

**Former Marble Quarry Landfill
109 Marbledale Road
Tuckahoe, New York**

NYSDEC Brownfield Cleanup Program #C360143

Community Meeting # 13

October 11, 2017



HydroEnvironmental
SOLUTIONS, INC.

One Deans Bridge Road
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Somers, New York 10589
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Pile Drilling

- EBC (Environmental Bulkheading Corp.) continued pile drilling using two drill rigs and the mud rotary drilling method. The final hotel pad pile was drilled on August 22, 2017.
- CAMP stations were used to monitor the site during all pile drilling work.
- Vapor monitoring of the designated vapor wells was performed during all pile drilling work.

Pile Drilling



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Tuckahoe

Vapor Monitoring

- HES, HDR, and NYSDEC agreed upon which vapor wells and monitoring wells should be monitored for vapors using a PID, FID, and Four Gas meter during pile work.
- HES monitored vapor levels in all agreed-upon wells in the localized area of the pile work each day. Vapor monitoring was performed at the selected vapor wells a minimum of once every three hours while work continued.
- Up to three rounds of vapor monitoring occurred each day, depending on how long contractors worked on each given day.
- All results were shared with the NYSDEC and HDR on a daily basis for review and discussion.

Vapor Well Monitoring



Groundwater Sampling

- A third round of groundwater sampling occurred in early July 2017.
- Samples were collected from wells designated MW-1, OW-1, OW-2, BW-2, OW-3, and BW-3.
- Samples were collected using the low-flow sampling technique and were sent to a NYS certified laboratory for analysis.
- Laboratory analytical results have been received and shared with HDR and NYSDEC.

Uncovered Cosmetic Material and Revlon Products



- Additional cosmetic material, including Revlon products, was discovered during planned excavation for site drainage and sewer systems on July 20, July 31, August 1, August 14, September 13, October 3, and October 6, 2017.
- Material was stockpiled, sorted and placed in drums for off-site removal. Samples of canisters were sent to a certified laboratory for analysis.

Uncovered Cosmetic Material and Revlon Products



Cosmetic Material and Revlon Products Stockpile and Sorting



Temporary Soil Vapor Well Venting System

- A vapor venting system consisting of a generator, regenerative blower and carbon filtration drums was connected to 2 vapor wells and one vapor point in the vicinity of the restaurant pad.
- The system is in place for use during the possible future drilling of foundation piles in the restaurant pad.
- The system was operational for the purpose of collecting data for engineering purposes.



Restaurant Pad Test Borings

- General Borings, Inc. (GBI) installed two test borings in the restaurant pad for the purpose of collecting geophysical data on August 28, September 1, and September 6 of 2017.
- CAMP station monitoring, ambient air monitoring with a handheld PID, and operation of the soil vapor venting system occurred during the drilling of the test borings.



