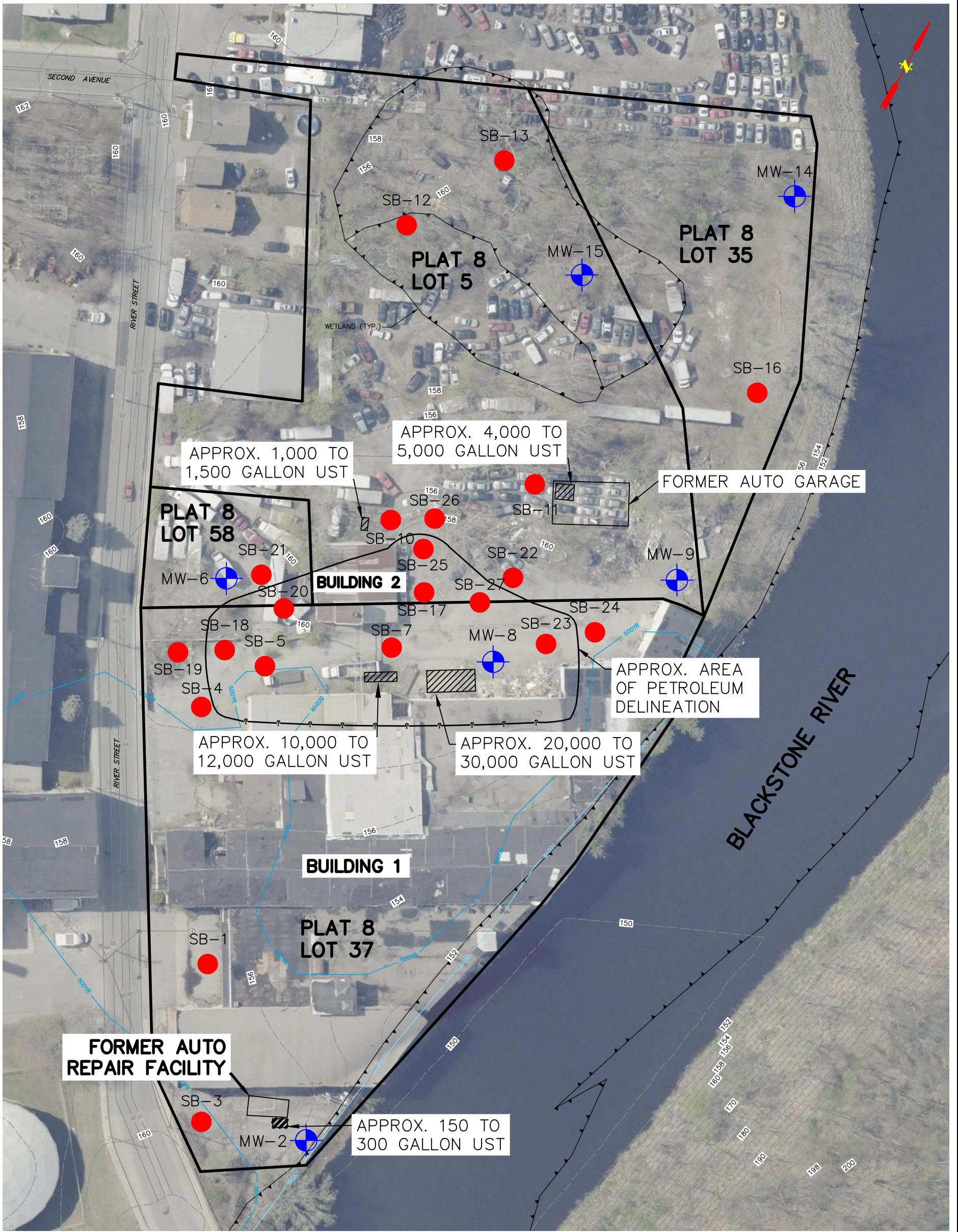
SOURCE: USGS TOPOVEIW



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 401.861.3070
 www.fando.com

RHODE ISLAND DEPARTMENT
 OF ENVIRONMENTAL MANAGEMENT
SITE LOCATION MAP
 719 RIVER STREET
 WOONSOCKET RHODE ISLAND

PROJ. No.: 20181545.E25
 DATE: FEBRUARY 2023
FIGURE 1



LEGEND

- MW-XX
- SB-XX
-
-

— APPROXIMATE AREA OF PETROLEUM CONTAMINATED SOIL DETERMINED BY FIELD OBSERVATIONS (DASHED WHERE INFERRED)

MAP REFERENCES AND NOTES

THIS MAP WAS PREPARED FROM RIGIS COLOR ORTHO IMAGERY (2019)
 SOURCE: THE RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM (RIGIS)
 SITE FEATURES AND UST LOCATIONS ARE APPROXIMATE

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 Layer State: PC3: DWG TO PDF PC3 STB/CTB: FO STB

SCALE:
 HORIZ.: 1" = 70'
 VERT.:
 DATUM:
 HORIZ.:
 VERT.:
 0 35 70
GRAPHIC SCALE

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RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

