

# Robinson Terminal North Demolition and Grading Meeting



05/25/2016



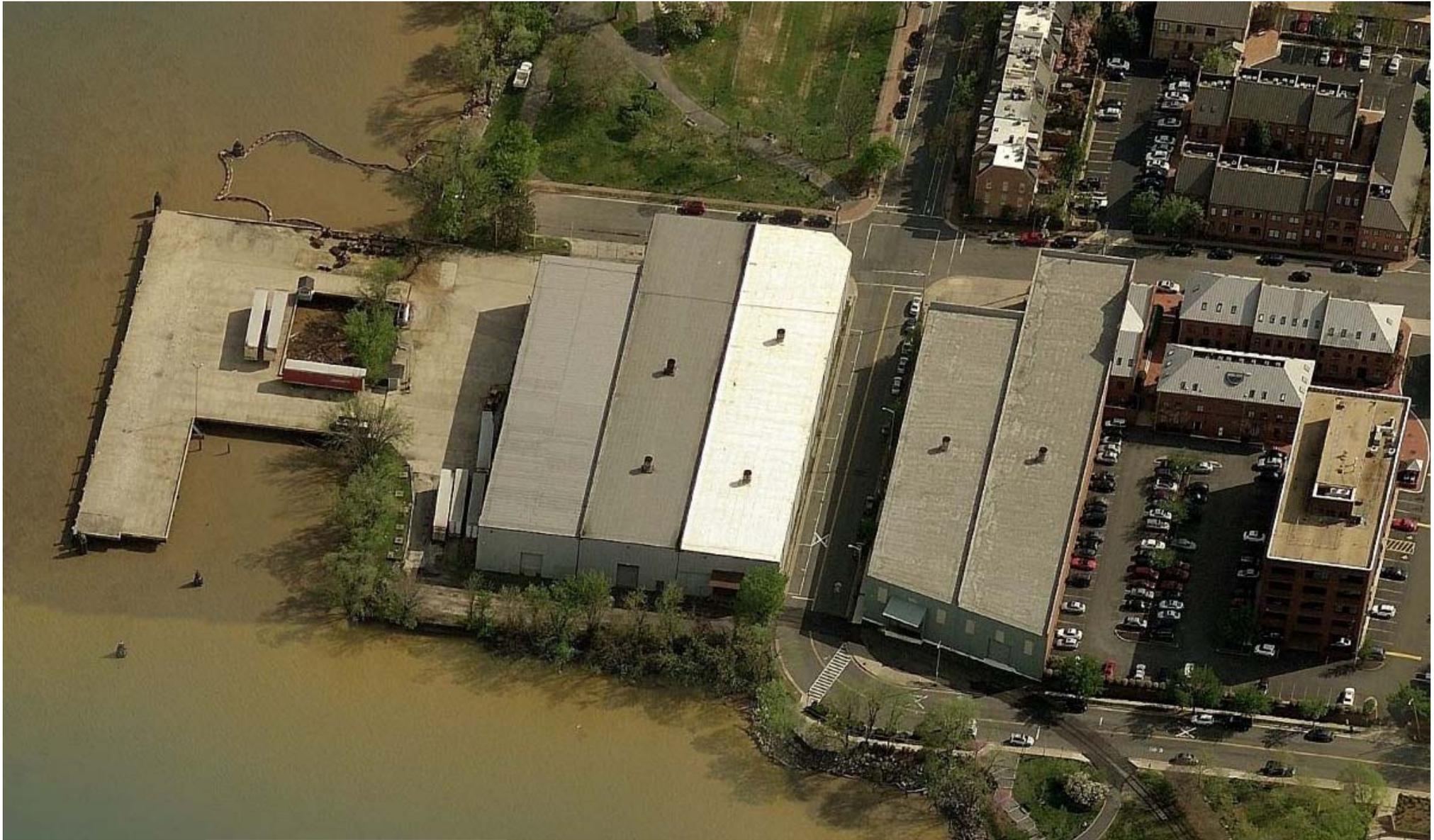
# Existing Conditions



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05/25/2016



# Development Process and Timeline

1. DSUP Approval – October 2015
2. Closed on the Property – December 2015
3. Processing Demolition, Grading and Final Site Plan – Spring 2016
4. Anticipated Issuance of Demolition and Grading and Haul Route Permits – June 2016
5. Demolition and Grading Work Begins – June 2016
6. Environmental Characterization – Summer 2016
7. FEMA Approval of New Grading – Fall / Winter 2016
8. Develop Health and Safety Plan and Remedial Action Work Plan – Fall 2016
9. Final Site Plan Released – Fall 2016
10. Second Community Meeting on Environmental Results and Plan – Fall 2016
11. Construction Begins – First Quarter 2017

