



# Williamstown-Northfield Park & Ride Case Study

*Presented by*  
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## Multidisciplinary Approach to Projects



### Core services

- Transportation planning & engineering
- Land development
- Planning & design
- Environmental
- Applied technologies

### Markets

- Transportation agencies
- Real estate
- County and local governments
- Institutions
- Federal government
- Energy

## Case Study Topics

- Preliminary Design
- Phase I Environmental Site Assessment
- Stormwater Design Revisions
- Phase II Environmental Site Assessment
- Summary/Conclusions

## Preliminary Design





### Williamstown-Northfield Park & Ride

Williamstown/Northfield, VT | Vermont Agency of Transportation (VTrans)



### Conceptual Design

- Preferred site from Alternatives Analysis
- Located adjacent to existing VTrans District Maintenance Garage
- Conceptual stormwater design

## Preliminary Stormwater Considerations

- Sub-Jurisdictional (State)
  - Proactively treating to 2017 VSMM
- Soils
  - Hydrologic Soil Group
- 2017 VSMM
  - Emphasis on infiltration
- Topography
- “Hotspot” (Environmental)?



## Phase I Environmental Site Assessment



## Limited Phase I ESA

- Owner Interview(s)
- EDR Report / Historical Photos
- ANR Atlas
  - Review of Historical Reports
- Site Visit



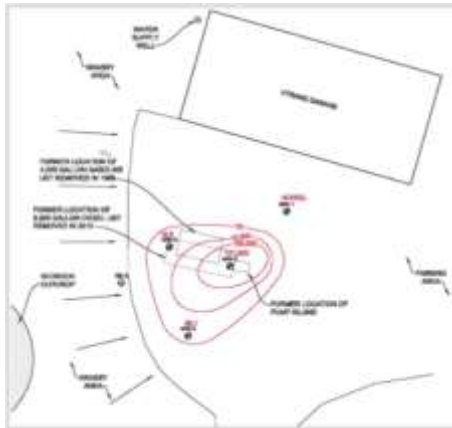
## Findings: EDR Report and Historical Photos

- No Nearby/Adjacent "High Risk" Properties
- Gas/Diesel Pumps
- Equipment Yard
- Soil Stockpile



## Findings: ANR Atlas

- VTrans Maintenance Garage since the 1950's
- Closed Hazardous Site – SMS# 880276
  - 1988 - 4000 gal Gasoline UST Removal
    - Contaminated Soil – thin spread on-site
  - 1000 gal Fuel Oil UST – pulled, no report
- Active Hazardous Site – SMS# 20124312
  - 2012 - 8000 gal Diesel UST
    - Contaminated soil discovered, apparently from gasoline UST pulled in 1988
- Currently sampling wells bi-annually



### MEMORANDUM

TO: Chuck Adams, Hydrogeologist/UST Program

FROM: Bob Maclean, Environmental Technologist

DATE: July 14, 1988

SUBJECT: VTRP Report

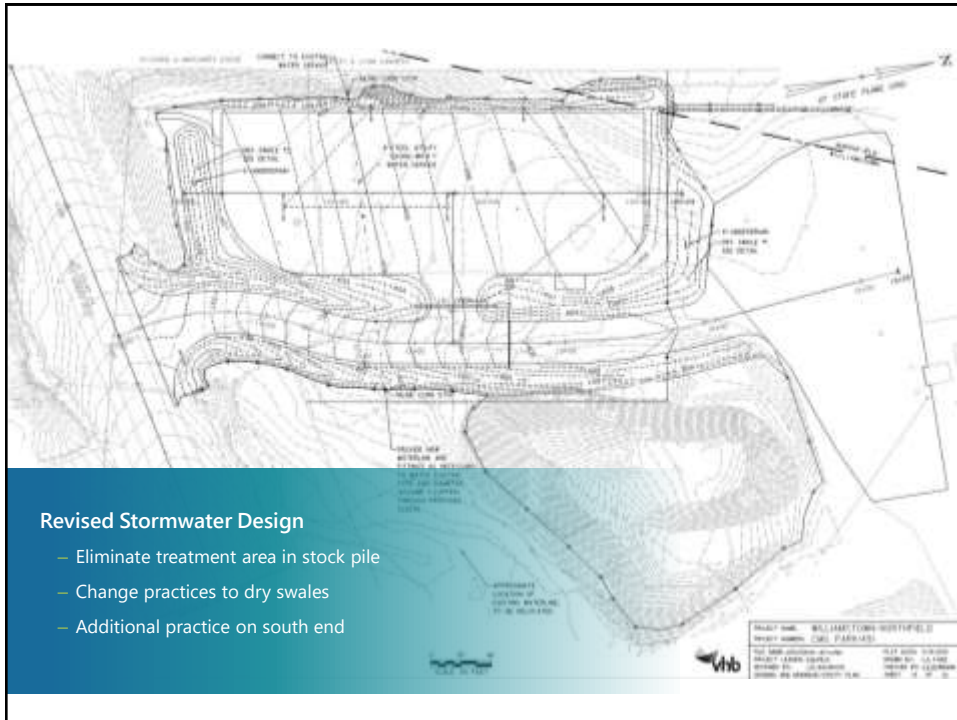
On July 14, 1988 I inspected the removal of a 2000 gallon heating oil tank at the Williamson Air Garage. While there, I noticed some previously unidentified soils from another spill at this site. These gasoline contaminated soils have been identified since November of 1986 and originally had depths of 25-30 meter units. I dug a 10" hole into this pile and got 100 readings of 0.1 at the surface and the pile did not in the center. I collected soil at this location. This soil from this pile is the middle of a very large spill on site. The spreading of these soils should indicate my remaining investigations will enable us to close this site.

