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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Region Office
PO Box 330316, Shoreline, WA 98133-9716 • 206-594-0000

August 29, 2024

David Yuchasz
Woodinville CD, LLC
3110 NE 177th Pl #321
Woodinville, WA 98072
(davidyuchasz@gmail.com)

Re: Opinion pursuant to WAC 173-340-515(5) on Remedial Action for the following Hazardous Waste Site:

- **Site Name:** Coit Services
- **Site Address:** 16750 Woodinville-Redmond Rd NE, Woodinville, WA 98072
- **Facility/Site No.:** 36189742
- **Cleanup Site ID No.:** 16672
- **VCP Project No.:** NW3377

Dear David Yuchasz:

The Washington State Department of Ecology (Ecology) received your request for an opinion on work planned at the Coit Services facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305 RCW.

Issue Presented and Opinion

Pursuant to completion of the Site characterization work described in *Final Additional Investigation Report, Coit Services Site, Woodinville, Washington*, dated August 7, 2024 (*August 2024 Investigation Report*), is additional work necessary to resolve data gaps?

NO. Ecology has determined that the Site has been sufficiently characterized to implement the proposed remedial action and monitor its effectiveness.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following releases:

- Tetrachloroethylene (PCE); cis-1,2-dichloroethene (DCE); and vinyl chloride into the Soil.
- Vinyl chloride into the Groundwater.

Enclosure A includes a detailed description and diagrams of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Landau Associates Inc. (Landau), *Final Additional Investigation Report, Coit Services Site, Woodinville, Washington*, August 7, 2024.
2. Ecology, *Re: Opinion Pursuant to WAC 173-340-515(5) on Remedial Action for the Following Hazardous Waste Site: Coit Services, 16750 Woodinville-Redmond Rd NE, Woodinville, WA*, February 8, 2024.
3. Landau, *Additional Investigation Report, Building C at Woodinville West Business Park, Woodinville, Washington*, October 12, 2023.
4. SLR International Corporation (SLR), *Remedial Investigation and Focused Feasibility Study Report, Building C at Woodinville West Business Park, Woodinville, Washington*, March 2023.
5. Ecology, *Initial Investigation Field Report, Woodinville West Business Park, Building C, 16750 Woodinville-Redmond Road NE, Woodinville, WA*, July 11, 2022.
6. SLR, *Notification of Recently Discovered Historical Release, Woodinville West Business Park, Building C, 16750 Woodinville-Redmond Road Northeast, Woodinville, Washington*, June 7, 2022.
7. Coda Consulting Group, *Phase II Indoor Air Quality and Subsurface Assessment, Industrial Building, 16750 Woodinville-Redmond Road, Woodinville, WA* December 29, 2021.
8. AECOM, *Phase II Environmental Site Assessment, Woodinville West Business Park, Building C, 16750 Redmond-Woodinville Road Northeast, Woodinville, Washington*, December 19, 2019.

A number of these documents are accessible in electronic form from the [Site web page](https://apps.ecology.wa.gov/cleanupsearch/site/16672)¹. The complete records are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Visit our [Public Records Request page](https://ecology.wa.gov/publicrecords)² to submit a public records request or get more information about the process. If you require assistance with this process, you may contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or 360-407-6040.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis and Opinion

Based on a review of the *August 2024 Investigation Report*, Ecology has determined:

- Ecology appreciates your evaluation of groundwater quality in the northeastern portion of the Site. Ecology concurs that the installation of MW-16 and MW-17 have effectively characterized the extent

¹ <https://apps.ecology.wa.gov/cleanupsearch/site/16672>

² <https://ecology.wa.gov/publicrecords>

of groundwater contamination to a sufficient degree to implement the proposed remedial action described in the *Remedial Investigation and Focused Feasibility Study Report, Building C at Woodinville West Business Park, Woodinville, Washington*, dated March 2023 (March 2023 RI/FFS) and August 2024 *Additional Investigation Report*.

- Ecology understands that you intend to implement a full-scale injection program to support enhanced reductive dechlorination (RDC) at the Site. The full-scale enhanced RDC injection program includes the following:
 - Installation of permanent injection wells,
 - Injection of dilute emulsified vegetable oil, and
 - Performance soil and groundwater monitoring.

The proposed remedial action is considered to be an interim action until performance and confirmation monitoring show that concentrations of Site contaminants in soil and groundwater at the Site meet the cleanup standards described in Ecology's *Re: Opinion Pursuant to WAC 173-340-515(5) on Remedial Action for the Following Hazardous Waste Site: Coit Services, 16750 Woodinville-Redmond Rd NE, Woodinville, WA*, dated February 8, 2024 (*February 2024 Opinion*).

Ecology concurs that the existing monitoring well network is sufficient to evaluate the performance of the proposed injections. Ecology recommends re-evaluating the use of emulsified vegetable oil if groundwater monitoring results following injections indicate that vinyl chloride concentrations will not meet the cleanup level within a reasonable restoration timeframe. Injection wells should be designed in a manner to allow for injection of a variety of reagents.