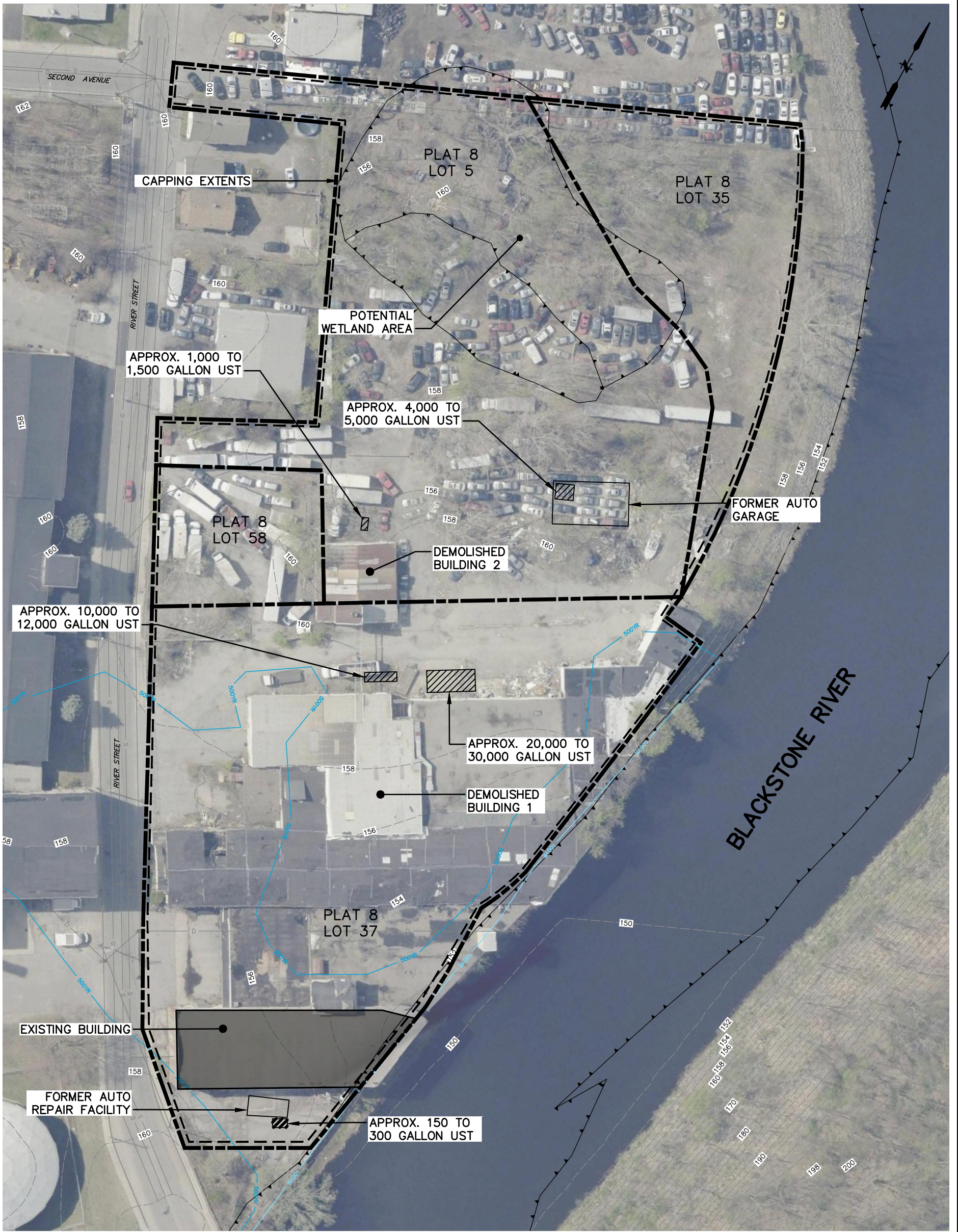
SITE PLAN

719 RIVER STREET (PLAT 8, LOTS 5, 35, 37 & 58)





WOONSOCKET RHODE ISLAND

PROJ. No.: 20181545.E25
 DATE: FEBRUARY 2023

FIGURE 2



LEGEND

-  LOT LINE
-  SITE CAPPING EXTENTS BOUNDARY
-  FEMA 500 YEAR
-  EXISTING STRUCTURE POST DEMOLITION

MAP REFERENCES AND NOTES

1. THIS MAP WAS PREPARED FROM RIGIS COLOR ORTHO IMAGERY (2019)
SOURCE: THE RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM (RIGIS)
2. SITE FEATURES AND UST LOCATIONS ARE APPROXIMATE.
3. BUILDING AND VEHICLES VISIBLE IN AERIAL WERE REMOVED IN 2022.

File: J:\DWG\20181545\B10_Environmental\Plan\719 River Street\RAWP\of_20181545 B10_STP03.dwg Layout: FIG 3 Plotted: 2023-02-14 1:07 PM Saved: 2023-02-01 1:51 PM User: CFlannery
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RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 SITE CAPPING PLAN
 719 RIVER STREET (PLAT 8, LOTS 5, 35, 37 & 58)
 WOONSOCKET
 RHODE ISLAND

PROJ. No.: 20181545.E25
 DATE: FEBRUARY 2023
FIGURE 3

Appendix A

City of Woonsocket Files

Property Card: 787 RIVER STREET

Town of Woonsocket, RI



Parcel Information	
Parcel ID: 8-5 Vision ID: 4853 Owner: DORADO PROPERTIES LLC Co-Owner: C/O ROBERT PICCIOTTI JR Mailing Address: 30 WOODWARD AVENUE NARRAGANSETT, RI 02882	Map: 8 Lot: -5 Use Description: INDUSTRL M96 Zone: I1 Land Area in Acres: 1.97
Sale History	Assessed Value
Book/Page: 997/298 Sale Date: 6/30/1995 Sale Price: \$175,000	Land: \$68,500 Buildings: \$52,800 Extra Bldg Features: \$53,400 Outbuildings: \$71,500 Total: \$124,900

