

August 28, 2024

**AECOM No. 60701804**

Thomas Praisewater  
Cleanup Project Manager  
Toxics Cleanup Program  
PO Box 47775  
Olympia, Washington 98504-7775

**Subject: Revised Remedial Investigation Work Plan Amendment  
Former Chevron Bulk Terminal 1001348, Facility/Site ID 1234, Cleanup Site ID 3762  
1656 E J St., Tacoma, Pierce County, WA**

Dear Mr. Praisewater:

On behalf of Chevron Environmental Management Company (CEMC), AECOM Technical Services, Inc. (AECOM) has prepared this *Revised Remedial Investigation (RI) Work Plan Amendment* detailing proposed modifications to the previously approved RI Work Plan<sup>1</sup> at the Former Chevron Bulk Terminal (Property) in Tacoma, Washington. The former bulk terminal is under an Agreed Order (No. DE7111<sup>2</sup>) between the State of Washington Department of Ecology (Ecology) and Chevron U.S.A. Inc., in accordance with requirements set forth in Washington Administrative Code (WAC) 173-340-350, to investigate soil and groundwater conditions affected by previous Property activities. The 'Site' includes both the Property and areas off-Property which have been impacted.

As discussed during the meeting on August 19, 2024, with Ecology, CEMC and AECOM, this work plan amendment has been revised to provide two alternative options for the additional subsurface investigation needed: Option 1 assumes obtaining the access agreement with BNSF, and Option 2 assumes no access agreement with BNSF. The two options have been proposed due to the length of time elapsed thus far in attempting to obtain the access agreement with BNSF and in the event that it cannot be executed in a reasonable timeframe.

## 1. Site Description

The Property is located in an industrial area at 1656 East J Street in Tacoma, Washington (**Figure 1**), approximately 2,200 feet east of the Thea Foss Waterway and approximately 2,000 feet west of the Puyallup River, near the Commencement Bay Nearshore/Tidal flats Superfund Site and approximately 1,500 feet northwest of a former coal gasification plant within the Tacoma Tar Pits study area (**Figure 1**) that operated from 1934 until 1956<sup>3,4</sup>. The Property is bounded to the north by East F Street, to the east by East J Street, to the south by a Burlington Northern Santa Fe (BNSF) rail siding and undeveloped property, and to the west by a rail siding on the

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<sup>1</sup> Leidos. 2020. Remedial Investigation Work Plan Addendum. Leidos Engineering, LLC. San Ramon, California. January 30.

<sup>2</sup> Ecology. 2009. Agreed Order No. DE 7111. State of Washington Department of Ecology

<sup>3</sup> GeoEngineers. 1989. Report of Geotechnical Services, Subsurface Contamination Study, Tacoma Bulk Fuel Terminal. GeoEngineers, Inc. Bellevue, Washington. March 22.

<sup>4</sup> SAIC. 2010. Remedial Investigation Work Plan. Science Applications International Corporation. Bothell, Washington. June 4.

Steeler Inc. (Steeler) property (**Figure 2A**). The Property is in Township 20N, Range 3 East, Section 4 SE. These adjacent properties are zoned for industrial use<sup>5</sup>.

The 3.5-acre parcel (Parcel Number 03200440002) is presently developed with a 2,100 square foot office building, a Quonset hut structure, and paved parking in the eastern half of the Property. The western half of the Property is vacant and unpaved (**Figure 2B**). Many of the former terminal foundation features (e.g., concrete slabs and footings) are still evident on surface grade across the Property (**Figure 2B**). A mobile office trailer and several shipping containers are also present on the Property. The Property is presently a vehicle and bus parking facility operated by GEO Group through the Correctional Services Corporation, the property owner, which operates the Northwest Detention Center across East J Street.

## 2. Proposed Activities

Several of the additional site characterization elements proposed in the Ecology-approved 2020 RI Work Plan<sup>1</sup> have not been able to be implemented due to various logistical and access issues. The proposed scope of the 2020 RI field work included additional shallow and deep monitoring wells and soil borings as shown on **Figure 3**. Based on AECOM's assessment of the conceptual site model (CSM<sup>6</sup>) and recent groundwater data through 2023 which was submitted with the recent Updated Draft RI (April 2024) and also shown on the attached **Figure 4A** and **Figure 4B**, revisions to the uncompleted 2020 investigation scope are now proposed to address identified data gaps and prior investigation objectives as summarized below.

### 2.1 Groundwater

The extent of petroleum hydrocarbons remaining in groundwater has not been fully delineated within the perched groundwater-bearing unit or the sand aquifer. Seven nested well pairs were previously proposed but not installed, including: northwest and northeast of the Richlite property (MW-40/D-28 and MW-35/D-23, respectively), to the south on the BNSF property (MW-27/D-11 and MW-28/D-16), and to the northwest adjacent to the waterway (MW-33/D-21). **Figure 3** shows the previously proposed groundwater monitoring well locations<sup>1</sup>. However, based on the recent groundwater data as well as delays obtaining the BNSF access agreement, the following modifications to the previous work plan amendment are proposed and are shown on **Figure 5A** and **Figure 5B**.

#### 2.1.1 Option 1: BNSF Access Agreement Obtained

In receiving the BNSF access agreement, the following will be completed (**Figure 5A**):

- Proceed with nested wells MW-28/D-16 on BNSF property but move slightly further to the north of the original position.
- Eliminate proposed nested wells MW-35/D-23 as 2023 groundwater data indicated that the limits of the plume have been delineated to the northeast by MW-31/D-19 and MW-36/D-24 (same for either option).

<sup>5</sup> PublicGIS. 2023. Pierce County PublicGIS Map Applications. Pierce County Finance Department. Tacoma, Washington. <https://matterhornwab.co.pierce.wa.us/publicgis/>. Visited October 16.