- Electronic submittal of all sampling data into Ecology's [Electronic Environmental Information Management \(EIM\)](#)³ database is a requirement in order to receive a final Ecology opinion for the Site. Please continue to upload sampling data to EIM as it is available. Nicole Masurat (nicole.masurat@ecy.wa.gov) is Ecology's contact and resource on entering data into EIM.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70A.305.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

³ <https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database>

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. See RCW 70A.305.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. See RCW 70A.305.170(6).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/vcp. If you have any questions about this opinion, please contact me by phone at 206-459-6287 or e-mail at david.unruh@ecy.wa.gov.

Sincerely,



David Unruh
Site Manager
Toxics Cleanup Program, NWRO

Enclosures (1): A – Description and Diagrams of the Site

cc: Mike Staton, Landau Associates, Inc. (mstaton@landauinc.com)
Elyssa Dixon, Landau Associates, Inc. (edixon@landauinc.com)

Enclosure A

Description and Diagrams of the Site

Site Description

This section provides Ecology's understanding and interpretation of Site conditions and is the basis for the opinions expressed in the body of the letter.

Site

The Site is defined by releases of the following at 16750 Woodinville-Redmond Rd NE in Woodinville, King County, Washington (**Figure 1, Figure 2**).

- PCE; cis-1,2-DCE; and vinyl chloride into the Soil.
- Vinyl chloride into the Groundwater.

The Site is located on the east side of Woodinville-Redmond Rd NE. It is located on one irregularly shaped parcel totaling 9.76 acres in area with the King County parcel number 092605-9084 (the Property).

Area and Property Description

The Site is located in a commercial area in Woodinville. The Property is currently developed with two warehouse buildings, Building C (16750 Woodinville-Redmond Rd NE; 49,000 square feet) and Building D (16650 Woodinville-Redmond Rd NE; 61,000 square feet; **Figure 2**). According to MTCA, the Site is defined as all areas where contamination has come to be located. Based on Site investigations, the Site includes Building C and the area north and east of Building C.

Use of the surrounding properties include the following:

- North and south: warehouses and office space for utility locating services and a specialty salt manufacturer.
- East: Sammamish River with multi-family residences beyond.
- West: Woodinville-Redmond Road NE with undeveloped land beyond.

Property History and Current Use

The Property was first developed in 1999 with the current buildings. Coit Services, an upholstery and rug cleaning service, operated a dry-cleaning machine in suite C-102 from 1999 to 2007 (**Figure 3**). Building C is currently occupied by three tenants including pump sales and service, rug and upholstery cleaning (Coit Services), and construction services businesses.

Sources of Contamination

The source of PCE; cis-1,2-DCE; and vinyl chloride (collectively HVOCs) contamination at the Site is associated with historical dry-cleaning operations (**Figure 3**). Contamination at the Site was initially found in 2019 as part of a Phase II Environmental Site Assessment. The sources of contamination at the Site appear to correspond to the former location of the dry-cleaning equipment in Suite C-102 and an oil-water separator located to the north of Building C (**Figure 3, Figure 4**).

Physiographic Setting

The Site is located within the Puget Sound Lowland Physiographic Province, a north-south trending structural and topographic depression that is bordered on its west side by the Olympic Mountains, and to the east by the Cascade Mountain foothills. The Puget Sound Lowland is underlain by Tertiary volcanic and sedimentary bedrock characteristic of a fore-arc environment. It has been filled to the present-day land surface with Pleistocene-aged glacial and nonglacial sediments.

Repeated advances and retreats of the continental glaciers that flowed through the area out of Canada more than 10,000 years ago created the low, undulating plains that are characteristic of the Puget Sound Lowland. Current land surfaces reflect the changes that are directly related to the most recent glacial advance and retreat through the region, known as the Vashon Stade of the Fraser Glaciation.

The Site is located on relatively flat ground at an elevation of approximately 40 feet above mean sea level (amsl) in the Sammamish River valley, a floodplain approximately 0.75 miles wide in this area. Immediately to the west of the Property, a highland rises to a maximum elevation of approximately 320 feet amsl.

Surface/Storm Water System

Stormwater runoff on the Property disperses via sheet flow to catch basins which drain to an oil water separator immediately north of Building C, which subsequently drains to a stormwater detention pond northeast of Building C (**Figure 3**). The closest surface water body to the Site is the Sammamish River, located adjacent to the east of the Property.

Ecological Setting

The Property and surrounding properties to the north, south, and west are zoned for industrial use. Land surfaces on the Property are primarily covered by buildings and asphalt and concrete pavement with some small, landscaped areas. A total of approximately 10.5 acres of undeveloped land are located to the west and east of the Property along the river valley slope and the Sammamish River, respectively.

Geology

The [geologic map](https://ngmdb.usgs.gov/Prodesc/proddesc_7467.htm)⁴ of the area indicates that the Site is underlain by younger alluvium. Younger alluvium in this area includes gravels to silts with pebbles and cobbles deposited by the Sammamish River in channels and floodplains. Boring logs for explorations advanced at the Site indicate that the Property is underlain by fill materials from a depth of approximately 2 to 7 feet below ground surface (bgs). Fill materials are underlain by deposits of interbedded sands, sandy silts, and silts to the maximum explored depth of 52 feet bgs, interpreted to be alluvial deposits.

