SPRING VALLEY FORMERLY USED DEFENSE SITE

Partners Meeting Presentation
February 2021

US Army Corps of Engineers®

AGENDA REVIEW

Parsons Update

- 4825 Glenbrook Road

Weston Updates

- Site-Wide Remedial Action
- Public Safety Building

USACE Updates

- SV Federal Property
- Groundwater Study
- 4835 Glenbrook Road

Future Partners Agenda Development

SPRING VALLEY GLENBROOK ROAD SITES

PARTNER'S UPDATE

February 2021

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."

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4825 Glenbrook Road - Recent Activities

- Continued to perform compaction activities in December
- In early January removed a soldier pile that was in the way of utility restoration
- In January also removed dead bamboo from 4801 Glenbrook that had been moved for temporary utility right-of-way

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4825 Glenbrook Road - Recent Activities (Cont.)

- Throughout January and February have maintained sediment and erosion controls
- No backfilling since December due to weather/soil moisture conditions

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4825 Glenbrook Road - Recent Activities (Cont.)

- On January 28th successfully and remotely cut twelve intact 75mm projectiles and one “livens like” projectile with video monitoring, air monitoring, and engineering controls.
- The cutting operation was needed to confirm the items where safe to dispose of as Material Documented as Safe (MDAS)

- No chemical agent (CA) was detected during cutting ops. and all items cleared headspacing for CA after cutting

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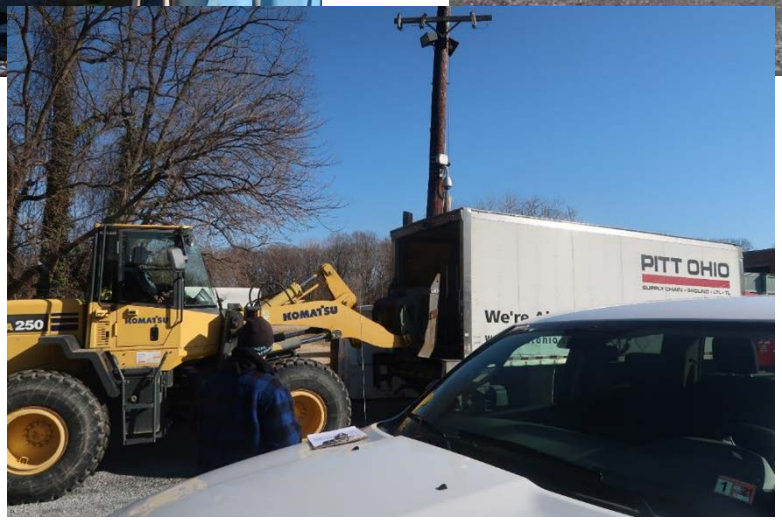
4825 Glenbrook Road - Recent Activities (Cont.)

- Beginning in February began shipping soil, liquid, and removal-derived waste to the waste incinerator
- Waste shipments expected to occur throughout February and into early March



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4825 Glenbrook Road - Summary of Clean Backfill for Restoration

Restoration				
	Expected Volume Needed (bcy*)	Approx. Volume Delivered to Site (bcy)	Approx. Volume on Hand at Federal Prop. (bcy)	Total # of Truck Loads to Date
	3,264	1,872	1,392	435
% Complete:	--	57.5%	--	--

*bcy – bulk cubic yards

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Near -Term Schedule

- Dispose of remaining waste generated during the removal
- Remove temporary utilities from 4801 Glenbrook Right-Of-Way
- Install permanent water and sewer laterals servicing American University onto 4825 Glenbrook
- Restore fence along 4801 and 4825 Glenbrook Road property boundary
- Restore site to final grade in 6-inch lifts with compaction in accordance with the Work Plan
- Submit Draft Final Site-Specific Final Report to regulators and other outside stakeholders in late March

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Tentative Long-Term Schedule

Spring 2021	Final restoration of 4801 and 4825 Glenbrook
Summer 2021	Submit Final Site-Specific Removal Report
Summer 2021	Closeout Project

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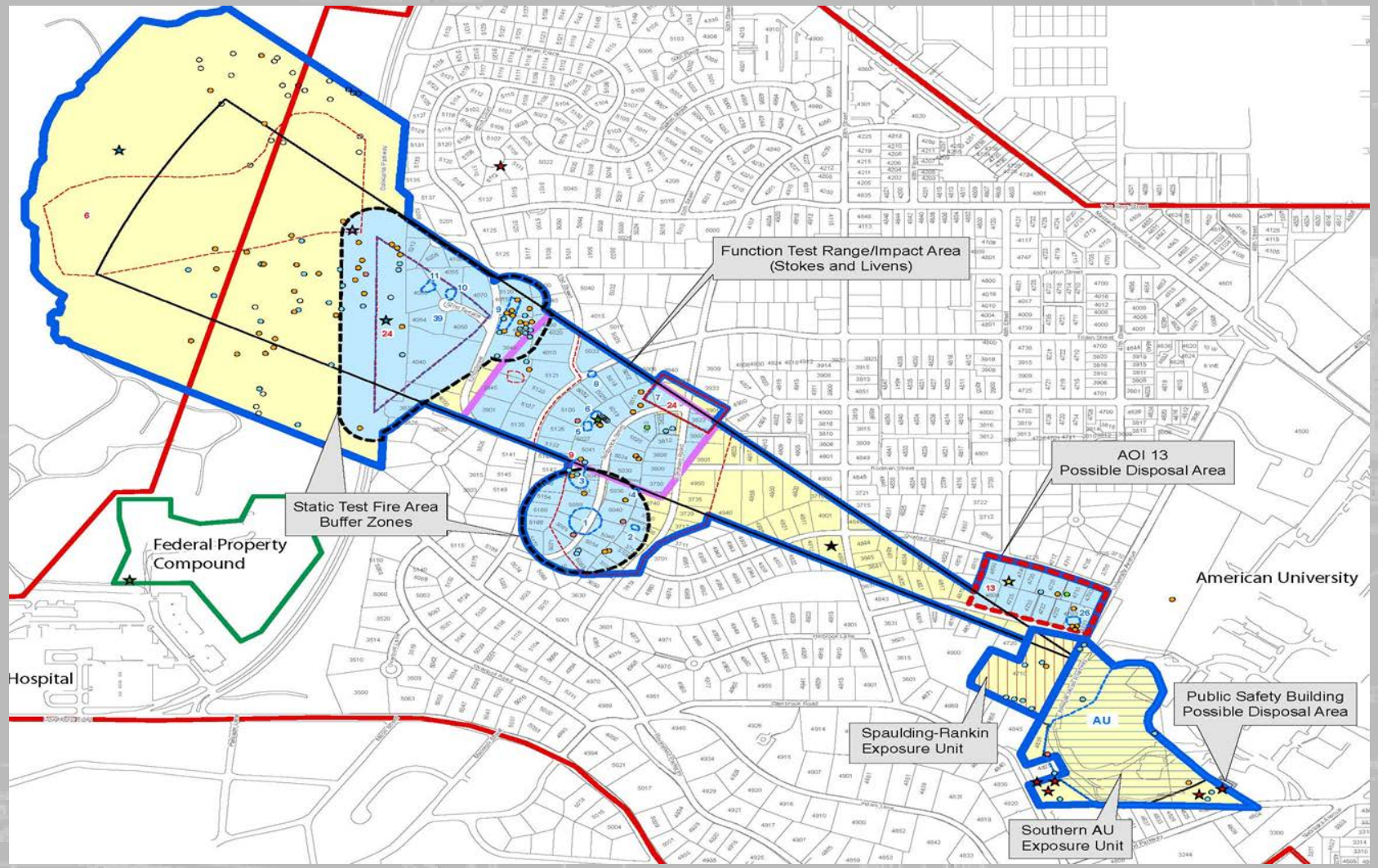
SVFUDS SITE-WIDE REMEDIATION STATUS FEBRUARY 2021

Weston Solutions, Inc.

February 19, 2021



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RESIDENTIAL PROPERTIES*

- **Property Availability –** No landscape plan approvals since December 11 Partners update. Seven property owners yet to approve landscape plans. Four of the seven remaining have yet to complete site preparation activities.
- **Site Preparation –** Site preparation activities (HD Video survey, arborist appraisal, vegetation removal site walk) will resume in April 2021 (dormant vegetation during winter months).

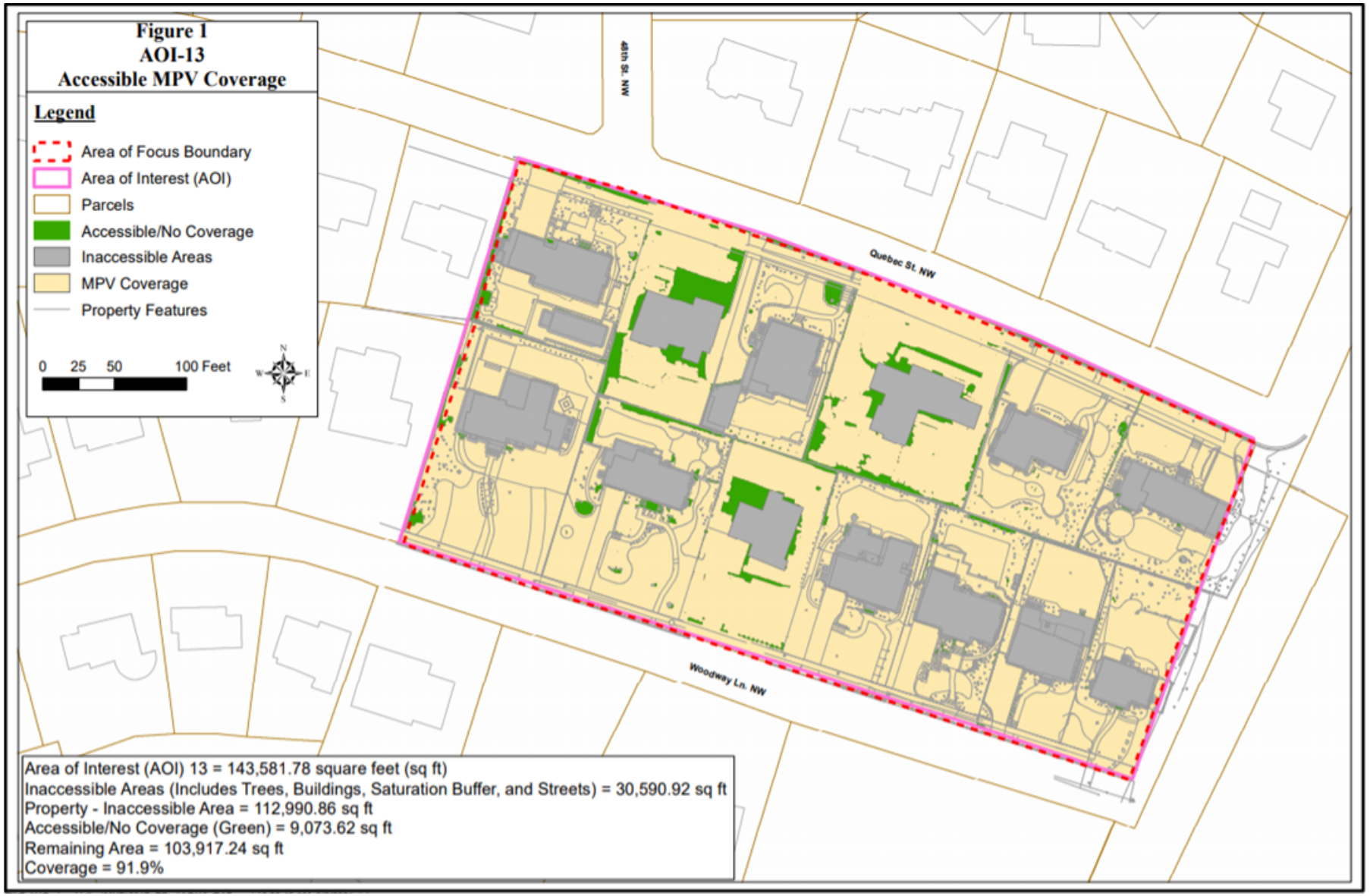
*info provided includes progress since last Partners presentation dated December 11, 2020