Building Details: Building # 1		
Model:	Ind/Comm	Int Wall Desc 1: Minim/Masonry
Living Area:	3025	Int Wall Desc 2:
Year Built:	1900	Ext Wall Desc 1: Stone/Masonry
Style:	Industrial	Ext Wall Desc 2: Brick/Masonry
Stories:	1	Roof Cover: Metal/Tin
Occupancy:	1	Roof Structure: Gable/Hip
No. Total Rooms:		Heat Type: None
No. Bedrooms:		Heat Fuel: Coal or Wood
No. Baths:		A/C Type: None
No. Half Baths:		



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Property Card: RIVER STREET

Town of Woonsocket, RI



Parcel Information	
Parcel ID: 8-35 Vision ID: 4851 Owner: DORADO PROPERTIES LLC Co-Owner: C/O ROBERT PICCIOTTI JR Mailing Address: 30 WOODWARD AVENUE NARRAGANSETT, RI 02882	Map: 8 Lot: -35 Use Description: UNDEV LAND M00 Zone: I1 Land Area in Acres: 0.56
Sale History	Assessed Value
Book/Page: 997/298 Sale Date: 6/30/1995 Sale Price: \$175,000	Land: \$3,900 Buildings: \$0 Extra Bldg Features: \$0 Outbuildings: \$3,900 Total: \$3,900

Building Details: Building # 1		
Model:	Vacant	Int Wall Desc 1:
Living Area:	0	Int Wall Desc 2:
Year Built:	0	Ext Wall Desc 1:
Style:		Ext Wall Desc 2:
Stories:		Roof Cover:
Occupancy:		Roof Structure:
No. Total Rooms:		Heat Type:
No. Bedrooms:		Heat Fuel:
No. Baths:		A/C Type:
No. Half Baths:		



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Property Card: 719 RIVER STREET

Town of Woonsocket, RI



Parcel Information	
Parcel ID: 8-37 Vision ID: 4852 Owner: DORADO PROPERTIES LLC Co-Owner: C/O ROBERT PICCIOTTI JR Mailing Address: 30 WOODWARD AVENUE NARRAGANSETT, RI 02882	Map: 8 Lot: -37 Use Description: INDUSTRL M96 Zone: I1 Land Area in Acres: 2.21
Sale History	Assessed Value
Book/Page: 997/298 Sale Date: 6/30/1995 Sale Price: \$175,000	Land: \$134,100 Buildings: \$100,700 Extra Bldg Features: \$107,500 Outbuildings: \$138,300 Total: \$245,800

Building Details: Building # 1		
Model:	Ind/Comm	Int Wall Desc 1: Minim/Masonry
Living Area:	63626	Int Wall Desc 2:
Year Built:	1890	Ext Wall Desc 1: Brick/Masonry
Style:	Mill.Bldg.	Ext Wall Desc 2: Pre-Fab Wood
Stories:	2	Roof Cover: Tar & Gravel
Occupancy:	2	Roof Structure: Irregular
No. Total Rooms:		Heat Type: Steam
No. Bedrooms:		Heat Fuel: Gas
No. Baths:		A/C Type: None
No. Half Baths:		



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Property Card: 775 RIVER STREET

Town of Woonsocket, RI



Parcel Information	
Parcel ID: 8-58 Vision ID: 4850 Owner: DORADO PROPERTIES LLC Co-Owner: C/O ROBERT PICCIOTTI JR Mailing Address: 30 WOODWARD AVENUE NARRAGANSETT, RI 02882	Map: 8 Lot: -58 Use Description: SML BUS M96 Zone: I1 Land Area in Acres: 0.28
Sale History	Assessed Value
Book/Page: 997/298 Sale Date: 6/30/1995 Sale Price: \$175,000	Land: \$41,000 Buildings: \$27,800 Extra Bldg Features: \$27,800 Outbuildings: \$42,200 Total: \$70,000

Building Details: Building # 1		
Model:	Ind/Comm	Int Wall Desc 1: Minim/Masonry
Living Area:	2520	Int Wall Desc 2:
Year Built:	1900	Ext Wall Desc 1: Concr/Cinder
Style:	Service Shop	Ext Wall Desc 2: Vinyl Siding
Stories:	1	Roof Cover: Tar & Gravel
Occupancy:	1	Roof Structure: Flat
No. Total Rooms:		Heat Type: None
No. Bedrooms:		Heat Fuel: Coal or Wood
No. Baths:		A/C Type: None
No. Half Baths:		



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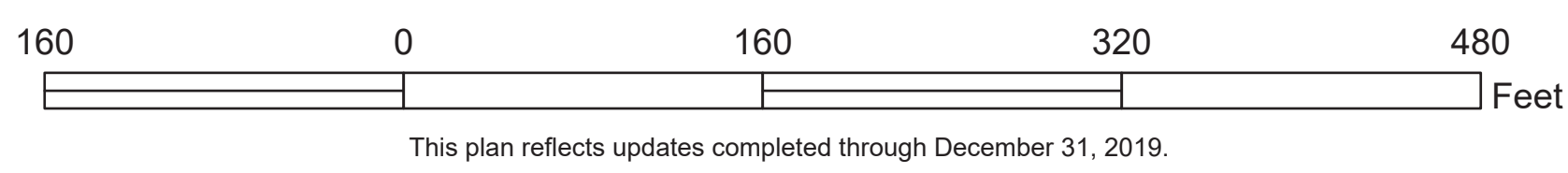
Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.