Groundwater

From 2019 to 2024, a total of 19 permanent monitoring wells were installed at the Site in two depth intervals: shallow (MW-1 to MW-17), and deep (DMW-1, DMW-2; **Figure 3**). Wells in the shallow

⁴ https://ngmdb.usgs.gov/Prodesc/proddesc_7467.htm

interval are installed with 15- to 20-foot screens from 3 to 23 feet bgs. Depth to water in shallow wells ranges from 8.70 to 16.54 feet bgs (23.01 to 18.01 feet NAVD88 ⁵). Wells DW-1 and DW-2 are installed with 5-foot screens from 42.5 to 49 feet bgs. Depth to water in deep interval wells ranges from 11.01 to 16.54 feet bgs (20.92 to 19.86 feet NAVD88). Shallow groundwater flow at the Site is oriented to the east-northeast toward the Sammamish River (**Figure 5**).

Water Supply

Drinking water at the Property is supplied by the Woodinville Water District. The Woodinville Water District's water is purchased from the City of Seattle, which in turn sources its water from reservoirs on the Tolt and Cedar Rivers, located approximately 23 miles east and 31 miles southeast of the Site, respectively. The closest 10-year wellhead protection zone is located 3 miles to the northeast of the Site.

Release and Extent of Contamination

Soil.

Subsurface investigations conducted at the Site from 2019 through 2024 have delineated the extent of HVOC contamination in soil at the Site. Soil samples collected from 0 to 20 feet bgs from borings B-11, B-12, GP-4, GP-5, SB-4, DMW-1, and MW-1, in the vicinity of the former dry-cleaning machine, contained cis-1,2-DCE above the Method B cleanup level (**Figure 3**). Additionally, PCE was present above the Method A cleanup level in soil samples collected from 0 to 7 feet bgs from B-11, GP-4, and GP-5. Vinyl chloride was also present above the Method B cleanup level in B-11 at a depth of 10-15 feet bgs. Near the oil-water separator, a soil sample collected from boring B-7 at a depth of 10-15 feet bgs contained cis-1,2-DCE above the Method B cleanup level.

Groundwater.

Groundwater samples collected from temporary and permanent monitoring wells from 2019 to 2023 contained vinyl chloride above the Method B cleanup level protective of surface water. Groundwater samples collected from temporary and permanent monitoring wells B-4, B-11, GP-4, MW-1, and MW-4 in the vicinity and downgradient of the former dry-cleaning machine contained vinyl chloride above the Method B cleanup level (**Figure 4**). Groundwater samples collected from B-7, GP-3, MW-2, MW-8, MW-9, MW-13, MW-14, and MW-15 in the vicinity and downgradient of the oil-water separator also contained vinyl chloride above the Method B cleanup level.

Two additional wells were installed in the northeastern portion of the Site in March 2024 (MW-16 and MW-17). Groundwater samples were collected from the new and existing shallow monitoring wells MW-1 through MW-4, MW-6, MW-7, and MW-14 through MW-17 in April 2024. Results from this event found vinyl chloride exceeded the Method B cleanup level in MW-1, MW-2, MW-4, MW-14, MW-15, and MW-16 (**Figure 4**).

Surface water.

A total of seven surface water samples were collected from the Sammamish River in August 2023 (**Figure 4**). Samples were collected at the midpoint between the thalweg and west bank of the river

⁵ North American Vertical Datum of 1988

near the river bottom using a peristaltic pump. None of the surface water samples contained HVOCs above the laboratory reporting limits and applicable MTCA cleanup levels.