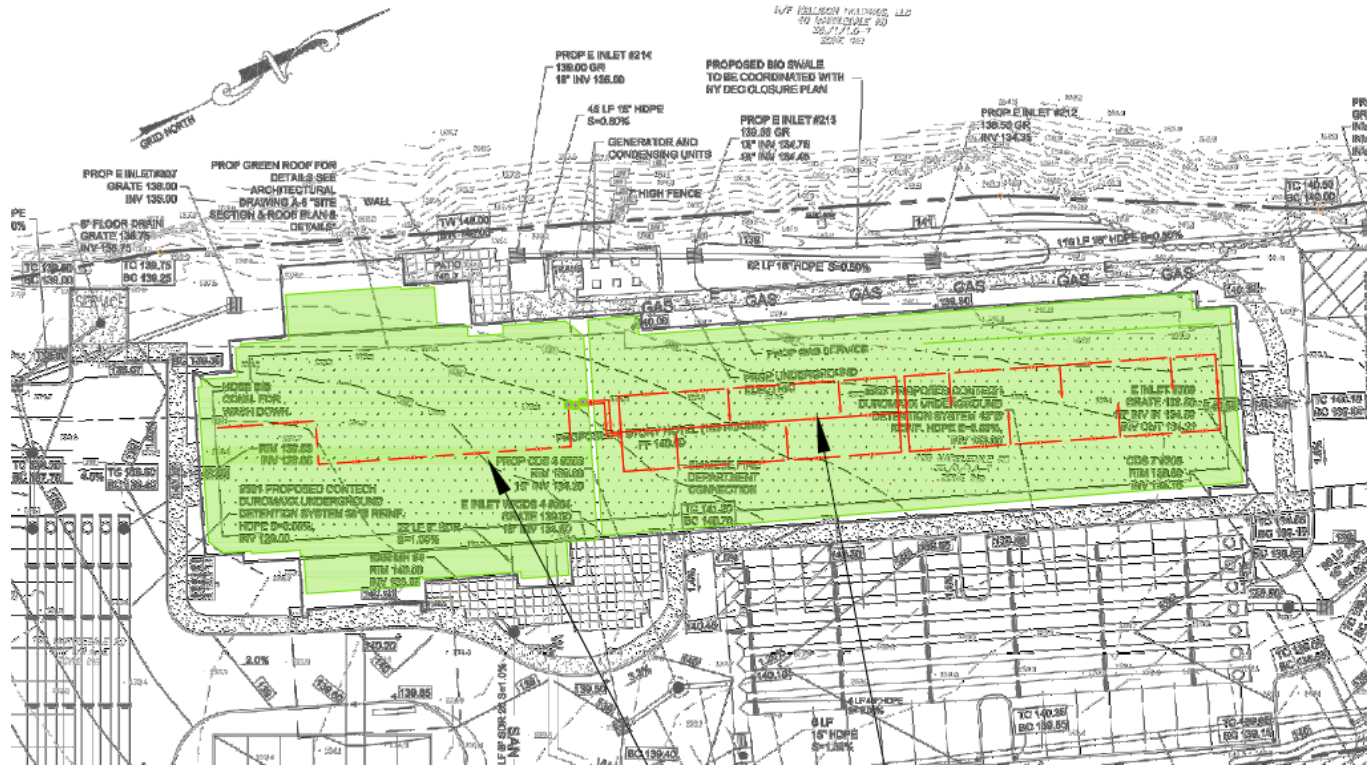
Frac Tank Emptied and Moved

- The Frac Tank was emptied during two separate trips by a vacuum truck in September 2017.
- The liquid was removed from the site and taken to an approved water disposal facility.
- The Frac Tank was moved to the north end of the site in order to accommodate work on the south end of the site.

