Site Reconnaissance and Data Review Report

Raplee Property
Cleanup Site ID #5275

Prepared for:

City of Stanwood

Stanwood, Washington

October 1, 2024

Project No. M1030.08.003

Prepared by:

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MAUL FOSTER ALONGI

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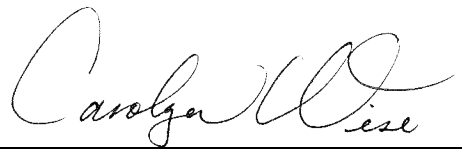
The material and data in this report were prepared under the supervision and direction of the undersigned.

Maul Foster & Alongi, Inc.



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Abbreviations

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
the City	City of Stanwood
CULs	cleanup levels
DRO	diesel-range organics
Ecology	Washington Department of Ecology
GPR	ground-penetrating radar
GRO	gasoline-range organics
IAA	Interagency Agreement No. C2400206
MFA	Maul Foster & Alongi, Inc.
MTCA	Model Toxics Control Act
NAPL	non-aqueous phase liquid
ORO	heavy-oil-range organics
Preliminary Assessment	pre-field investigation, site reconnaissance, and data review
Property	9816 271st Street NW in Stanwood, Washington
RCW	Revised Code Washington
SFIM	Sanborn Fire Insurance Map
SAIC	Science Applications International Corporation
the Site	the “Raplee Property” Site
South ROW	City right-of-way adjacent to the south boundary of the Property
USTs	underground storage tanks
WAC	Washington Administrative Code

1 Introduction

Maul Foster & Alongi, Inc. (MFA), prepared this report describing the pre-field investigation, site reconnaissance, and data review (Preliminary Assessment) conducted on behalf of the City of Stanwood (the City) at 9816 271st Street NW in Stanwood, Washington (the Property) and the City right-of-way (South ROW; see Figure 1-1). The Property is located on Snohomish County parcel 32032400405900 and is currently owned by Kathleen Raplee. It is MFA's understanding that the City is interested in acquiring the Property, cleaning up the Property and Site (if feasible), and redeveloping the Property as a public park that will enhance the downtown corridor.

The Washington Department of Ecology (Ecology) defines the "Raplee Property" Site (the Site; Cleanup Site ID #5275) as the Property and any adjacent properties may be impacted by contamination originating from the Property. The full extent of the Site is not currently known.

MFA prepared a Cleanup Options Report for the Site under a 2018 Remedial Action Grant agreement identifying data gaps for additional investigation (MFA 2019b). The purpose of this Preliminary Assessment and subsequent Site investigation activities is to address these data gaps in support of a Site cleanup options evaluation.

1.1 Regulatory Framework

This report has been prepared in accordance with Interagency Agreement No. C2400206 (the IAA), dated May 8, 2024, between the Ecology and the City. The agreement provides funding from Ecology under Revised Code Washington (RCW) 39.34.130 and RCW 39.26.180(3).

The Preliminary Assessment work was conducted in general accordance with the Model Toxics Control Act (MTCA) (Washington Administrative Code [WAC] 173-340) and the IAA.

1.2 Purpose and Objectives

The purpose of the Preliminary Assessment was to gather environmental information to inform the upcoming data gaps investigation for the Site and to support the evaluation of potential cleanup options. The specific objectives of the Preliminary Assessment are as follows:

- Summarize existing environmental data for the Site.
- Review historical use information for the Site and the surrounding area.
- Assess the presence of underground storage tanks (USTs) and other subsurface anomalies at the Site.
- Visually assess the Site for indications of environmental contamination.
- Select locations for the soil borings and monitoring wells to be installed during the data gaps investigation using the data from the Preliminary Assessment.

2 Background

2.1 Site Description

The Site is located in the southeast quarter of section 24, township 32 north, and range 3 east of the Willamette Meridian (Figure 1-1). The approximately 0.21-acre Property is relatively level, sloping slightly to the northwest. The Property is zoned as Mainstreet Business but is currently vacant.

The Property is surrounded by a chain-link fence and contains brushy areas and partially intact asphalt and concrete surfaces, along with asphalt and concrete rubble and debris from a prior building demolition.

Access to the Property is from South ROW. The South ROW is an asphalt alleyway that connects 270th Street NW to the east and 99th Avenue NW to the west. A strip of grass lies between the paved alley and the Property's fence.

2.2 Current Uses of Adjoining Properties

The Site is bordered by 271st Street NW, residences, and law offices to the north; the intersection of 271st Street NW and 270th Street NW to the east; a restaurant parking lot to the south; a residential duplex to the west. An equipment rental, hardware and lumber store, J E Hamilton & Sons, is adjacent to and southeast of the Site.

2.3 Site History

According to previous environmental reports, the first recorded sale of the Property was in 1924, when the Lien family sold the Property to J. Norin Hafstad (Science Applications International Corporation [SAIC] 2006). In 1939, Mr. Hafstad sold the Property to Mr. Ed Peterson and his wife. In 1958, Standard Oil obtained a lease on the Property. The Property was the location of a Standard Oil (now Chevron Corporation) service station from approximately 1958 to when the lease expired in 1970. From 1970 to 1998, the Property's ownership passed through many parties. In 1984, the portion of the Property with the south-bounding alleyway was sold to the City. In 1998, Kathleen Raplee purchased the Property (SAIC 2006).

Based on SAIC's review of a 1941 Sanborn Fire Insurance Map (SFIM), the Property had been developed into a filling station by that time, with at least two underground storage tanks (USTs) in the northeast portion of the Property, a greasing facility in the eastern portion of the station structure, and a store in the western section (SAIC 2006).

2.4 Regulatory History

A petroleum hydrocarbon release from a UST at the Site was reported to Ecology on January 10, 2005. Pertinent information from Ecology's database is as follows:

- Facility Site ID: 2132059

- Cleanup Site ID: 5275
- UST ID: 619125
- Alternate Names
  - Standard 305192
  - Standard Oil Station 30-5192 (former)
- Site Status: Cleanup Started

The Chevron Environmental Management Company was party to a Voluntary Cleanup Program agreement with Ecology from June 7, 2006, through July 9, 2012.

2.5 Prior Environmental Investigations

2.5.1 2005 UST Decommissioning

In 2005, Glacier Environmental Services, Inc., decommissioned and removed three USTs in the south-central portion of the Site (see Figure 2-1). During the decommissioning process, Pinnacle GeoSciences, Inc. (Pinnacle) collected soil samples from the sidewalls and the bottom of the excavation area, as well as from below former product piping, dispenser islands, and stockpiles. Analytical results from the excavation soil samples identified concentrations of gasoline-range organics (GRO); heavy-oil-range organics (ORO); and benzene, toluene, ethylbenzene, and total xylenes (BTEX, collectively) above their respective MTCA Method A cleanup levels (CULs). In addition to these excavation exceedances, concentrations of lead and diesel-range organics (DRO) were identified in stockpile samples above their respective MTCA Method A CULs (Pinnacle 2005).

2.5.2 2006 Site Investigation

In 2006, SAIC performed an environmental assessment of the Site and identified soil and groundwater impacted by GRO, DRO, ORO, and BTEX near the former UST area (SAIC 2006). A summary of soil analytical results associated with this investigation is included in Table 2-1. Previous soil borings are shown on Figure 2-1. During this assessment, Apollo Geophysics conducted a ground-penetrating radar (GPR) survey of the Site to identify subsurface anomalies (e.g., USTs). Based on Figure 2 of the 2005 Pinnacle report, the GPR survey showed two anomalies indicative of in-place USTs on and adjacent to the Property (see Figure 2-1).

The first GPR anomaly was identified as two USTs to the south of the Property in the South ROW, directly under a steel 4-inch-diameter, high-pressure natural gas line. The exact depth and location of this line is unknown. The presence of these USTs was confirmed with an air-knife excavation. SAIC observed that the USTs contained liquid petroleum mixed with water (SAIC 2006). The second GPR anomaly was identified as one UST in the west-central portion of the Property, as confirmed by SAIC while excavating soil from the area (SAIC 2006). None of the USTs identified in the 2006 investigation were decommissioned.

2.5.3 2006 to 2014 Groundwater Monitoring

From April 2006 to July 2014, Gettler-Ryan Inc., on behalf of Leidos Engineering, LLC (formerly SAIC), monitored the groundwater at four wells located at the Site (see Figure 2-1) (Leidos 2014). The

groundwater samples were analyzed for GRO, DRO, ORO, and BTEX. According to the most recent available groundwater monitoring report, only one of the four monitoring wells, MW-4, had concentrations of DRO and ORO above their respective MTCA Method A CULs. Additionally, MW-4 had measurable non-aqueous phase liquid (NAPL) during sampling events between January 2012 and July 2014; therefore, samples from this well were not collected during those events (Leidos 2014). A summary of groundwater analytical results for the Property is included in Table 2-2.

2.5.4 2019 Site Reconnaissance and Groundwater Sampling

In February of 2019, MFA conducted a focused environmental investigation consisting of reconnaissance, well redevelopment, and groundwater sample collection from existing monitoring wells at the Site (MFA 2019a). The sampling showed NAPL was present in MW-04 and likely contains concentrations of GRO, DRO, and/or ORO above MTCA Method A CULs. Monitoring well MW-02 contains concentrations of DRO and ORO above the MTCA Method A CUL, and no exceedances were observed in the downgradient well MW-01 and crossgradient well MW-03 (see Table 2-2). Data gaps remain at the Site, and it was concluded that:

- The full lateral and vertical extent of soil impacts is unknown.
- The lateral and vertical extent of groundwater impacts to the west and south of the Site is unknown.
- The lateral and vertical extent of groundwater impacts on the north and east portions of the Site appear to be bounded.
- The existing, abandoned UST(s) may be on-going sources of contamination.

2.6 Geology and Hydrogeology

The Site is located in the Snohomish River Valley, approximately 0.2 miles northeast of an oxbow of the Stillaguamish River. According to the Geologic Map of the Stanwood Quadrangle, the Site vicinity is located on Quaternary younger alluvial and estuarine deposits (Minard 1985).

MFA prepared hydrogeologic cross sections using the lithologic data presented in 2006 SAIC boring logs (see cross sections in Figures 2-2 and 2-3). Cross section transect lines are shown in Figure 2-1. SAIC reported the presence of fill in the upper 4 feet of the borings, consisting of brown medium sand and sandy silt with fine gravel with trace rounded cobbles (SAIC 2006). It is likely that during initial development of the Site, fill was placed to raise the grade above flood levels. During the 2006 well installation, SAIC encountered subsurface soils consisting primarily of gray silt or a silt/clay mixture from 4 to 14 feet below ground surface (bgs) (SAIC 2006, see hydrogeologic cross section Figures 2-2 and 2-3). When assessing petroleum impacts in the soils, contamination was found to be confined by a gray clay contact layer at 14 feet bgs (SAIC 2006).

Because of the low hydraulic conductivity of the silt/clay, the monitoring wells on the Site have poor groundwater recharge and were initially pumped dry during purging (SAIC 2006). During the February 2019 groundwater sampling fieldwork, slow recharge was also observed in the sampled monitoring wells (MFA 2019a).

According to the previous environmental investigations described above, shallow groundwater at the Property likely is associated with a shallow, unconfined aquifer (MFA 2019a, SAIC 2006). Groundwater depths measured during Preliminary Assessment activities in July 2024 ranged from

1.75 to 3.49 feet bgs (see Table 2-3). The groundwater at the Property flows northwest with a relatively flat gradient of less than 2 feet groundwater elevation difference across the Site, consistent with previous investigation observations (see Figure 2-4) (MFA 2019a, SAIC 2006). A groundwater gradient of approximately 0.026 ft/ft was calculated during the February 2019 monitoring event (MFA 2019a, SAIC 2006) and approximately 0.015 ft/ft for the July 2024 water levels.