RESIDENTIAL PROPERTIES (CONTINUED)

Geophysical surveys:

- Geophysical surveys at 7 properties and one grid began on 12/1/20 and were completed on 1/20/21 .
- To date, geophysical surveys have been completed at 13 fed/city lots and 82 residential properties
- Geophysical surveys remaining to be conducted include 7 residential properties

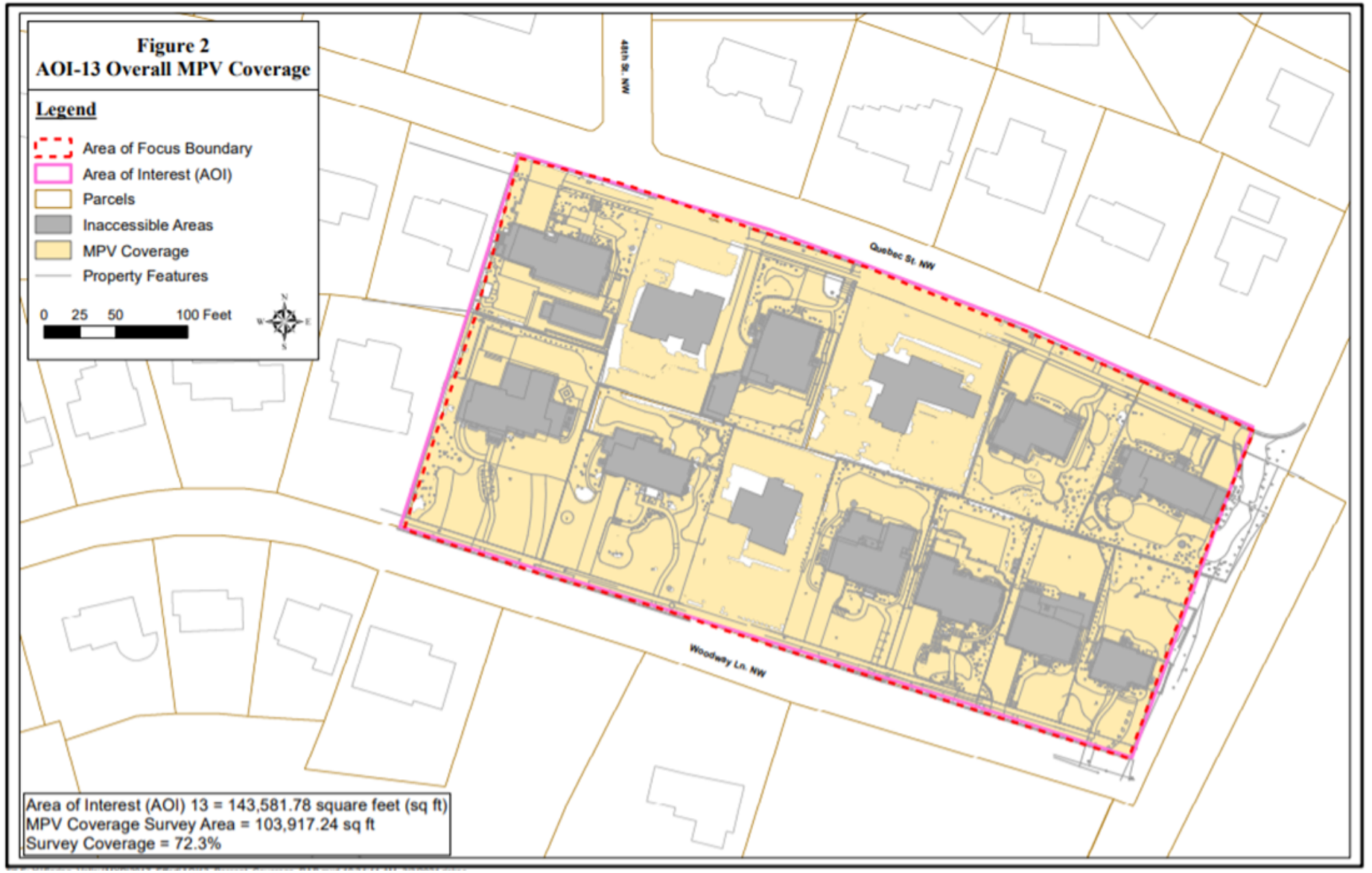
GEOPHYSICAL SURVEY COVERAGE



AOI-13

- MPV Survey Coverage of accessible areas = 91.9%
- Accessible/No Coverage areas include data gaps caused by vegetation or other obstructions that were not allowed to be removed
- Inaccessible areas include buildings, 18-inch saturation buffer, streets, and trees
- Includes coverage from MPV surveys conducted at 3 residential properties during the Pilot Study

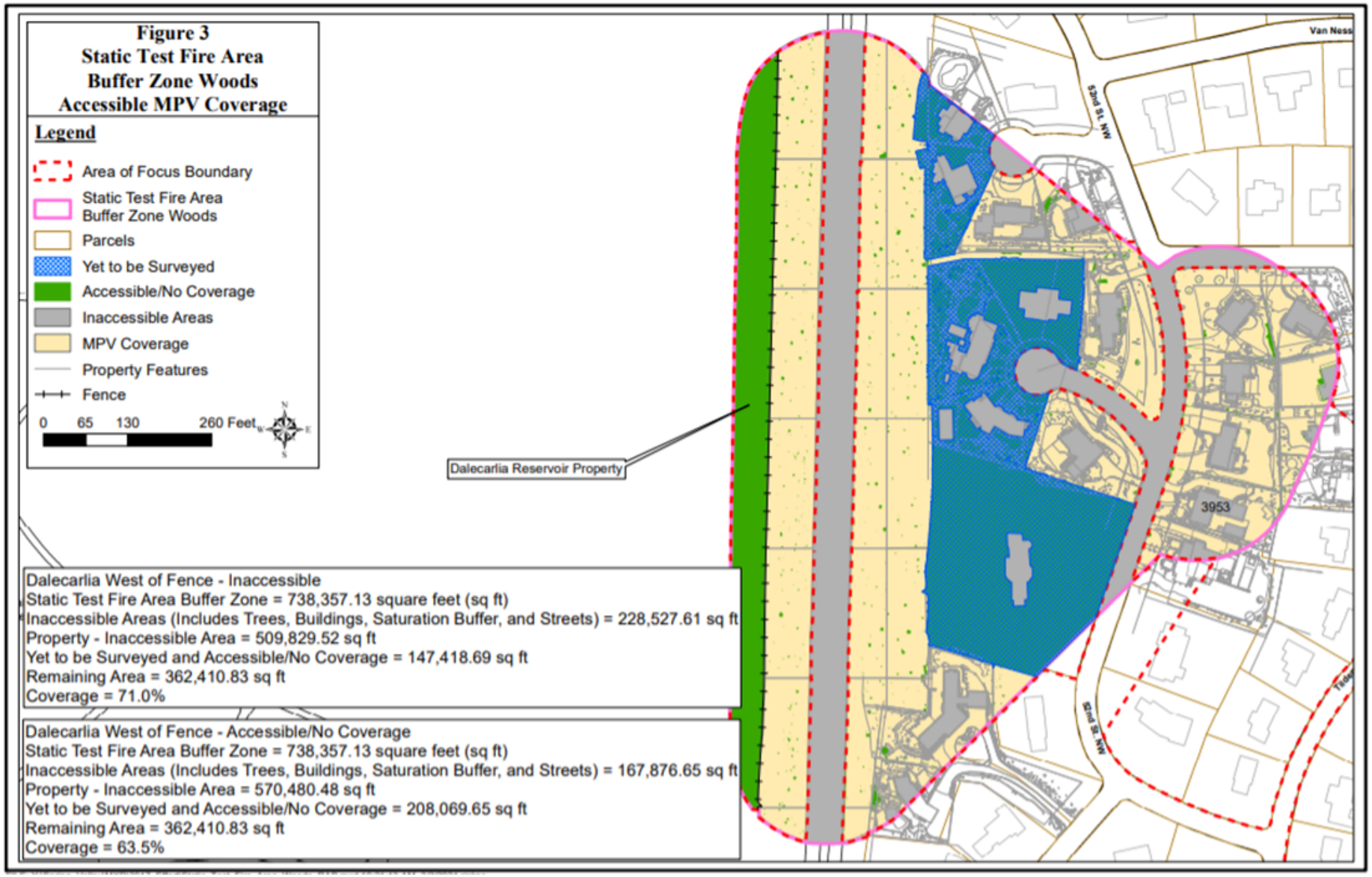
GEOPHYSICAL SURVEY COVERAGE



AOI-13

- Overall MPV Survey Coverage of Area of Focus = 72.3%
- Includes coverage from MPV surveys conducted at 3 residential properties during the Pilot Study