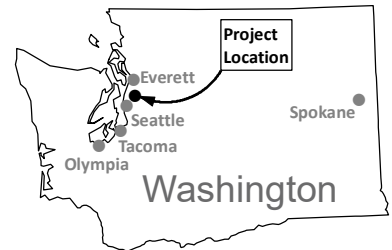
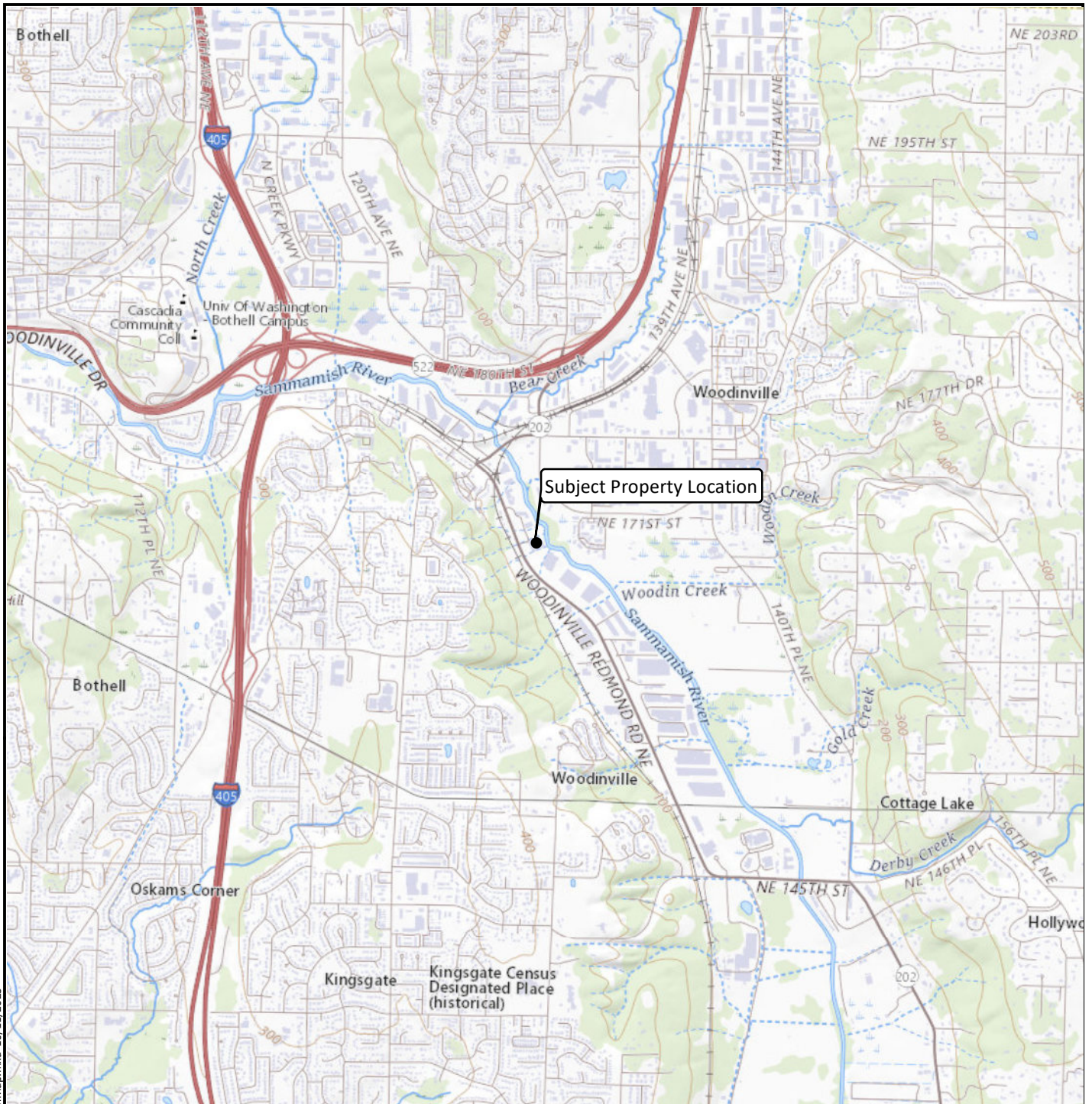
Air.

In December 2021, two soil gas samples, SG-01 and SG-02, were collected from borings B-10 and B-12, respectively (**Figure 6**). Borings were advanced to a depth of 4 feet bgs, and a temporary soil gas probe was installed. Sample SG-02 contained PCE; trichloroethylene (TCE); cis-1,2-DCE; and vinyl chloride above the Method B screening level for unrestricted use.

Seven indoor air samples and one ambient air sample were also collected at the Site in December 2021 (A-01 to A-08; **Figure 6**). With the exception of A-02, none of the samples contained HVOCs above the Method B cleanup levels for unrestricted use. Methylene chloride was detected in A-02 at a concentration of 293 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). This contaminant has not historically been detected in soil or groundwater at the site. Due to the lack of methylene chloride in other media at the Site and the common use of this compound as a cleaning agent, this result likely represents an interference.

An additional indoor air sampling event was conducted in July 2022. Two indoor air samples were collected from the building and one ambient air sample was collected outside to the east of the building (IA-1 and IA-2, AA-1; **Figure 6**). None of these samples contained HVOCs above the laboratory reporting limits and Method B cleanup levels.

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Data Source: Esri.

Enclosure A Figure 1

King County iMap



The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 2/6/2024

Notes:

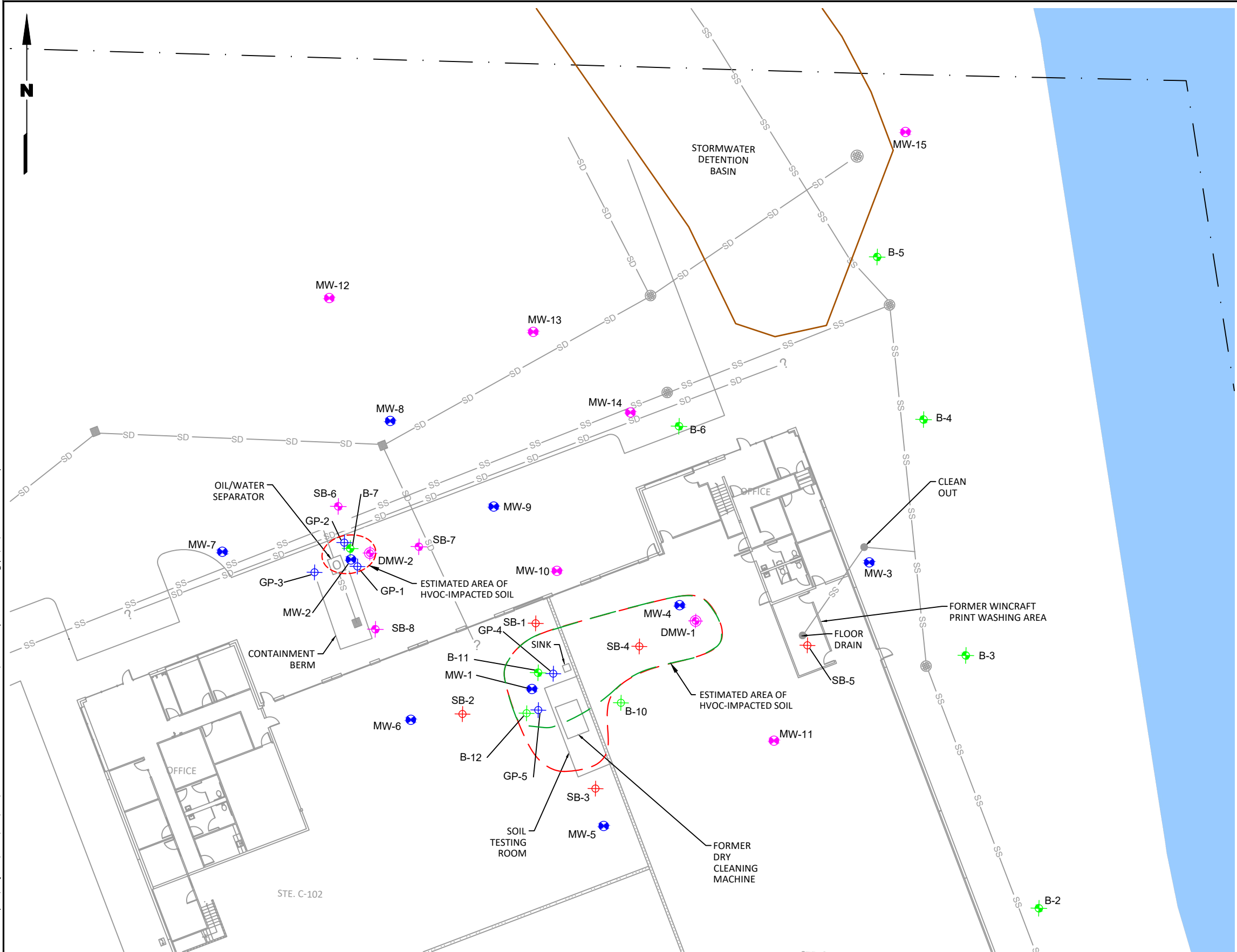
 Parcel 092605-9084 boundary

Enclosure A Figure 2



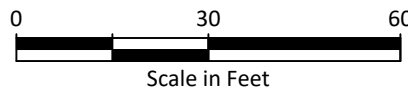
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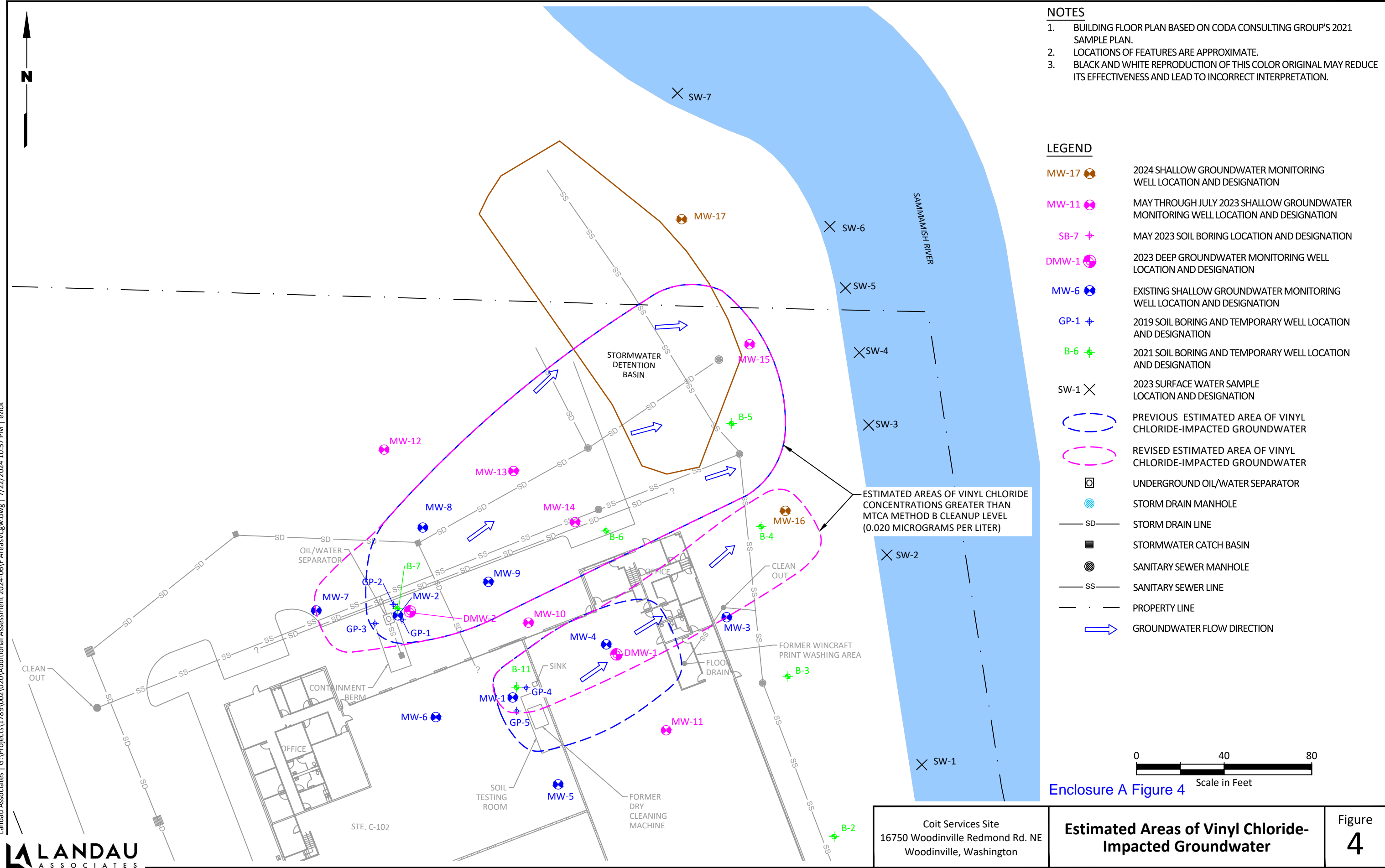