Notes:
 1. THIS IS NOT A LEGAL DOCUMENT
 2. Property line information was developed from the City of Woonsocket's Assessor's plat maps.
 3. All information shown on this map are subject to verification.

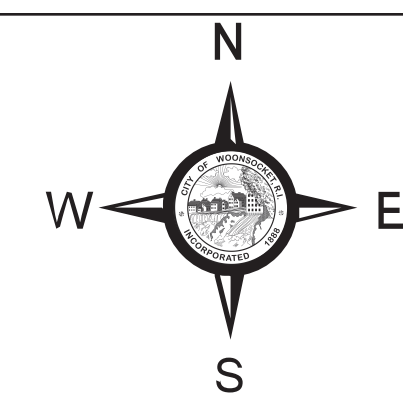
Legend	
29-113	Lot Number
12000 sf	Lot Area
---	Parcel Boundary Line w/ Dimension
---	Easement Line
---	Town Line
---	Right-of-Way Line
---	Paper Street
---	Cemetery

1 inch = 80 feet



A3	A4	A5	A6	A7	A8	A9
B3	B4	B5	B6	B7	B8	B9
C3	C4	C5	C6	C7	C8	C9
D3	D4	D5	D6	D7	D8	D9
E3	E4	E5	E6	E7	E8	E9
F3	F4	F5	F6	F7	F8	F9
G3	G4	G5	G6	G7	G8	G9
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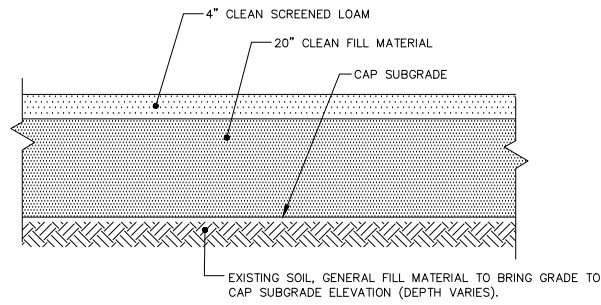
Sheet Index



Tax Map
 City of Woonsocket
 Rhode Island
 Sheet No. C2

Appendix B

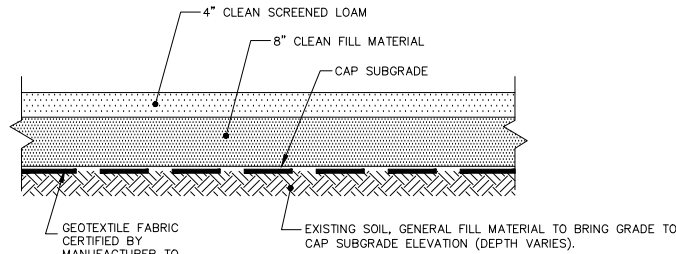
Soil Capping Details



NOTES:
 CROSS SECTION AS SHOWN IS THE MINIMUM REMEDIATION CAP ALLOWED. CIVIL ENGINEERING PLANS TO SPECIFY MATERIAL REQUIREMENTS AND ADDITIONAL SECTION THICKNESS AS REQUIRED.

① TYPICAL CAP SECTION AT LANDSCAPE AREAS (2-FOOT CAP)

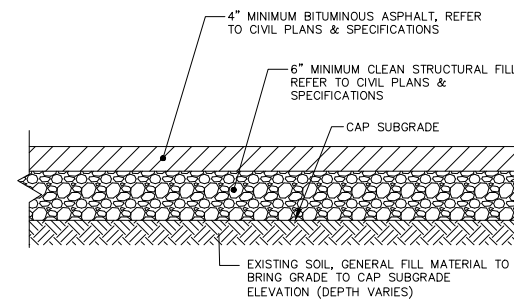
NOT TO SCALE



NOTES:
 CROSS SECTION AS SHOWN IS THE MINIMUM REMEDIATION CAP ALLOWED. CIVIL ENGINEERING PLANS TO SPECIFY MATERIAL REQUIREMENTS AND ADDITIONAL OR MODIFIED SECTION THICKNESS AS REQUIRED.

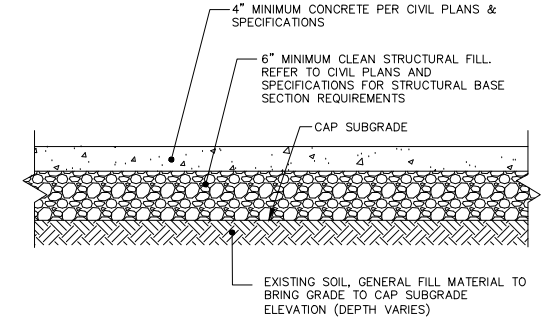
② TYPICAL CAP SECTION AT ALTERNATIVE LANDSCAPED AREAS (1-FOOT CAP)

NOT TO SCALE



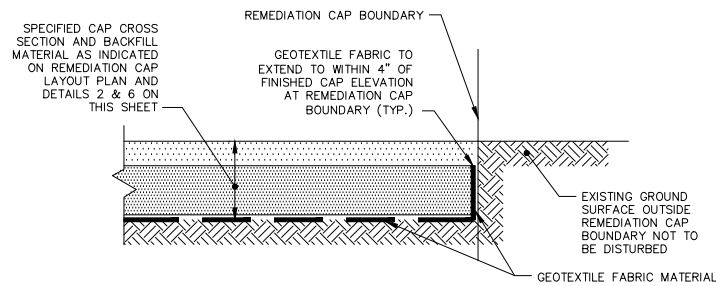
NOTES:
 1. CROSS SECTION AS SHOWN IS THE MINIMUM REMEDIATION CAP ALLOWED. CIVIL ENGINEERING PLANS TO SPECIFY MATERIAL REQUIREMENTS AND ADDITIONAL OR MODIFIED SECTION THICKNESS AS REQUIRED.

