



Civil & Environmental
Consultants, Inc.

West Virginia Department of Environmental Protection

2022 AML Contract 8 Project North Project – Brownton Refuse #2
CEOI 0313 DEP2200000017

Presented By:

Joseph D. Robinson, P.E.



Office of Abandoned Mine
Lands and Reclamation

December 8, 2023

Company Overview

- ❖ Decades of History with AML and Civil Engineering Projects – 1980's
- ❖ Tried and Proven AMD Remediation Experience
- ❖ Technical Services In-House

CEC is an expanding, multi-disciplined company that is home to:

- Civil Engineers
- Geotechnical Engineers
- Transportation Engineers
- Structural Engineers
- Environmental Engineers
- Environmental Scientists
- Chemical Engineers
- Geologists
- Hydrogeologists
- Hydrologists
- Ecologists
- Biologists
- Wetland Scientists
- Threatened & Endangered Species Experts
- Agronomists/Soil Scientists
- Emissions Testing Professionals
- Meteorologists
- Chemists
- Archaeologists
- Construction Managers & Inspectors
- Environmental Technicians
- Treatment Plant Operators
- Land Surveyors
- Landscape Architects
- GIS Analysts & Programmers

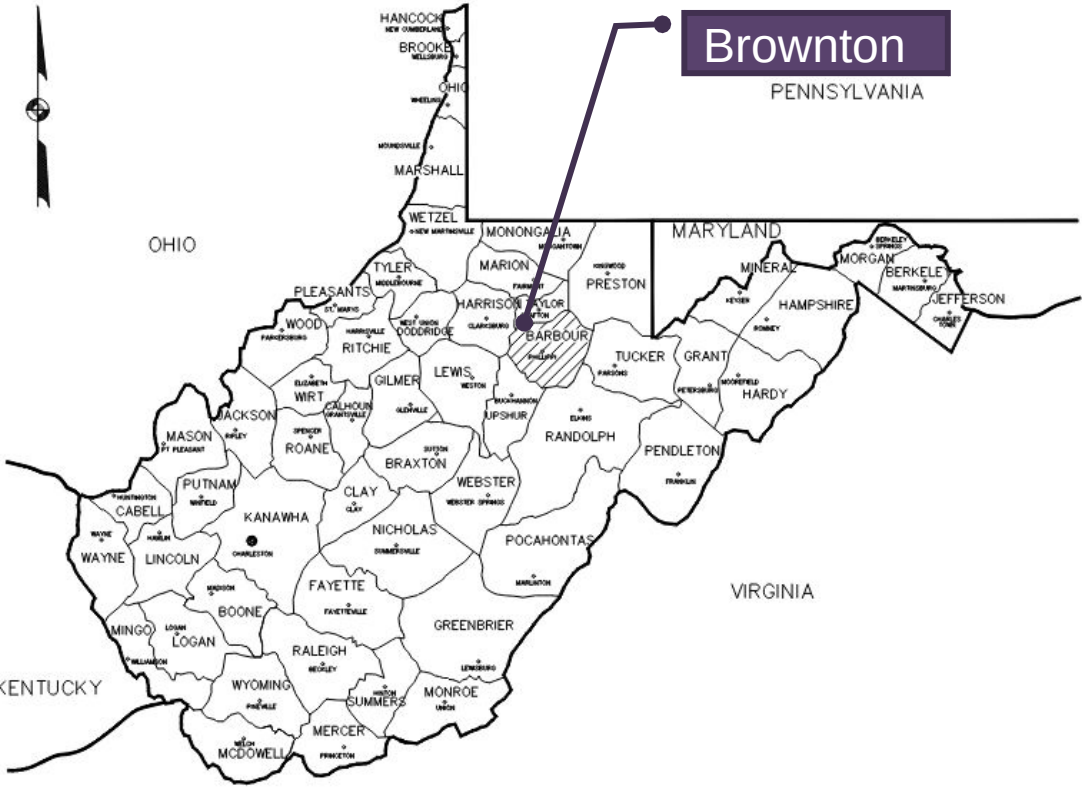


Brownton Refuse #2 - Agenda

Agenda:

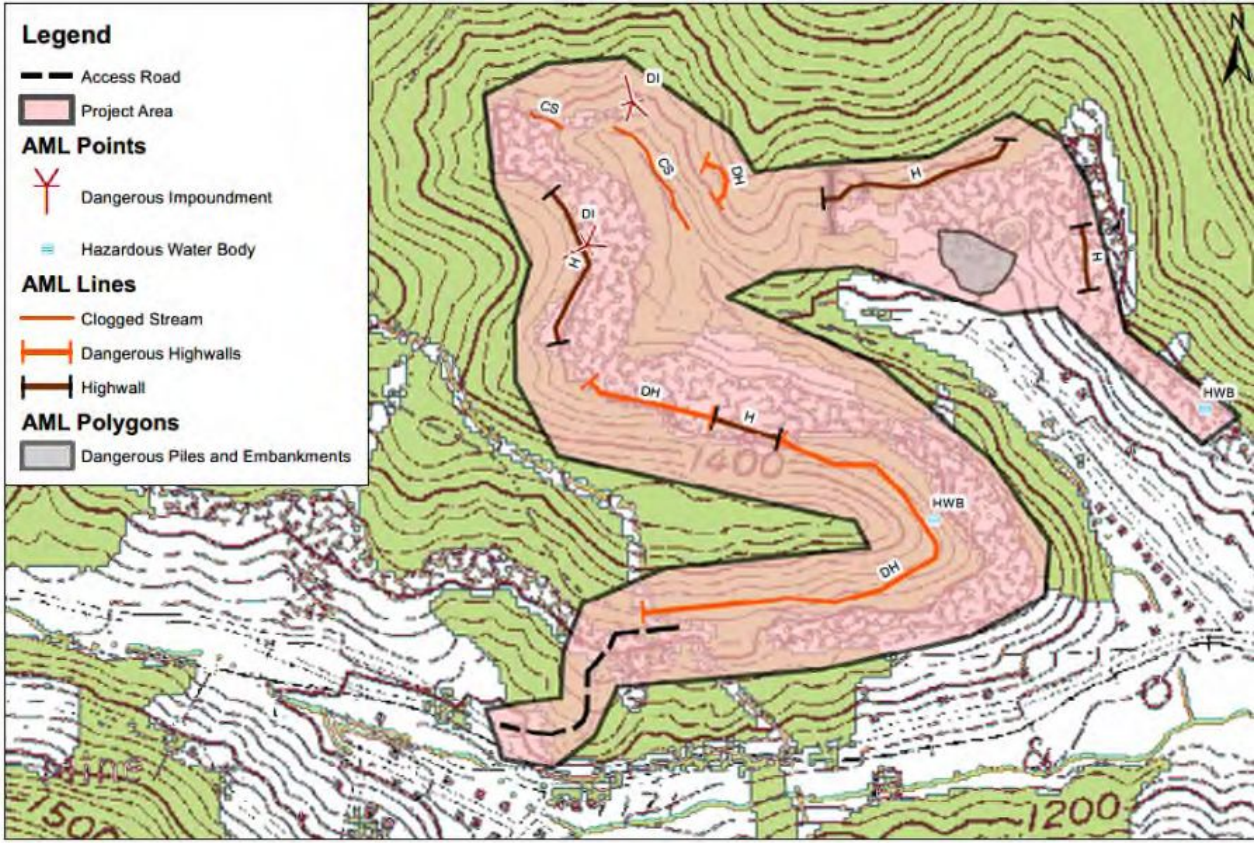
- Site Location
- General Mitigation Overview
- Key Site Issues / Site Constraints / Design
 - Existing Conditions
 - Preliminary Design Plan
 - Outline of Key Quantities
- Schedule & Bidding