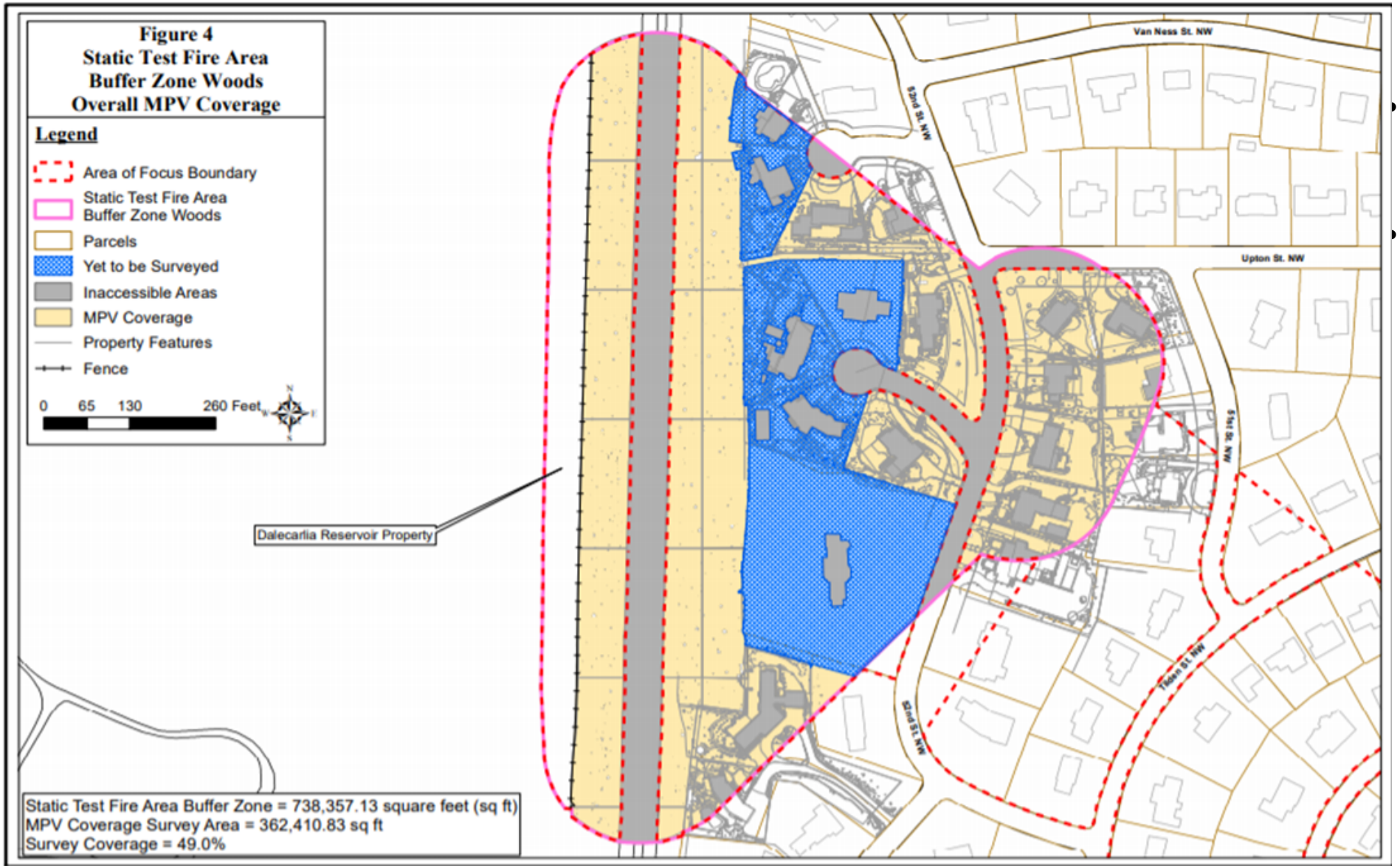
GEOPHYSICAL SURVEY COVERAGE



Static Test Fire Area West

- MPV Survey Coverage of accessible areas (Dalecarlia Reservoir property considered accessible) = 63.5%
- MPV Survey Coverage of accessible areas (Dalecarlia Reservoir property considered inaccessible) = 71%
- Additional inaccessible areas include buildings, 18-inch saturation buffer, streets, and trees
- Accessible/No Coverage areas include data gaps caused by vegetation or other obstructions that were not allowed to be removed
- Six properties have yet to be surveyed

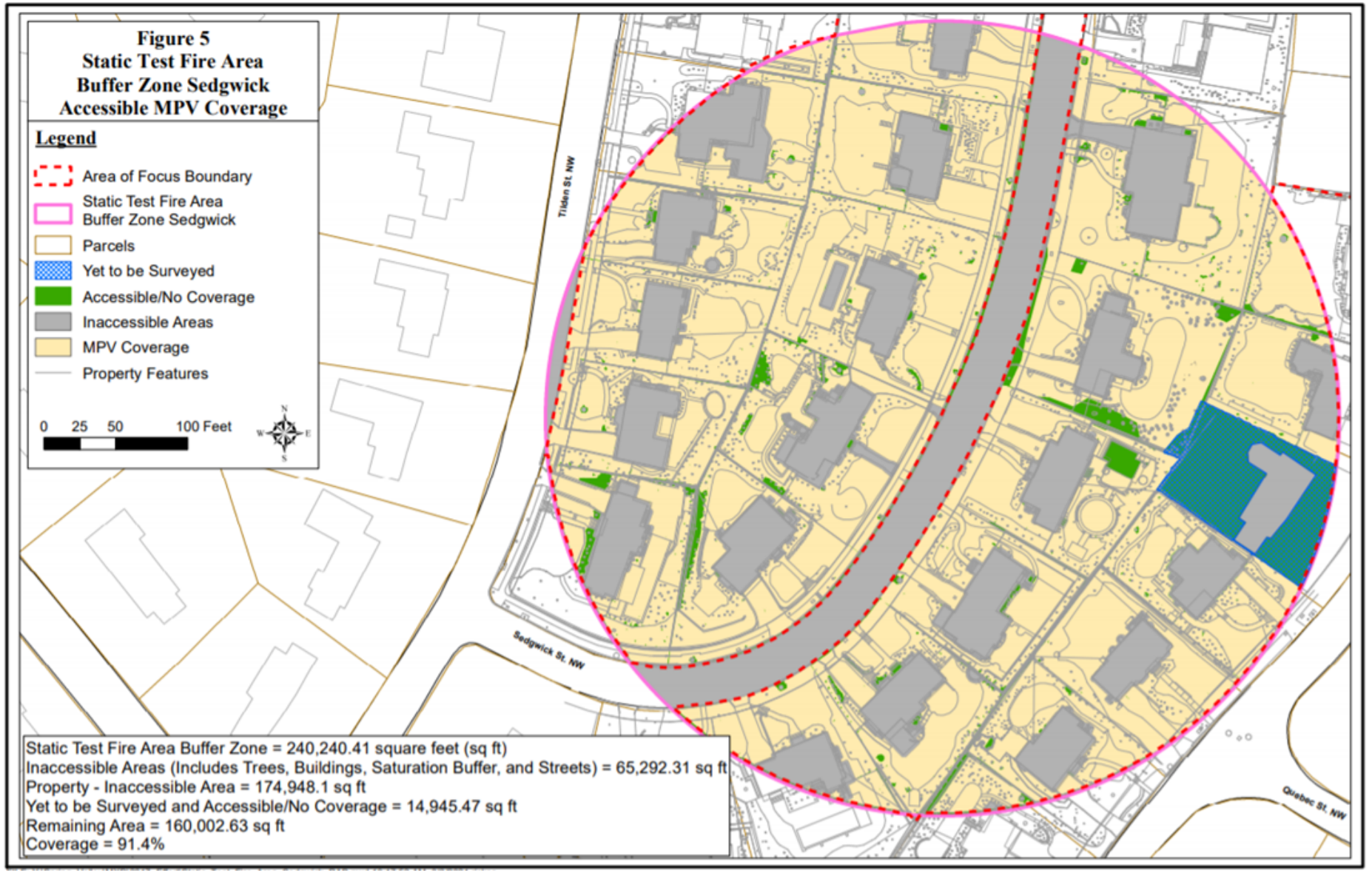
GEOPHYSICAL SURVEY COVERAGE



Static Test Fire Area West

- Overall MPV Survey Coverage of Area of Focus = 49%
- Six properties have yet to be surveyed

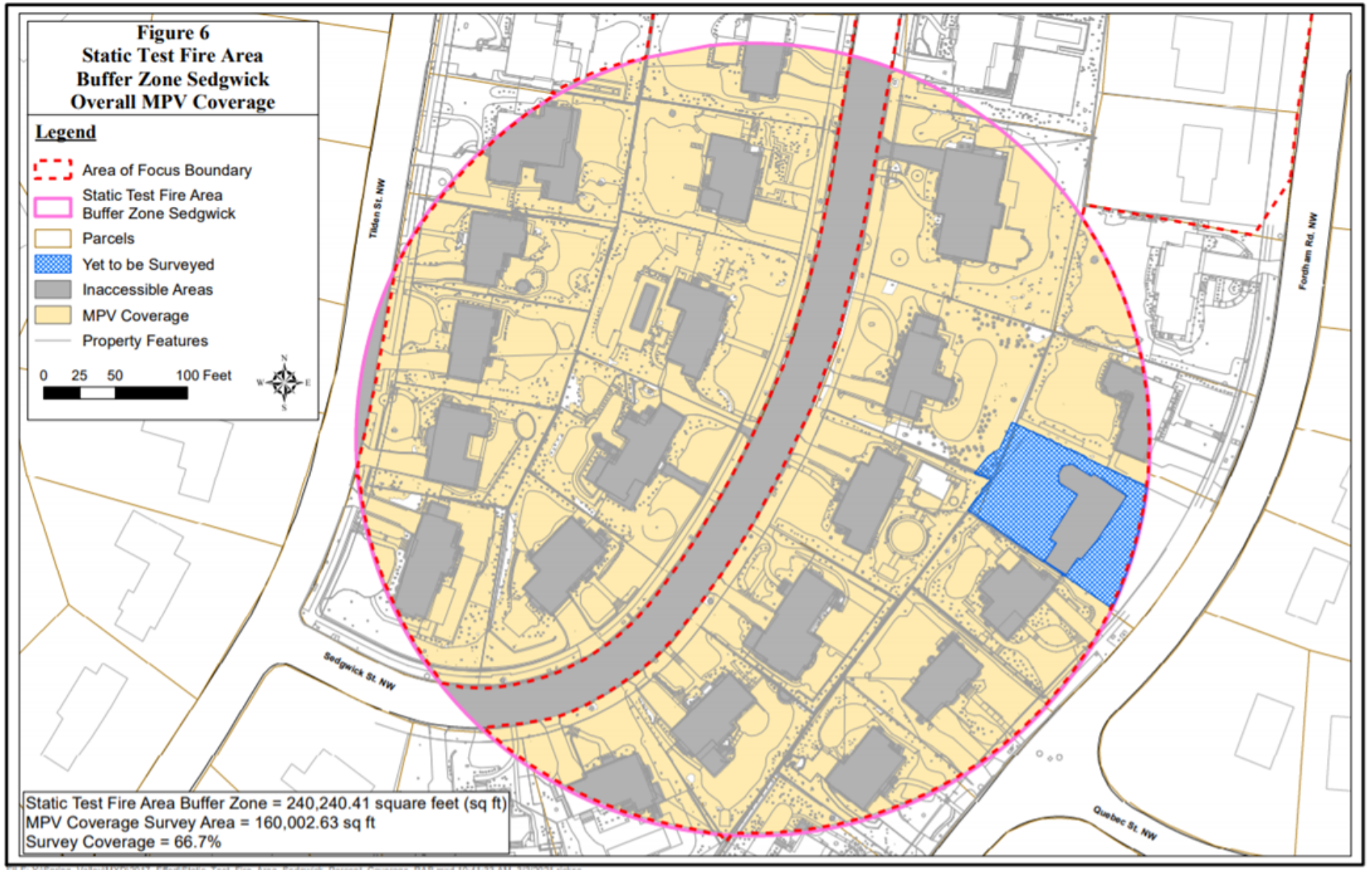
GEOPHYSICAL SURVEY COVERAGE



Static Test Fire Area East

- MPV Survey Coverage of accessible areas = 91.4%
- Accessible/No Coverage areas include data gaps caused by vegetation or other obstructions that were not allowed to be removed
- Inaccessible areas include buildings, 18-inch saturation buffer, streets, and trees
- One property has yet to be surveyed