# Demolition and Grading Process

1. Permits Issued June 2016; work to begin shortly after permits are issued
2. Union Street will be closed and fencing installed
3. Assembly of equipment – 2 week
4. Demolition of buildings – 6-8 weeks
5. Grading site with barge fill – 6-8 weeks
6. Existing concrete building slabs will remain in place with fill on top

# Demolition and Grading Schedule

<u>SCOPE DESCRIPTION</u>	<u>ANTICIPATED START DATE</u>	<u>ANTICIPATED COMPLETION DATE</u>
1. General Contractor Mobilize	6/6/2016	6/17/2016
2. Demolish Existing Structures (East & West)	6/20/2016	8/5/2016
3. Barge FEMA Fill Material	7/25/2016	9/9/2016
4. General Contractor Demobilize	9/12/2016	9/16/2016
5. Wait for FEMA Recertification	9/16/2016	—



# Barging Concept Plan

1. New fill will be delivered to the job site by Barge.
2. The amount of fill required to regrade the site to achieve FEMA recertification is 7,100 cubic yards.
3. It is anticipated that two Barge deliveries are required to bring the fill material to the job site.
4. Construction Sequencing & Barging Means & Methods:
  - a. The Barge will dock next to the pier and will use spuds to anchor the ship in the river
  - b. Once the Barge is securely anchored the fill material will be transferred from the Barge to the site via a conveyor system. The fill material will be placed on the conveyor system and transported across the pier to the site
  - c. Once the fill material has been transported to the site earth moving equipment and dump trucks will be used to place the fill material on site in compliance with the approved grading plan and meet FEMA recertification requirements