③ TYPICAL CAP SECTION AT PAVED AREAS
 NOT TO SCALE



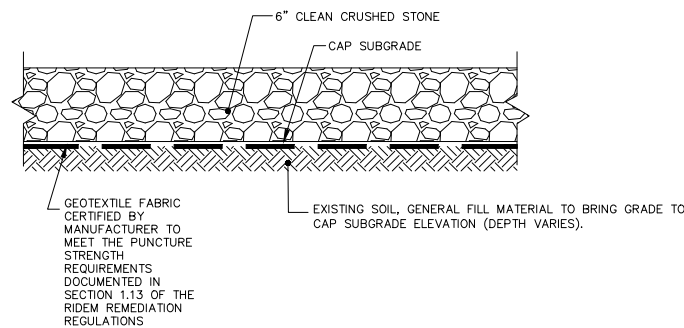
NOTES:
 1. CROSS SECTION AS SHOWN IS THE MINIMUM REMEDIATION CAP ALLOWED. CIVIL ENGINEERING PLANS TO SPECIFY MATERIAL REQUIREMENTS AND ADDITIONAL OR MODIFIED SECTION THICKNESS AS REQUIRED.

④ TYPICAL CAP SECTION AT CONCRETE AREAS
 NOT TO SCALE



⑤ TYPICAL CAP SECTION TERMINATION AT REMEDIATION CAP BOUNDARY

NOT TO SCALE



NOTES:
 CROSS SECTION AS SHOWN IS THE MINIMUM REMEDIATION CAP ALLOWED. CIVIL ENGINEERING PLANS TO SPECIFY MATERIAL REQUIREMENTS AND ADDITIONAL SECTION THICKNESS AS REQUIRED.

⑥ TYPICAL CAP SECTION FOR SOLAR ARRAY (CRUSHED STONE AND FABRIC CAP)

NOT TO SCALE

CAP CONSTRUCTION NOTES:

1. ALL REMEDIAL CAP MATERIALS SHALL BE APPROVED AND COMPLY WITH THE ANALYTICAL TESTING REQUIRED PER "REMEDIAL ACTION WORK PLAN" DATED JANUARY 2023.
2. ALL FINISH GRADES FOR CAP SYSTEM SHALL BE AS SHOWN ON CIVIL PLANS AND SPECIFICATIONS WITH INDICATED CAP THICKNESSES AND GEOTEXTILE FABRIC OR MARKING MATERIAL AS SHOWN ON DETAILS 1-6 THIS SHEET.

File: J:\DWG\201811\54610\Environmental\Plan\719 River Street\RAWP\20181545 E25_DET.dwg Layout: 11X17-L Plotted: 2023-02-14 1:01 PM Saved: 2023-01-30 1:16 PM User: siron

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

SCALE:
 HORZ.: NTS
 VERT.:
 DATUM:
 HORZ.:
 VERT.:

f **FUSS & O'NEILL**
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RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 SOIL CAPPING DETAILS
 719 RIVER STREET
 WOONSOCKET
 RHODE ISLAND

PROJ. No.: 20181545.E25
 DATE: FEBRUARY 2023
 DET-01

Appendix C

Draft Environmental Land Usage Restriction

ENVIRONMENTAL LAND USAGE RESTRICTION

This Declaration of Environmental Land Usage Restriction (“Restriction”) is made on this _____ day of _____, 20__ by the City of Woonsocket~~property owner~~, and its successors and/or assigns (hereinafter, the “Grantor”).

WITNESSETH:

WHEREAS, the Grantor ~~_____~~the City of Woonsocket (name) is the Owner in fee simple of certain real property identified as ~~specify~~ Plat 8, Lots 5, 35, 37, and 58(s), ~~address and Town or City~~719 River Street, Woonsocket, Rhode Island (the “Property”), more particularly described in Exhibit A (Legal Description) which is attached hereto and made a part hereof;

WHEREAS, the Property ~~(or portion thereof identified in the Class I survey which is attached hereto as Exhibit 2A and is made a part hereof)~~ has been determined to contain soil and/or groundwater which is contaminated with certain Hazardous Materials and/or petroleum in excess of applicable R~~residential~~ and/or~~I~~Industrial~~C~~Commercial Direct Exposure Criteria, ~~and/or applicable groundwater objective~~ criteria pursuant to the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (“Remediation Regulations”);

WHEREAS, the Grantor and the Rhode Island Department of Environmental Management (“Department”) have determined that the environmental land use restrictions set forth below are consistent with the regulations adopted by the Department pursuant to R.I.G.L. § 23-19.14-1 and that this restriction shall be a Conservation Restriction pursuant to R.I.G.L. § 34-39-1 et. seq. and shall not be subject to the 30-year limitation provided in R.I.G.L. § 34-4-21;

WHEREAS, the Department's written approval of this Restriction is contained in the document entitled: ~~[Remedial Decision Letter / Settlement Agreement / Order of Approval / Remedial Approval Letter]~~ issued pursuant to the Remediation Regulations;

WHEREAS, to prevent exposure to or migration of Hazardous Substances and to abate hazards to human health and/or the environment, and in accordance with the ~~[Remedial Decision Letter / Remedial Agreement / Order of Approval / Remedial Approval Letter]~~, the Grantor desires to impose certain restrictions upon the use, occupancy, and activities of and at the ~~[Property / Contaminated Site]~~;

WHEREAS, the Grantor believes that this Restriction will effectively protect public health and the environment from such contamination; and

WHEREAS, the Grantor intends that such restrictions shall run with the land and be binding upon and enforceable against the Grantor and the Grantor’s successors and assigns.