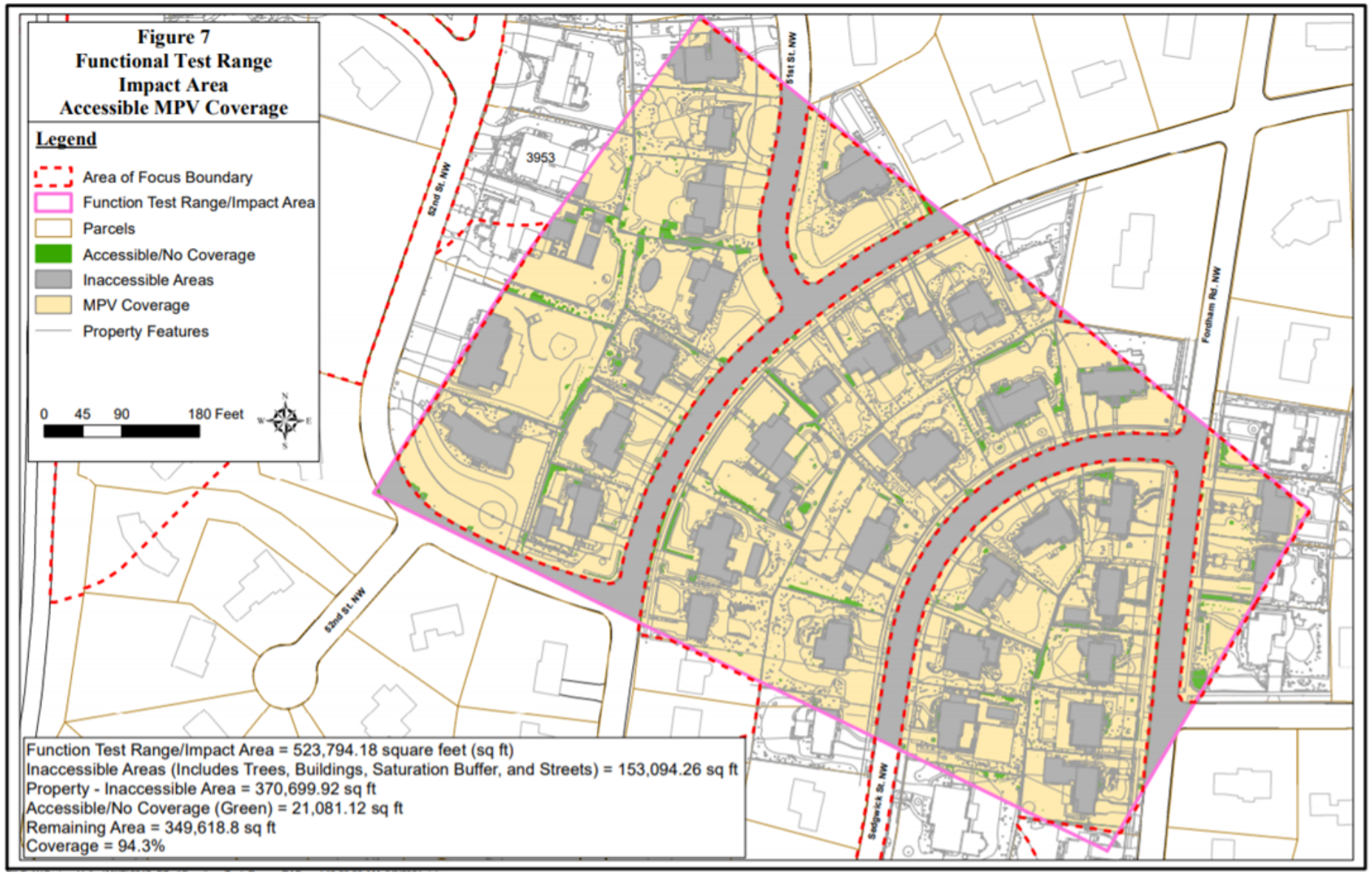
GEOPHYSICAL SURVEY COVERAGE



Static Test Fire Area East

- Overall MPV Survey Coverage of Area of Focus = 66.7%
- One property has yet to be surveyed

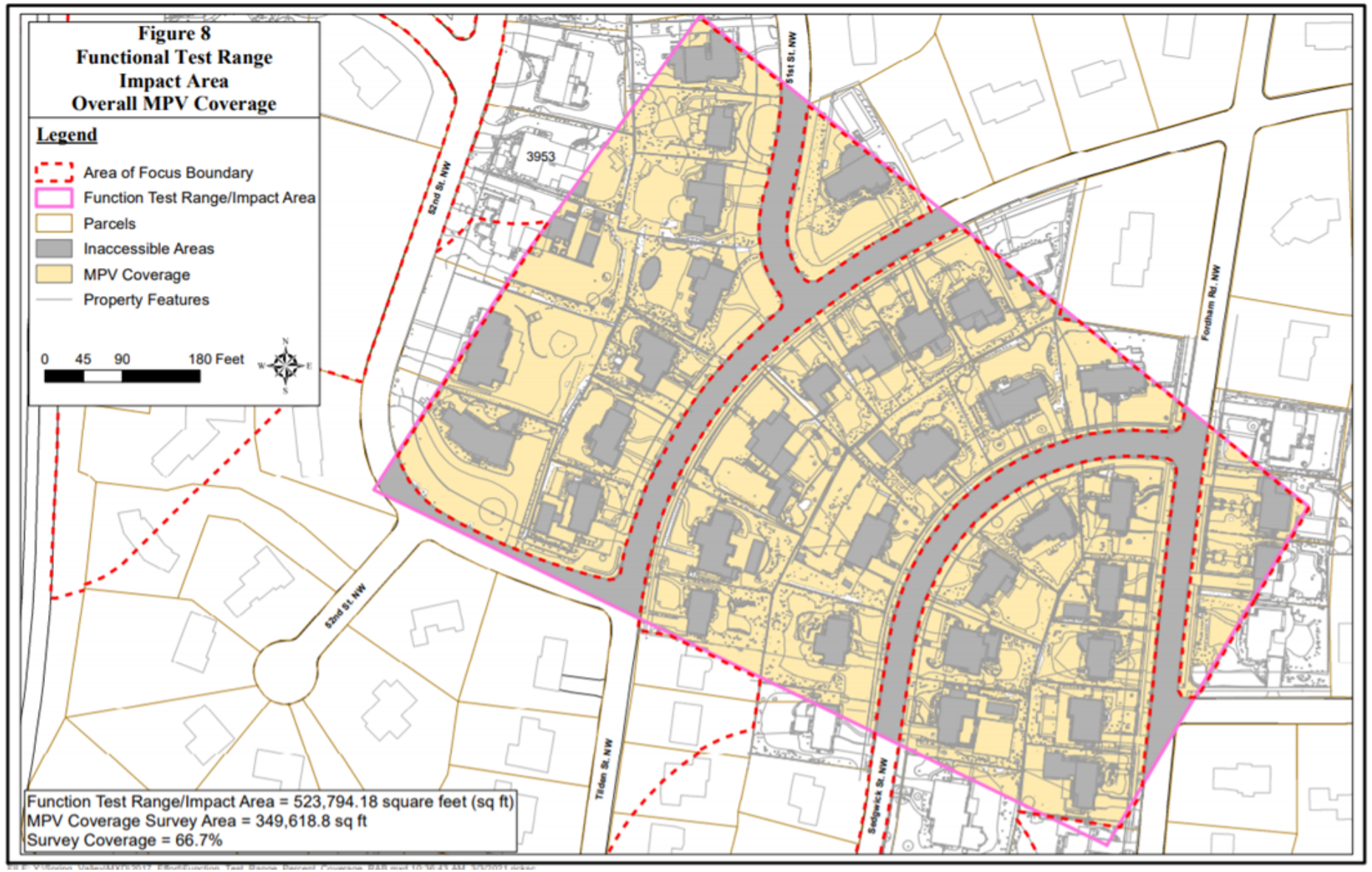
GEOPHYSICAL SURVEY COVERAGE



Function Test Range Impact Area

- MPV Survey Coverage of accessible areas = 94.3%
- Accessible/No Coverage areas include data gaps caused by vegetation or other obstructions that were not allowed to be removed
- Inaccessible areas include buildings, 18-inch saturation buffer, streets, and trees

GEOPHYSICAL SURVEY COVERAGE



Function Test Range Impact Area

- Overall MPV Survey Coverage of Area of Focus = 66.7%

INTRUSIVE INVESTIGATIONS UPDATE

Intrusive Investigations:

- December intrusive phase (began on 12/1/20) was complete on 12/21/20.
- February intrusive phase began on 2/8/21 and is expected to be complete the week of 2/22/21.

INTRUSIVE INVESTIGATIONS UPDATE

December 2020 Intrusive Investigation Results:

- No MEC/MPPEH items recovered.
- Seven MD items recovered.
- Headspace results all non-detect for agent.