<sup>6</sup> The **Updated Draft Remedial Investigation and Data Gap Report** was submitted to Ecology on April 22, 2024.

- Eliminate shallow monitoring well MW-33 from the nested well pair northwest of the property as the plume has been defined to the west by MW-23<sup>7</sup> and MW-34. Proceed with deeper well D-21 in the parcel containing Wheeler-Osgood waterway along the eastern border.
- Move nested wells MW-27/D-11 approximately 100 to 200 feet to the west onto the Steeler property to better define the southwestern limits of the plume and eliminate the need to have additional wells on BNSF property (same for either option).
- Add another set of nested wells (MW-33/D-23) on the Steeler property to the west of MW-25/D-10 for further delineation in the western direction (same for either option).

### 2.1.2 Option 2: No BNSF Access Agreement

If the BNSF access agreement is not obtained in a reasonable timeframe, the above option will be modified as follows (**Figure 5B**):

- Move nested wells MW-28/D-16 from the BNSF property to the southeast corner of the Property for plume delineation and to facilitate easier access for future sampling.
- Downgradient nested wells MW-41/D-21 will not be advanced. These wells will be advanced at a later date if access is obtained, and the wells are still required.

## 2.2 Soil

Additional delineation of residual petroleum hydrocarbons in soil to the south (BNSF property) was proposed and is contingent on obtaining an access agreement from BNSF, which has not been able to be executed to date. Nine additional soil borings (OB-9 through OB-17) were proposed along the former rail spur and on the BNSF property (**Figure 3**). AECOM proposes the initial advancement of OB-9 through OB-12 only. If soil impacts are not apparent in the initial four borings, no additional borings will be warranted. However, if impacts are apparent (e.g., hydrocarbon odors, sheen and/or above background photoionization detector (PID) readings), then one additional step-out soil boring will be advanced for each of the initial four soil borings where needed. The revised initial boring locations are shown on **Figure 5A**. The attached **Figure 6** presents the most recent soil delineation contours for TPH concentrations reported above the applicable Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs).

If access is not obtained for BNSF property, these borings will be advanced at a later date if/when access is obtained.

## 3. Schedule

Following Ecology approval of the *Revised RI Work Plan Amendment* the additional drilling and sampling start date will be confirmed. If delays obtaining the BNSF access agreement continue, then Option 2 will be initiated. If there are no further comments from BNSF, it is anticipated that the access agreement could be fully executed by early September. As of now, the work is

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<sup>7</sup> During the second quarter sampling event of 2024, well MW-23 was reported with exceedances of TPH-d and TPH-g. Prior to this event, well MW-23 had six consecutive sampling events with non-detect or low J-value estimated detections. AECOM will confirm with Ecology after the third quarter analytical data regarding if this well should still be installed. If the exceedances are repeated, the shallow well will be installed as originally planned as MW-41.

tentatively scheduled to start on **September 23, 2024**. The following provides the project schedule based on current tentative start date:

- **September 3 to 16** – Mark drilling locations and complete utility locates.
- **September 23 to October 4** – Complete additional subsurface investigation.
- **October 7 to 11** – Conduct monitoring well development and elevation survey for new wells.
- **October 28 to November 1** – Conduct Q4 groundwater monitoring event including new wells.
- **December 2024** – Complete 2024 Q4/Annual Report including new well data.
- **January 2025** – Conduct Q1 groundwater monitoring event.
- Pending results of new wells and completion of delineation, prepare final Draft RI/FS Report by **60 days** after receipt of the Q1 2025 sampling event results (**April 2025**).

This schedule will be updated and/or confirmed upon completion of the planned additional subsurface investigation and pending completion of delineation.

Please reach out to Brad Wynne at 214-971-1829 or via email below, if you have any additional questions, comments, or concerns.

Sincerely,



Brad Wynne, PMP  
Project Manager  
[bradley.wynne@aecom.com](mailto:bradley.wynne@aecom.com)



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Geologist III  
[tess.lydick@aecom.com](mailto:tess.lydick@aecom.com)