3 Historical Records Review

MFA used the following information sources to obtain historical use information for the Property, Site, and surrounding area.

3.1.1 Sanborn Fire Insurance Maps

MFA reviewed SFIMs to identify historical changes to the Site and the surrounding area (see Appendix A).

Year of Map	Observations
1905	The Site is just outside the extents of the SFIM. The South ROW does not appear to be present to the west of the Property. Nearby structures to the west of the Site include dwellings, barns, and stables.
1909	No change from 1905.
1918	The Site is just outside the extents of the SFIM. The South ROW does not appear to be present the west of the Site. Nearby structures to the west of the Site include sheds and dwellings. The index map for the Sanborn Map series shows a spur track for the Stanwood Lumber Co. and Wisconsin Lumber Co. running along State and Main Streets adjacent to the Site (Sanborn Map Company 1918).
1953	Three structures are present on the Property: a store, a “greasing” structure, and a “gas & oil” structure. USTs are not shown. The South ROW is present. Surrounding structures are primarily dwellings. A sawmill and lumber shed are present to the southeast of the Site and an implement sales and service building is present to the south.

3.1.2 Historical Aerial Photographs

MFA reviewed aerial photographs from EDR to identify historical changes to the Site and the surrounding area (see Appendix B).

Year of Image	Observations
1941	The resolution of the aerial photograph is poor. Multiple structures are present on the Property. The surrounding area appears to be a mix of small buildings (likely some residential and some commercial) as well as fields of crops. The South ROW is present.
1954	Two buildings are present on the Property, an L-shaped building on the west side of the Property and a rectangular building in the center of the Property adjacent to the L-shaped building. A storage yard is visible across 270th St NW from the Property.
1956	The resolution of the aerial photograph is poor. Minimal change from the 1954 aerial photograph.

Year of Image	Observations
1968	A small structure or vehicle is present in the northeast corner of the Property. One large and four small retention ponds are present to the south of the Property on the other side of State Route 532
1979	The small structure or vehicle visible in the 1968 aerial photograph is no longer visible. Minimal changes to the Property or surrounding area.
1981	No apparent changes to the Property or surrounding area.
1990	No apparent changes to the Property or surrounding area.
2006	The rectangular building in the center of the Property and the L-shaped building on the west side of the building appear to have been removed. Concrete or gravel pads remain in the place of these buildings. The grassy area on the neighboring property to the south has been paved.
2011	The Property appears to be covered with vegetation
2015	No apparent changes to the Property or surrounding area.
2019	No apparent changes to the Property or surrounding area.

4 Ground Penetrating Radar Survey

On July 8, 2024, GeoTest Services, Inc., performed a GPR survey of the Property, the adjacent portion of the City right-of-way, and the northern portion of the neighboring property to the south to determine the presence of potential USTs within the requested area. The report prepared by GeoTest Services, Inc., is provided in Appendix C. The Property vegetation was cleared by the City prior to the survey.

Scanning was performed utilizing a 270 MHz antenna with a typical scan depth range of 5 to 15 feet bgs. The central portion of the fenced in area including the location of the western UST previously identified during the 2006 site investigation (SAIC 2006) could not be scanned due to the low ground clearance of the scanner and remaining dense vegetation. The City will conduct additional vegetation clearing and this area will be re-scanned at a later date. The paved portion of the Property within the fence along the north side of the Property as well as the areas outside the fence were scanned.

Indications of potential USTs were observed at a depth of approximately 3 feet bgs within a single 7-foot by 11-foot rectangular area near the southeast corner of the fence line. This area is located approximately 2 feet to the northeast of monitoring well MW-02. This area corresponds with the location of the USTs identified in the 2006 site investigation (SAIC 2006).

5 Site Reconnaissance

MFA conducted a site reconnaissance visit search for evidence of potential environmental concerns on the Site. During the site visit, MFA observed the Property, South ROW, northern portion of the

adjacent restaurant parking lot, and adjacent properties from public thoroughfares. Photographs taken during the site reconnaissance are provided in Appendix D.

Observations of the ground surface in portions of the fenced area of the Site were in some areas limited by the presence of remaining vegetation and vegetation cuttings. The ground surface was inspected in areas with lesser amounts of vegetation.

Table 5-1: Interior and Exterior Observations

Feature	Observed on the Property		Notes
	Yes	No	
Structures		X	
Roads	X		The Site is accessed from the unnamed alley to the south in the South ROW. 270th St NW borders the Site to the east, and 271st St NW borders the Site to the north.
Potable water supply		X	
Sewage-disposal system		X	
Hazardous substances and petroleum products in connection with identified uses		X	
Storage tanks	X		Two potential fill ports were observed in the ground in the grassy area between the south fence and the alley.
Odors	X		Petroleum hydrocarbon-like odors were observed in the well casings of MW-02 and MW-04.
Pools of liquid		X	
Drums, totes, and intermediate bulk containers		X	
Hazardous-substance and petroleum-product containers not connected with identified uses		X	
Unidentified-substance containers		X	
Items potentially containing polychlorinated biphenyls		X	
Stains or corrosion		X	
Drains or sumps	X		A storm drain is present on the edge of 271st NW, immediately northwest of the Property. No liquids, staining, or odors were observed in the drain.
Pits, ponds, or lagoons		X	
Stained soil or pavement		X	No stains were observed in the visible portions of gravel or asphalt within the fence, on the South ROW, or on the paved or grassy areas of the Site.
Stressed vegetation		X	
Solid waste	X		Minor amounts of litter (plastic bottles and paper) were observed within the fence and adjacent to the roadways.

Feature	Observed on the Property		Notes
	Yes	No	
Wastewater		X	
Stormwater		X	
Wells	X		Three monitoring wells are present on the within the fenced area (MW-01, MW-03, and MW-04) and one is present in the South ROW (MW-02).
Septic systems		X	

As stated in the table above, two potential fill ports were observed in the grassy area between the south fence of the Property and the paved alley. The ports had iron caps situated in iron flush-mount vaults spaced approximately three feet apart. The caps were rusted in place and unable to be opened. The ports are located 5 feet immediately north of the area identified in the GPR survey and approximately 15 feet north of monitoring well MW-02. These are likely the two fill ports identified in the same area during the 2006 site investigation (SAIC 2006).

The condition of the four present monitoring wells was also assessed. All wells were located, opened, and water levels measured. Groundwater was encountered at depths ranging from 1.75 to 3.49 feet bgs (see Table 2-3 and Figure 2-4). Petroleum hydrocarbon-like odors were observed at monitoring wells MW-02 and MW-04; however, no NAPL was encountered in any of the wells during water level measurement with an interface probe or observed on the surface of the probe after its removal from the well.

6 Proposed Data Gaps Investigation Locations

Additional investigation of subsurface soil and groundwater is proposed to address the data gaps identified in the cleanup options report (MFA 2019b) and findings from the Preliminary Assessment described in this report. MFA proposes the advancement of six borings, installation of two monitoring wells, and redevelopment of the four existing monitoring wells for the collection of soil and groundwater samples.

The portion of the Site that was inaccessible during the GPR survey will be cleared and re-surveyed. The area around proposed boring locations will be scanned for subsurface utilities prior to drilling. Proposed boring locations may shift based on the findings of the additional GPR survey and utility locate.

6.1 Soil and Reconnaissance Groundwater Borings

Four soil and reconnaissance groundwater borings to 15 feet bgs are proposed at the following locations:

- SB-24 in the west side of the Site to assess potential downgradient impacts from the existing western UST in the west portion of the Site.
- SB-25 in the southwest corner of the Site to assess the presence of petroleum impacts and potential NAPL migration into MW-04 from the existing western UST.
- SB-26 south of the fence, in between MW-02 and MW-04, to evaluate the source of NAPL previously observed in MW-04 and the potential for a NAPL migration pathway from the existing USTs in the southeast portion of the Site.
- SB-27 near the center of the Site to assess the presence of petroleum impacts to the north of the existing and former USTs in the southeast portion of the Site near the soil CUL exceedances at former boring SB-23.

6.2 Monitoring Wells

Two borings to 15 feet bgs are proposed for monitoring well installations at the following locations:

- MW-05: Evaluate potential contaminant migration from the Site to the neighboring property to the east.
- MW-06: Assess potential soil and groundwater impacts downgradient of the existing USTs in the southeast portion of the Site in the vicinity of SB-2, which had the highest soil heavy oil concentrations.

6.3 Sample Collection

Direct-push drilling with continuous core retrieval will be used for the collection of samples and the installation of the monitoring wells. Soil samples will be collected from depths with signs of contamination during visual or olfactory observations or field screening using a photoionization detector. Well screens will target the water table surface, if feasible, considering the necessary surface seal thickness for monitoring wells.

A sampling and analysis plan will be prepared prior to commencement of this fieldwork. The sampling and analysis plan will describe drilling, sampling, and analysis methods; quality assurance procedures; health and safety procedures; procedures for protecting cultural resources; and management of investigation derived waste in accordance with the IAA.

References

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Limitations

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

Figures

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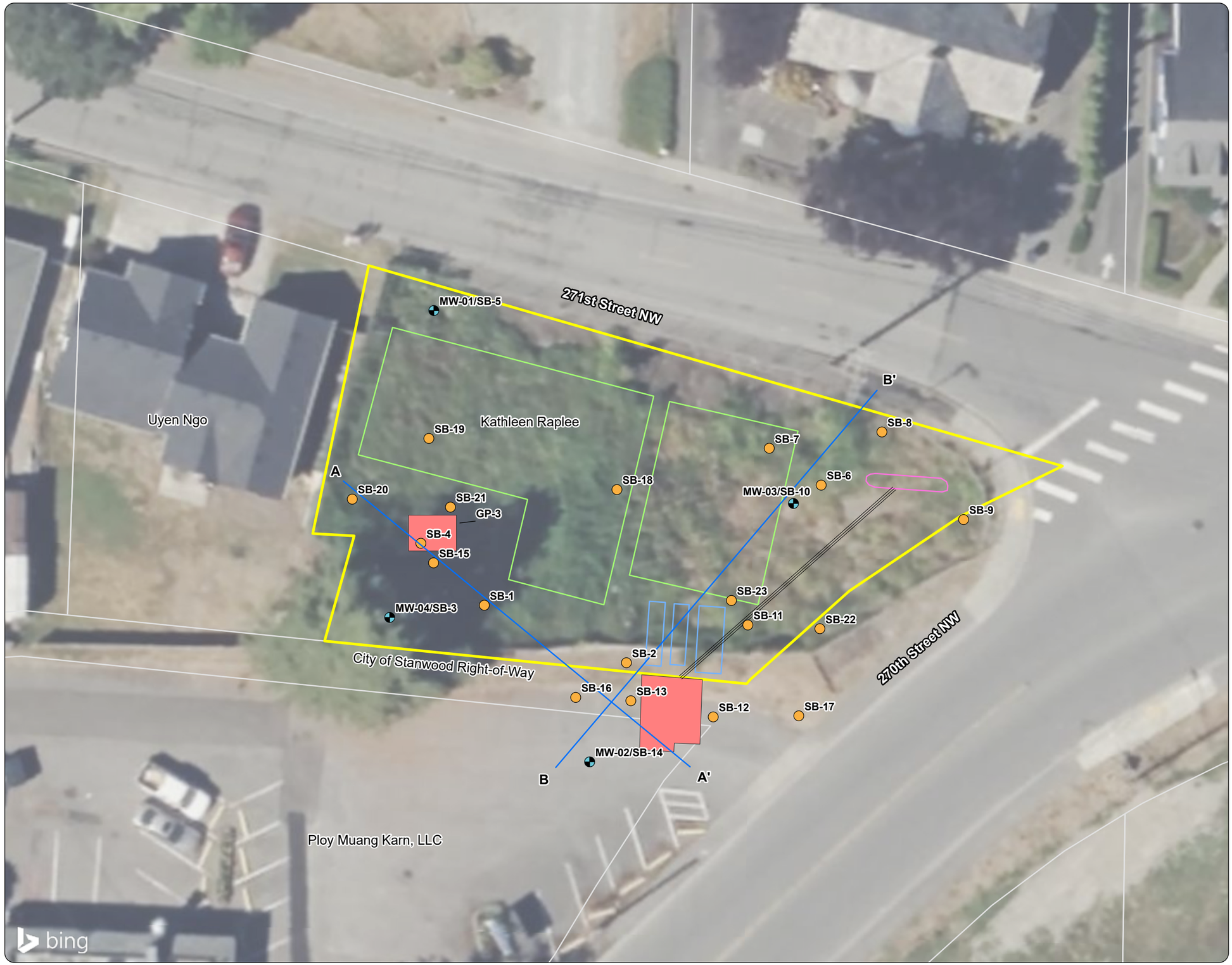
Figure 2-1
Historical Sample Locations and Site Features

Raplee Property
Stanwood, Washington



Legend

- Historical Soil Borings
- Monitoring Well
- Former Product Lines
- Tax Lot
- Existing UST
- Former Building
- Former Service Island
- Former UST
- Property Parcel

Notes:
Parcel ownership noted on tax lots in figure.
All property feature locations are approximate and were obtained from previous reports (Pinnacle 2005; SAIC 2006).
UST = underground storage tank.