INTRUSIVE INVESTIGATIONS UPDATE

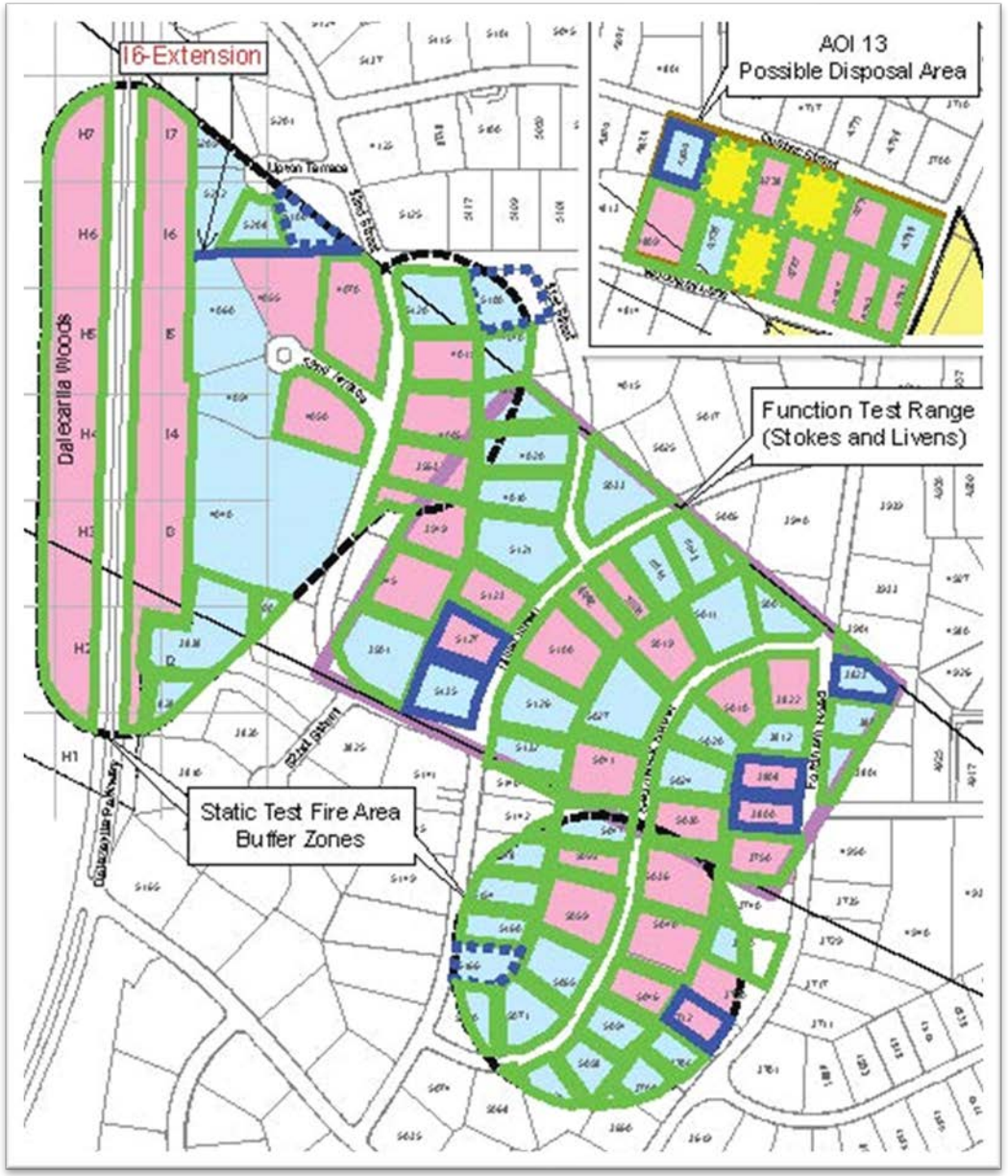
February 2021 Intrusive Investigation Results (Preliminary):

As of 2/16/2021:

- No MEC/MPPEH items recovered.
- Three MD items recovered.
- Headspace results pending.

RESIDENTIAL PROPERTIES – INTRUSIVE STATUS

- 75 residential properties and 13 federal/city lots completed to date
- Intrusive investigations being conducted at 7 properties and 1 partial city lot in February 2021
- Three properties have a hardscape dig requiring concrete work to complete the intrusive investigations. Necessary permits have been obtained, but weather has prevented the concrete work from occurring. These remaining digs will be completed once temperatures allow



Intrusive Investigations:

Complete

February 2021

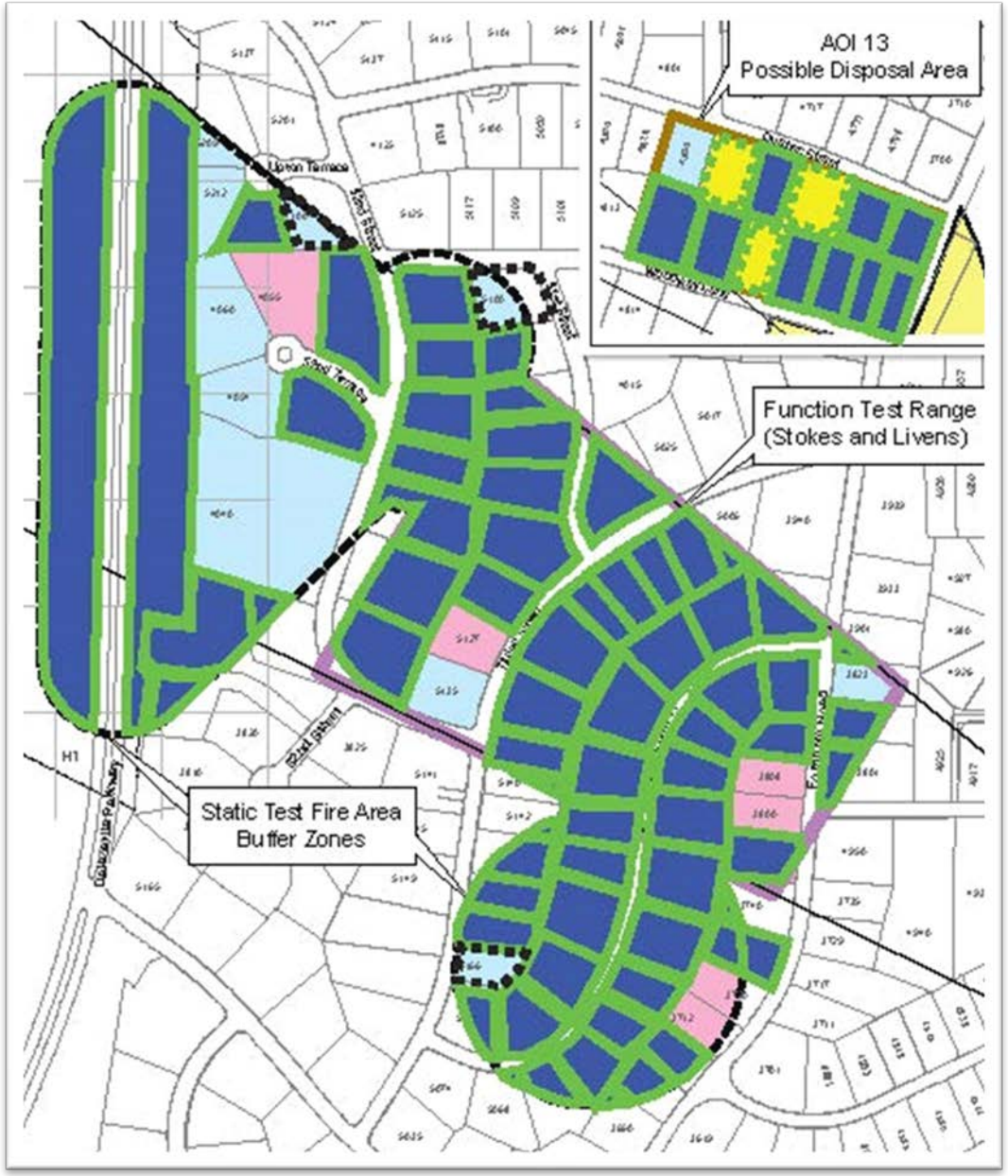
Hardscape dig remaining

Completed during 2016 Pilot Study

RESIDENTIAL PROPERTIES – INTRUSIVE DATA

Intrusive Statistics:

- 75 residential properties completed to date (82%)
- 2601 targets investigated (not including February dig targets)
- MD recovered = 137 (5.27% of total digs)
- MEC recovered (including Civil War cannonball) = 3 (0.12% of total digs)
- WW1-era MEC recovered = 2 (0.08% of total digs)



Intrusive Investigations:

Property/Lot Completed

Partially Completed

Completed during 2016 Pilot Study

Remediation Planned
previous DGM completed

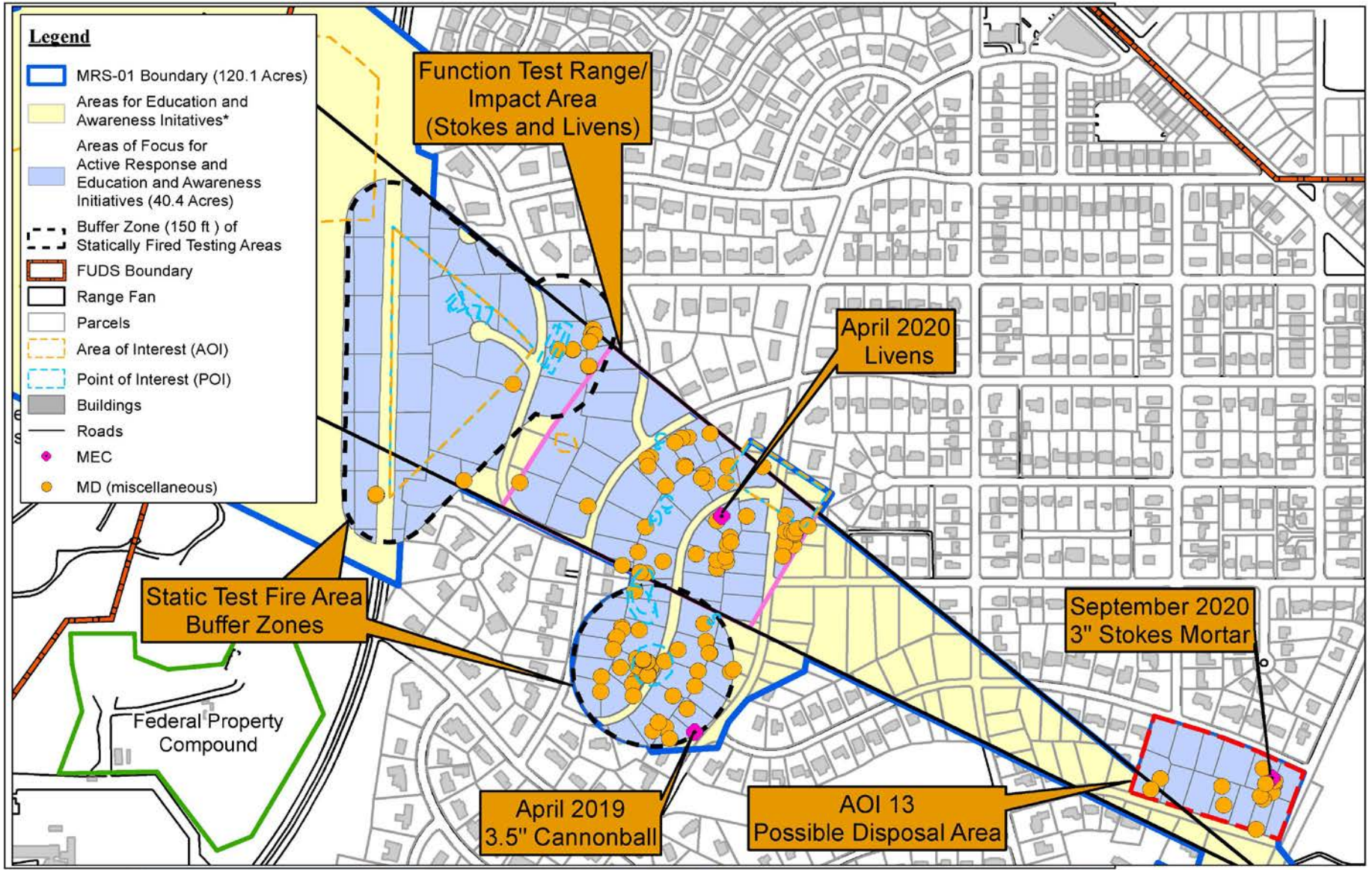
Remediation Planned
as listed in PWS

N

0 250

Scale in Feet

RESIDENTIAL PROPERTIES – RA MEC/MD FINDS



RESIDENTIAL PROPERTIES – DELIVERABLES*

- **Property Specific Data Summary (PSDS) Reports –** Ten Draft Final PSDS were delivered to USACE/EPA/DOEE since last Partners presentation (as of 2/17/21).
- **RA Property Summary (RAPS) Memos –** Five Draft Final RAPS were submitted to USACE/EPA/DOEE for review.
- **Root Cause Analyses (RCAs)/Field Variance Forms (FVFs) –** No new FVFs. One (1) RCA was approved by USACE. Details provided on following slides.