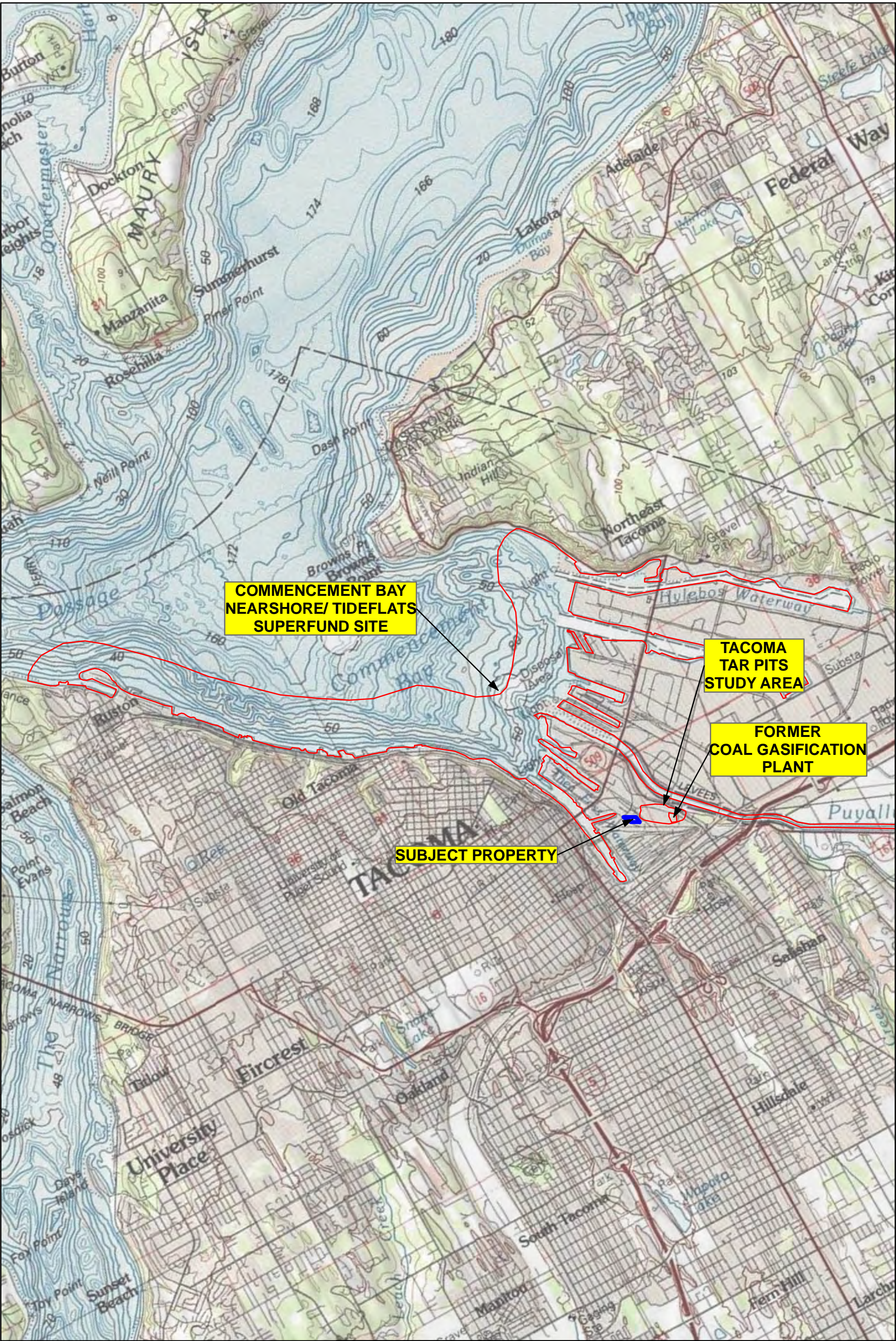
cc via email: James Kiernan – CEMC  
Marian Abbett – Ecology

## Figures

Figure 1	Site Location Map
Figure 2A	Site Vicinity Map
Figure 2B	Site Plan
Figure 3	Leidos 2020 Work Plan Uncompleted Proposed Additional Monitoring Well and Soil Boring Locations
Figure 4A	2023 Groundwater Analytical Data – Perched Groundwater Bearing Unit
Figure 4B	2023 Groundwater Analytical Data – Sand Aquifer
Figure 5A	AECOM 2024 Revised Proposed Additional Monitoring Well and Soil Boring Locations with BNSF Access Agreement
Figure 5B	AECOM 2024 Revised Proposed Additional Monitoring Well and Soil Boring Locations without BNSF Access Agreement
Figure 6	2010 – 2021 Soil Sample/Boring Locations and TPH Distribution

## Figures



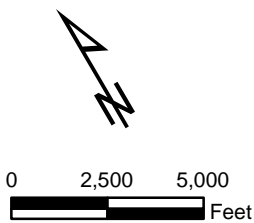


COMMENCEMENT BAY  
NEARSHORE/ TIDEFLATS  
SUPERFUND SITE

TACOMA  
TAR PITS  
STUDY AREA

FORMER  
COAL GASIFICATION  
PLANT

SUBJECT PROPERTY



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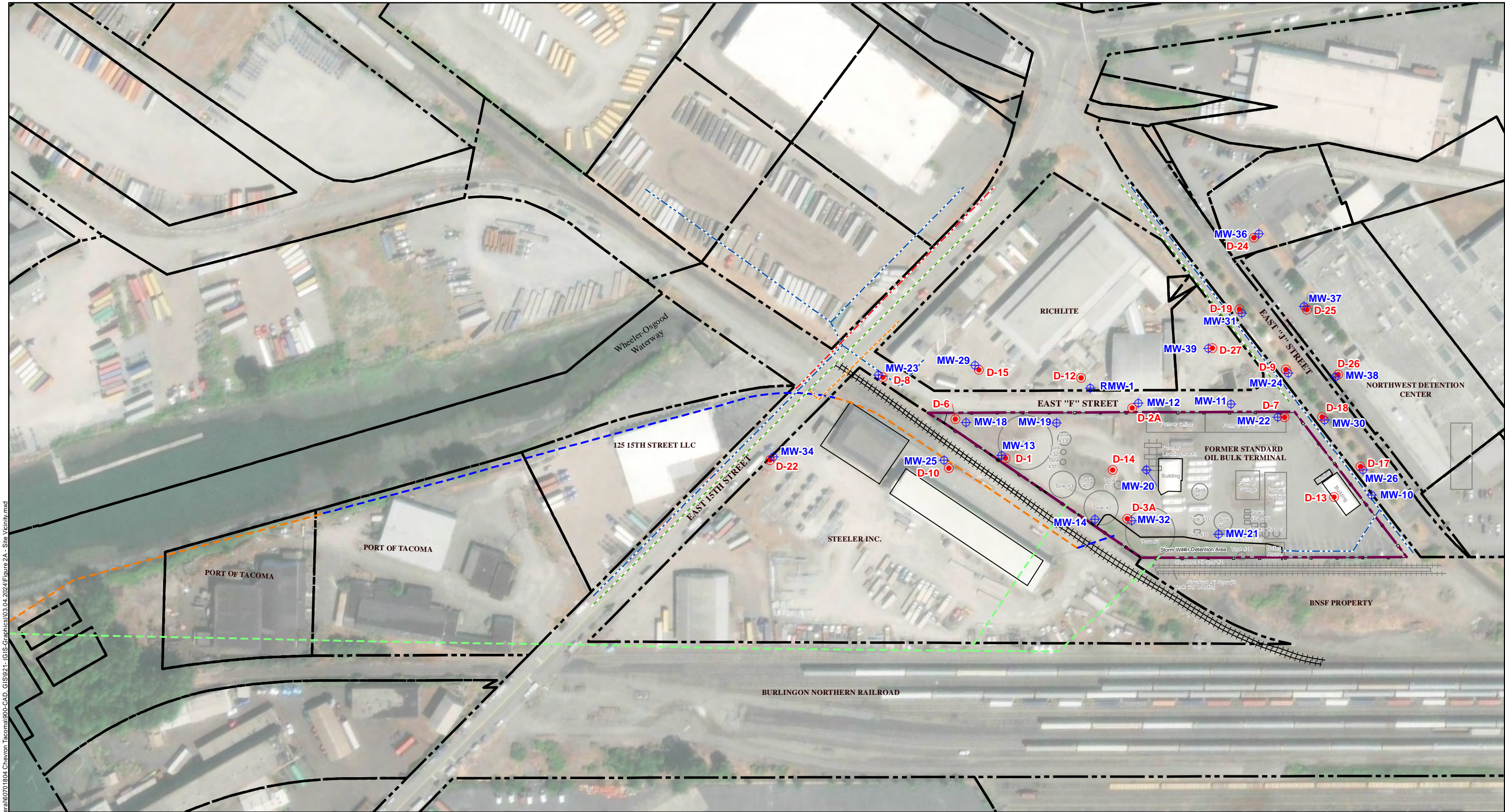
Former Chevron Bulk Terminal  
Facility No. 1001348  
1656 East J Street  
Tacoma, Washington