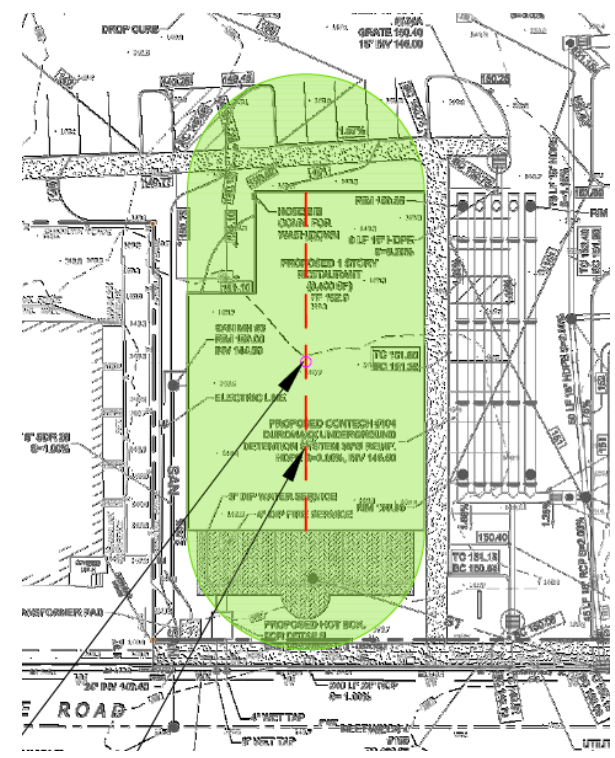
SSDS Design

LEGEND

- W — PROPOSED WATER SERVICE
- W — EXISTING WATER MAIN
- GAS — GAS — PROPOSED GAS SERVICE
- ▤ PROPOSED E INLET
- PROPOSED MANHOLE
- EXISTING MANHOLE
- ▨ PROPOSED CONC. FLATWORK
- INDICATED DROP CURB
- ▲ SSDS MONITORING POINT
- CONVEYANCE PIPE
- DESIGN AREA OF INFLUENCE FOR SSDS