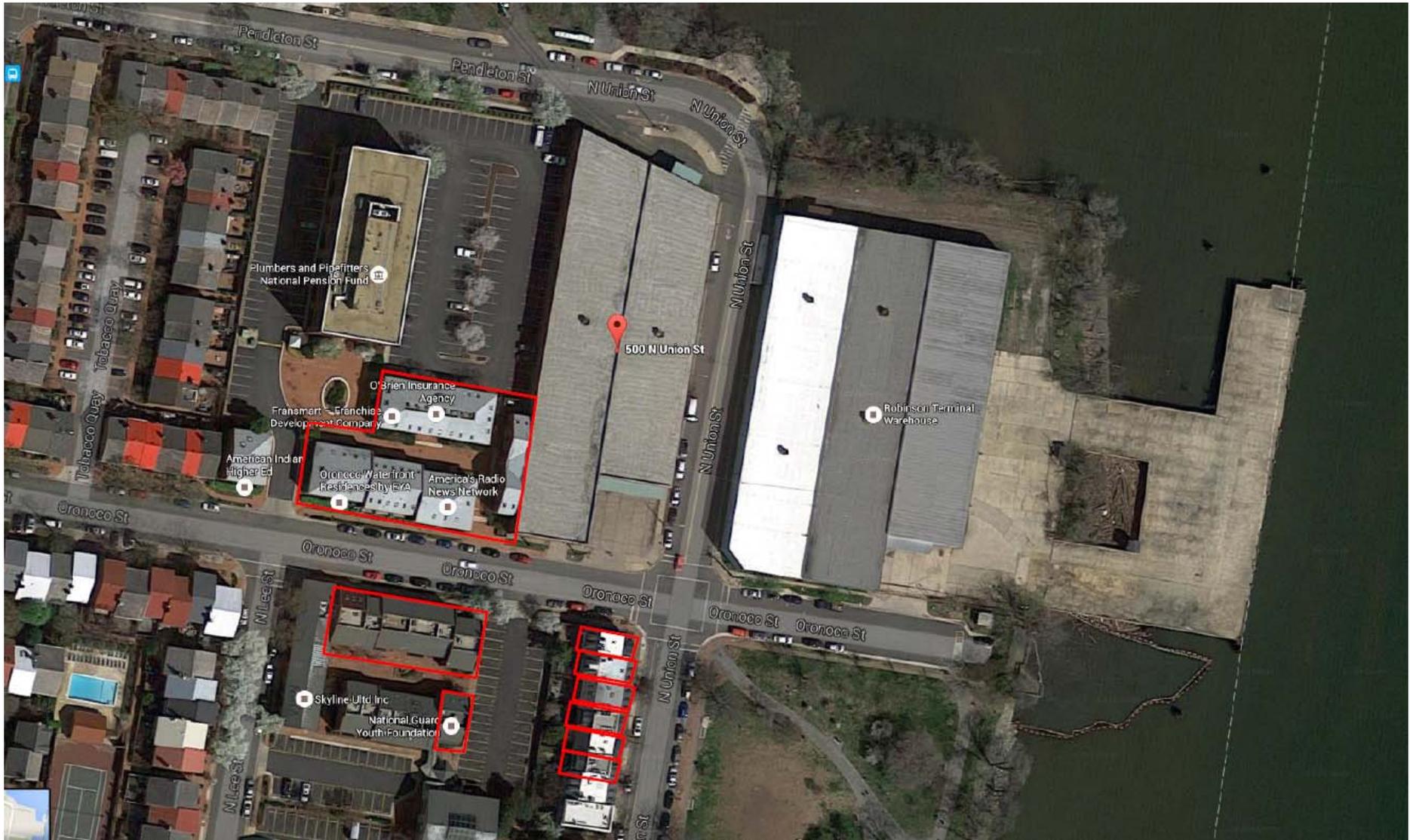


# Vibration and Settlement Monitoring

1. Prior to the start of work, an engineering monitoring firm will conduct pre-construction surveys of the surrounding structures, both exterior and interior, to document any pre-existing cracks and the overall condition of the structures.
2. A Structures Monitoring Plan (SMP) will be developed to establish safe vibration threshold limits and a mix of monitoring points and Seismographs will be used during construction to demonstrate compliance with the threshold limits in the SMP
3. Each seismic station will be equipped with a cellular modem for communication. If vibrations reach an established threshold, then a message will be sent to alert designated project personnel

# Building Survey and Monitoring Scope

*DRAFT – SUBJECT TO CHANGE*



# Site Characterization Process

1. To date, numerous environmental studies have been conducted at the site and surrounding properties
2. More than 30 test borings, installation of 15 groundwater monitoring wells, and collection of 57 soil samples and 17 groundwater samples for laboratory analysis on site
3. Virginia DEQ and City T&ES will approve the final Site Characterization Study Work Plan which details the proposed characterization activities that will be implemented to evaluate the degree and extent of impacts at the site
4. Contractor proposes to assess soil and groundwater at approximately 28 additional locations on-site for a wide variety of constituents of potential concern



- Characterization will begin with use of a Membrane Interface Probe with HPT (MiHPT) to determine the extent of volatile organic compounds in the subsurface and to develop a 3D diagram of impacts
- The results of this work will be used to select soil and groundwater sampling locations (where samples will be collected for laboratory analysis)

# Membrane Interface Probe with HPT (MiHPT) Testing



## Membrane Interface Probe (MIP):

The MIP coupled with an electrical conductivity sensor will provide continuous stratigraphic information of the soil as well as semi-quantitative concentrations of volatile organic compounds (VOCs). The MIP can be used in both saturated and unsaturated materials to detect VOCs in the gaseous, sorbed, dissolved or free phases.