Figure 1  
Site Location Map

Date: May 2024

Project No.: 60701804

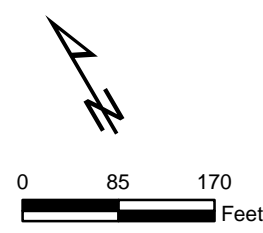




C:\Users\lazar\AECOM\Chevron - Legacy PNW - General\60701804 Chevron Tacoma\100-CAD\_GIS\921- GIS-Graphics\103\_04\_2024\Figure 2A - Site Vicinity.mxd

**LEGEND**

- |  |   |  |  |
|--|---|--|--|
|  | Gas Line  |  | Sand Aquifer Monitoring Well                     |
|  | Overhead Line   |  | Perched Groundwater-bearing Unit Monitoring Well |
|  | Sanitary Sewer Line                                     |  |  |
|  | Storm Sewer Line  |  |  |
|  | Former Pipeline Shown in 1921 Plan; Disposition Unknown |  |  |
|  | Former Pipeline Shown in 1988 Plan; Removed             |  |  |
|  | Former Pipeline Shown in 1988 Plan; Left in Place       |  |  |



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Former Standard Oil Bulk Terminal/  
Chevron Facility No. 1001348  
1656 East J Street  
Tacoma, Washington

Figure 2A  
Site Vicinity Map

Date: May 2024

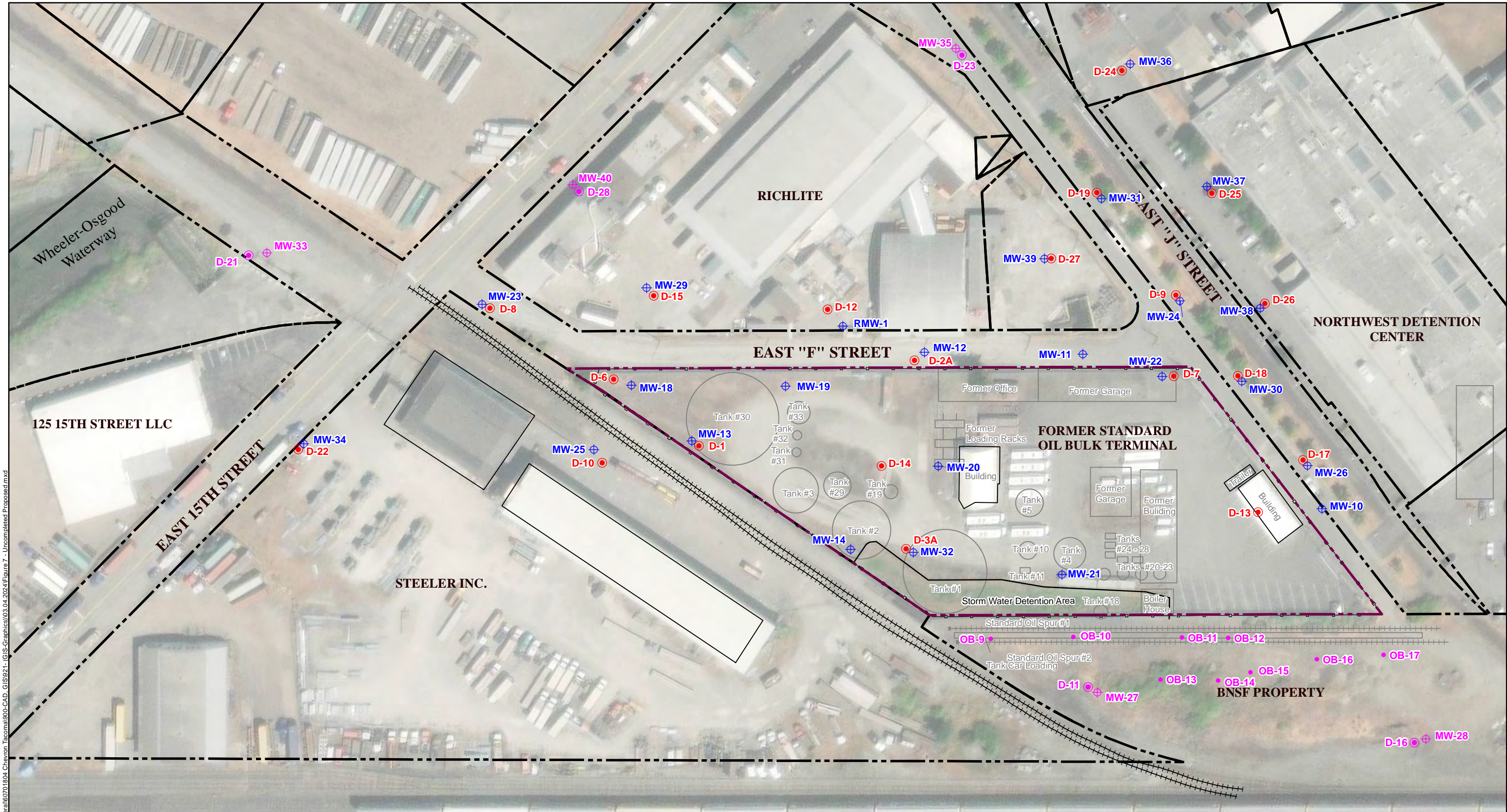
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<b>LEGEND</b> <div><div></div> Former Above-Ground Storage Tanks, Buildings, and Structures</div> <div><div></div> Current Buildings and Structures</div> <div><div></div> Parcel Boundary</div> <div><div></div> Property Boundary</div>	<div><div>D-12</div> Sand Aquifer Monitoring Well</div> <div><div>MW-25</div> Perched Groundwater-bearing Unit Monitoring Well</div> <div><div></div> Sanitary Sewer Line</div> <div><div></div> Storm Sewer Line</div> <div><div></div> Former Pipeline Shown in 1921 Plan; Disposition Unknown</div> <div><div></div> Former Pipeline Shown in 1988 Plan; Removed</div> <div><div></div> Former Pipeline Shown in 1988 Plan; Left in Place</div>	<div><div><b>AECOM</b></div><div>Former Standard Oil Bulk Terminal/ Chevron Facility No. 1001348 1656 East J Street Tacoma, Washington</div></div>	<div>Figure 2B Site Plan</div> <div><div>Date: May 2024</div><div>Project No.: 60701804</div></div>
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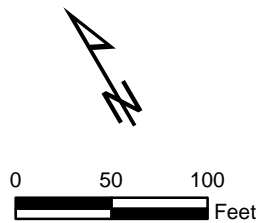
C:\Users\Lazar\AECOM\Chevron - General\60701804 Chevron Tacoma\600-CAD\_GIS\921- (GIS-Graphics)\03\_04\_2024\Figure 7 - Uncompleted Proposed.mxd