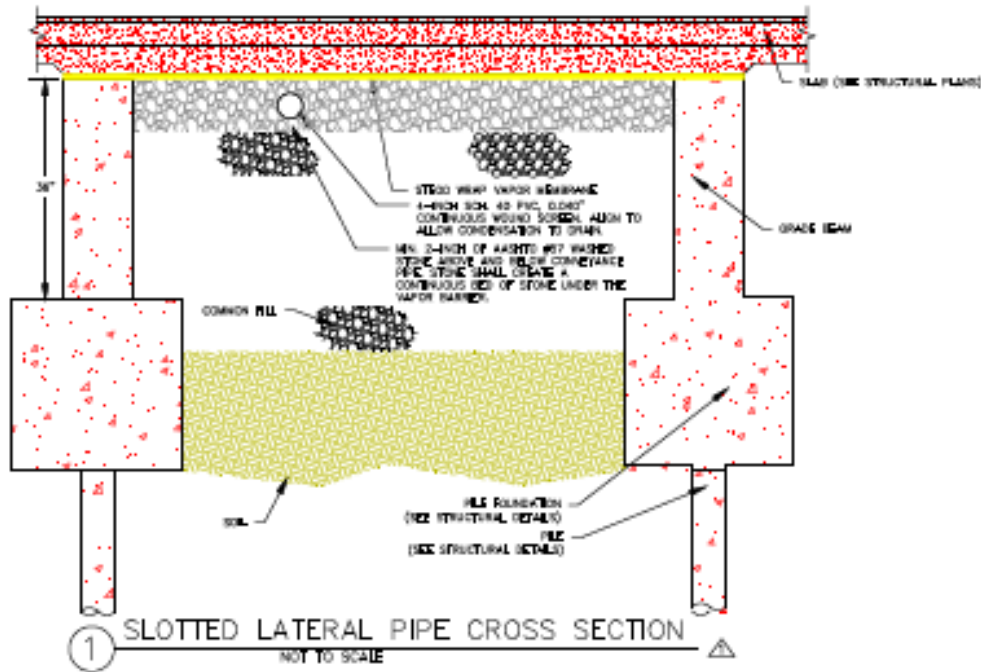


Hotel Pad

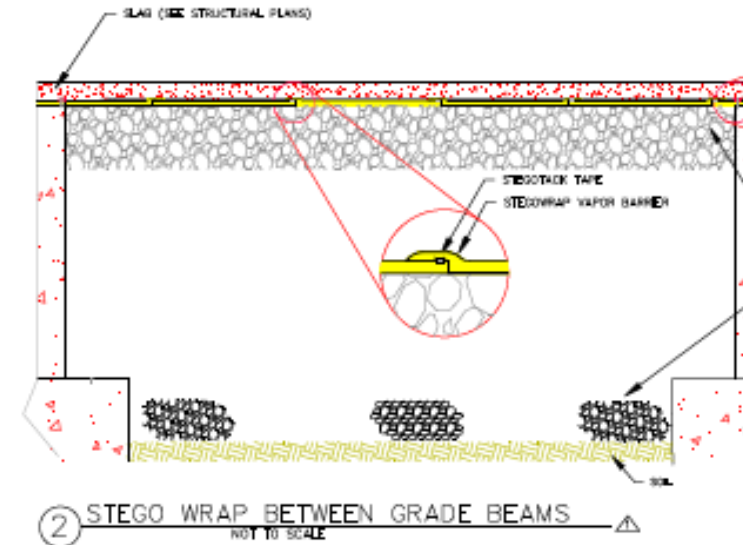
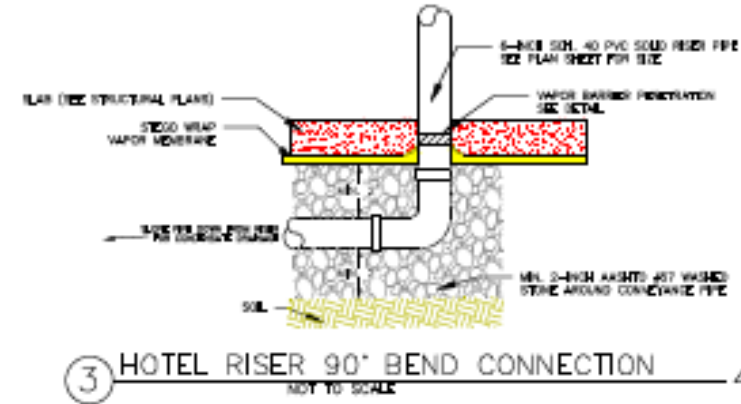


Restaurant Pad

SSDS Design



NOTES:
ALL SLOTTED PIPE SHALL BE 4-INCH SCHEDULE 40 PVC BY JOHNSON SCREENS OR APPROVED EQUAL.