0 20 40
Feet

Source: Aerial imagery obtained from Bing. Property boundary obtained from Snohomish County GIS.

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Produced By: glaravata
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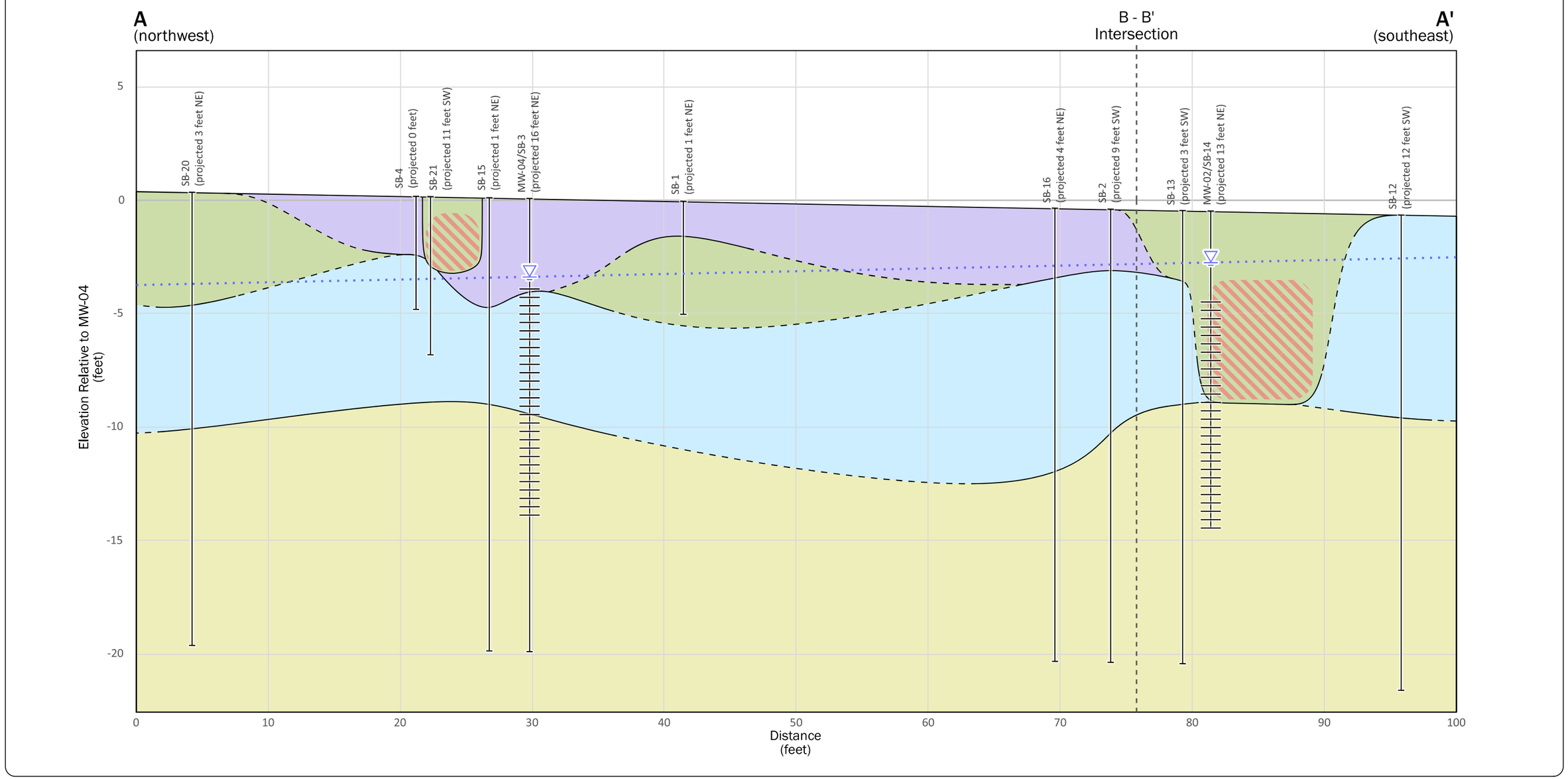

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Lithology

- Coarse-grained gravel fill
- Fine-grained fill with sand and occasional gravel
- Clay to silt
- Sandy silt to silt with intermittent lenses of silty sand with occasional gravel

- Water level at time of site reconnaissance visit
- Approximate water table
- Presumed UST Location

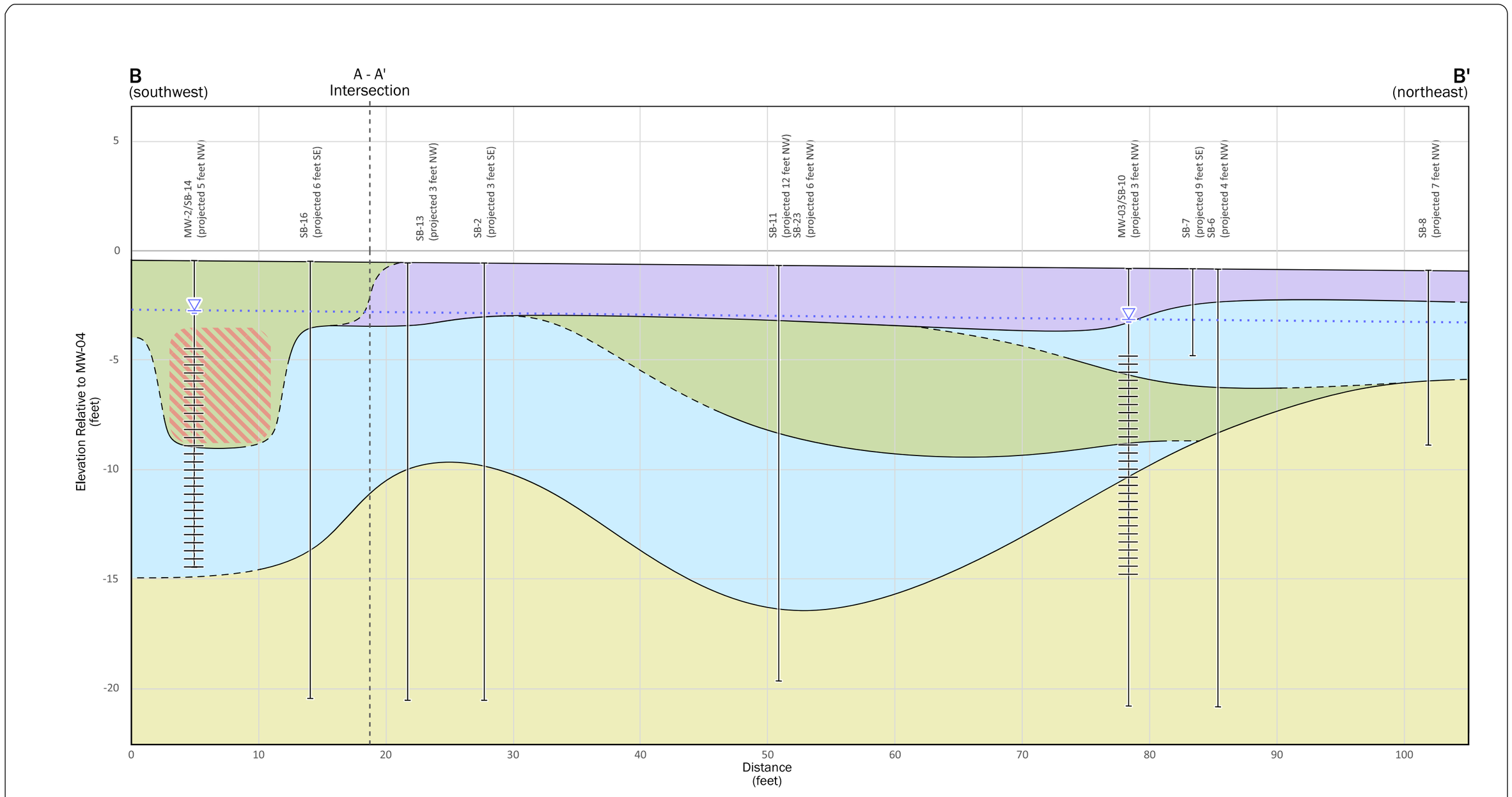
Boring Features

- Top of boring
- Well screen
- Bottom of boring

Notes:
Contacts are dashed where inferred.
Groundwater elevations were measured on June 12, 2024.
The vertical axis has 2× exaggeration for visualization purposes.
Boring locations, lithology, and elevation from SAIC 2006 Site Investigation.
NE = northeast.
UST = underground storage tank.
SW = southwest.

Figure 2-2
Hydrogeologic Cross Section A - A'

Raplee Property Site
Stanwood, Washington



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Lithology

- Coarse-grained gravel fill
- Fine-grained fill with sand and occasional gravel
- Clay to silt
- Sandy silt to silt with intermittent lenses of silty sand with occasional gravel

- Water level at time of site reconnaissance visit
- Approximate water table
- Presumed UST Location

Boring Features

- Top of boring
- Well screen
- Bottom of boring

Notes:
Contacts are dashed where inferred.
Groundwater elevations were measured on June 12, 2024.
The vertical axis has 2× exaggeration for visualization purposes.
Boring locations, lithology, and elevation from SAIC 2006 Site Investigation.
NW = northwest.
UST = underground storage tank.
SE = southeast.

Figure 2-3
Hydrogeologic Cross Section B - B'

Raplee Property Site
Stanwood, Washington

Figure 2-4
July 2024 Potentiometric Groundwater Contours

Raplee Property
Stanwood, Washington

Legend

- Potentiometric Groundwater Contour
- Approximate Groundwater Flow Direction
- Monitoring Well
- Property Parcel
- Tax Lot

Notes:
Depths to groundwater measured between 1:01 pm and 1:27 pm on July 12, 2024.
All property feature locations are approximate.
TOC elevations are expressed in feet relative to an arbitrary datum of 100.00 feet at MW-04 SAIC, 2006).
TOC = top of casing.

0 25
Feet

Source: Aerial imagery obtained from Bing. Property boundary obtained from Snohomish County GIS.