Brownton Refuse #2 - Site Location

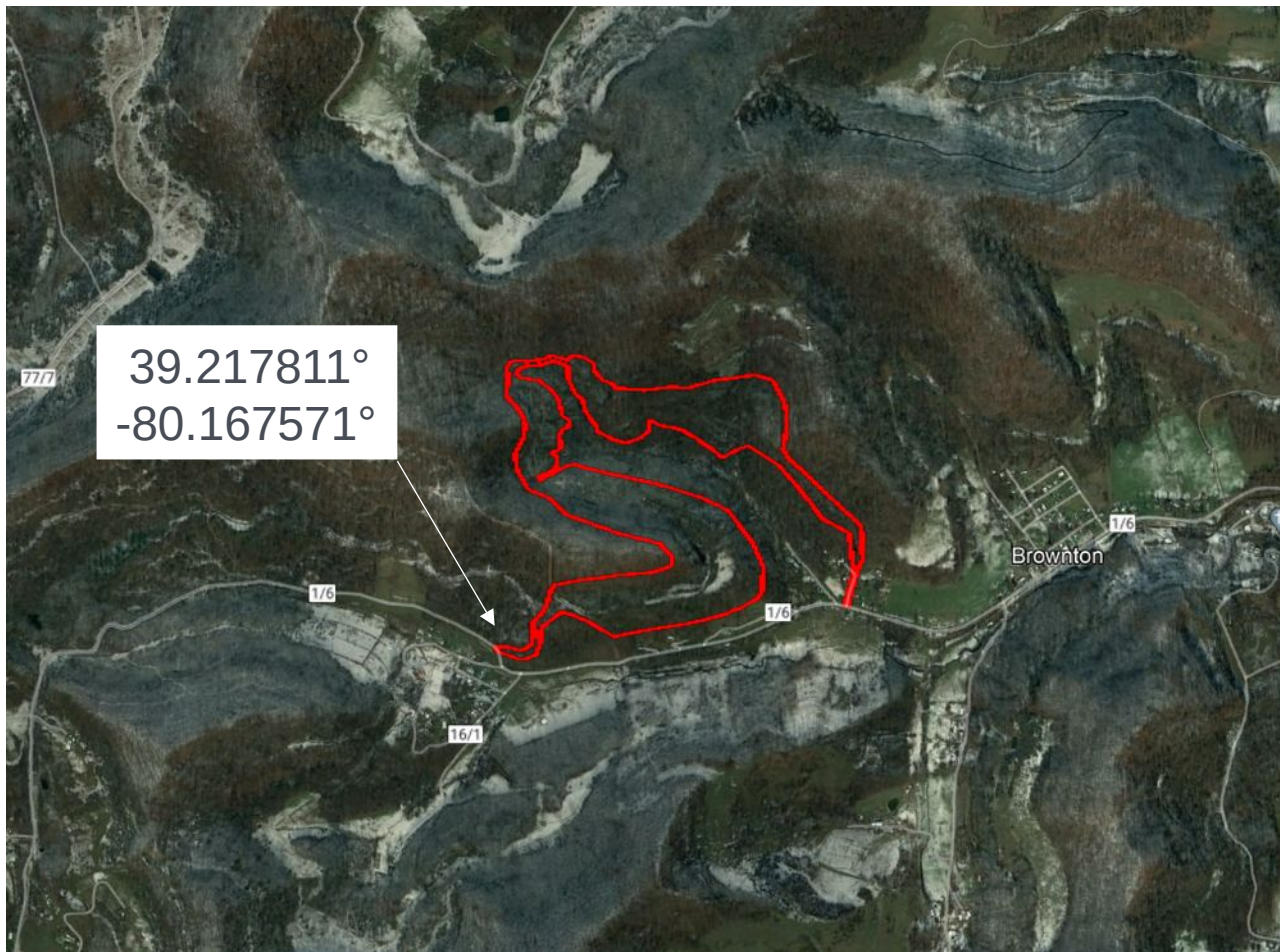


STATE VICINITY MAP

Project Location Map - Topographic Map
Brownton Refuse #2, WV-3242



Brownton Refuse #2 - Site Location



Brownton Refuse #2 – Mitigation Summary

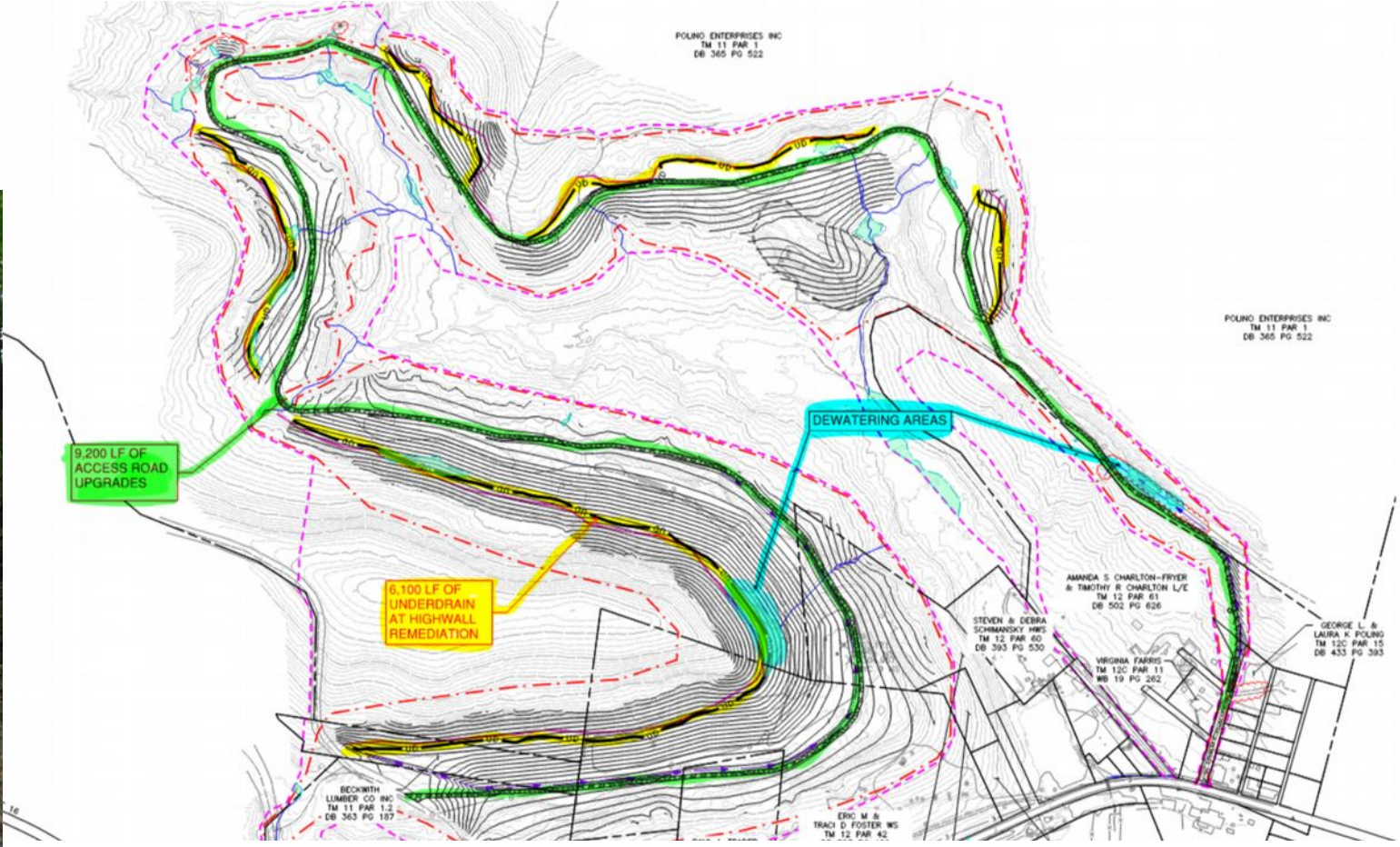
SUMMARY:

- High wall mitigation utilizing grading and drainage
- Refuse remediation utilizing trenching and filling
- Dewatering existing ponded areas and provide positive drainage
- Maintain balanced storm water outflow
- Mine portal sealing
- Correct drainage blockage
- Relocation of surface gas line
- Improve site access for AML maintenance, gas company and land owners
- Maintain land use for land owners
- Revegetate and close out site