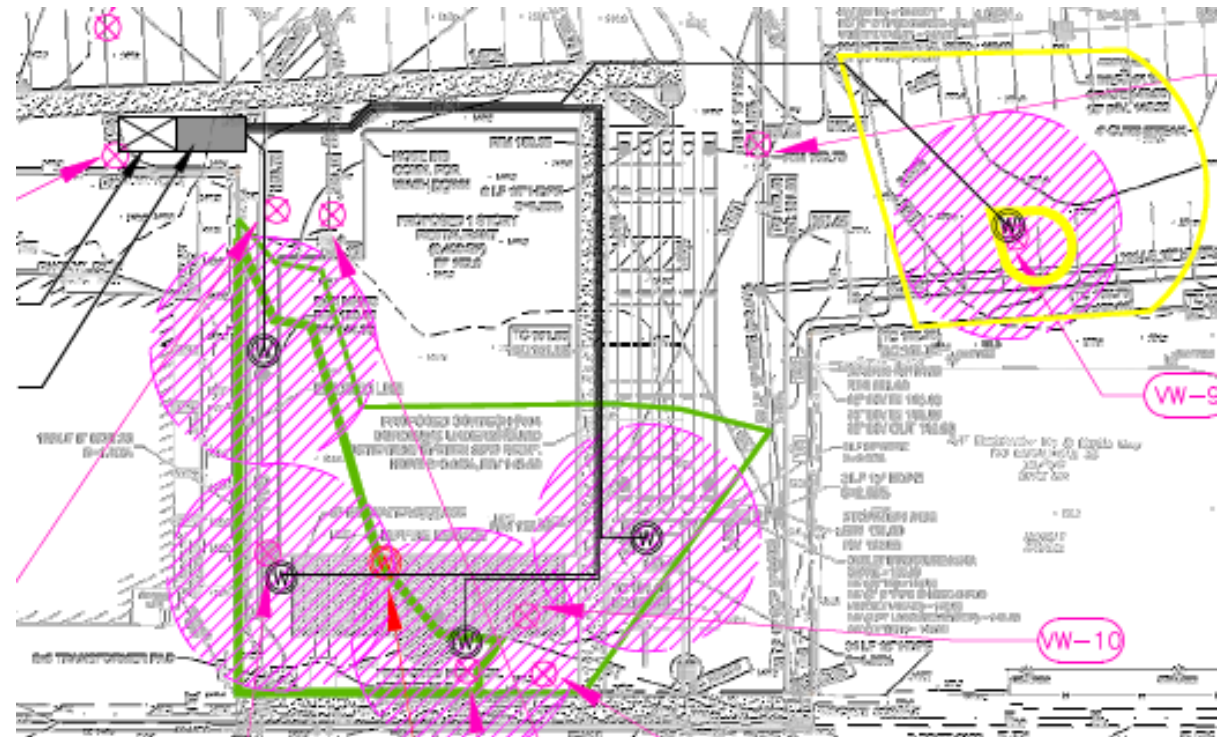
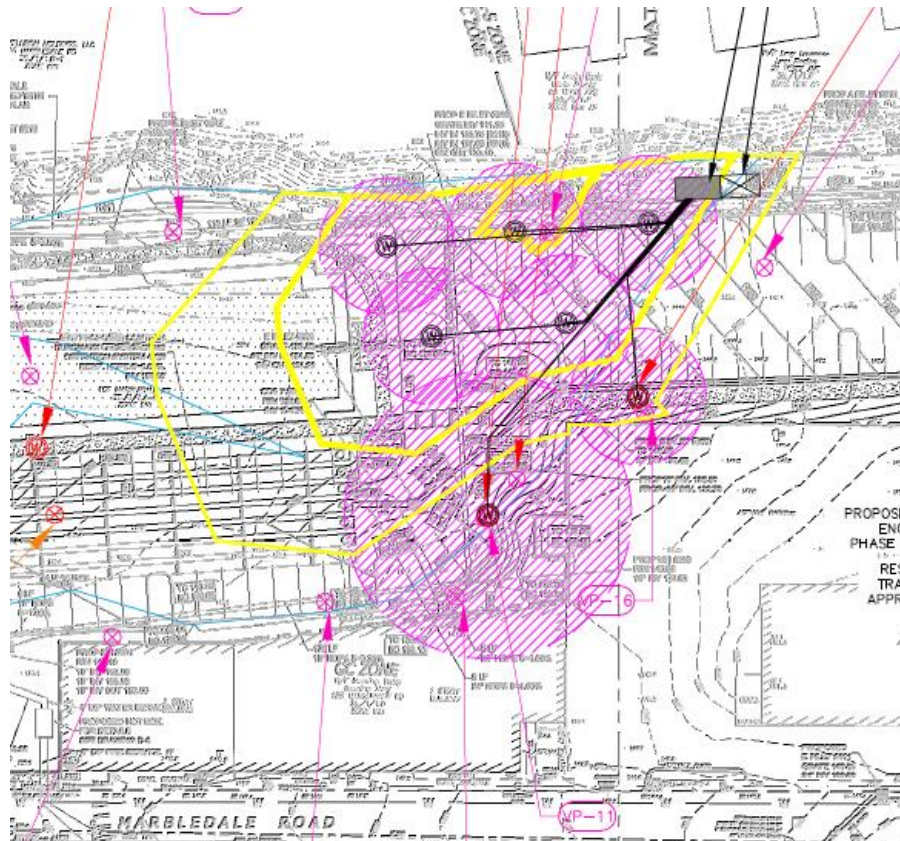


NOTES:
A CONTINUOUS STONE 2-INCH THICK BED OF 4-AGGREGATE 407 WASHED STONE SHALL BE BETWEEN
ALL PILE FOUNDATIONS UNDER SLAB. STONE BED SHALL BE COVERED WITH STEGOWRAP VAPOR
BARRIER OR APPROVED EQUAL. STEGOWRAP TAPE SHALL BE USED TO CONNECT SECTIONS OF
STEGOWRAP AND TO FOUNDATION FOOTING.