*info provided includes progress since last Partners presentation on December 11, 2020

RESIDENTIAL PROPERTIES – APPROVED RCAs

- **SV-RCA-017**
  - **Issue –** Cued data collected at the I6-Extension on January 19, 2021 failed to correctly classify a QC seed for intrusive investigation.
  - **Cause –** The I6-Extension is a DDOT utility right-of-way that extends east from Grid I6 to 52nd Street. Interviews conducted as part of the RCA found that both the Weston QC and USACE QA seeding teams had difficulty locating anomaly-free, low noise areas for seed placement. The higher-than-normal site noise in the I6-Extension is due to underground utilities running through the grid and chain-link fence bordering the majority of the area. The site was so noisy that none of the proposed background locations derived from the dynamic data were quiet enough to pass the background validation test, and a background location had to be selected outside the grid (about 5.3 m north of the seed), within a nearby property.

RESIDENTIAL PROPERTIES – APPROVED RCAs

- **SV-RCA-017**
  - **Cause (continued) –** The estimated noise in the quietest part of the site is 0.20 mV/A, while the standard detection threshold for this project is 0.27 mV/A. To maintain some consistency in the detection depth across the project, the detection threshold for this site was raised to the minimum useable of three times the noise, or 0.60 mV/A. This corresponds to a detection depth of 22.3 cm for a small ISO. The QC seed that failed the MQO is a small ISO buried at 21.6 cm. Additionally, the seed was placed near another large anomaly. As part of the RCA, cued data were recollected as close to the seed as possible on February 3, 2021 and processed following the standard approach. The recovered polarizabilities for the data collected at two locations within 5 cm of the seed were still unable to correctly classify the seed. These results show that the seed was placed at a location that is beyond the technology limits, being that it was placed at the detection limit for a particularly noisy site and too close to high-amplitude anomalies.

RESIDENTIAL PROPERTIES – APPROVED RCAs

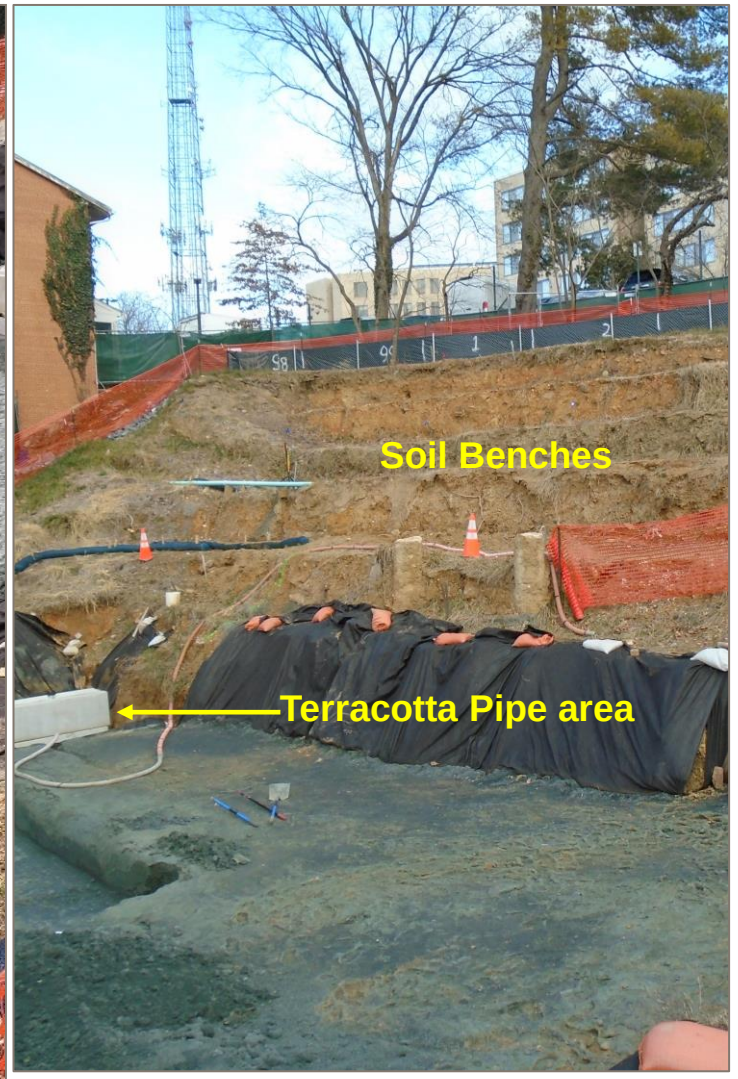
- **SV-RCA-017 (continued)**
  - **Cause (continued) –** The missed QC seed is due to the limitations of the technology, given that the seed was buried near its maximum detectable depth for the local site noise. The situation was further complicated by the presence of a large nearby anomaly caused by a shallow (~ 5 cm) metallic object predicted by the cued data to be only 30 cm away from the seed.
  - **Corrective Action –** One corrective action is to avoid anomalies as much as possible when seeding, which is already done. However, this is practically difficult given that no AGC data is available before seeding, and that it is difficult to validate background locations in properties and grids with widespread site noise. In this case, a larger number of seeds will be used and placed at different depths, and their pass/fail status will be reviewed on a case-by-case basis once AGC data in the area is available, depending on the site noise and multi-source configuration near the seeds

RESIDENTIAL PROPERTIES – SCHEDULE

- **Intrusive Investigations –** February 2021 intrusive investigations expected to be complete the week of 2/22/21. Hardscape digs will be coordinated once weather is favorable for concrete work.
- **Site preparation activities –** will resume in April 2021.
- **Geophysical Surveys –** Schedule for geophysical surveys at 7 remaining properties pending completion of site preparation activities and/or property owner approvals of Landscape Plans.

PUBLIC SAFETY BUILDING UPDATE

- Completed excavation of final grid (E3) under the former PSB building slab.
- Completed backfill, compaction & testing to 3 feet below grade.
- Preparing terracotta pipe replacement in grid E2/E3.
- Completed test pits east and west of the PSB foundation to evaluate the extent of AUES debris.



PSB GRID EXCAVATION AND BACKFILL DEPTHS

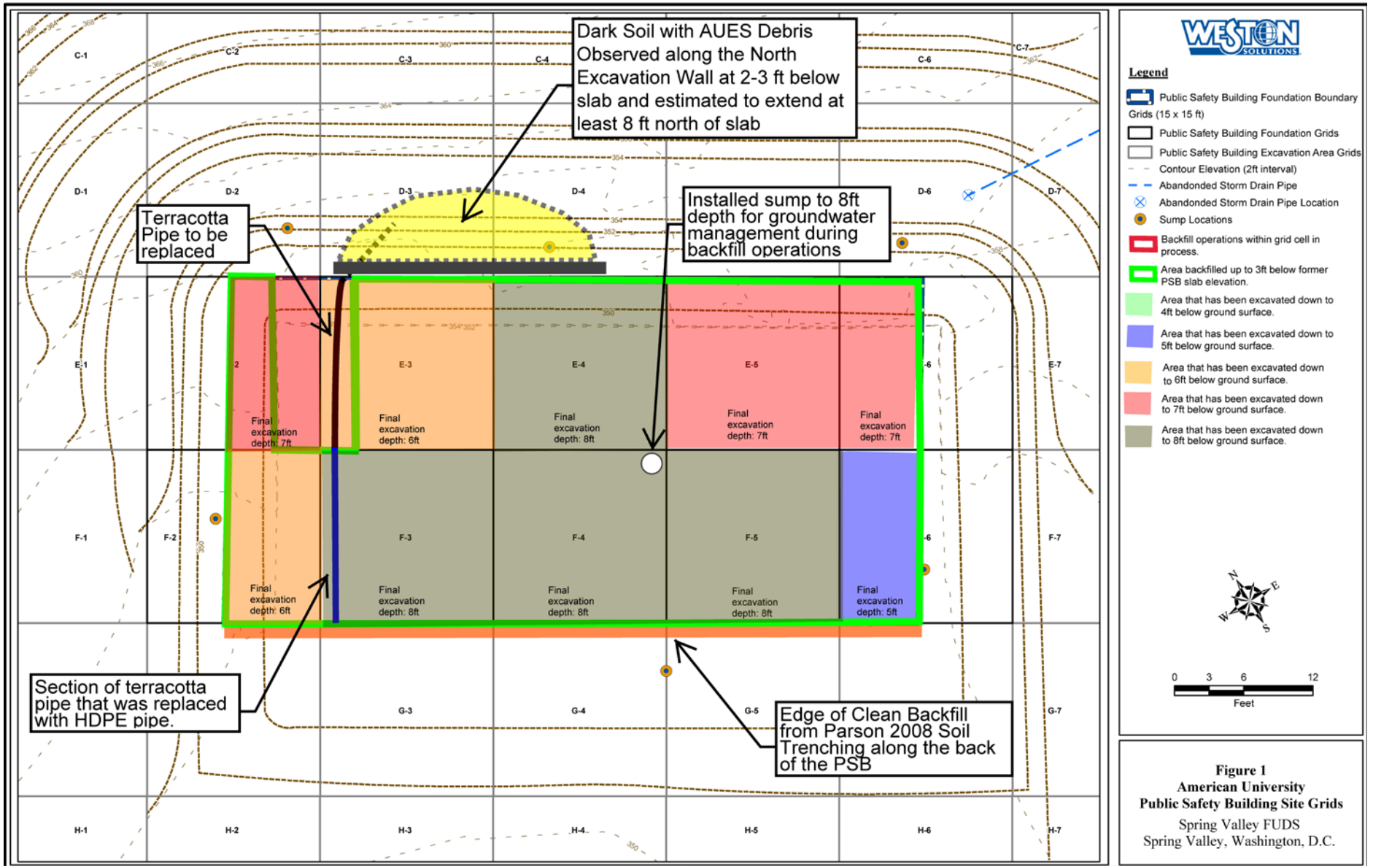
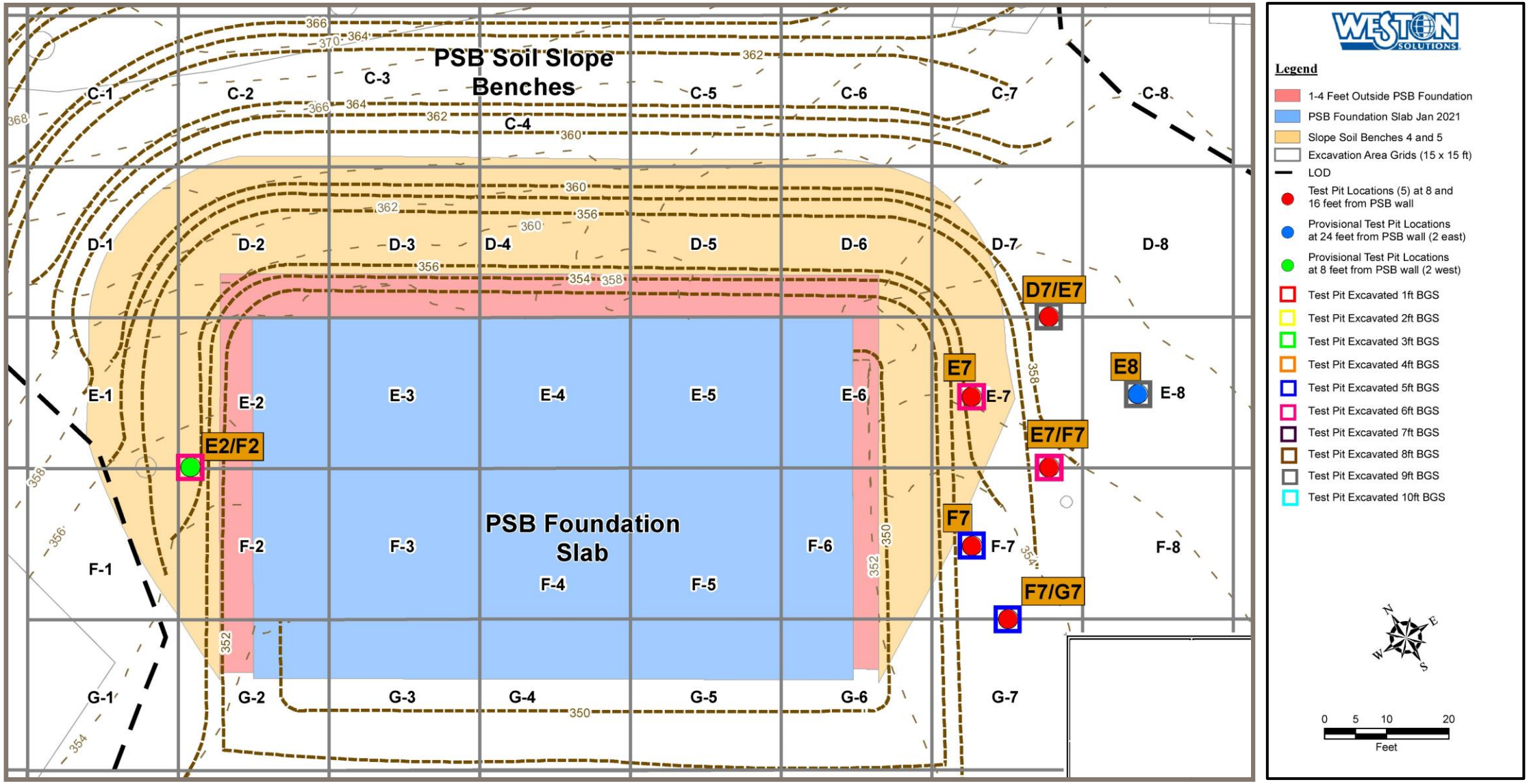