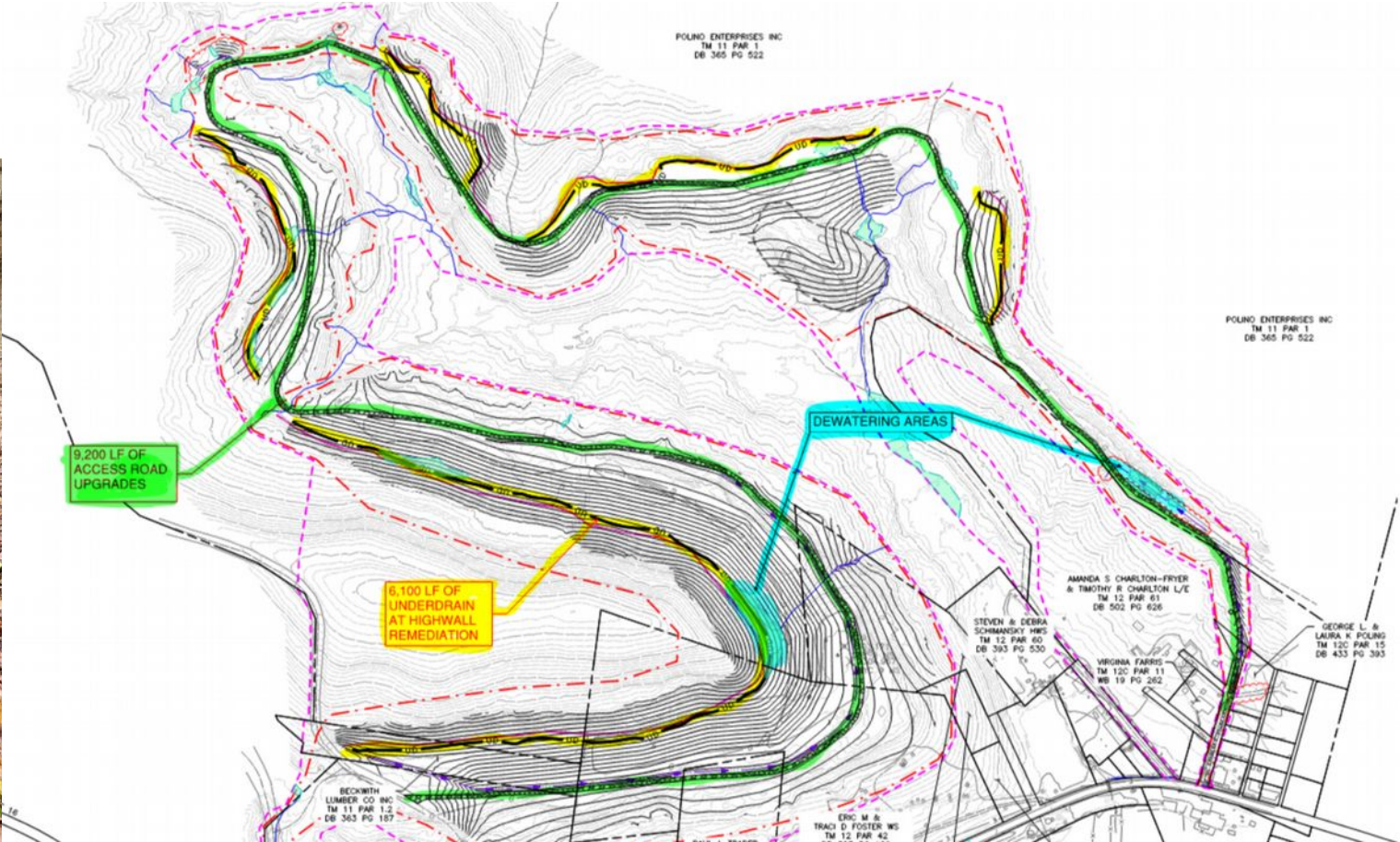
Brownton Refuse #2 - Key Site Issues

- Access Improvements



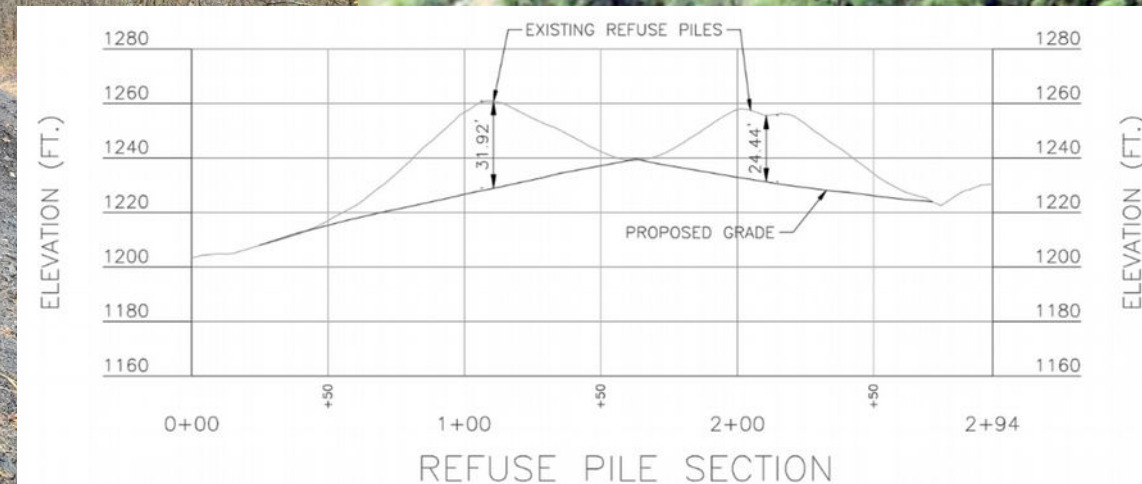