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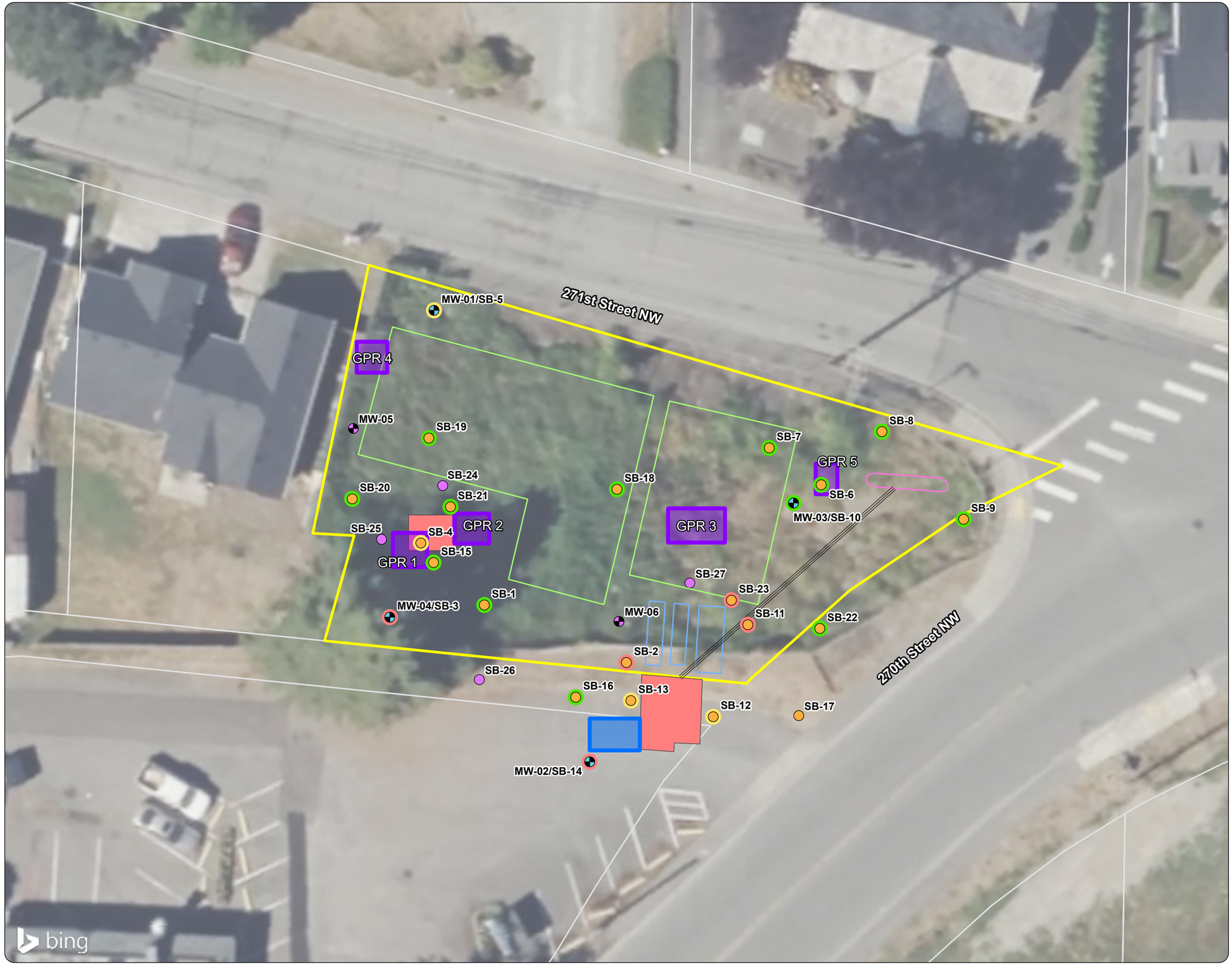
Figure 6-1
Previous Sample Results and Proposed Sample Locations

Raplee Property
Stanwood, Washington



Legend

- Historical Soil Borings
- Monitoring Well
- Former Product Lines
- Tax Lot
- Existing UST
- Former Building
- Former Service Island
- Former UST
- July 2024 GPR Anamoly
- September 2024 GPR Anamoly
- Property Parcel
- Proposed Boring
- Proposed Monitoring Well

Notes:
All property feature locations are approximate and were obtained from previous reports (Pinnacle 2005; SAIC 2006).
Green halo = Petroleum, BTEX, or lead non-detect or detected below 0.1 × the CUL.
Yellow halo = Petroleum, BTEX, or lead detected between the CUL and 0.1 × the CUL.
Red halo = Petroleum, BTEX, or lead detected above the CUL.
BTEX = benzene, toluene, ethylbenzene, and xylenes.
CUL = MTCA Method A or Method B vapor intrusion cleanup level
Petroleum = gasoline-range hydrocarbons, diesel-range hydrocarbons, and/or motor oil range hydrocarbons.
UST = underground storage tank.
No samples were collected at SB-17.

0 20 40
Feet

Source: Aerial imagery obtained from Bing. Property boundary obtained from Snohomish County GIS.

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Print Date: 7/31/2024
Approved By:
Produced By: gjaravata
Project: 1030.08

Tables

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Table 2-1
Summary of Soil Analytical Results
Raplee Property
Stanwood, Washington

Location	Sample Name	Sample Depth (feet bgs):	Collection Date:	GRO	DRO	ORO	Total Heavy Oils[a]	Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Lead
MTCA Method A Cleanup Level (mg/kg):				30	2000	2000	2000	0.03	6	7	9	250
SB-2	SB-2-3	3	2/7/2006	**340**	**1200**	**8700**	**9900**	**0.3**	**0.1**	< 0.08	**2.1**	--
	SB-2-14	14	2/7/2006	**48**	**140**	**970**	**1110**	**0.2**	**0.01**	< 0.02	**0.2**	**6.85**
	SB-2-18	18	2/7/2006	< 1.1	< 3.0	< 10	ND	< 0.006	< 0.006	< 0.006	< 0.02	--
SB-3	SB-3-6	6	2/7/2006	< 1.1	**15**	**150**	**165**	< 0.005	< 0.005	< 0.005	< 0.2	**6.03**
	SB-3-15	15	2/7/2006	< 0.9	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.01	--
SB-5	SB-5-18	18	2/7/2006	< 1.0	< 3.0	< 10.0	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
SB-6	SB-6-6	6	2/7/2006	< 1.2	< 3.0	< 10	ND	< 0.006	< 0.006	< 0.006	< 0.02	--
	SB-6-14	14	2/7/2006	< 1.0	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
SB-8	SB-8-6	6	2/7/2006	< 0.9	< 3.0	**17**	**18.5**	< 0.005	< 0.005	< 0.005	< 0.01	--
SB-10	SB-10-6	6	2/7/2006	< 1.6	< 3.0	< 10	ND	< 0.008	< 0.008	< 0.008	< 0.02	--
	SB-10-16	16	2/7/2006	< 0.9	< 3.0	< 10	ND	< 0.004	< 0.004	< 0.004	< 0.01	--
SB-11	SB-11-4	4	2/7/2006	**2000**	**68**	**230**	**298**	**23**	**44**	**25**	**240**	--
	SB-11-6	6	2/7/2006	**65**	**7.2**	**37**	**44.2**	**3.6**	**0.9**	**0.5**	**9.7**	**4.4**
	SB-11-14	14	2/7/2006	**18**	< 3.0	**13**	**14.5**	**5.6**	**0.4**	**0.2**	**2**	--
	SB-11-19	19	2/7/2006	< 1.0	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
SB-12	SB-12-17	17	2/7/2006	< 0.9	< 3.0	**11**	**12.5**	< 0.005	< 0.005	< 0.005	< 0.01	--
SB-13	SB-13-10	10	2/7/2006	**5.1**	**27**	**190**	**217**	**0.007**	< 0.004	< 0.004	**0.03**	--
	SB-13-20	20	2/7/2006	< 0.9	< 3.0	< 10	ND	< 0.004	< 0.004	< 0.004	< 0.01	--
SB-14	SB-14-4	4	2/7/2006	**19**	**25**	**73**	**98**	**0.02**	**0.003**	**0.012**	**0.006**	**35.4**
	SB-14-17	17	2/7/2006	< 0.9	< 3.0	**11**	**12.5**	< 0.005	< 0.005	< 0.005	< 0.01	--
SB-15	SB-15-14	14	2/7/2006	< 1.4	< 3.0	< 10	ND	< 0.007	< 0.007	< 0.007	< 0.02	--
SB-16	SB-16-4	4	2/7/2006	< 1.3	< 3.0	< 10	ND	< 0.006	< 0.006	< 0.006	< 0.02	--
	SB-16-14	14	2/7/2006	< 1.0	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
SB-18	SB-18-4	4	2/7/2006	**1.5**	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
	SB-18-14	14	2/7/2006	< 1.0	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
SB-19	SB-19-4	4	2/7/2006	< 1.1	--	--	--	< 0.006	< 0.006	< 0.006	< 0.02	--
	SB-19-12	12	2/7/2006	< 1.0	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
SB-20	SB-20-6	6	2/7/2006	< 1.0	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
	SB-20-14	14	2/7/2006	< 1.1	< 3.0	< 10	ND	< 0.006	< 0.006	< 0.006	< 0.02	--
SB-21	SB-21-6	6	2/7/2006	< 1.1	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
SB-22	SB-22-14	14	2/7/2006	< 1.0	< 3.0	< 10	ND	< 0.005	< 0.005	< 0.005	< 0.02	--
SB-23	SB-23-5	5	4/5/2006	**45**	**40**	**170**	**210**	**1.6**	**0.39**	< 0.052	**3.2**	--

Table 2-1
Summary of Soil Analytical Results
Raplee Property
Stanwood, Washington

Notes

Detections are in bold font.

Detections above MTCA Method A cleanup levels are shaded.

Results were obtained from the 2006 site assessment by SAIC (SAIC, 2006).

-- = not analyzed.

< = concentration is less than reported value.

DRO = diesel-range hydrocarbons.

GRO = gasoline-range hydrocarbons.

MTCA = Model Toxics Control Act.

ND = not detected.

ORO = motor-oil-range hydrocarbons.

Total xylenes = sum of m,p-xylene and o-xylene.

U = analyte not detected.

ug/L = micrograms per liter (parts per billion).

[a]Total concentrations were calculated using one-half the method reporting limit for non-detects. Where all components were non-detect, the calculated total is "ND."