- Notes**
1. BUILDING FLOOR PLAN BASED ON CODA CONSULTING GROUP'S 2021 SAMPLE PLAN.
 2. LOCATIONS OF FEATURES ARE APPROXIMATE.
 3. HVOC = HALOGENATED VOLATILE ORGANIC COMPOUNDS
 4. BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

- Legend**
- SB-7 MAY 2023 SOIL BORING LOCATION AND DESIGNATION
 - MW-11 MAY THROUGH JULY 2023 SHALLOW GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
 - DMW-1 2023 DEEP GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
 - SB-1 APRIL 2022 SOIL BORING LOCATION AND DESIGNATION
 - MW-6 EXISTING SHALLOW GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
 - GP-1 2019 SOIL BORING AND TEMPORARY WELL LOCATION AND DESIGNATION
 - B-6 2021 SOIL BORING AND TEMPORARY WELL LOCATION AND DESIGNATION
 - B-10 2021 SOIL BORING LOCATION AND DESIGNATION
 - UNDERGROUND OIL/WATER SEPARATOR
 - STORM DRAIN MANHOLE
 - SD STORM DRAIN LINE
 - STORMWATER CATCH BASIN
 - SANITARY SEWER MANHOLE
 - SS SANITARY SEWER LINE
 - PROPERTY LINE
 - PREVIOUS ESTIMATED AREA OF HVOC-IMPACTED SOIL
 - REVISED ESTIMATED AREA OF HVOC-IMPACTED SOIL