Brownton Refuse #2 - Key Site Issues

- Dewatering



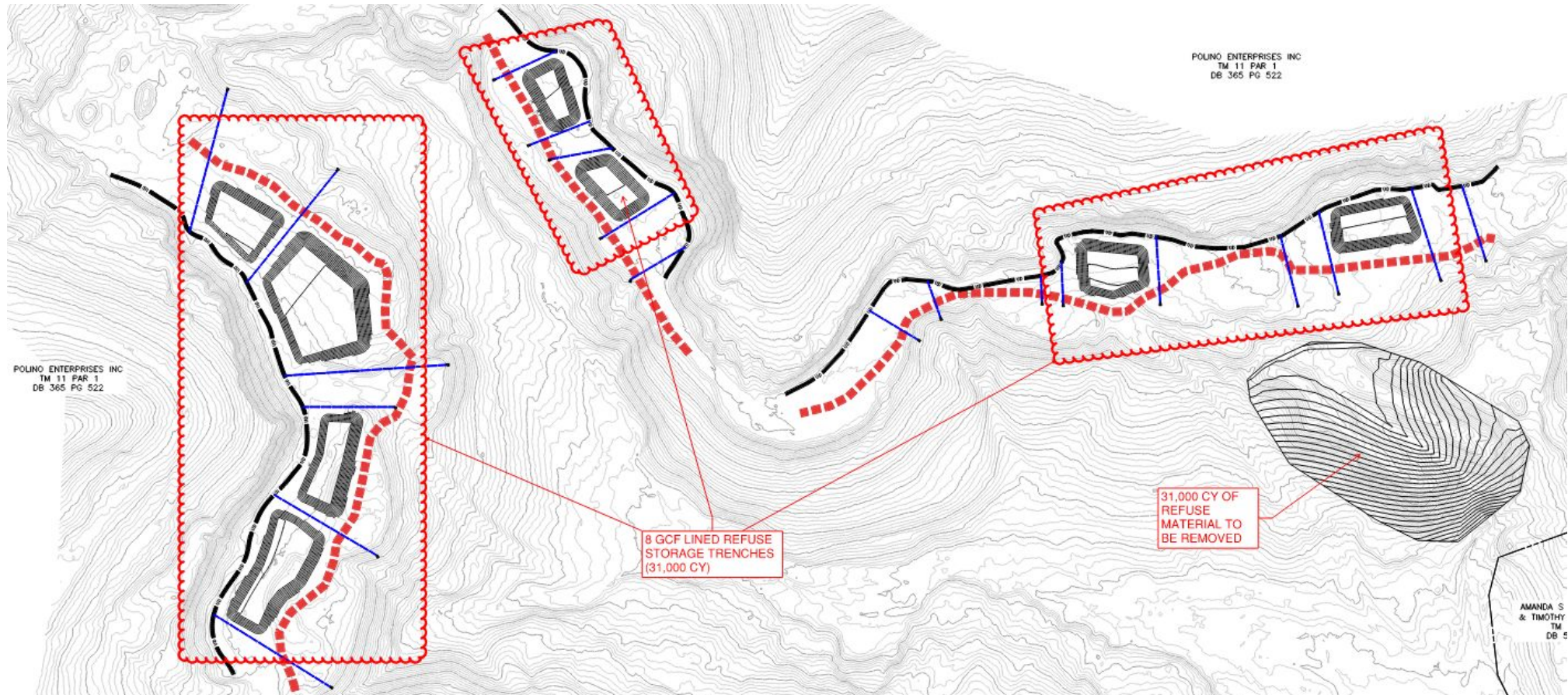
Brownton Refuse #2 - Key Site Issues