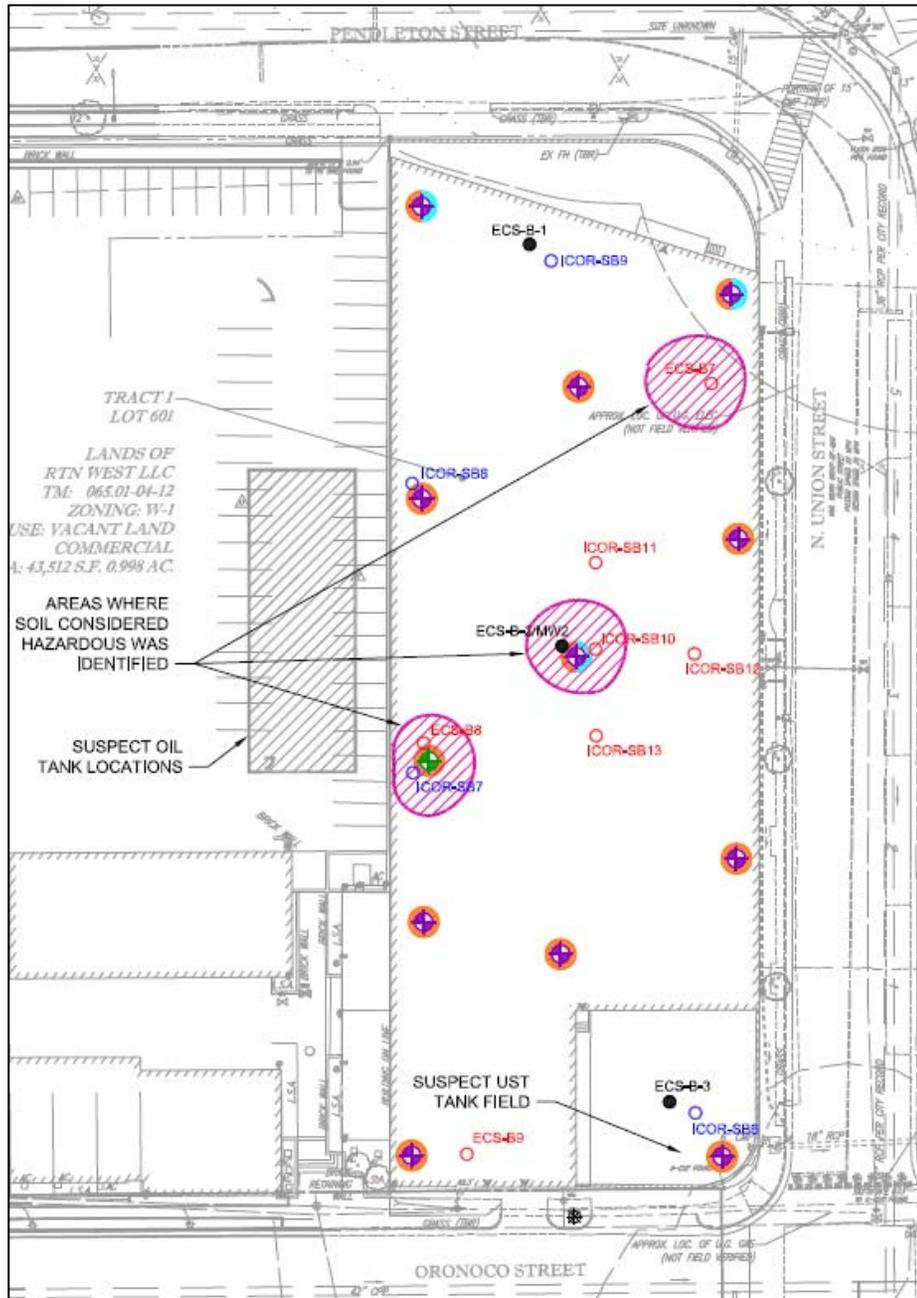
## Hydraulic Profiling Tool (HPT):

The HPT system is designed to evaluate the hydraulic behavior of unconsolidated materials. As the probe is pushed at 2 cm/s, clean water is pumped through a screen on the side of the HPT probe at a low flow rate, approximately 300 mL/min. Injection pressure, which is monitored and plotted with depth, is an indication of the hydraulic properties of the soil. That is, a relatively low pressure response would indicate a relatively large grain size, and the ability to easily transmit water. A relatively high pressure response, however, would indicate a relatively small grain size and the lack of ability to transmit water.