NOW, THEREFORE, Grantor agrees as follows:

A. **Restrictions Applicable to the ~~{Property/Contaminated-Site}~~:** In accordance with the ~~{Remedial Decision Letter/ Letter/ Remedial Agreement/ Order of Approval/ Remedial Approval Letter}~~, the use, occupancy and activity of and at the ~~{Property/Contaminated-Site}~~ is restricted as follows:

i. No unrestricted residential use of the ~~{Property/Contaminated-Site}~~ shall be permitted that is contrary to Department approvals and restrictions contained herein;

ii. No groundwater at the ~~{Property/Contaminated-Site}~~ shall be used as potable water;

iii. No soil at the ~~{Property/Contaminated-Site}~~ shall be disturbed in any manner without written permission of the Department's Office of Land Revitalization & Sustainable Materials Management, except as permitted in the ~~Remedial Action Work Plan (RAWP) or~~ Soil Management Plan (SMP), Exhibit B and attached hereto, approved by the Department in a written approval letter dated _____ (date);

[iv. Humans engaged in activities at the ~~{Property/Contaminated-Site}~~ shall not be exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved Direct Exposure Criteria set forth in the Remediation Regulations;

~~{v. Water at the ~~{Property/Contaminated-Site}~~ shall be prohibited from infiltrating soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved leachability criteria set forth in the Remediation Regulations;~~

~~{vi. No subsurface structures shall be constructed on the ~~{Property/Contaminated-Site}~~ over groundwater containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved GA or GB Groundwater Objectives set forth in the Remediation Regulations;~~

~~{vii. [v. _____ The engineered controls at the ~~{Property/Contaminated-Site}~~ described in the ~~{RAWP or SMP}~~ contained in Exhibit B attached hereto shall not be disturbed and shall be properly maintained to prevent humans engaged in ~~{Residential and/or Industrial/Commercial}~~ activity from being exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department-approved ~~R{residential or I}ndustrial/Commercial} Direct Exposure Criteria in accordance with the Remediation Regulations; and~~~~

~~{viii. The engineered controls at the ~~{Property/Contaminated-Site}~~ described in the ~~{RAWP or Soil Management Plan SMP}~~ contained in Exhibit B attached hereto shall not be disturbed and shall be properly maintained so that water does not infiltrate soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved leachability criteria set forth in the Remediation Regulations.~~

B. No action shall be taken, allowed, suffered, or omitted at the ~~{Property/Contaminated-Site}~~ if such action or omission is reasonably likely to:

- i. Create a risk of migration of Hazardous Materials and/or petroleum;
- ii. Create a potential hazard to human health or the environment; or
- iii. Result in the disturbance of any engineering controls utilized at the ~~{Property/Contaminated-Site}~~, except as permitted in the Department-approved ~~{RAWP or SMP}~~ contained in Exhibit B.

C. Emergencies: In the event of any emergency which presents a significant risk to human health or to the environment, including but not limited to, maintenance and repair of utility lines or a response to emergencies such as fire or flood, the application of Paragraphs A (iii.-viii.) and B above may be suspended, provided such risk cannot be abated without suspending such Paragraphs and the Grantor complies with the following:

- i. Grantor shall notify the Department's Office of Land Revitalization & Sustainable Materials Management in writing of the emergency as soon as possible but no more than three (3) business days after Grantor's having learned of the emergency. (This does not remove Grantor's obligation to notify any other necessary state, local or federal agencies.);
- ii. Grantor shall limit both the extent and duration of the suspension to the minimum period reasonable and necessary to adequately respond to the emergency;
- iii. Grantor shall implement reasonable measures necessary to prevent actual, potential, present and future risk to human health and the environment resulting from such suspension;
- iv. Grantor shall communicate at the time of written notification to the Department its intention to conduct the Emergency Response Actions and provide a schedule to complete the Emergency Response Actions;
- v. Grantor shall continue to implement the Emergency Response Actions, on the schedule submitted to the Department, to ensure that the ~~{Property/Contaminated-Site}~~ is remediated in accordance with the Remediation Regulations (or applicable variance) or restored to its condition prior to such emergency. Based upon information submitted to the Department at the time the ELUR was recorded pertaining to known environmental conditions at the ~~{Property/Contaminated-Site}~~, emergency maintenance and repair of utility lines shall only require restoration of the ~~{Property/Contaminated-Site}~~ to its condition prior to the maintenance and repair of the utility lines; and
- vi. Grantor shall submit to the Department, within ten (10) days after the completion of the Emergency Response Action, a status report describing the emergency activities that have been completed.