Figure 1
American University
Public Safety Building Site Grids
Spring Valley FUDS
Spring Valley, Washington, D.C.

PUBLIC SAFETY BUILDING STATUS

- All Excavation floor Confirmation Soil Sample results for Grids have meet the cleanup criteria for CWA, metals, SVOCs, Cyanide, Explosives (Grid F3 only) and VOCs (none detected).
- USACE awarded Rotosonic drilling and Test Pit investigation Scope of Work on 3 February 2021 to determine the extent of AUES debris north, east & west of the PSB foundation slab:
  - Completed seven (7) test pit excavations and soil screening east, west and northeast of the former PSB foundation.
  - Plans in preparation to conduct six Rotosonic angled borings with coring to determine extent of AUES debris under slope.
- Conducted video survey of Terracotta Pipe as it extends into the slope north of PSB to determine its location for utility avoidance purposes.

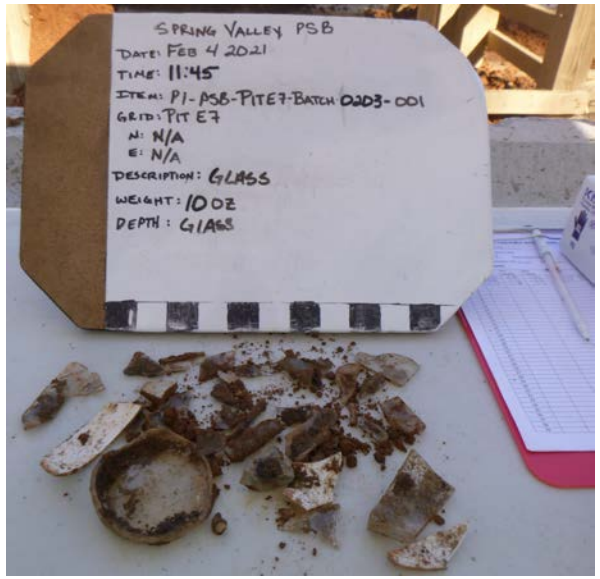
TEST PIT INVESTIGATION MAP



PSB - TEST PIT RESULTS TABLE

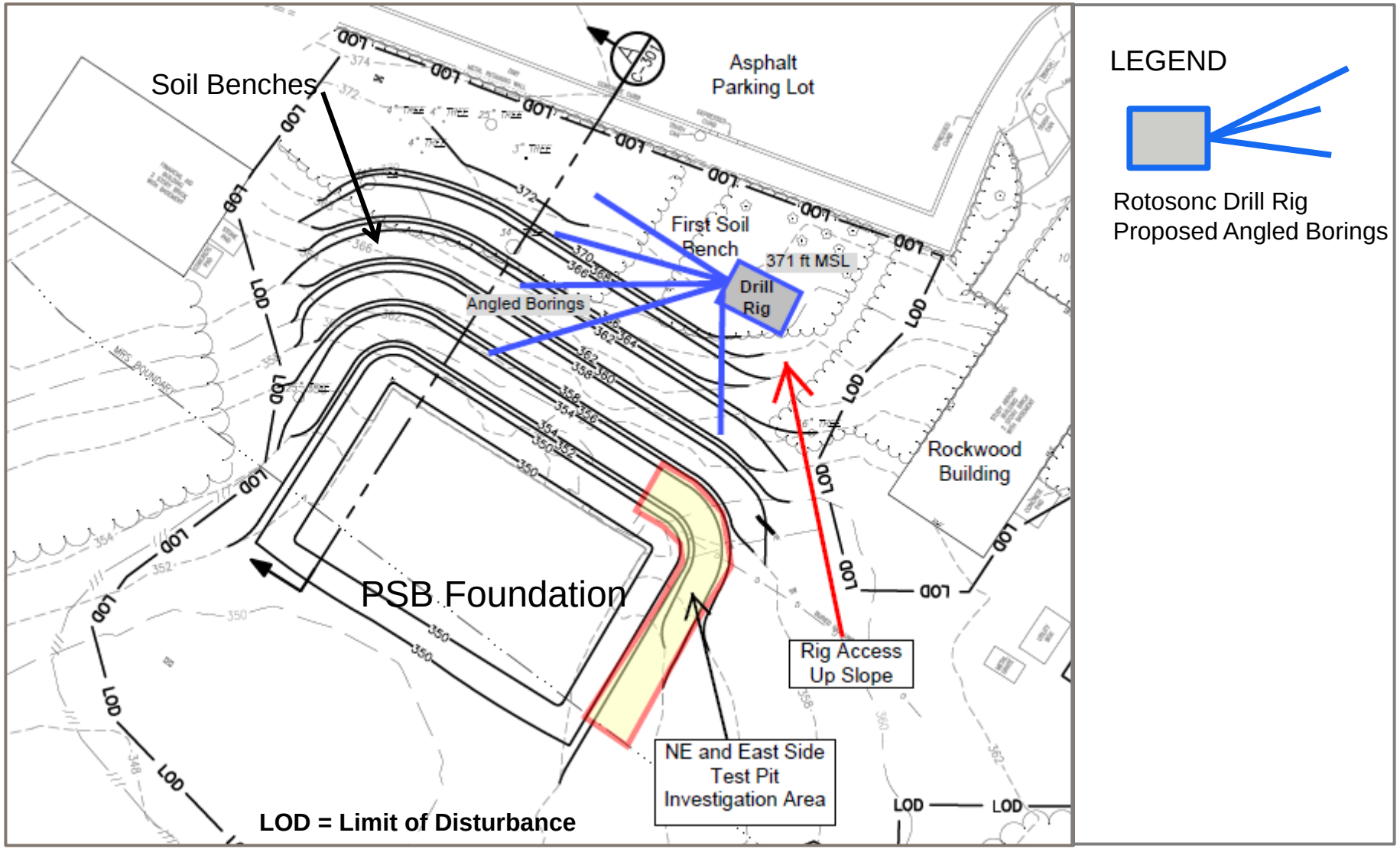
Test Pit	Initial Elevation (ft)	Final Depth (ft)	Final Elevation (ft)	Depth/Elev. Last AUES Glass (ft)	Observations
E7	353.0	6 ft	347.0	5 ft/ 348 ft	Lab glass observed from 0-5 ft
F7	352.7	5 ft	347.7	4 ft/ 348.7 ft	Lab glass observed from 0-4 ft
F7/G7	354.0	5 ft	349.0	4 ft/ 350 ft	Small amounts of glass from 0-4 ft
D7/E7	358.1	9 ft	349.1	8 ft/ 350 ft	Lab glass observed from 0-5 & 7-8 ft
E7/F7	354.9	6 ft	348.9	5 ft/ 350 ft	Small amounts of glass from 0-1 & 4-5 ft
E8	357.3	9 ft	348.3	5 ft/ 352 ft	Small amounts of glass from 1-3 & 4-5 ft
E2/F2	355.0	6 ft	349.0	3 ft/ 352 ft	Significant AUES glass from 0-3 ft

PSB – TEST PIT PHOTOS



Test Pit E8 Excavated to 9 ft

ROTOSONIC & TEST PIT INVESTIGATION MAP



PUBLIC SAFETY BUILDING – UPCOMING TASKS

- Construct Rotosonic drilling pad on slope north of the PSB and access path up to the drilling location.
- Replace Terracotta pipe in Grid E2/E3 area with HDPE pipe.
- Continue backfill, compaction and density testing operations at the PSB slab from 3 feet below slab up to current area grade.
- Conduct Rotosonic drilling of six (6) angled boreholes, collect continuous 4-inch diameter soil cores, evaluate soil cores for AUES debris layers.
- Prepare PSB Slope Investigation report.
- Demobilize from the PSB site – leaving soil benches (with erosion controls), access road and security fence
- E&S control inspections after major rain events.