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NOTES

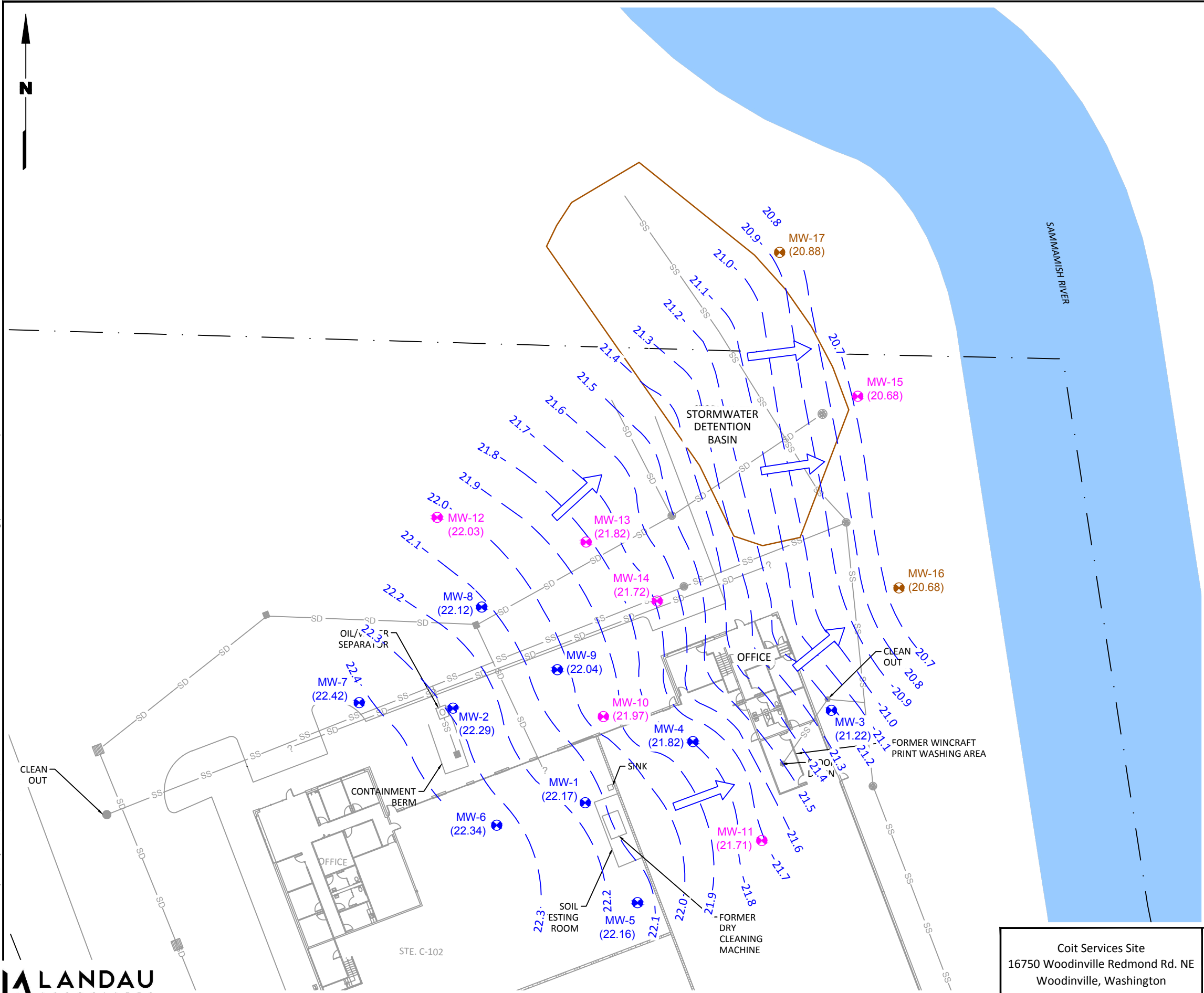
- 1. BUILDING FLOOR PLAN BASED ON CODA CONSULTING GROUP'S 2021 SAMPLE PLAN.
- 2. LOCATIONS OF FEATURES ARE APPROXIMATE.
- 3. BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

LEGEND

- MW-17 2024 SHALLOW GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-11 MAY THROUGH JULY 2023 SHALLOW GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- SB-7 MAY 2023 SOIL BORING LOCATION AND DESIGNATION
- DMW-1 2023 DEEP GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-6 EXISTING SHALLOW GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- GP-1 2019 SOIL BORING AND TEMPORARY WELL LOCATION AND DESIGNATION
- B-6 2021 SOIL BORING AND TEMPORARY WELL LOCATION AND DESIGNATION
- SW-1 2023 SURFACE WATER SAMPLE LOCATION AND DESIGNATION
- PREVIOUS ESTIMATED AREA OF VINYL CHLORIDE-IMPACTED GROUNDWATER
- REVISED ESTIMATED AREA OF VINYL CHLORIDE-IMPACTED GROUNDWATER
- UNDERGROUND OIL/WATER SEPARATOR
- STORM DRAIN MANHOLE
- SD STORM DRAIN LINE
- STORMWATER CATCH BASIN
- SANITARY SEWER MANHOLE
- SS SANITARY SEWER LINE
- PROPERTY LINE
- GROUNDWATER FLOW DIRECTION