# Site Characterization Test Locations

## West Building

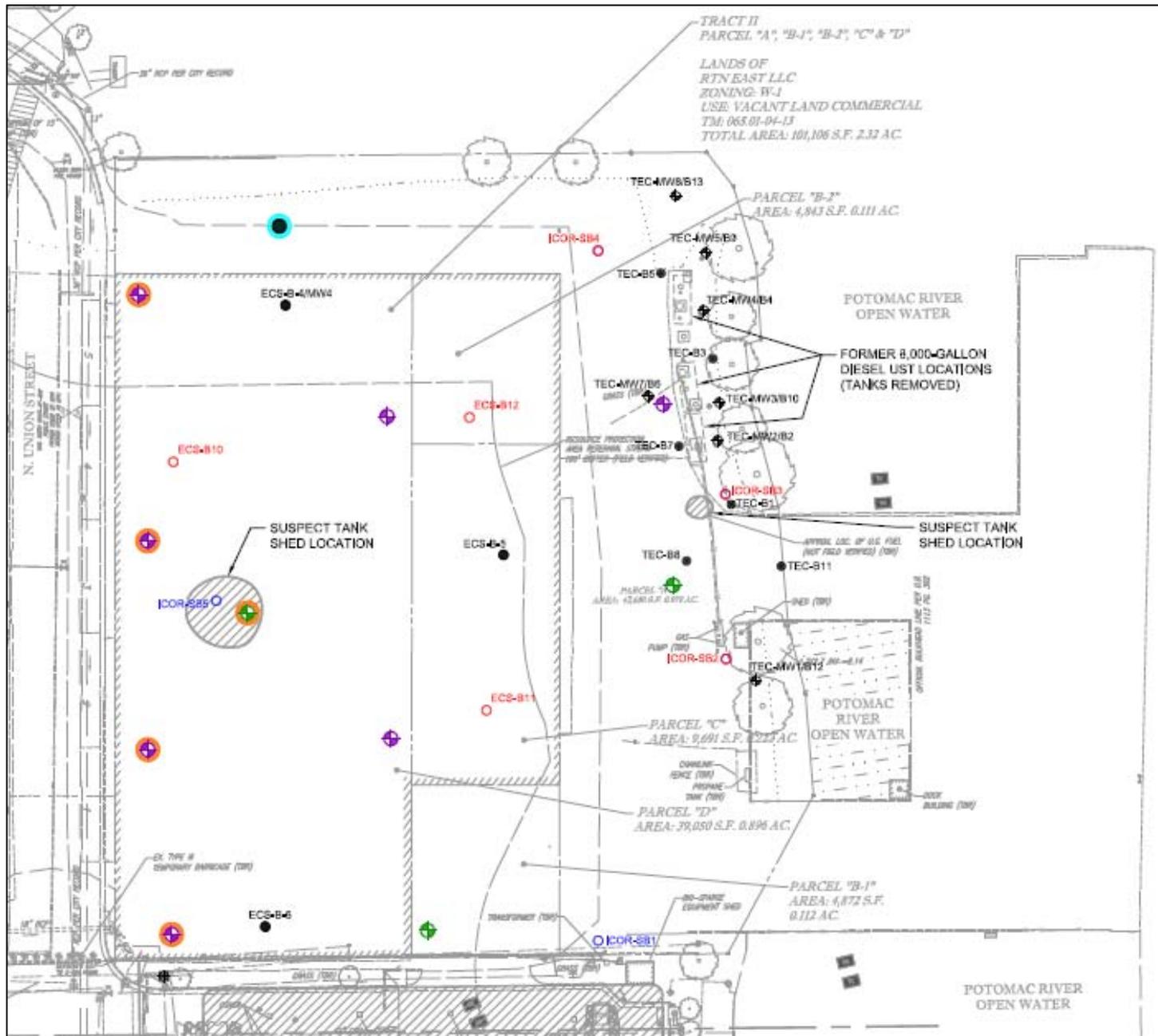


### LEGEND

- ⊕ EXISTING WELL (APPROXIMATE LOCATION)
- HISTORICAL BORING (APPROXIMATE LOCATION)
- ⊗ GROUNDWATER AND SOIL GAS SAMPLE LOCATION FOR ALEXANDRIA TOWN GAS SITE (2006)
- ⊕ PRODUCT RECOVERY WELL FOR ALEXANDRIA TOWN GAS SITE
- ICOR SOIL AND GROUNDWATER TEST BORING
- ICOR SOIL TEST BORING
- ⊕ PROPOSED REAL-TIME SHALLOW ASSESSMENT BORING LOCATIONS
- ⊕ PROPOSED REAL-TIME DEEP ASSESSMENT BORING LOCATIONS
- PROPOSED LOCATIONS WHERE ARSENIC SAMPLES WILL BE COLLECTED TO SUPPLEMENT EXISTING DATA
- PROPOSED LOCATIONS WHERE DIOXIN SAMPLES WILL BE COLLECTED TO SUPPLEMENT EXISTING DATA