Table 2-2
Summary of Groundwater Analytical Results
Raplee Property
Stanwood, Washington

Location	Collection Date:	GRO	DRO	ORO	Total Heavy Oils[a]	Benzene	Ethylbenzene	Toluene	Total Xylenes
MTCA Method A Cleanup Level (ug/L):		800	500	500	500	5	700	1,000	1,000
Screening Levels for Groundwater Protective of Vapor Intrusion (ug/L):		--	--	--	--	2.4	2,800	15,000	320
MW-01	05/03/2006	< 240	**310**	**120**	**430**	< 2.5	**4.7**	< 2.5	**11**
	08/02/2006	< 48	**260**	**330**	**590**	< 0.5	< 0.5	< 0.5	< 1.5
	10/10/2006	< 48	**150**	< 100	200	< 0.5	< 0.5	< 0.5	< 1.5
	01/15/2007	< 240	< 160	< 200	ND	< 2.5	< 2.5	< 2.5	< 7.5
	04/25/2007	< 50	**190**	**130**	**320**	< 0.5	< 0.5	< 0.5	< 1.5
	07/15/2007	< 500	< 81	< 100	ND	< 5.0	< 5.0	< 5.0	< 15
	10/03/2007	< 250	**130**	< 100	50	< 2.5	< 2.5	< 2.5	< 7.5
	01/03/2008	< 50	**130**	< 100	50	< 0.5	< 0.5	< 0.5	< 1.5
	02/28/2009	< 50	**610**	**610**	**1220**	< 0.5	< 0.5	< 0.5	< 1.5
	07/22/2009	< 50	**650**	**720**	**1370**	< 0.5	< 0.5	< 0.5	< 1.5
	01/08/2010	< 50	**350**	**160**	**510**	< 0.5	< 0.5	< 0.5	< 1.5
	07/20/2010	< 50	**130**	**100**	**230**	< 0.5	< 0.5	< 0.5	< 1.5
	01/21/2011	< 50	< 160	**650**	**730**	< 0.5	< 0.5	< 0.5	< 1.5
	08/05/2011	< 50	**190**	**130**	**320**	< 0.5	< 0.5	< 0.5	< 1.5
	01/27/2012	< 50	< 30	< 69	ND	< 0.5	< 0.5	< 0.5	< 1.5
	07/02/2012	< 50	< 29	< 68	ND	< 0.5	< 0.5	< 0.5	< 1.5
	01/11/2013	< 50	< 29	< 67	ND	< 0.5	< 0.5	< 0.5	< 1.5
	07/12/2013	< 50	< 29	< 68	ND	< 0.5	< 0.5	< 0.5	< 1.5
	01/10/2014	< 50	< 29	< 67	ND	< 0.5	< 0.5	< 0.5	< 1.5
	07/16/2014	< 50	< 29	< 67	ND	< 0.5	< 0.5	< 0.5	< 1.5
	02/22/2019	100 U	**180**	300 U	**330**	1 U	1 U	1 U	3 U
		100 U	**200**	300 U	**350**	1 U	1 U	1 U	3 U

Table 2-2
Summary of Groundwater Analytical Results
Raplee Property
Stanwood, Washington

Location	Collection Date:	GRO	DRO	ORO	Total Heavy Oils[a]	Benzene	Ethylbenzene	Toluene	Total Xylenes
MTCA Method A Cleanup Level (ug/L):		800	500	500	500	5	700	1,000	1,000
Screening Levels for Groundwater Protective of Vapor Intrusion (ug/L):		--	--	--	--	2.4	2,800	15,000	320
MW-02	05/03/2006	< 240	**1400**	**560**	**1960**	**13**	< 2.5	< 2.5	< 7.5
	08/02/2006	**220**	**2000**	**1800**	**3800**	**20**	< 0.5	< 0.5	**1.6**
	10/10/2006	< 240	**1400**	**790**	**2190**	**16**	< 2.5	< 2.5	< 7.5
	01/15/2007	< 240	**810**	**270**	**1080**	**9.3**	< 2.5	< 2.5	< 7.5
	04/25/2007	**250**	**830**	**480**	**1310**	**13**	< 0.5	< 0.5	< 1.5
	07/15/2007	< 500	**7800**	< 1000	**8300**	**13**	< 5.0	< 5.0	< 15
	10/03/2007	< 250	**1600**	**1100**	**2700**	**4.9**	< 2.5	< 2.5	< 7.5
	01/03/2008	**460**	**1400**	**800**	**2200**	**6.7**	< 0.5	**1.0**	< 1.5
	02/28/2009	**450**	**2700**	**2800**	**5500**	**2.5**	< 0.5	**0.6**	< 1.5
	07/22/2009	**360**	**2500**	**4000**	**6500**	**1.1**	< 0.5	**0.8**	**1.5**
	01/08/2010	**470**	**1800**	**1400**	**3200**	< 0.5	**0.7**	**0.5**	< 1.5
	07/20/2010	**420**	**2000**	**1600**	**3600**	< 0.5	< 0.5	**0.8**	< 1.5
	01/21/2011	**390**	**2000**	**1900**	**3900**	< 0.5	**0.6**	< 0.5	< 1.5
	08/05/2011	< 250	**830**	**880**	**1710**	< 2.5	< 2.5	< 2.5	< 7.5
	01/27/2012	**56**	< 29	< 68	ND	< 0.5	< 0.5	< 0.5	< 1.5
	07/02/2012	< 250	**31**	**110**	**141**	< 2.5	< 2.5	< 2.5	< 7.5
	01/11/2013	**130**	**32**	**160**	**192**	< 0.5	**0.6**	< 0.5	< 1.5
	07/12/2013	< 50	< 29	< 68	ND	< 0.5	< 0.5	< 0.5	< 1.5
	01/10/2014	< 50	< 29	< 67	ND	< 0.5	< 0.5	< 0.5	< 1.5
	07/16/2014	< 50	< 30	< 69	ND	< 2.0	< 0.5	< 0.5	< 1.5
	02/22/2019	**190**	**1900**	**1900**	**3800**	1 U	1 U	1 U	**3.4**

Table 2-2
Summary of Groundwater Analytical Results
Raplee Property
Stanwood, Washington

Location	Collection Date:	GRO	DRO	ORO	Total Heavy Oils[a]	Benzene	Ethylbenzene	Toluene	Total Xylenes
MTCA Method A Cleanup Level (ug/L):		800	500	500	500	5	700	1,000	1,000
Screening Levels for Groundwater Protective of Vapor Intrusion (ug/L):		--	--	--	--	2.4	2,800	15,000	320
MW-03	05/03/2006	< 240	**580**	**240**	**820**	< 2.5	< 2.5	< 2.5	< 7.5
	08/02/2006	< 48	**350**	**380**	**730**	< 0.5	< 0.5	< 0.5	< 1.5
	10/10/2006	< 48	**310**	**140**	**450**	< 0.5	< 0.5	< 0.5	< 1.5
	01/15/2007	< 240	**250**	< 100	**300**	< 2.5	< 2.5	< 2.5	< 7.5
	04/25/2007	< 50	**260**	**110**	**370**	< 0.5	< 0.5	< 0.5	< 1.5
	07/15/2007	< 500	**250**	**150**	**400**	< 5.0	< 5.0	< 5.0	< 15
	10/03/2007	< 250	**330**	**260**	**590**	< 2.5	< 2.5	< 2.5	< 7.5
	01/03/2008	< 50	**280**	**210**	**490**	< 0.5	< 0.5	< 0.5	< 1.5
	02/28/2009	< 50	**290**	**190**	**480**	< 0.5	< 0.5	< 0.5	**1.6**
	07/22/2009	< 50	**780**	**830**	**1610**	< 0.5	< 0.5	< 0.5	< 1.5
	01/08/2010	< 50	**680**	**360**	**1040**	< 0.5	< 0.5	< 0.5	< 1.5
	07/20/2010	< 50	**330**	**190**	**520**	< 0.5	< 0.5	< 0.5	< 1.5
	01/21/2011	< 50	< 160	**630**	**710**	< 0.5	< 1.5	< 0.5	< 1.5
	08/05/2011	< 50	**230**	**210**	**440**	< 0.5	< 0.5	< 0.5	< 1.5
	01/27/2012	< 50	< 30	< 70	ND	< 0.5	< 0.5	< 0.5	< 1.5
	07/02/2012	< 50	< 29	< 67	ND	< 0.5	< 0.5	< 0.5	< 1.5
	01/11/2013	< 50	< 28	< 66	ND	< 0.5	< 0.5	< 0.5	< 1.5
	07/12/2013	< 50	< 29	< 68	ND	< 0.5	< 0.5	< 0.5	< 1.5
	01/10/2014	< 50	< 29	<68	ND	< 0.5	< 0.5	< 0.5	< 1.5
	07/16/2014	< 50	< 29	< 68	ND	< 2.0	< 0.5	< 0.5	< 1.5
	02/22/2019	100 U	**94**	300 U	**244**	1 U	1 U	1 U	3 U

Table 2-2
Summary of Groundwater Analytical Results
Raplee Property
Stanwood, Washington

Location	Collection Date:	GRO	DRO	ORO	Total Heavy Oils[a]	Benzene	Ethylbenzene	Toluene	Total Xylenes
MTCA Method A Cleanup Level (ug/L):		800	500	500	500	5	700	1,000	1,000
Screening Levels for Groundwater Protective of Vapor Intrusion (ug/L):		--	--	--	--	2.4	2,800	15,000	320
MW-04	05/03/2006	< 240	**7900**	< 1000	**8400**	< 2.5	< 2.5	< 2.5	< 7.5
	08/02/2006	**73**	**7300**	< 1000	**7800**	< 0.5	< 0.5	< 0.5	**2.8**
	10/10/2006	< 48	**7900**	**2200**	**10100**	< 0.5	< 0.5	< 0.5	< 1.5
	01/15/2007	< 240	**8300**	**3000**	**11300**	< 2.5	< 2.5	< 2.5	< 7.5
	04/25/2007	**89**	**9300**	**2000**	**11300**	< 0.5	< 0.5	< 0.5	< 1.5
	07/15/2007	< 500	**850**	**320**	**1170**	< 5.0	< 5.0	< 5.0	< 15
	10/03/2007	< 250	**8500**	< 2100	**9550**	< 2.5	< 2.5	< 2.5	< 7.5
	01/03/2008	**61**	**9100**	**2200**	**11300**	< 0.5	< 0.5	< 0.5	< 1.5
	02/28/2009	**56**	**5400**	**2100**	**7500**	< 0.5	< 0.5	< 0.5	< 1.5
	07/22/2009	**100**	**14000**	**7600**	**21600**	< 0.5	< 0.5	< 0.5	< 1.5
	01/08/2010	**75**	**13000**	**18000**	**31000**	< 0.5	< 0.5	< 0.5	< 1.5
	07/20/2010	**69**	**12000**	**13000**	**25000**	< 0.5	< 0.5	< 0.5	< 1.5
	01/21/2011	**50**	**14000**	< 1800	**14900**	< 0.5	< 0.5	< 0.5	< 1.5
	08/05/2011	*Unable to sample because of presence of free product.*							
	01/27/2012	*Unable to sample because of presence of free product.*							
	07/02/2012	*Unable to sample because of presence of free product.*							
	01/11/2013	*Unable to sample because of presence of free product.*							
	07/12/2013	*Unable to sample because of presence of free product.*							
	01/10/2014	*Unable to sample because of presence of free product.*							
	07/16/2014	*Unable to sample because of presence of free product.*							
	02/22/2019	*Unable to sample because of presence of free product.*							

Table 2-2
Summary of Groundwater Analytical Results
Raplee Property
Stanwood, Washington

Notes

Detections are in **bold** font.

Detections above MTCA Method A cleanup levels are shaded.

Screening Levels for Groundwater Protective of Vapor Intrusion are shaded blue.

Results prior to 2019 were obtained from the August 2014 groundwater report by Leidos (Leidos, 2014). Results from 2019 were obtained from the MFA 2019 Focused Environmental Investigation Report.

< = concentration is less than reported value.

DRO = diesel-range hydrocarbons.

GRO = gasoline-range hydrocarbons.

MTCA = Model Toxics Control Act.

ND = not detected.

ORO = motor-oil-range hydrocarbons.

Total xylenes = sum of m,p-xylene and o-xylene.

U = analyte not detected.

ug/L = micrograms per liter (parts per billion).

[a]Total concentrations were calculated using one-half the method reporting limit for non-detects. Where all components were non-detect, the calculated total is "ND."

Table 2-3
Groundwater Level Measurements
Raplee Property
Stanwood, Washington

Well ID	Relative Well Elevation[a] (feet)	Date	Measurement Time	Depth to Product (feet TOC)	Depth to Water (feet TOC)	Depth to Bottom (feet TOC)	Relative Water Level Elevation[a] (feet)	Observations
MW-01	98.32	2/22/2019	8:32 AM	--	2.18	14.17	96.14	No odor; no visible sheen during sampling.
		7/12/2024	1:27 PM	--	1.75	13.99	96.57	No odor; No free product on interface probe.
MW-02	99.58	2/22/2019	8:13 AM	--	1.58	14.46	98.00	No odor; biosheen during sampling.
		7/12/2024	1:01 PM		2.31	14.15	97.27	Moderate PHC-like odor; No free product on interface probe.
MW-03	99.16	2/22/2019	8:22 AM	--	0.80	13.56	98.36	No odor; no visible sheen during sampling.
		7/12/2024	1:19 PM	--	2.34	13.54	96.82	No odor; No free product on interface probe.
MW-04	100.00	2/22/2019	8:40 AM	2.32	2.33	13.76	97.67	Black, viscous free product on interface probe tip.
		7/12/2024	1:14 PM	--	3.49	13.75	96.51	Slight PHC-like odor; No free product on interface probe.