Enclosure A Figure 4

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Notes

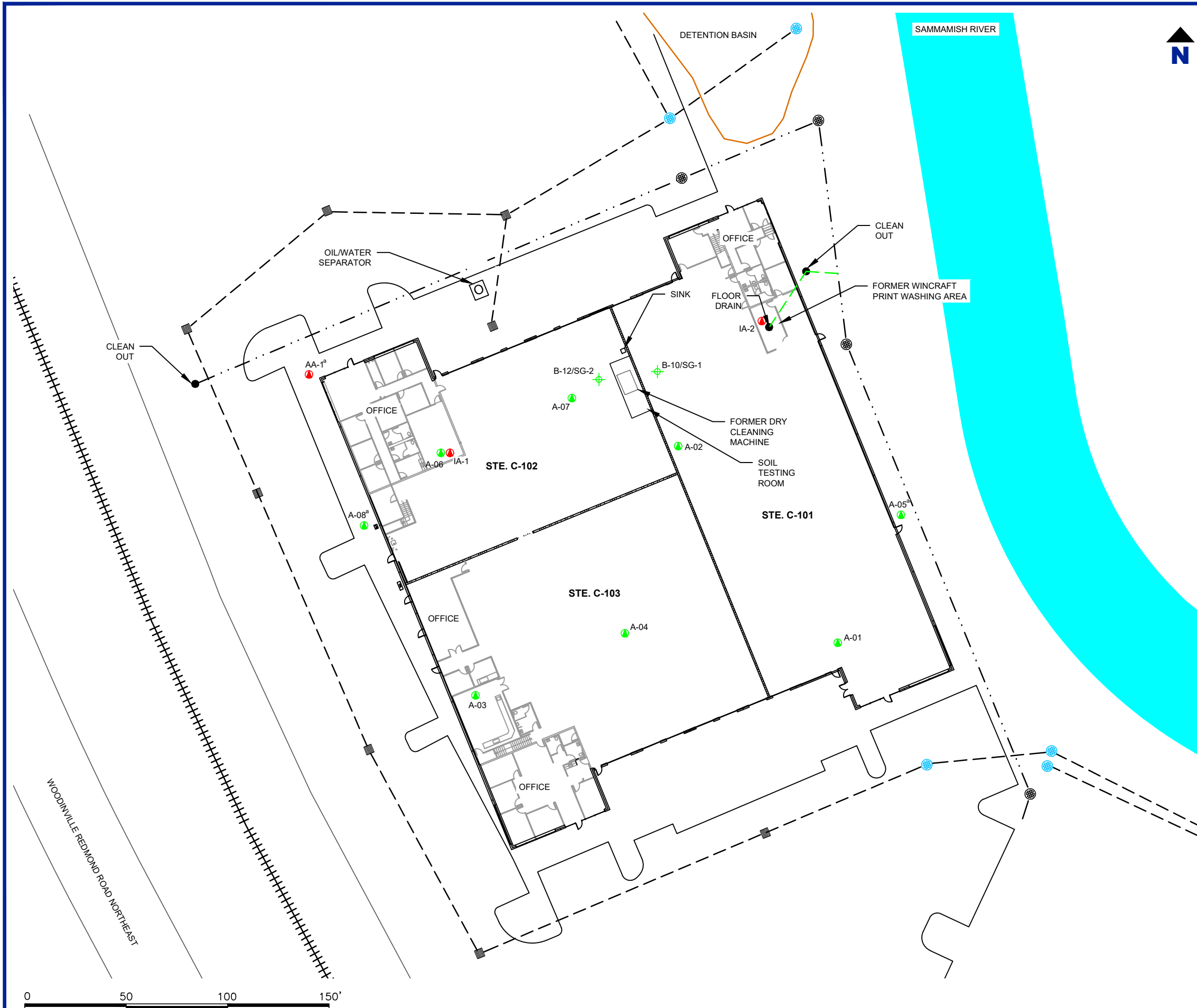
- BUILDING FLOOR PLAN BASED ON CODA CONSULTING GROUP'S 2021 SAMPLE PLAN.
- LOCATIONS OF FEATURES ARE APPROXIMATE.
- BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.

LEGEND

MW-17	2024 SHALLOW GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
MW-11	MAY THROUGH JULY 2023 SHALLOW GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
MW-6	EXISTING SHALLOW GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
[Symbol]	UNDERGROUND OIL/WATER SEPARATOR
[Symbol]	STORM DRAIN MANHOLE
SD	STORM DRAIN LINE
[Symbol]	STORMWATER CATCH BASIN
[Symbol]	SANITARY SEWER MANHOLE
SS	SANITARY SEWER LINE
- - -	PROPERTY LINE
(20.68)	GROUNDWATER ELEVATION ON APRIL 2, 2024 (IN FEET ABOVE NAVD88 DATUM)
20.8 -	GROUNDWATER CONTOUR AND ELEVATION (IN FEET ABOVE NAVD88 DATUM)
[Arrow]	GENERAL GROUNDWATER FLOW DIRECTION

Enclosure A Figure 5

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NOTES
1) BUILDING FLOOR PLAN BASED ON CODA CONSULTING GROUP'S 2021 SAMPLE PLAN.
2) LOCATIONS OF FEATURES ARE APPROXIMATE.
3) * = BACKGROUND AMBIENT AIR SAMPLE LOCATION

LEGEND

IA-1	2022 INDOOR AIR SAMPLE LOCATION AND DESIGNATION
A-01	2021 INDOOR AIR SAMPLE LOCATION AND DESIGNATION
B-10/SG-1	2021 SOIL BORING AND SOIL VAPOR SAMPLE LOCATION AND DESIGNATION
	UNDERGROUND OIL/WATER SEPARATOR
	STORM DRAIN MANHOLE
	STORM DRAIN LINE
	STORMWATER CATCH BASIN
	SANITARY SEWER MANHOLE
	SANITARY SEWER LINE
	SIDE SEWER/DRAIN LINE
	RAILROAD TRACKS

Enclosure A Figure 6

BUILDING C
WOODINVILLE WEST BUSINESS PARK
16750 WOODINVILLE REDMOND RD. NE
WOODINVILLE, WASHINGTON

INDOOR AIR AND SOIL VAPOR SAMPLE LOCATIONS

Date	February 17, 2023	Scale	AS SHOWN	Drawing No.	3
File Name	01-03	Project No.	101.20841.00001		