- Refuse remediation



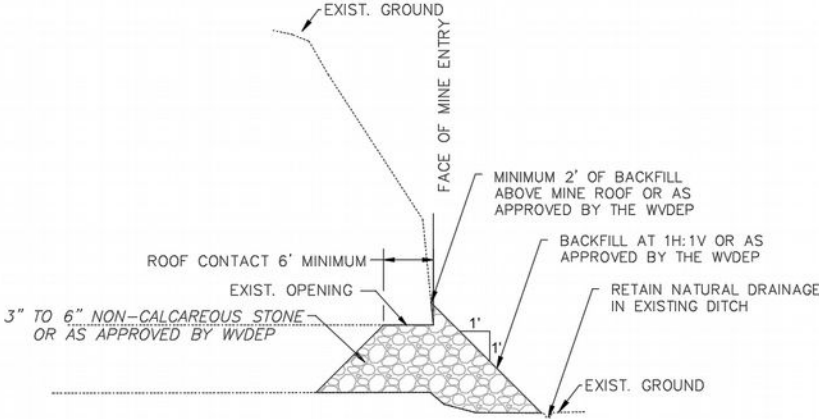
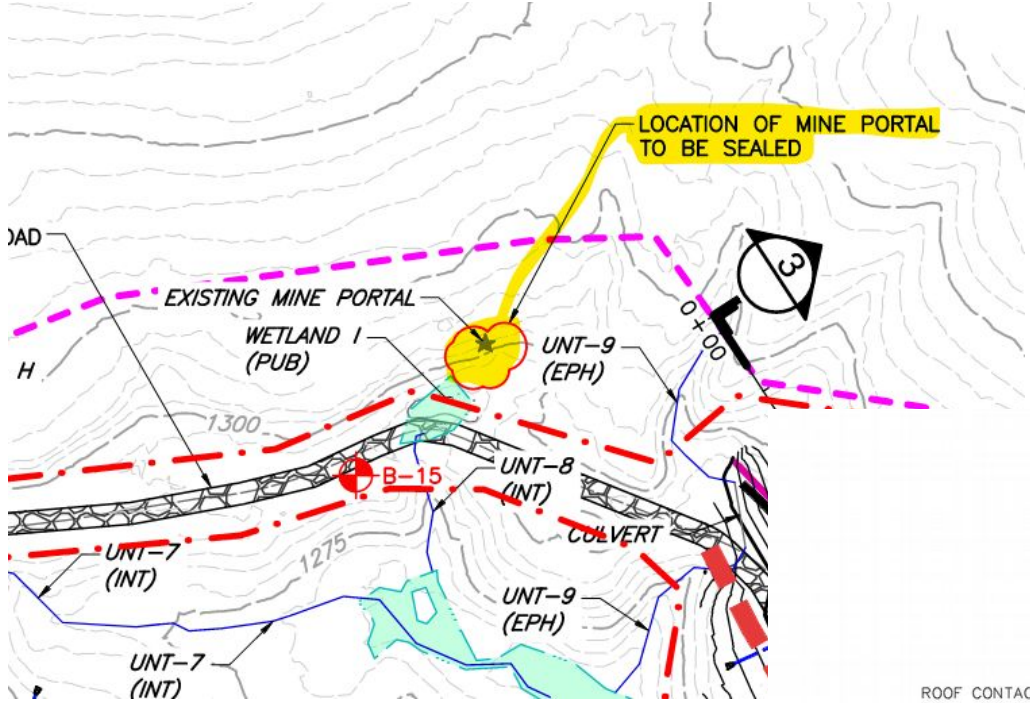
Brownton Refuse #2 - Key Site Issues