Notes

PHC = petroleum hydrocarbon.

TOC = top of casing.

[a]Well elevations are relative to an arbitrary datum of 100 feet at MW-04, the topographically highest well (SAIC 2006).

Appendix A

Sanborn Fire Insurance Maps

MAUL FOSTER ALONGI

Raplee Property
9816 271st Street NW
Stanwood, WA 98292

Inquiry Number: 7702776.1
July 10, 2024

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

07/10/24

Site Name:

Raplee Property
9816 271st Street NW
Stanwood, WA 98292
EDR Inquiry # 7702776.1

Client Name:

Maul Foster & Alongi, Inc.
330 E Mill Plain Boulevard, Suite 405
Vancouver, WA 98660
Contact: Christian Sifford

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Maul Foster & Alongi, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 196F-41F1-BB5A

PO # M1030.08.003

Project Raplee Property

Maps Provided:

1953
1918
1909
1905

Sanborn® Library search results

Certification #: 196F-41F1-BB5A

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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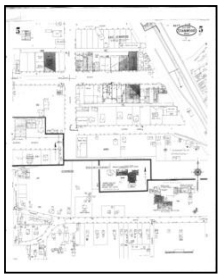
Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1953 Source Sheets



Volume 1, Sheet 5
1953

Volume 1, Sheet 4
1953

1918 Source Sheets

Volume 1, Sheet 4
1918

1909 Source Sheets

Volume 1, Sheet 2
1909

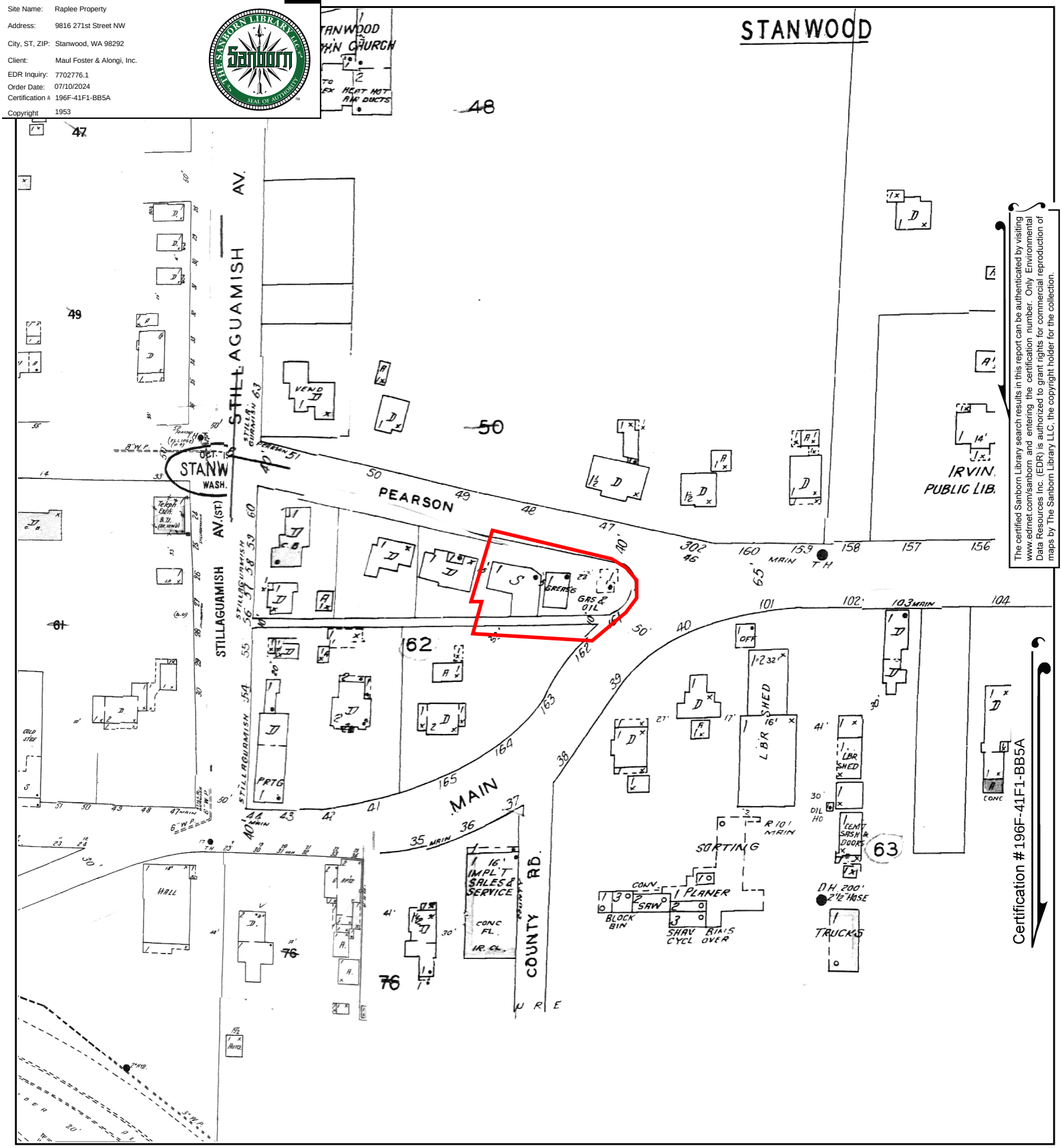
1905 Source Sheets

Volume 1, Sheet 1
1905

Certified Sanborn® Map

1953

Site Name:	Raplee Property
Address:	9816 271st Street NW
City, ST, ZIP:	Stanwood, WA 98292
Client:	Maul Foster & Alongi, Inc.
EDR Inquiry:	7702776.1
Order Date:	07/10/2024
Certification #:	196F-41F1-BB5A
Copyright	1953



This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

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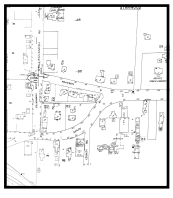
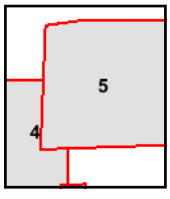




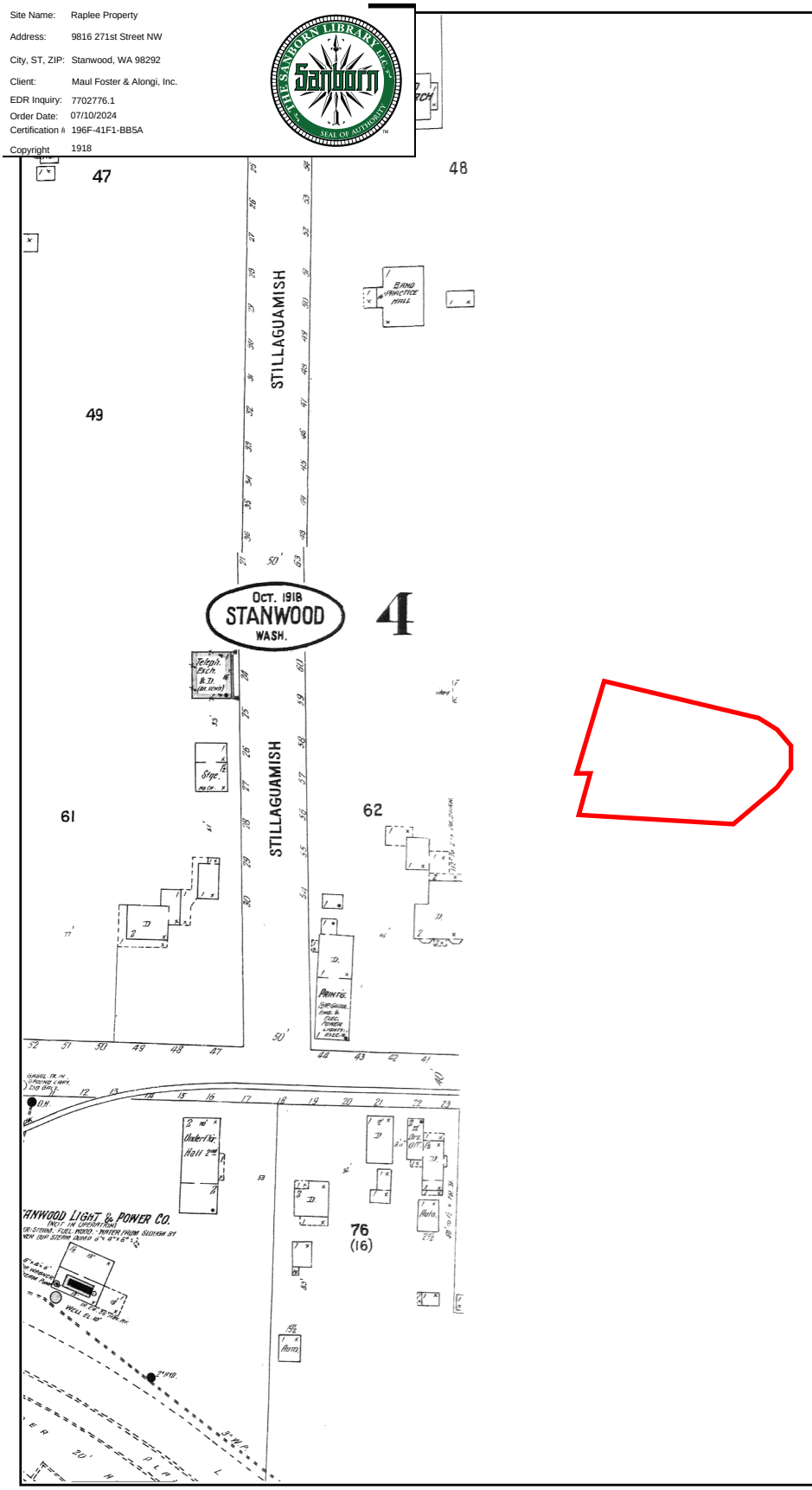
Volume 1, Sheet 4
Volume 1, Sheet 5

N

Certified Sanborn® Map

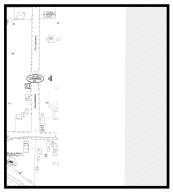
1918

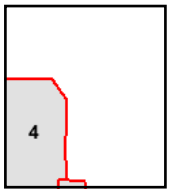
Site Name: Raplee Property
Address: 9816 271st Street NW
City, ST, ZIP: Stanwood, WA 98292
Client: Maul Foster & Alongi, Inc.
EDR Inquiry: 7702776.1
Order Date: 07/10/2024
Certification #: 196F-41F1-BB5A
Copyright: 1918



Certification #196F-41F1-BB5A

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.