PUBLIC SAFETY BUILDING - PHOTOS

PSB Operations – Pumping groundwater from sump at 8 feet in Grid F4 to help complete proper backfill compaction.

Backfill – Delivering approved backfill from Savage Quarry.

Water Disposal – Emptying groundwater from sumps stored in Frac tank into tanker truck for disposal.

PSB SCHEDULE

- Build a Rotosonic drilling pad on the slope north of the PSB slab and prepare drill rig access path.
- Remove Terracotta pipe section and replace with HDPE pipe in Grid E2/E3.
- Continue PSB excavation backfilling and compaction in all grids up to local surface grade.
- Conduct Rotosonic drilling at 6 locations and evaluate the soil cores for the presence of AUES debris.
- Prepare a PSB Slope Investigation Report.
- Based on the investigation results USACE will determine the scope of work to excavate the extent of AUES debris identified during the investigation.
- Once funding has been obtained and the work awarded, additional plans will be required before re-starting the soil remediation work – this will most likely entail a demobilization and delay of several months.

PSB SCHEDULE (CONTINUED)

- Restoration work would start after completing the north/east slope investigation and slope soil excavation and backfilling and include rebuilding the PSB slope and removing the access road.
- Landscape restoration work will be coordinated with American University – based on the approved landscape restoration plan.

SOUTHERN AU EXPOSURE UNIT UPDATE

- **Schedule:** Submitted Draft Final Southern AU EU Soil Remediation Property Report to the Spring Valley Partners on 22 December 2020. No comments have been received so far. Looking to respond to any Spring Valley Partner comments and submit the Final Southern AU EU Soil Remediation Property Report.
- **SV Partner Comments**: If the Partners do not have any comments on the Southern AU EU Soil Remediation Property Report, Dan Noble requests that they please send an email to him stating that they accept the report and recommend finalization.

SPRING VALLEY FORMERLY USED DEFENSE SITE

USACE Update
February 2021

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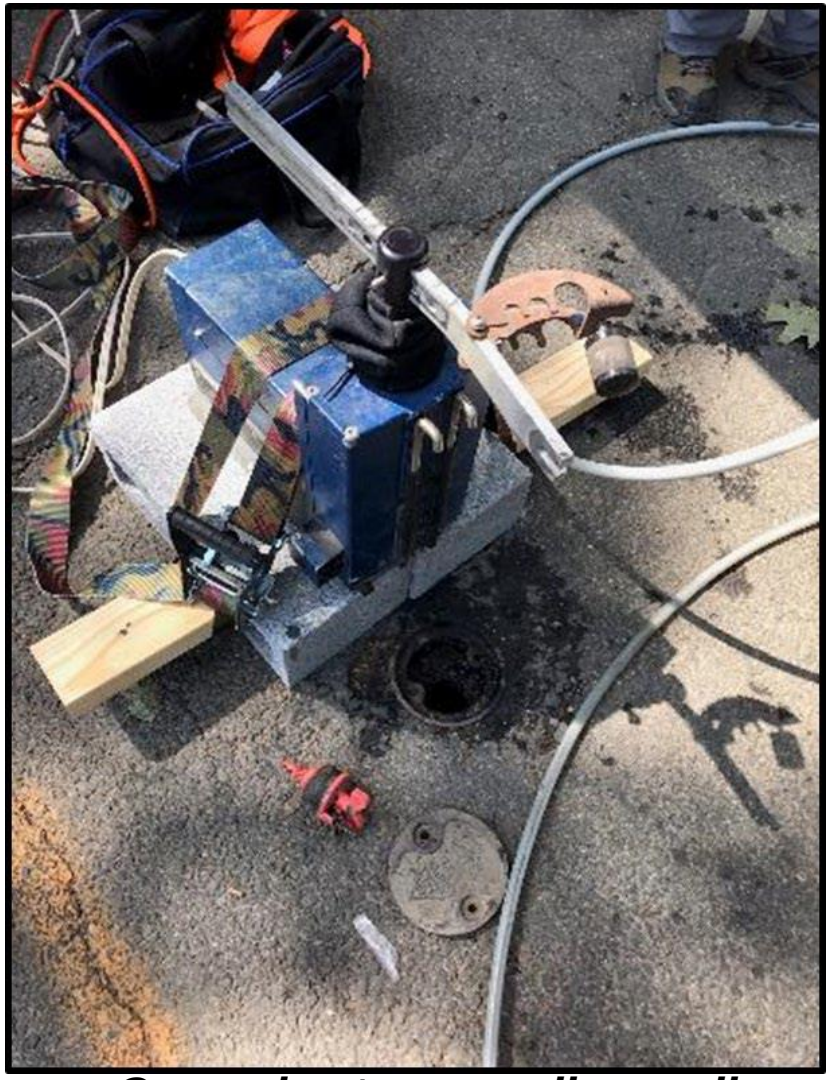
SPRING VALLEY FEDERAL PROPERTY – Munitions Items Found

During a recent inspection of the Federal Property fence line, the Army Corps on-site explosive safety specialist discovered a padlocked day box containing two 75mm items.

- These items are open cavity and include duct tape handles. The agencies, contractors, and personnel on site in recent years were unable provide any information; speculation is that these items may have been used as training aids.
- EOD was called and a formal assessment process of the items began on February 16. The items are currently stored in the Assessment Holding Facility (AHF) under negative pressure carbon filtration.

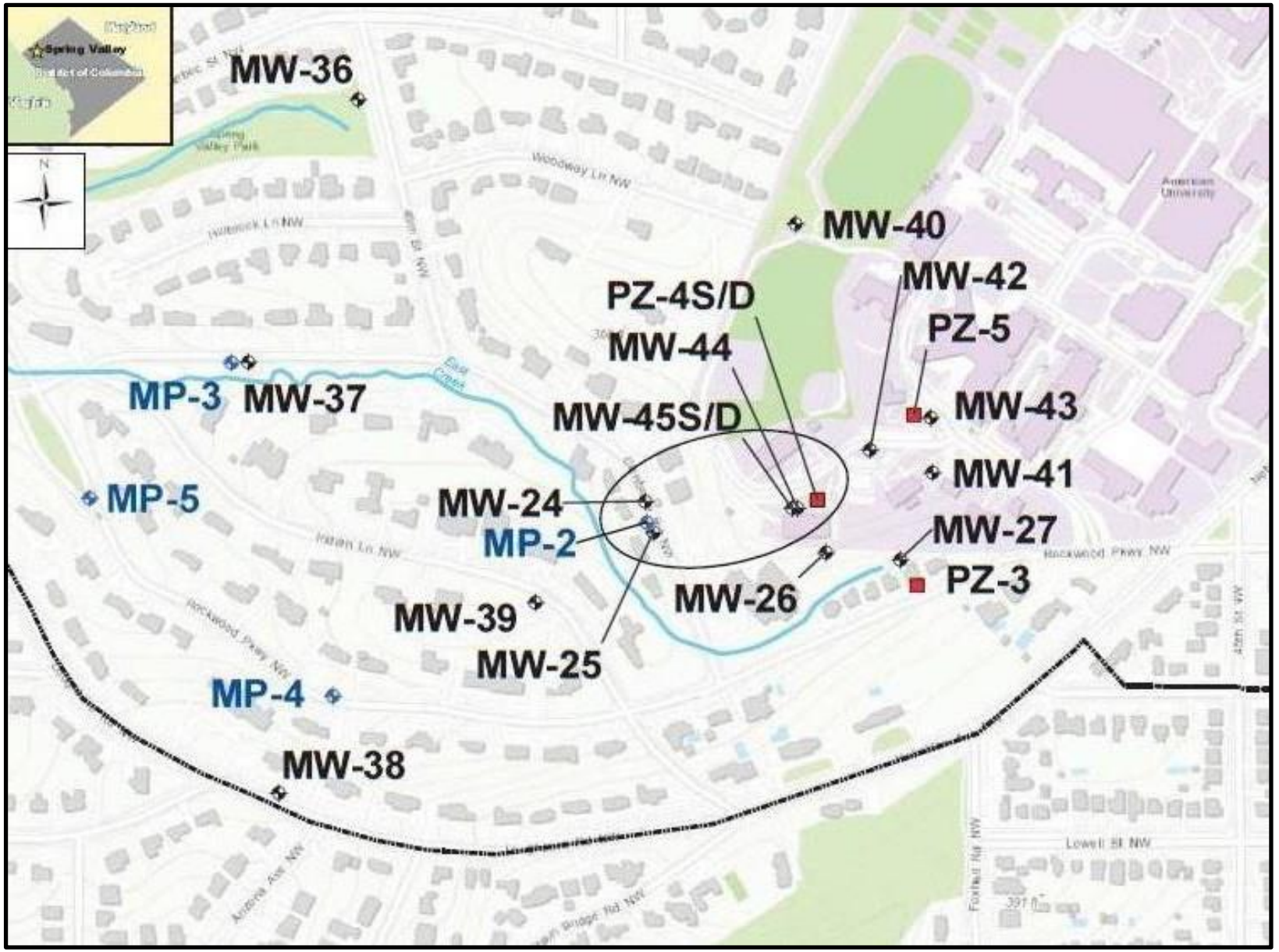
GROUNDWATER STUDY

- A groundwater sampling event for perchlorate at wells PZ-4D and MW-44 will be conducted by the USACE and the U.S. Geological Survey (USGS) the week of February 22nd . The event was pushed from mid-February due to icy conditions.
- The June 2020 sampling results were very similar to the results from September 2019. The Army Corps and Partners agreed on additional sampling for perchlorate after the November update to the Regional Screening Level (RSL), to confirm concentrations consistent with the September results.



Groundwater sampling well

GROUNDWATER STUDY: EXPOSURE UNIT 2



Key

- Area encompassing the EU2 Monitoring Wells
- Spring Valley FUDS Boundary
- Piezometer
- Monitoring Well
- Multiport Well

S/D = Monitoring well or piezometer with screened intervals in the same borehole.

4835 GLENBROOK ROAD

- The Army Corps has allowed the 4835 lease to expire at the end of Jan 2021 and has returned the house to the control of the property owner (American University). USACE will finalize an agreement with the owner to reimburse them for damages incurred during the USACE lease of the property.
- Crews continued maintenance and repairs on the site in January, including repairs to the HVAC system located near the shared property line of 4835 and 4825 Glenbrook Road.

SPRING VALLEY PARTNERS

Reminders:

- Due to continued concerns surrounding the COVID-19 pandemic, the next Partners meeting for **April** will likely be an electronic update in lieu of an in-person meeting once again.
- Our team is continually monitoring the situation closely and is open to discuss plans for future in-person or conference call meetings.

Upcoming Agenda Items:

- *Suggestions?*