RM/1000

# Stormwater Design Revisions

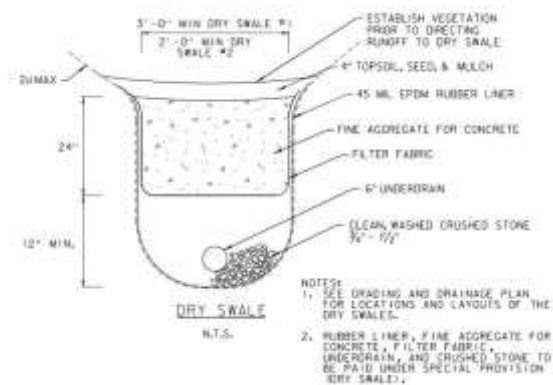






## Treatment Detail Considerations

- Typical Dry Swale
- No infiltration
- Liner
  - Prevent infiltration that could influence groundwater plume
  - Prevent surface discharge of contaminated groundwater

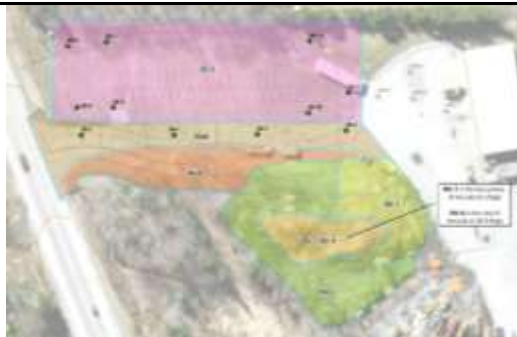


# Phase II Environmental Site Assessment

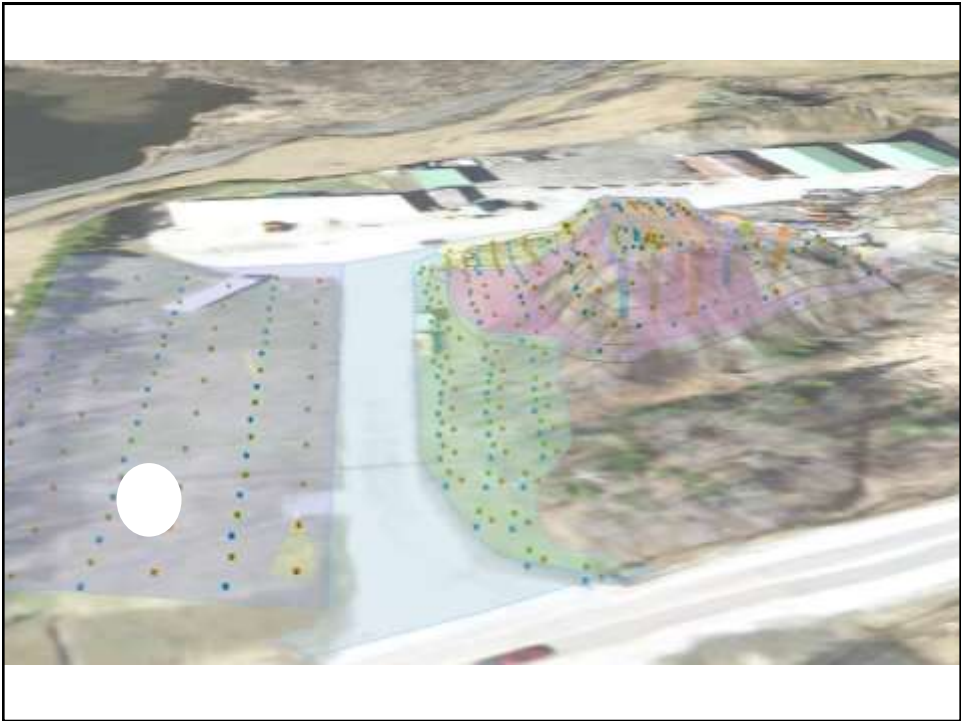


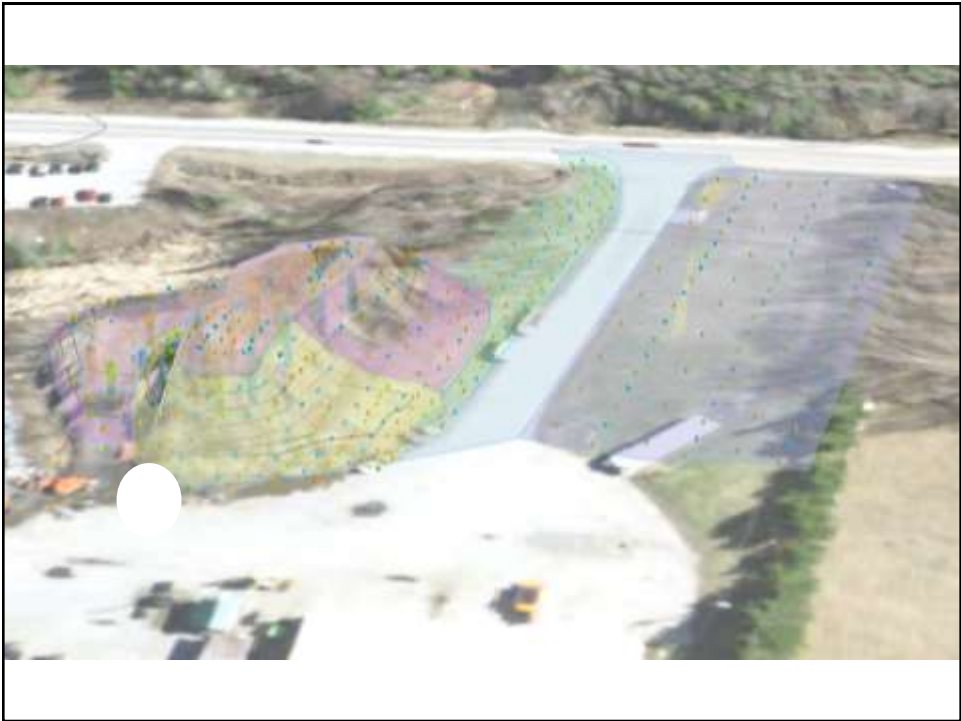
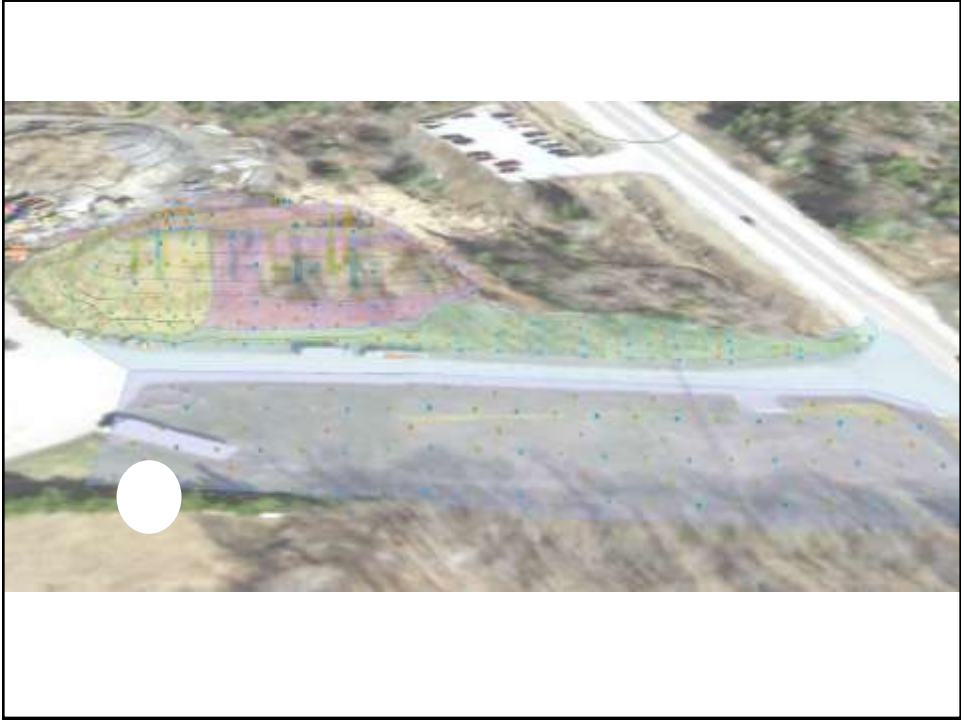
## Limited Phase II ESA

- Soil Characterization
  - Discrete Sampling
  - Incremental Sampling Methodology
- Why?
  - **NO SURPRISES!**
    - Construction Delays
      - additional investigation(s), CAP/SMP design, regulatory review and approval, etc.
    - Cost of Soil Disposal
    - Contractor Worker S&H
    - VTrans Garage Worker S&H
    - Public Park and Ride User S&H









# Conclusions/ Summary



## Conclusions/Summary

### **Preliminary Design Process**

- Consider potential for contamination on developed sites
- Neighboring sites also should be considered
- Involve environmental team early (establish “hotspot”)

### **Other Considerations**

- Urban soils, cost of disposal
- Coordination of soils exploration with environmental team
- Infiltration can be more cost effective if feasible

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