LEGEND

- Former Above-Ground Storage Tanks, Buildings, and Structures
- Current Buildings and Structures
- Parcel Boundary
- Property Boundary

Note :  
Utilities approximate based on 2016 Historic Figure

- D-12 Sand Aquifer Monitoring Well
- MW-25 Perched Groundwater-bearing Unit Monitoring Well
- MW-33 Proposed Shallow Aquifer Monitoring Well Location
- D-21 Proposed Deep Aquifer Monitoring Well Location
- OB-10 Proposed Soil Boring Location



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Former Standard Oil Bulk Terminal/  
Chevron Facility No. 1001348  
1656 East J Street  
Tacoma, Washington

Figure 3  
Leidos 2020 Work Plan  
Uncompleted Proposed Additional  
Monitoring Well and  
Soil Boring Locations

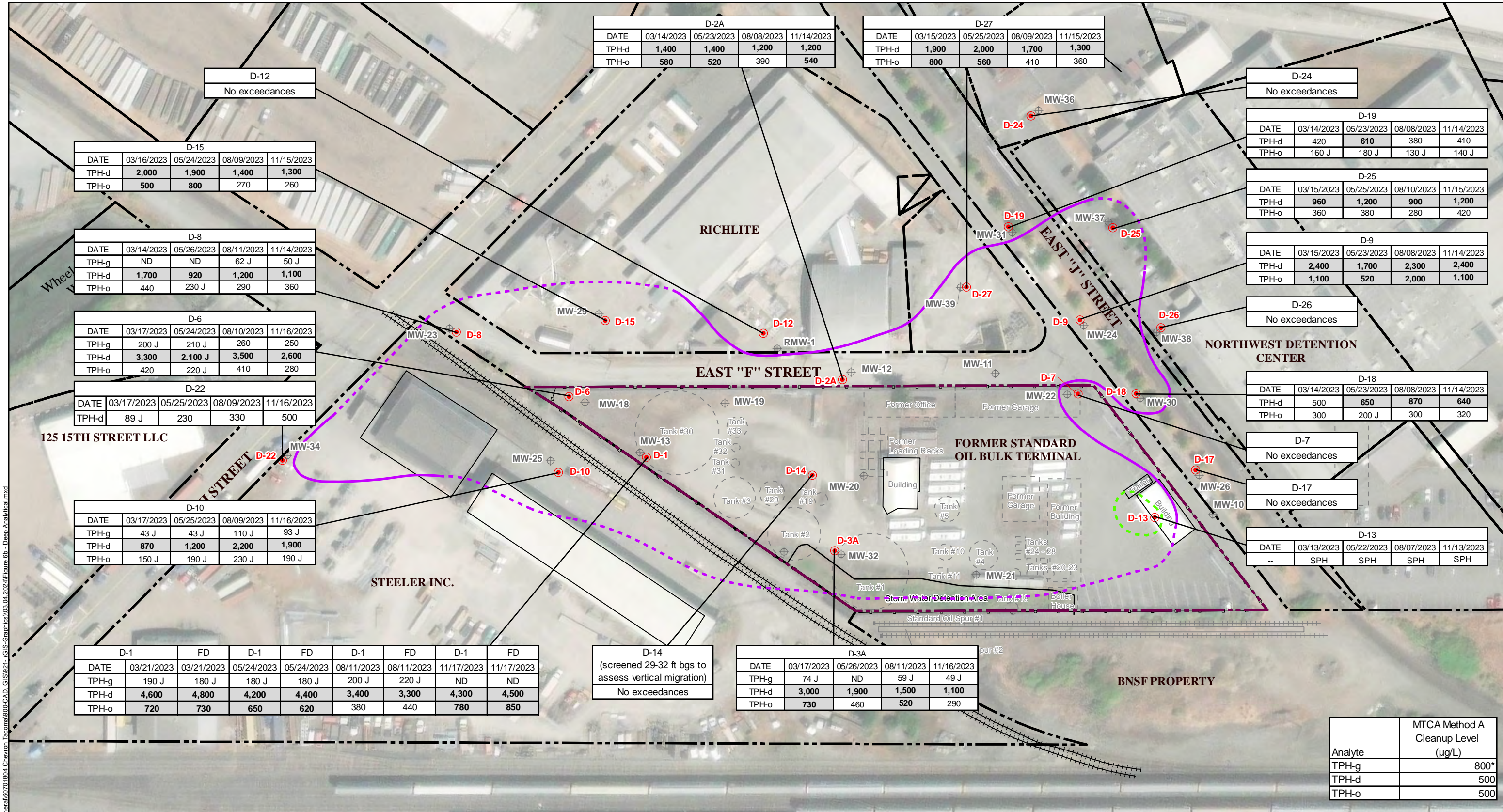
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Project No.: 60701804