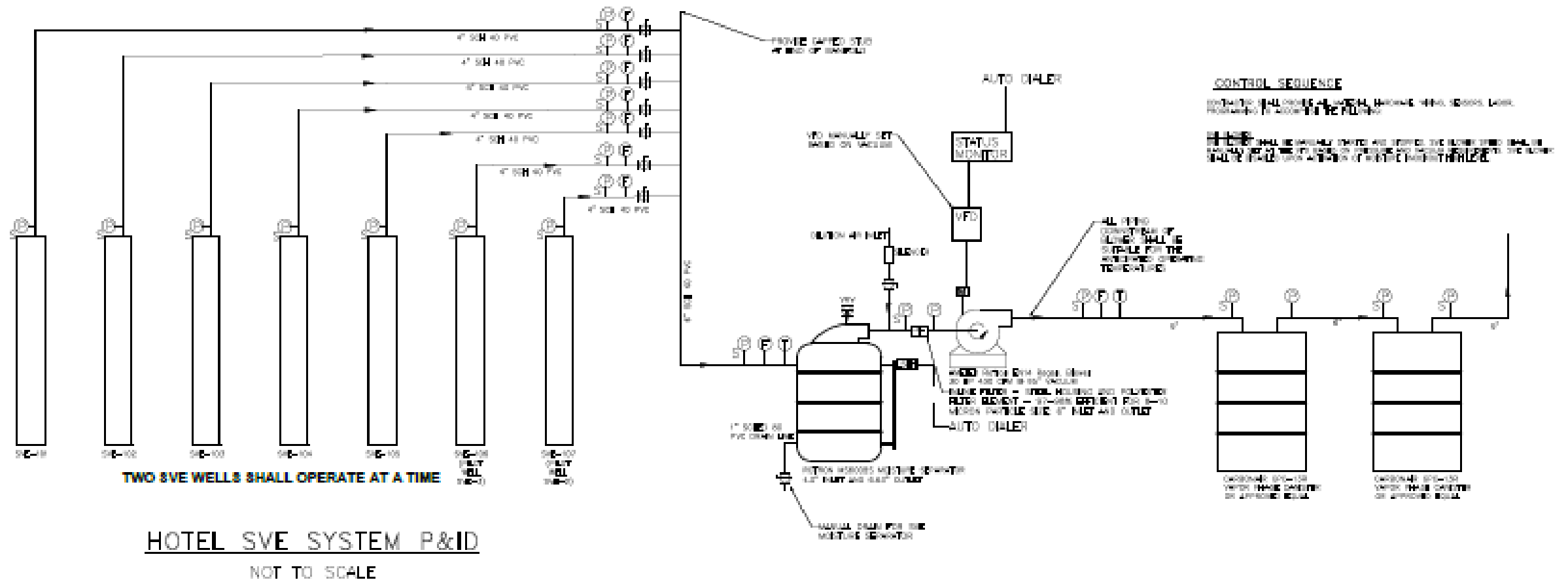
SVE Design

LEGEND

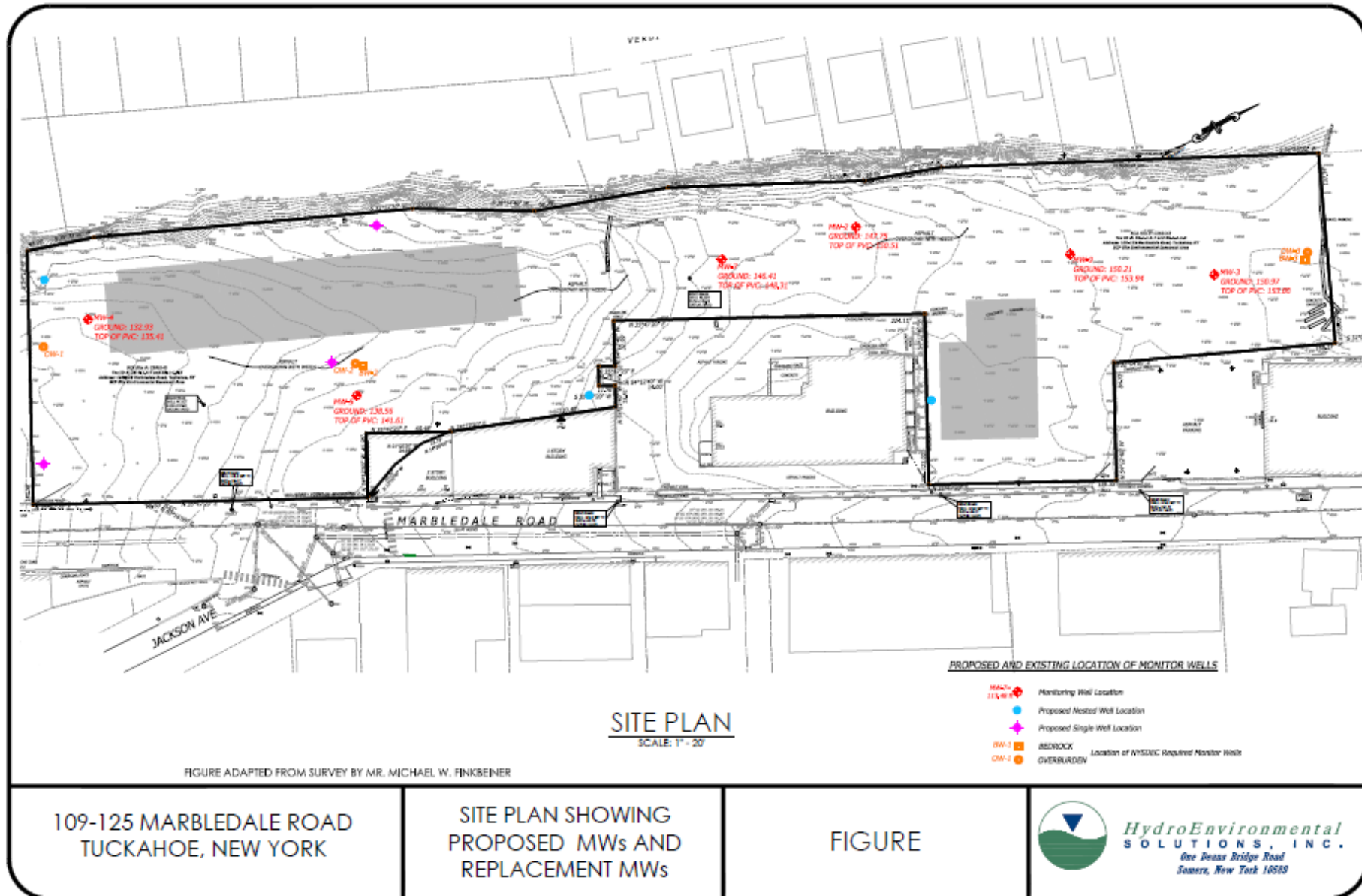
- BENZENE $>100 \mu\text{g}/\text{m}^3$
- FREON $>2,000,000 \mu\text{g}/\text{m}^3$
- FREON $>1,000,000 \mu\text{g}/\text{m}^3$
- FREON $>500,000 \mu\text{g}/\text{m}^3$
- PCE, TCE, VC $>1,000 \mu\text{g}/\text{m}^3$
- PCE, TCE, VC $>500 \mu\text{g}/\text{m}^3$



SVE Design



Monitor Well Installation (For Long Term Monitoring)