Volume 1, Sheet 4

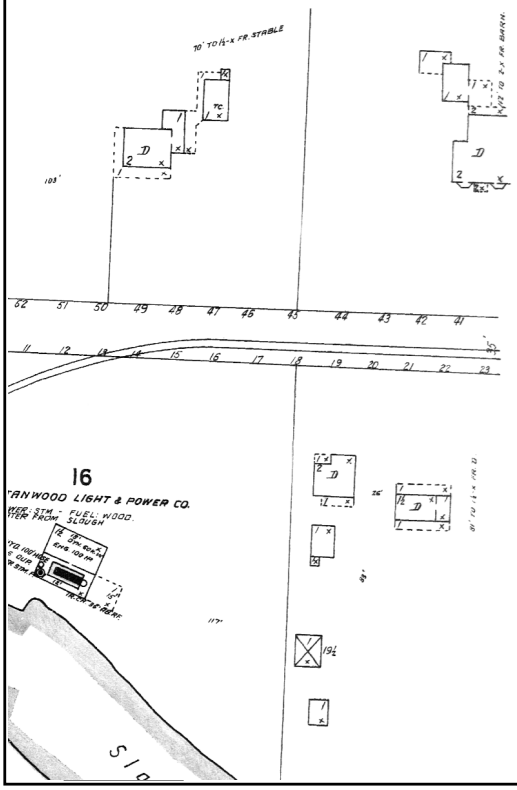
0 Feet 150 300 600

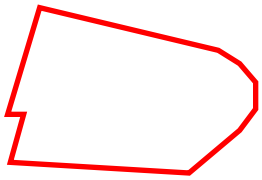
N

Certified Sanborn® Map

1909

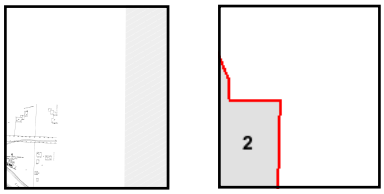
Site Name: Raplee Property
Address: 9816 271st Street NW
City, ST, ZIP: Stanwood, WA 98292
Client: Maul Foster & Alongi, Inc.
EDR Inquiry: 7702776.1
Order Date: 07/10/2024
Certification #: 196F-41F1-BB5A
Copyright: 1909





Certification #196F-41F1-BB5A

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



Volume 1, Sheet 2

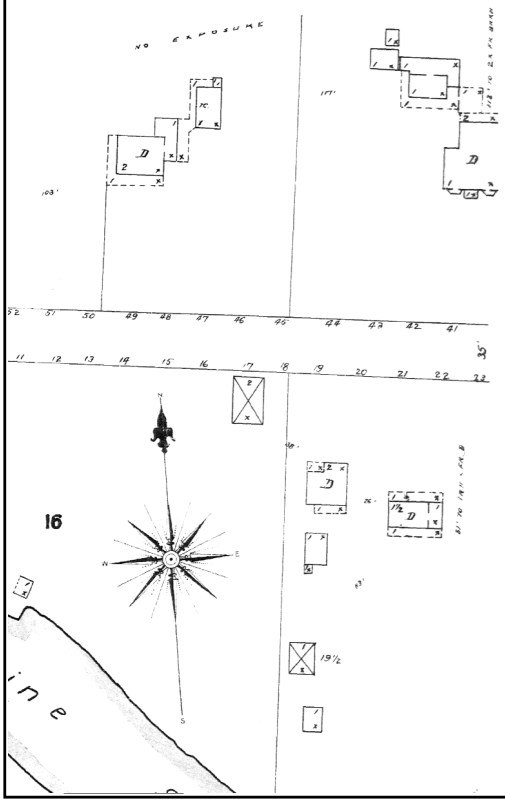
0 Feet 150 300 600

N

Certified Sanborn® Map

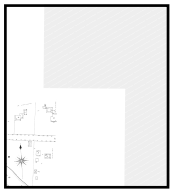
1905

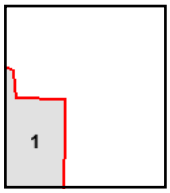
Site Name: Raplee Property
Address: 9816 271st Street NW
City, ST, ZIP: Stanwood, WA 98292
Client: Maul Foster & Alongi, Inc.
EDR Inquiry: 7702776.1
Order Date: 07/10/2024
Certification #: 196F-41F1-BB5A
Copyright: 1905



Certification #196F-41F1-BB5A

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.





Volume 1, Sheet 1

0 Feet 150 300 600

N

Appendix B

Historical Aerial Imagery

MAUL FOSTER ALONGI

Raplee Property

9816 271st Street NW

Stanwood, WA 98292

Inquiry Number: 7702776.3

July 09, 2024

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

07/09/24

Site Name:

Raplee Property
9816 271st Street NW
Stanwood, WA 98292
EDR Inquiry # 7702776.3

Client Name:

Maul Foster & Alongi, Inc.
330 E Mill Plain Boulevard, Suite 405
Vancouver, WA 98660
Contact: Christian Sifford

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2019	1"=500'	Flight Year: 2019	USDA/NAIP
2015	1"=500'	Flight Year: 2015	USDA/NAIP
2011	1"=500'	Flight Year: 2011	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1990	1"=500'	Acquisition Date: July 10, 1990	USGS/DOQQ
1981	1"=500'	Flight Date: August 08, 1981	USDA
1979	1"=500'	Flight Date: July 20, 1979	USDA
1968	1"=500'	Flight Date: September 02, 1968	USGS
1956	1"=500'	Flight Date: April 09, 1956	USGS
1954	1"=500'	Flight Date: June 24, 1954	USGS
1941	1"=500'	Flight Date: July 10, 1941	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.


INQUIRY #: 7702776.3
YEAR: 2019
= 500'
N
EDR


INQUIRY #: 7702776.3
YEAR: 2015
= 500'
N
EDR

INQUIRY #: 7702776.3

YEAR: 2011

= 500'

N

EDR

INQUIRY #: 7702776.3

YEAR: 2006

= 500'

N

EDR

INQUIRY #: 7702776.3

YEAR: 1990

= 500'

N

EDR

INQUIRY #: 7702776.3

YEAR: 1981

= 500'

N

EDR

INQUIRY #: 7702776.3

YEAR: 1979

= 500'

N

EDR

INQUIRY #: 7702776.3

YEAR: 1968

= 500'

N

EDR


INQUIRY #: 7702776.3
YEAR: 1956
= 500'
N
EDR

INQUIRY #: 7702776.3

YEAR: 1954

= 500'

N

EDR

INQUIRY #: 7702776.3

YEAR: 1941

= 500'

N

EDR

Appendix C

Ground Penetrating Radar Survey Report

MAUL FOSTER ALONGI

1.888.251.5276
Bellingham | Arlington | Oak Harbor | Tacoma
www.geotest-inc.com

SUBSURFACE SURVEY GROUND PENETRATING RADAR (GPR) EVALUATION					
Project Name	Raplee Property - GPR	**Project No.**	24-2153	**Date**	7/19/2024
Project Address	9816 271st Street NW Stanwood, WA 98292				
Client Address	Maul Foster & Alongi, Inc. (MFA) 1329 North State Street, Suite 301 Bellingham, WA 98225				
Attention	Carolyn Wise, MFA Senior Hydrogeologist				

PROJECT DESCRIPTION					
GPR Scan Type	Subsurface	**Date of Scan**	7/8/2024	**Operator(s)**	AD
Site Plan	Yes	**Photo**	Yes	**GPR Cross-Sections**	N/A
Location	Requested Area at the Site of Former Fuel Station				
Equipment	GSSI SIR 3000 w/ 270 MHz antenna				

GeoTest was on-site to perform a GPR subsurface investigation in the area noted above (see Image 1 for extent). This subsurface investigation was conducted to determine the presence of potential decommissioned underground storage tanks (USTs) within the requested area. The client requested this investigation in conjunction with their ongoing environmental work at the site. GeoTest's findings will aid in identifying potential sources of contamination in this area.

FINDINGS

Upon arrival, GeoTest was directed to the requested area by the client. During the scan, indications of potential USTs were marked on the ground in pink spray paint. Areas obstructed by dense vegetation could not be scanned on this date. See Image 1 for the extent of the area that could be scanned. Findings are described below:

- Indications of potential USTs were observed within a single 7' x 11' rectangular area near the southeast corner of the site fence line. These indications were observed at a depth of approximately 3' below ground surface. The client was notified of these findings prior to departure.

EQUIPMENT AND METHODOLOGY

GSSI SIR 3000 Ground Penetrating Radar

The GSSI SIR 3000 GPR is used to detect changes in subsurface composition and to identify features underground by interpreting reflected radar waves emitted from a scanning antenna. The reflected radar waves detect changes in dielectric properties of subsurface features such as metals, bedrock, varying soil, plastic, concrete, clay pipe, and organic material. The GSSI SIR 3000 unit displays cross-sectional images of the subsurface on a video monitor which can then be utilized to interpret underground features. Scanning was performed utilizing a 270 MHz antenna. Typical scan depth utilizing a 270 MHz antenna can range from 5 feet to 15 feet below the scanned surface depending on soil type and overlying mediums such as surface water, groundwater, concrete, and asphalt.

LIMITATIONS

GeoTest has prepared this report for the exclusive use of City of Stanwood and their representatives regarding the above-referenced project. Use of this report by others is at the user's sole risk.

Because depth of exploration is dependent upon the electrical properties of material(s) inspected and interpretations are opinions based on judgments made from those acquired radar signals and/or other data, GeoTest does not extend any warranties or guaranties as to the accuracy or correctness of interpretations and GeoTest will not accept liability or responsibility for any loss, damage, or expense that may be incurred or sustained by any services or interpretations performed by GeoTest, or others.

GPR scanning cannot distinguish the difference between utilities, anomalies, variable soil conditions, and/or subsurface target 100% of the time. It can only detect the center and approximate depth of targets. GeoTest recognizes that other conditions may vary from those encountered at the location where geophysical or other explorations are made. The data interpretations and recommendations made by GeoTest are based solely on the information available to them at the time of performance; and GeoTest shall not be responsible for the interpretation, by others, of the information developed.

Submitted By	 Alex Davis, G.I.T. GPR Operator

Image 1: Site map with the extent of the requested area bordered in yellow, and the approximate extent of the area scanned on this date bordered in red. The blue border indicates the approximate boundary of the fence line. The pink highlighted area indicates the approximate location of observed UST indications.

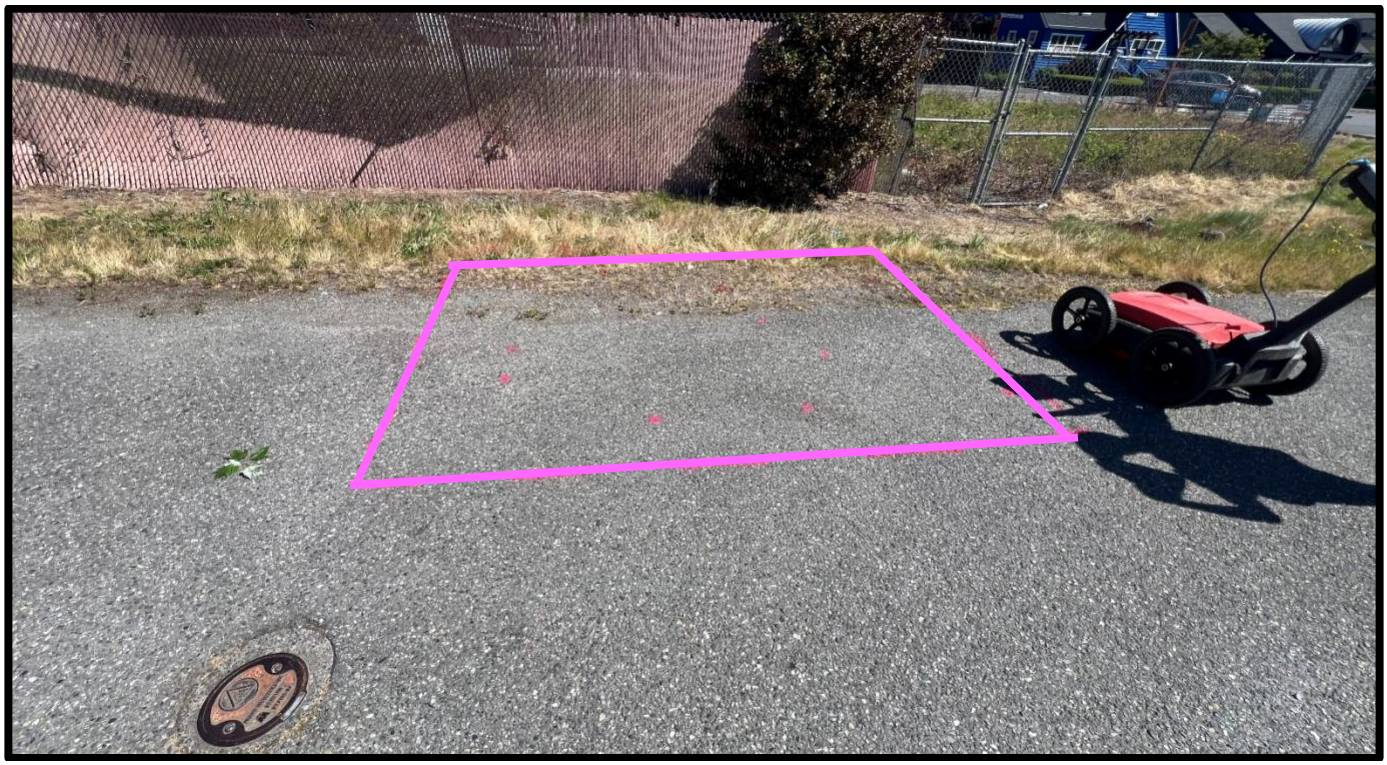


Image 2: Portion of the area scanned on this date, with pink lines indicating the approximate boundary of potential UST indications.