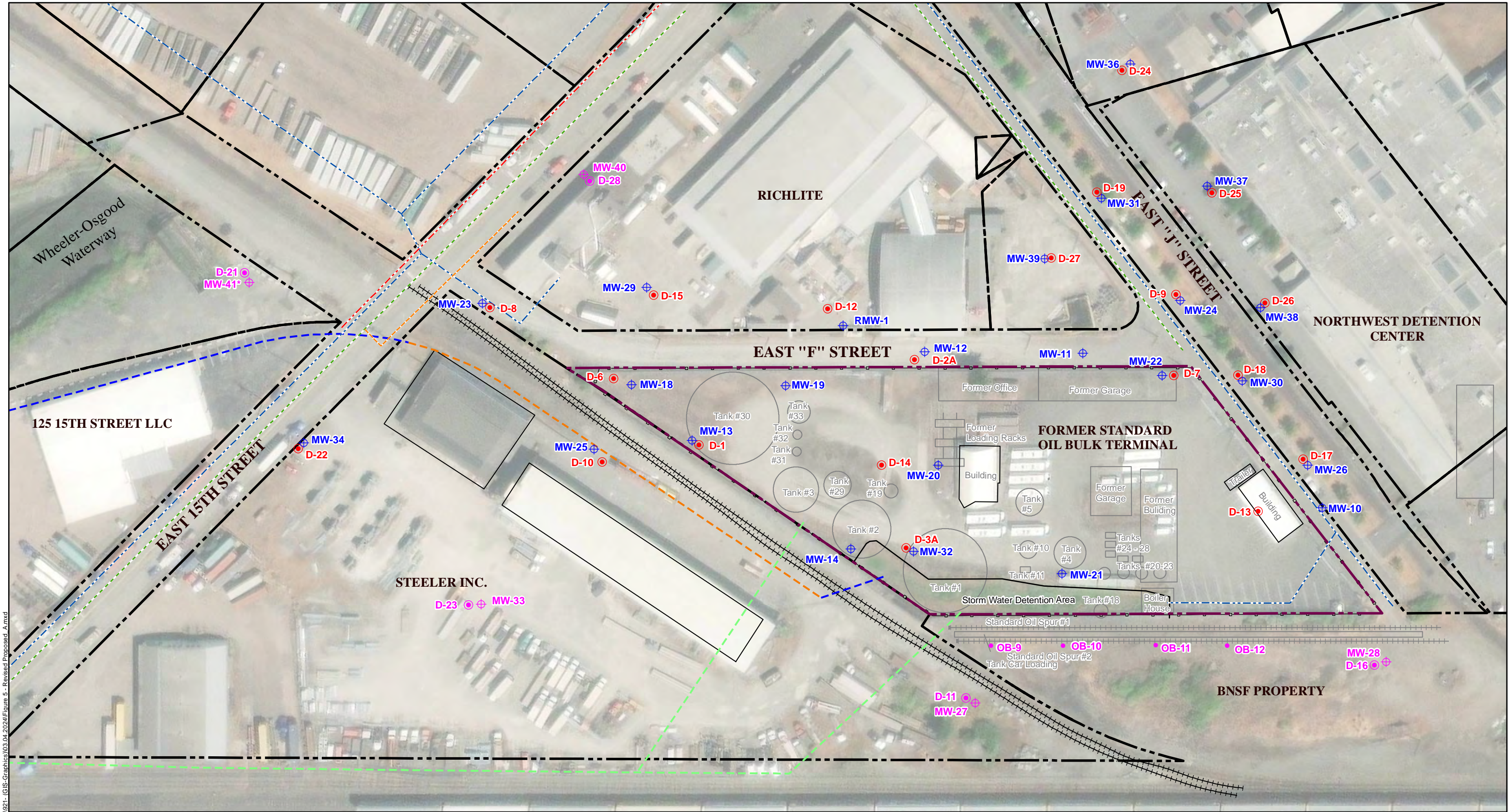








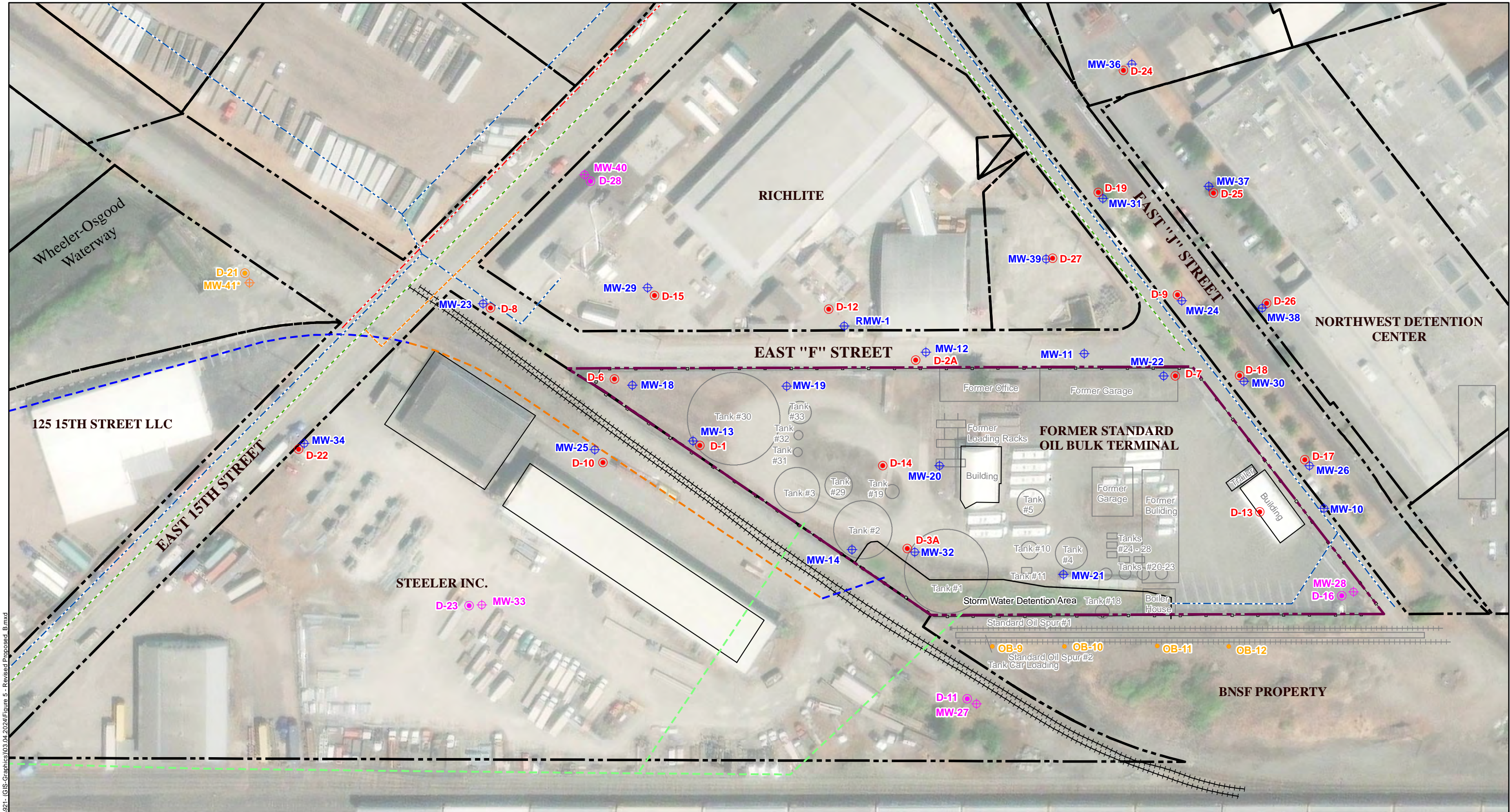




C:\Users\borescue\OneDrive - AECOM\900-CAD\_GIS\921- (GIS Graphics)\03.04.2024\Figure 5 - Revised Proposed A.mxd

<b>LEGEND</b>				<b>AECOM</b>		Figure 5A AECOM 2024 Revised Proposed Additional Monitoring Well and Soil Boring Locations with BNSF Access Agreement	
Former Above-Ground Storage Tanks, Buildings, and Structures		Sand Aquifer Monitoring Well		Former Standard Oil Bulk Terminal/ Chevron Facility No. 1001348 1656 East J Street Tacoma, Washington			
Current Buildings and Structures		Perched Groundwater-bearing Unit Monitoring Well				Date: August 2024	
Parcel Boundary		Proposed Shallow Aquifer Monitoring Well Location				Project No.: 60701804	
Parcel Boundary		Proposed Deep Aquifer Monitoring Well Location					
Note : Utilities approximate based on 2016 Historic Figure		OB-10 • Proposed Soil Boring Location					
		If MW-23 has exceedance of TPH-d and TPH-g during 3Q2024 Groundwater Sampling Event					
		Gas Line					
		Overhead Line					
		Sanitary Sewer Line					
		Storm Sewer Line					
		Former Pipeline Shown in 1921 Plan; Disposition Unknown					
		Former Pipeline Shown in 1988 Plan; Removed					
		Former Pipeline Shown in 1988 Plan; Left in Place					





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LEGEND

- Former Above-Ground Storage Tanks, Buildings, and Structures
- Current Buildings and Structures
- Parcel Boundary
- Parcel Boundary
- Note : Utilities approximate based on 2016 Historic Figure

- D-12 Sand Aquifer Monitoring Well
- MW-25 Perched Groundwater-bearing Unit Monitoring Well
- MW-33 Proposed Shallow Aquifer Monitoring Well Location
- D-21 Proposed Deep Aquifer Monitoring Well Location
- OB-10 Proposed Soil Boring Location
- Pending Access Agreement from BNSF
- If MW-23 has exceedance of TPH-d and TPH-g during 3Q2024 Groundwater Sampling Event

- Gas Line
- Overhead Line
- Sanitary Sewer Line
- Storm Sewer Line
- Former Pipeline Shown in 1921 Plan; Disposition Unknown
- Former Pipeline Shown in 1988 Plan; Removed
- Former Pipeline Shown in 1988 Plan; Left in Place