# Site Characterization Test Locations

## East Building



**LEGEND**

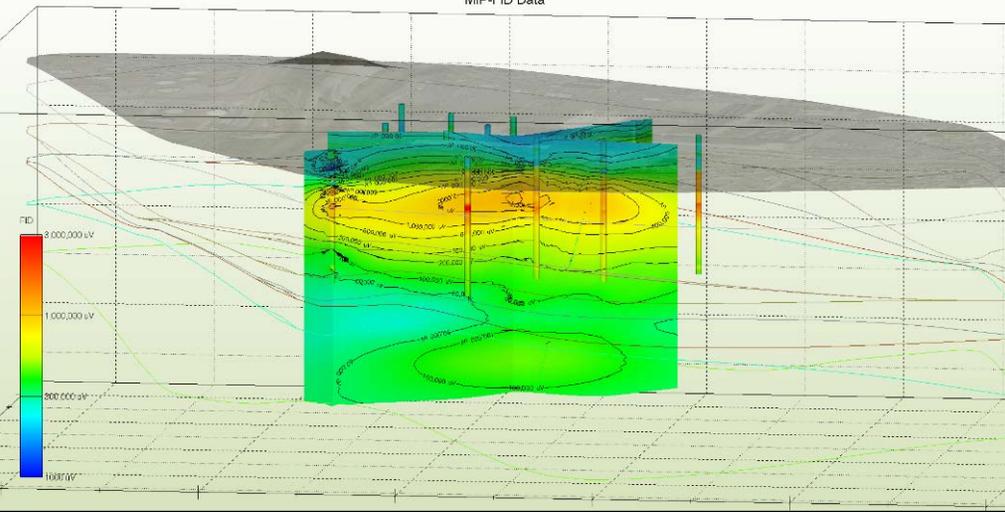
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# Results of Site Characterization

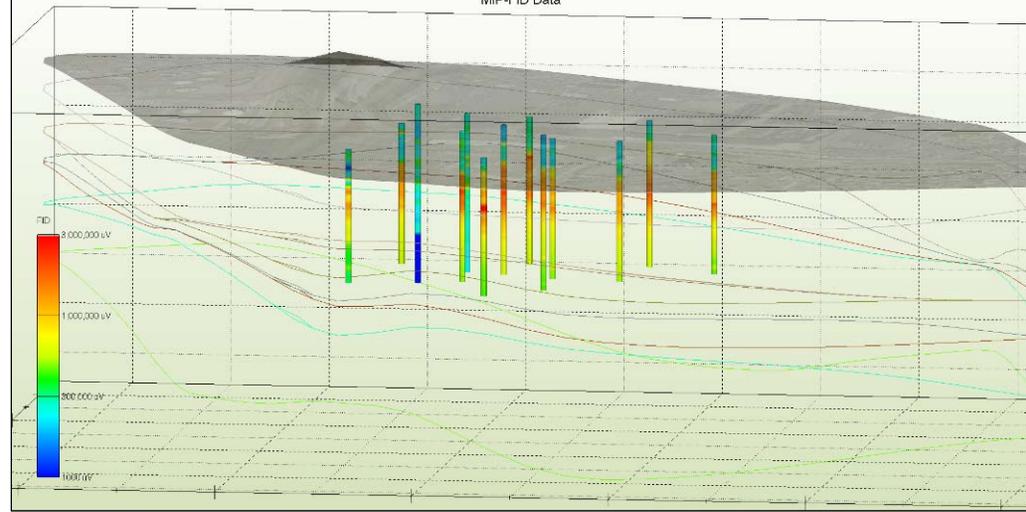
1. Results will be reviewed by the Virginia DEQ and City T&ES and will be used to develop the Remedial Action Work Plan and Health and Safety Plan
2. The Plans establish protocols for managing impacted soil and groundwater during construction and protocols for protecting health and safety of site workers and general public during and post construction
3. Both Plans will be shared with the community in the Fall 2016