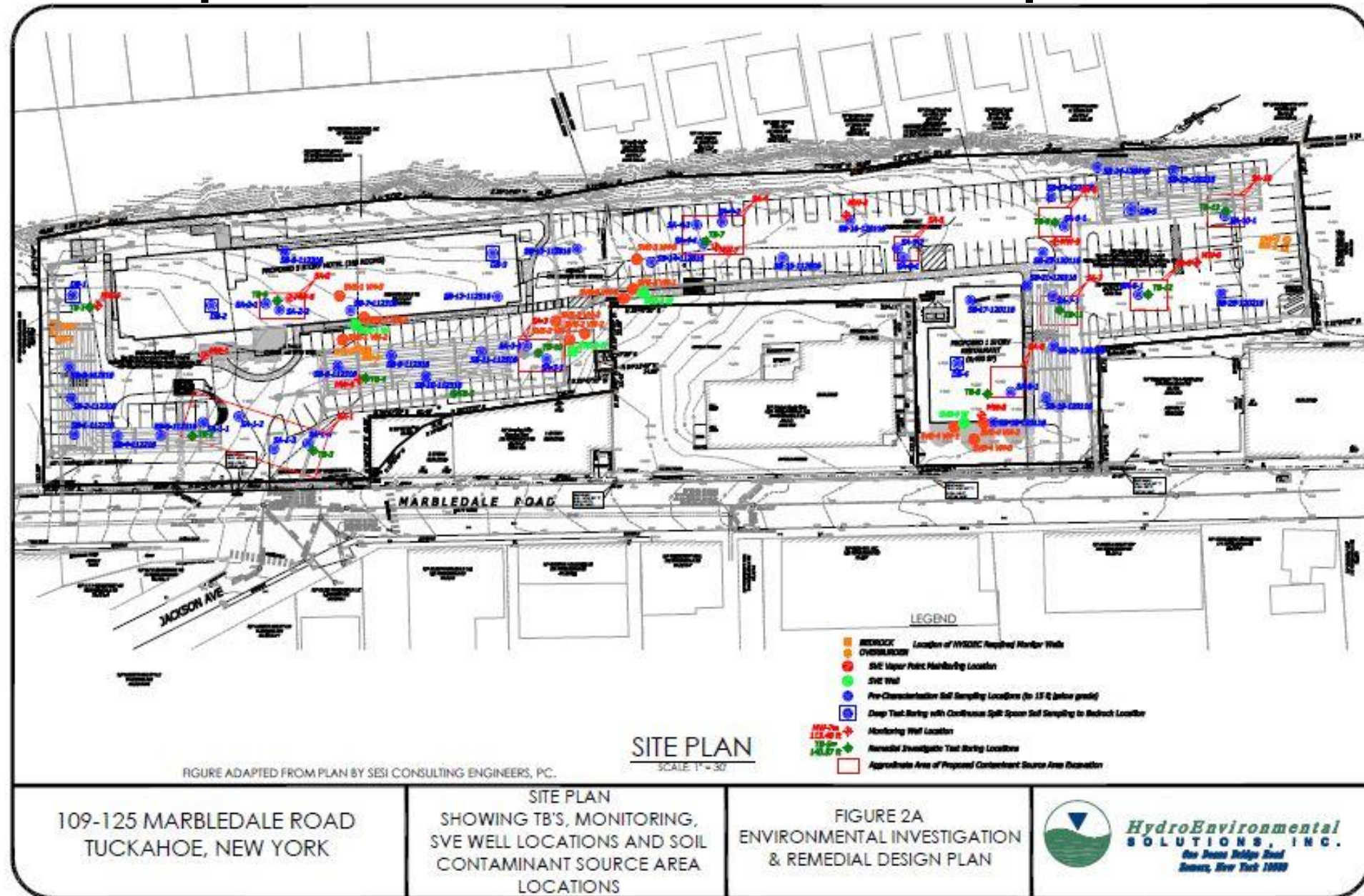
Pending Source Area Removal

- Additional excavation of SA-4 along the northern sidewall to remove any remaining Freon source materials.

Upcoming Reports

- SMP – Site Management Plan
 - Description of Remedial Program
 - Engineering and Institutional Control Plan
 - Site Monitoring Plan
 - Operation and Maintenance Plan
 - Inspections, Reporting and Certifications
- FER – Final Engineering Report
 - Summary of Site Remedy
 - Description of Remedial Action
 - Contaminant removal, sampling, etc.
 - Engineering and Institutional Controls Implemented

Proposed Future Site Development



What's Next?

- Continue to place item 4/QP across site along with crushed stone to act as a temporary cap. This will continue during stormwater retention basin and culvert piping installation.
- Additional excavation of SA-4.
- Finalize designs for SSDS and SVE and install systems.
- Install 9 monitor wells including 3 nested pairs and 3 single wells.

Thank You for Attending the Tuckahoe
Community Meeting Related to the
Marbledale BCP Site!

Questions?