0 50 100 Feet

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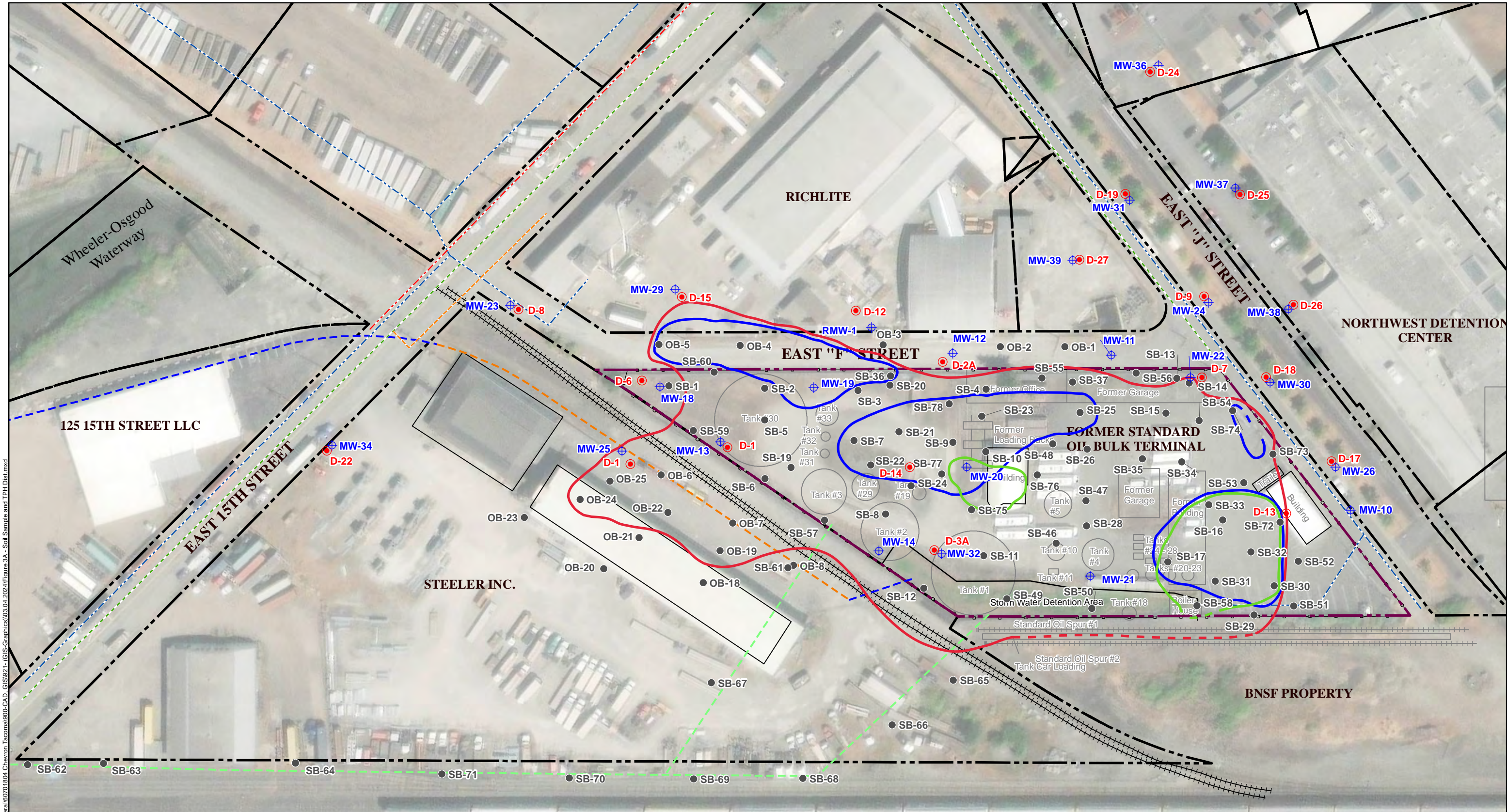
Former Standard Oil Bulk Terminal/  
Chevron Facility No. 1001348  
1656 East J Street  
Tacoma, Washington

Figure 5B  
AECOM 2024 Revised Proposed  
Additional Monitoring Well  
and Soil Boring Locations  
without BNSF Access Agreement

Date: August 2024

Project No.: 60701804





C:\Users\lazar\AECOM\Chevron - General\60701804 Chevron Tacoma\100-CAD\_GIS\921L\_GIS\Graphics\103\_04\_2024\Figure 6A - Soil Sample and TPH Dist.mxd

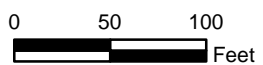
**LEGEND**

- Former Above-Ground Storage Tanks, Buildings, and Structures
- Current Buildings and Structures
- Parcel Boundary
- Property Boundary
- D-12 Sand Aquifer Monitoring Well
- MW-25 Perched Groundwater-bearing Unit Monitoring Well

- OB-1 Soil Boring Location (2019-2021)
- SB-1 Completed Soil Boring Location (2010-2013)
- Gasoline-range Total Petroleum Hydrocarbons (dashed where inferred) Above Method A CULs
- Diesel-range Total Petroleum Hydrocarbons (dashed where inferred) Above Method A CULs
- Oil-range Total Petroleum Hydrocarbons (dashed where inferred) Above Method A CULs
- Former Pipeline Shown in 1921 Plan; Disposition Unknown
- Former Pipeline Shown in 1988 Plan; Removed
- Former Pipeline Shown in 1988 Plan; Left in Place

Notes:  
CUL = Cleanup Level

- Gas Line
- Overhead Line
- Sanitary Sewer Line
- Storm Sewer Line



Former Standard Oil Bulk Terminal/  
Chevron Facility No. 1001348  
1656 East J Street  
Tacoma, Washington

Figure 6  
2010 - 2021 Soil Sample/Boring Locations  
and TPH Distribution

Date: May 2024

Project No.: 60701804