1.888.251.5276
Bellingham | Arlington | Oak Harbor | Tacoma
www.geotest-inc.com

SUBSURFACE SURVEY GROUND PENETRATING RADAR (GPR) EVALUATION					
Project Name	Raplee Property - GPR	**Project No.**	24-2153	**Date**	9/12/2024
Project Address	9816 271st Street NW Stanwood, WA 98292				
Client Address	Maul Foster & Alongi, Inc. (MFA) 1329 North State Street, Suite 301 Bellingham, WA 98225				
Attention	Carolyn Wise, MFA Senior Hydrogeologist				

PROJECT DESCRIPTION					
GPR Scan Type	Subsurface	**Date of Scan**	9/11/2024	**Operator(s)**	AD
Site Plan	Yes	**Photo**	Yes	**GPR Cross-Sections**	Yes
Location	Remainder of Requested Area at the Site of Former Fuel Station				
Equipment	GSSI SIR 3000 w/ 270 MHz antenna				

GeoTest was on-site to perform a GPR subsurface investigation in the area noted above (see Image 1 for extent). This subsurface investigation was conducted to determine the presence of potential decommissioned underground storage tanks (USTs) within the requested area. The client requested this investigation in conjunction with their ongoing environmental work at the site. GeoTest's findings will aid in identifying potential sources of contamination in this area. The area scanned on this date was previously inaccessible due to dense vegetation. See GeoTest's GPR Report dated 7/19/2024 for results of a previous scan conducted at this location.

FINDINGS

Upon arrival, GeoTest was directed to the requested area by a Department of Ecology (DOE) representative. During the scan, indications of potential USTs were marked on the ground in pink spray paint, along with the observed depth of each identified anomaly. Findings are described below:

- Anomaly 1 (see Image 1 for approximate location) measured approximately 3' x 4' and was observed at approximately 2.5' below the scanned surface (BSS).
- Anomaly 2 measured approximately 5' x 5' and was observed at approximately 3' BSS.
- Anomaly 3 measured approximately 9' x 6' and was observed at approximately 5' BSS.
- Anomaly 4 measured approximately 6' x 5+' and was observed at approximately 4' BSS. The site fence line obstructed the GPR scan from identifying the western edge of this anomaly.
- Anomaly 5 measured approximately 3' x 4' and was observed at approximately 5' BSS.

The results of the scan were communicated to the DOE representative prior to departure. GPR cross-sections and images of each identified anomaly can be found in the images included in this report.

EQUIPMENT AND METHODOLOGY

GSSI SIR 3000 Ground Penetrating Radar

The GSSI SIR 3000 GPR is used to detect changes in subsurface composition and to identify features underground by interpreting reflected radar waves emitted from a scanning antenna. The reflected radar waves detect changes in dielectric properties of subsurface features such as metals, bedrock, varying soil, plastic, concrete, clay pipe, and organic material. The GSSI SIR 3000 unit displays cross-sectional images of the subsurface on a video monitor which can then be utilized to interpret underground features. Scanning was performed utilizing a 270 MHz antenna. Typical scan depth utilizing a 270 MHz antenna can range from 5 feet to 15 feet below the scanned surface depending on soil type and overlying mediums such as surface water, groundwater, concrete, and asphalt.

LIMITATIONS

GeoTest has prepared this report for the exclusive use of City of Stanwood and their representatives regarding the above-referenced project. Use of this report by others is at the user's sole risk.

Because depth of exploration is dependent upon the electrical properties of material(s) inspected and interpretations are opinions based on judgments made from those acquired radar signals and/or other data, GeoTest does not extend any warranties or guaranties as to the accuracy or correctness of interpretations and GeoTest will not accept liability or responsibility for any loss, damage, or expense that may be incurred or sustained by any services or interpretations performed by GeoTest, or others.

GPR scanning cannot distinguish the difference between utilities, anomalies, variable soil conditions, and/or subsurface target 100% of the time. It can only detect the center and approximate depth of targets. GeoTest recognizes that other conditions may vary from those encountered at the location where geophysical or other explorations are made. The data interpretations and recommendations made by GeoTest are based solely on the information available to them at the time of performance; and GeoTest shall not be responsible for the interpretation, by others, of the information developed.

Submitted By	 Alex Davis, G.I.T. GPR Operator

Image 1: Site map with the extent of the requested area bordered in yellow, and the approximate extent of the area scanned on this date bordered in red. The blue border indicates the approximate boundary of the fence line. The approximate location of subsurface anomalies identified on this date are marked and numbered in pink .

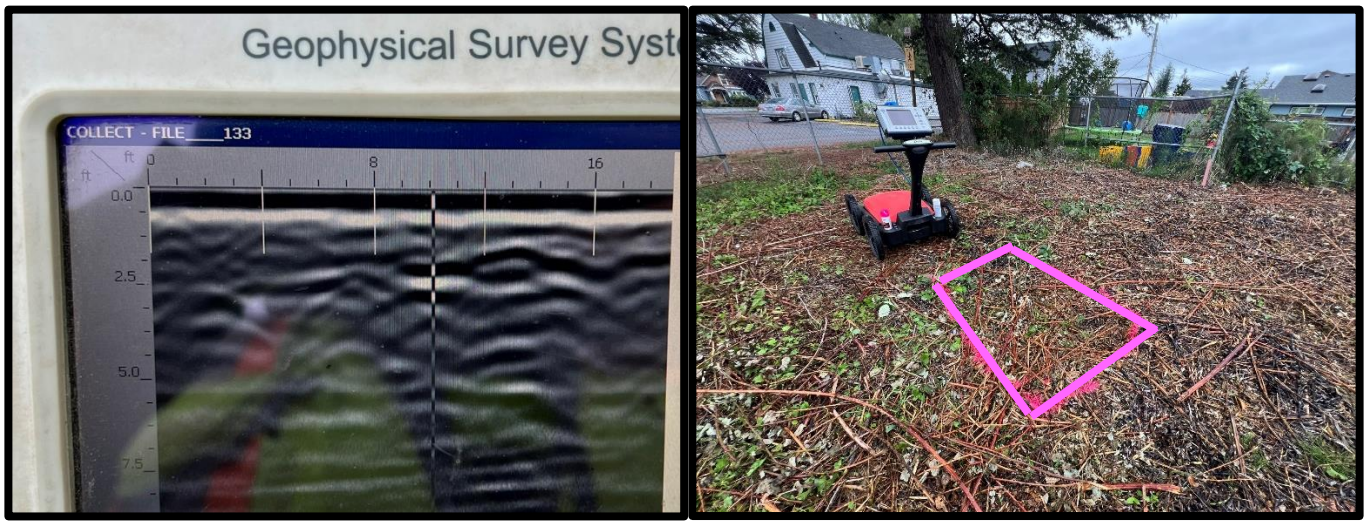


Image 2: GPR cross-section with vertical reference line centered on Anomaly 1 (left). Its observed extent is outlined in pink (right).

Image 3: GPR cross-section with vertical reference line centered on Anomaly 2 (left). Its observed extent is outlined in pink (right).

Image 4: GPR cross-section with vertical reference line centered on Anomaly 3 (left). Its observed extent is outlined in pink (right).

Image 5: GPR cross-section with vertical reference line centered on Anomaly 4 (left). Its observed extent is outlined in pink (right).

Image 6: GPR cross-section with vertical reference line centered on Anomaly 5 (left). Its observed extent is outlined in pink (right).

Appendix D

Site Reconnaissance Photographs

MAUL FOSTER ALONGI

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 1.

Description

Photograph from the east side of 9816 271st Street NW, Stanwood, Washington (the Property), looking west.

Photo No. 2.

Description

View looking west from the alleyway toward the southwest corner of the Property.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 3.

Description

Photo looking east from the south-central portion of the Property. J E Hamilton & Sons is visible on the neighboring property.

Photo No. 4.

Description

Photo from the neighboring property to the south, looking northwest. Monitoring well MW-02 is in the center with the adjacent ground-penetrating radar (GPR) anomaly marked in pink paint.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 5.

Description

Photo from the neighboring property to the south, looking northeast towards MW-02 and the GPR anomaly.

Photo No. 6.

Description

Photo looking east toward the GPR anomaly marked in pink paint, with MW-02 to the right.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 7.

Description

Photo on the south side of the Property looking east toward the two presumed fill ports (center left and bottom left), the GPR anomaly marked in pink paint (center) and monitoring well MW-02 (right).

Photo No. 8.

Description

Photo of the interior of the east presumed fill port showing the metal pipe and pipe cap within.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 9.

Description

Photo of the interior of the west presumed fill port showing the metal pipe and pipe cap buried with soil inside.

Photo No. 10.

Description

Photo looking west down the alley in the City right-of-way and toward the south side of the Property from the southeast corner of the Property.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 11.

Description

Photo looking north from the southeast corner of the Property. In the foreground are two railroad ties. In the background are law and financial services offices to the northeast of the Property.

Photo No. 12.

Description

Photo looking southwest from the northeast corner of the Property. In the background it the restaurant on the neighboring property to the south of the Property and City right-of-way.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 13.

Description

Photo looking west from the northeast corner of the Property.

Photo No. 14.

Description

Photo looking west from the north side of the Property along 271st Street NW.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 15.

Description

Photo looking east from the northwest corner of the Property down 271st Street NW.

Photo No. 16.

Description

Photo of the interior of the catch basin in 271st Street NW near the northwest corner of the Property. No sheen, odor, or staining was observed through the grate.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 17.

Description

Photo looking northeast from the gate to the fenced area of the Property on the south side.

Photo No. 18.

Description

Photo looking northwest from the gate to the fenced area of the Property on the south side. In the top left is the duplex on the neighboring property to the west. In the background of the photo is the residence north across 271st Street NW.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 19.

Description

Photo looking east from the west side of the Property.

Photo No. 20.

Description

Photo looking west from the northeast corner of the Property. The asphalt-paved strip of the Property on its north side is under the brown pieces of cut vegetation along the right side.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 21.

Description

Photo looking west from the approximate location of monitoring well MW-01. In the background is the driveway for the duplex on the neighboring property to the west of the Property.

Photo No. 22.

Description

Photo looking southwest toward monitoring well MW-01 in the northwest corner of the Property.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 23.

Description

Photo looking southeast toward monitoring well MW-03. Down and to the left of MW-03 in the photo is an old iron monitoring well cover. The bucket contains surface water removed from the monitoring well monuments on the day of the site visit.

Photo No. 24.

Description

Photo from north of monitoring well MW-03 showing the gravel ground surface in the unpaved portion of the Property.

Photographs

Project Name: Site Reconnaissance and Data Review
Raplee Property
Project Number: M1030.08.003
Location: Stanwood, Washington

Photo No. 25.

Description

Photo looking southwest toward monitoring well MW-04 in the southwest corner of the Property.