- D. Release of Restriction; Alterations of Subject Area:** The Grantor shall not make, or allow or suffer to be made, any alteration of any kind in, to, or about any portion of the ~~{Property/Contaminated Site}~~ inconsistent with this Restriction unless the Grantor has received the Department's prior written approval for such alteration. If the Department determines that the proposed alteration is significant, the Department may require the amendment of this Restriction. Alterations deemed insignificant by the Department will be approved via a letter from the Department. The Department shall not approve any such alteration and shall not release the ~~{Property/Contaminated Site}~~ from the provisions of this Restriction unless the Grantor demonstrates to the Department's satisfaction that Grantor has managed the ~~{Property/Contaminated Site}~~ in accordance with applicable regulations.
- E. Notice of Lessees and Other Holders of Interests in the ~~{Property/Contaminated Site}~~:** The Grantor, or any future holder of any interest in the ~~{Property/Contaminated Site}~~, shall cause any lease, grant, or other transfer of any interest in the ~~{Property/Contaminated Site}~~ to include a provision expressly requiring the lessee, grantee, or transferee to comply with this Restriction. The failure to include such provision shall not affect the validity or applicability of this Restriction to the ~~{Property/Contaminated Site}~~.
- F. Enforceability:** If any court of competent jurisdiction determines that any provision of this Restriction is invalid or unenforceable, the Grantor shall notify the Department in writing within fourteen (14) days of such determination.
- G. Binding Effect:** All of the terms, covenants, and conditions of this Restriction shall run with the land and shall be binding on the Grantor, its successors and assigns, and each Owner and any other party entitled to control, possession or use of the ~~{Property/Contaminated Site}~~ during such period of Ownership or possession.
- H. Inspection & Non-Compliance:** It shall be the obligation of the Grantor, or any future holder of any interest in the ~~{Property/Contaminated Site}~~, to provide for annual inspections of the ~~{Property/Contaminated Site}~~ for compliance with the ELUR in accordance with Department requirements.

~~{An officer or Director of the company with direct knowledge of past and present conditions of the {Property/Contaminated Site} (the "Company Representative"), or} A-a~~ qualified environmental professional will, on behalf of the Grantor or future holder of any interest in the ~~{Property/Contaminated Site}~~, evaluate the compliance status of the ~~{Property/Contaminated Site}~~ on an annual basis. Upon completion of the evaluation, the ~~{Company Representative or}~~ environmental professional will prepare and simultaneously submit to the Department and to the Grantor or future holder of any interest in the ~~{Property/Contaminated Site}~~ an evaluation report detailing the findings of the inspection, and noting any compliance violations at the ~~{Property/Contaminated Site}~~. If the ~~{Property/Contaminated Site}~~ is determined to be out of compliance with the terms of the ELUR, the Grantor or future holder of any interest in the ~~{Property/Contaminated Site}~~ shall submit a corrective action plan in writing to the Department within ten (10) days of receipt of the evaluation report, indicating the plans to bring the ~~{Property/Contaminated Site}~~ into compliance with the ELUR, including, at a minimum, a schedule for implementation of the plan.

In the event of any violation of the terms of this Restriction, which remains uncured more than ninety (90) days after written notice of violation, all Department approvals and agreements relating to the ~~[Property/Contaminated Site]~~ may be voided at the sole discretion of the Department.

I. Terms Used Herein: The definitions of terms used herein shall be the same as the definitions contained in Section 3 (DEFINITIONS) of the Remediation Regulations.

IN WITNESS WHEREOF, the Grantor has hereunto set (his/her) hand and seal on the day and year set forth above.

~~[Name of Person(s), company, LLC or LLP]~~ The City of Woonsocket

By: _____
Grantor (signature) _____ Grantor (typed name)

STATE OF RHODE ISLAND
COUNTY OF _____

In (CITY/TOWN), in said County and State, on the ____ day of _____, 20____, before me Personally appeared _____, to me known and known by me to be the party executing the foregoing instrument and (he/she) acknowledged said instrument by (him/her) executed to be (his/her) free act and deed.

Notary Public: _____

My Comm. Expires: _____

Appendix D

Draft Post-Remediation Soil Management Plan

Post Remediation Soil Management Plan
719 River Street, Woonsocket, Rhode Island, Plat 8 Lots 5, 35, 37, and 58

This Soil Management Plan (SMP) has been prepared to establish procedures that will be followed should future construction/maintenance activities at the 719 River Street property require the need to manage soils excavated from the subsurface or when existing Property surfaces / Department approved engineered controls (asphalt, concrete, landscaping and/or foundations) are disturbed. The plan serves to supplement, and will be initiated by, the RIDEM notification requirement established by the Environmental Land Use Restriction (ELUR) for the property.

Background

The Property, located at 719 River Street, Woonsocket, Rhode Island, was formerly occupied by several textile mills, an auto repair facility, residential housing, and a trucking company. The property contained five underground storage tanks (USTs) which contributed to releases of petroleum to the subsurface. Based on historical aerial photographs between the years of 1919 and 1943 as well as 1954 and 1964, several buildings at the Site were razed, the Blackstone River was re-routed, and Lot 35 was built up. The Property is currently controlled by the City of Woonsocket after it was abandoned by the last owner of record, Dorado Properties LLC, since 1995. The Department approved remedy included addressing petroleum contamination by either targeted soil excavation or on-Property soil stabilization, closure of USTs, encapsulation of Property soils by a Department approved engineered control, and the implementation of an ELUR and a SMP. The regulated Property soils are covered with Department approved engineered controls, consisting of building foundations, asphalt pavement, and landscape caps in order to prevent direct exposure to regulated soils.

Applicable Area

This SMP and affiliated ELUR pertains to the entire Property. See attached Property figure.