# Example of MIPs Mapping

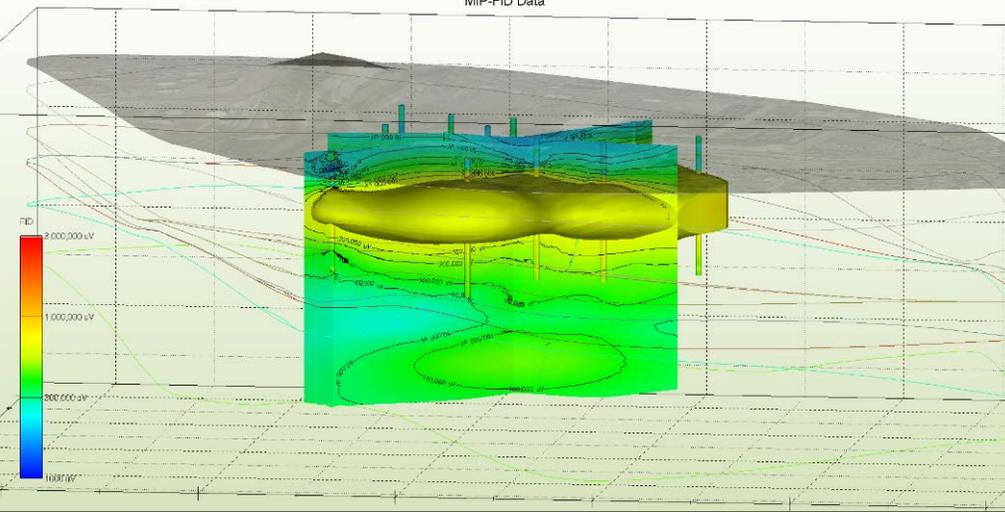
Example Fuel Oil Plume  
MIP-FID Data



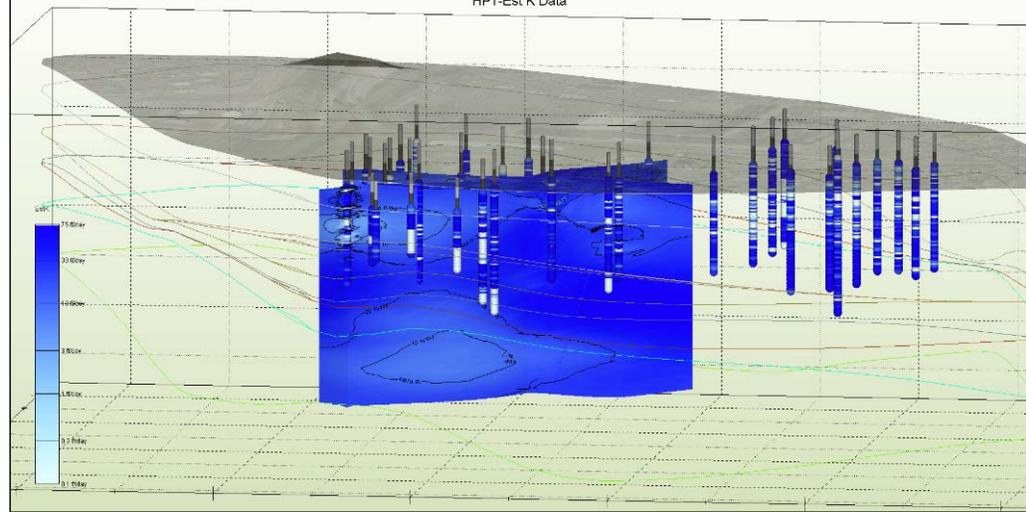
Example Fuel Oil Plume  
MIP-FID Data



Example Fuel Oil Plume  
MIP-FID Data



Example Estimated Hydraulic Conductivity  
HPT-Est K Data



# Health and Safety Plan Content

*To be completed in Fall 2016*

1. Testing procedures during excavation
2. Air monitoring
3. Work and resident safety plan
4. Notification procedures
5. Stop work procedures
6. Virginia DEQ and City T&ES Monitoring procedures

# Remedial Action Work Plan Content

*To be completed in Fall 2016*

1. Testing procedures during excavation
2. Procedures for handling and disposal of impacted soil (including loading and cleaning of trucks)
3. Procedures for handling and treating impacted groundwater generated during dewatering
4. Installation of engineering controls (e.g., covering of impacted areas and vapor barrier)
5. Implementation of institutional controls (e.g., future site use restrictions and groundwater use restrictions)

# Next Steps

1. Developer will continue to provide monthly updates to Waterfront Construction and Monitoring Group
2. A Second Community meeting will be held in the Fall of 2016 to discuss results of environmental tests and plans to handle contamination during and after construction