Soil Management

The direct exposure pathway is the primary concern at the Property. Individuals engaged in activities at the Property may be exposed through incidental ingestion, dermal contact, or inhalation of vapors or entrained soil particles if proper precautions are not taken. Therefore, the following procedures will be followed to minimize the potential of exposure.

During site work, the appropriate precautions will be taken to restrict unauthorized access to the property.

During all site/earth work, dust suppression (e.g. watering, etc) techniques must be employed at all times. If it is anticipated due to the nature of the contaminants of concern

that odors may be generated during site activities, air monitoring and means to control odors will be utilized, as appropriate (e.g. odor-suppressing foam, etc).

In the event that an unexpected observation or situation arises during site work, such activities will immediately stop. Workers will not attempt to handle the situation themselves but will contact the appropriate authority for further direction.

In the event that certain soils on site were not previously characterized, these soils are presumed to be regulated until such time that it is demonstrated to the Department, through sampling and laboratory analysis that they are not regulated. (For example, presumptive remedies or locations of previously inaccessible soil.)

If excess soil is generated / excavated from the Property, the soil is to remain on-site for analytical testing, to be performed by an environmental professional, in order to determine the appropriate disposal and/or management options. The soil must be placed on and covered with polyethylene/plastic sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against storm-water and / or wind erosion (e.g. hay bales, silt fencing, rocks, etc).

Excavated soils will be staged and temporarily stored in a designated area of the property. Within reason, the storage location will be selected to limit the unauthorized access to the materials (e.g., away from public roadways/walkways). No regulated soil will be stockpiled on-site for greater than 60 days without prior Department approval.

In the event that stockpiled soils pose a risk or threat of leaching hazardous materials, a proper leak-proof container (e.g. drum or lined roll-off) or secondary containment will be utilized.

Soils excavated from the site may not be re-used as fill on residential property. Excavated fill material shall not be re-used as fill on commercial or industrial properties unless it meets the Department's Method 1 Residential Direct Exposure Criteria for all constituents listed in Table 1 of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations). Copies of the laboratory analysis results shall be maintained by the site owner and included in the annual inspection report for the site, or the closure report if applicable. In the event that the soil does not meet any of these criteria, the material must be properly managed and disposed of off site at a licensed facility.

Site soils, which are to be disposed of off-site, must be done so at a licensed facility in accordance with all local, state, and federal laws. Copies of the material shipping records associated with the disposal of the material shall be maintained by the site owner and included in the annual inspection report for the site.

Best soil management practices should be employed at all times and regulated soils should be segregated into separate piles (or cells or containers) as appropriate based upon the results of analytical testing, when multiple reuse options are planned (e.g. reuse on-

site, reuse at a Department approved Industrial/Commercial property, or disposal at a Department approved licensed facility).

All non-disposable equipment used during the soil disturbance activities will be properly decontaminated as appropriate prior to removal from the site. All disposable equipment used during the soil disturbance activities will be properly containerized and disposed of following completion of the work. All vehicles utilized during the work shall be properly decontaminated as appropriate prior to leaving the site.

At the completion of site work, all exposed soils are required to be recapped with Department approved engineered controls (2 ft of clean fill or equivalent: building foundations, 4 inches of pavement/concrete underlain with 6 inches of clean fill, and/or 1 foot of clean fill underlain with an approved geotextile fabric) consistent or better than the site surface conditions prior to the work that took place. These measures must also be consistent with the Department approved ELUR recorded on the property. Any clean fill material brought on site is required to meet the Department's Method 1 Residential Direct Exposure Criteria or be designated by an Environmental Professional as Non-Jurisdictional under the Remediation Regulations. The Annual Inspection Report for the site, or Closure Report if applicable, should include either analytical sampling results from the fill demonstrating compliance or alternatively include written certification by an Environmental Professional that the fill is not jurisdictional.

Worker Health and Safety

To ensure the health and safety of on-site workers, persons involved in the excavation and handling of the material on site are required to wear a minimum of Level D personal protection equipment, including gloves, work boots and eye protection. Workers are also required to wash their hands with soap and water prior to eating, drinking, smoking, or leaving the site.

Department Approval

In accordance with Section A iii of the ELUR, no soil at the property is to be disturbed in any manner without prior written permission of the Department's Office of Land Revitalization & Sustainable Materials Management, except for minor inspections, maintenance, and landscaping activities that do not disturb the contaminated soil at the Site. As part of the notification process, the site owner shall provide a brief written description of the anticipated site activity involving soil excavation. The notification should be submitted to the Department no later than 60 days prior to the proposed initiation of the start of site activities. The description shall include an estimate of the volume of soil to be excavated, a list of the known and anticipated contaminants of concern, a site figure clearly identifying the proposed areas to be excavated/disturbed, the duration of the project and the proposed disposal location of the soil.

Following written Notification, the Department will determine the post closure reporting requirements. Significant disturbances of regulated soil will require submission of a

Closure Report for Department review and approval documenting that the activities were performed in accordance with this SMP and the Department approved ELUR. Minor disturbances of regulated soil may be documented through the annual certification submitted in accordance with Section H (Inspection & Non-Compliance) of the Department approved ELUR. The Department will also make a determination regarding the necessity of performing Public Notice to abutting property owners/tenants concerning the proposed activities. Work associated with the Notification will not commence until written Department approval has been issued. Once Department approval has been issued, the Department will be notified a minimum of two (2) days prior to the start of activities at the site. Shall any significant alterations to the Department approved plan be necessary, a written description of the proposed deviation, will be submitted to the Department for review and approval prior to initiating such changes.



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