- Refuse remediation utilizing trenching; 31,000CY



Brownton Refuse #2 - Key Site Issues

- Dry Mine Portal Closure



DRY MINE SEAL
NOT TO SCALE



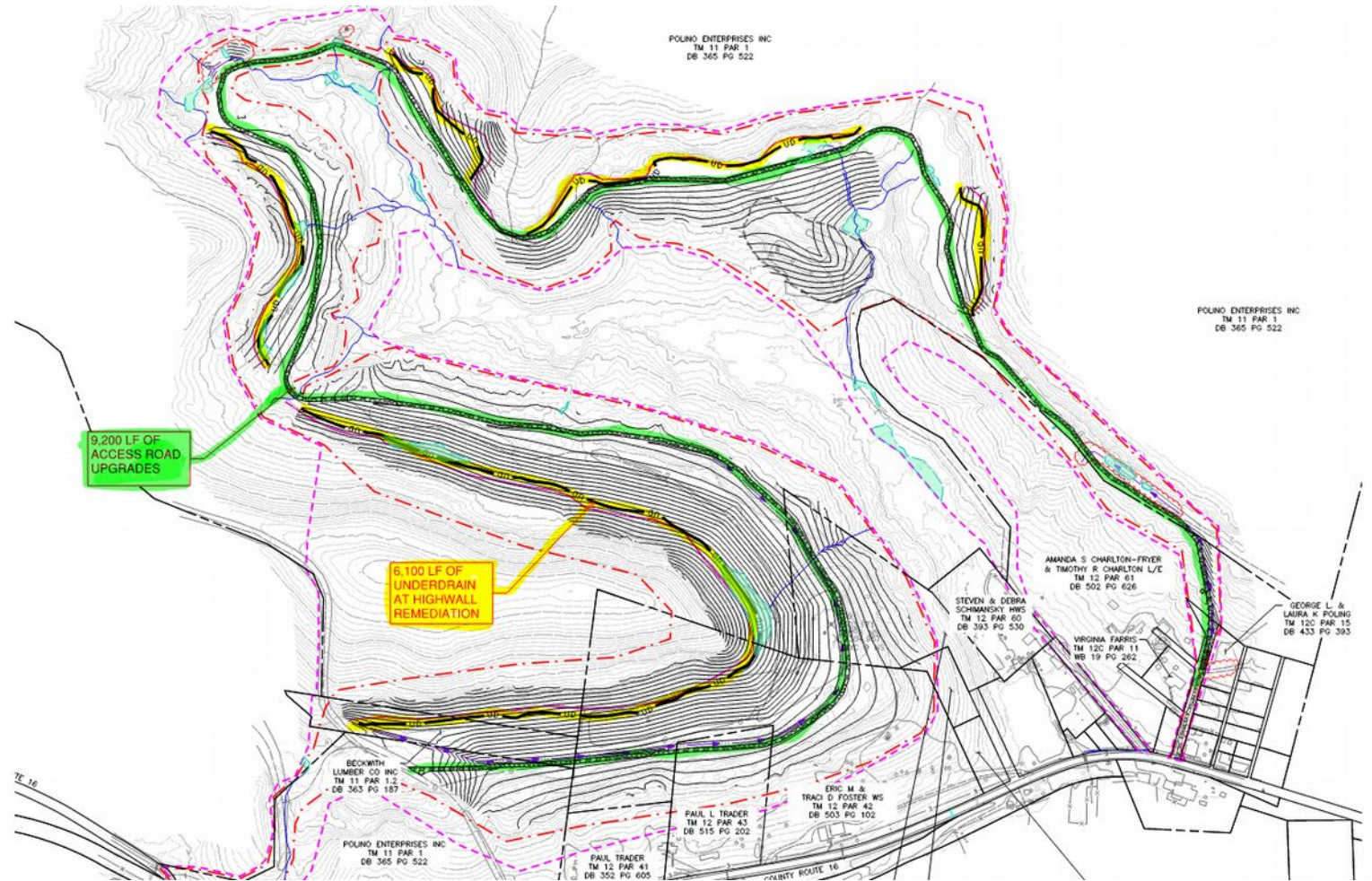
Brownton Refuse #2 - Key Site Issues

- High Wall Remediation



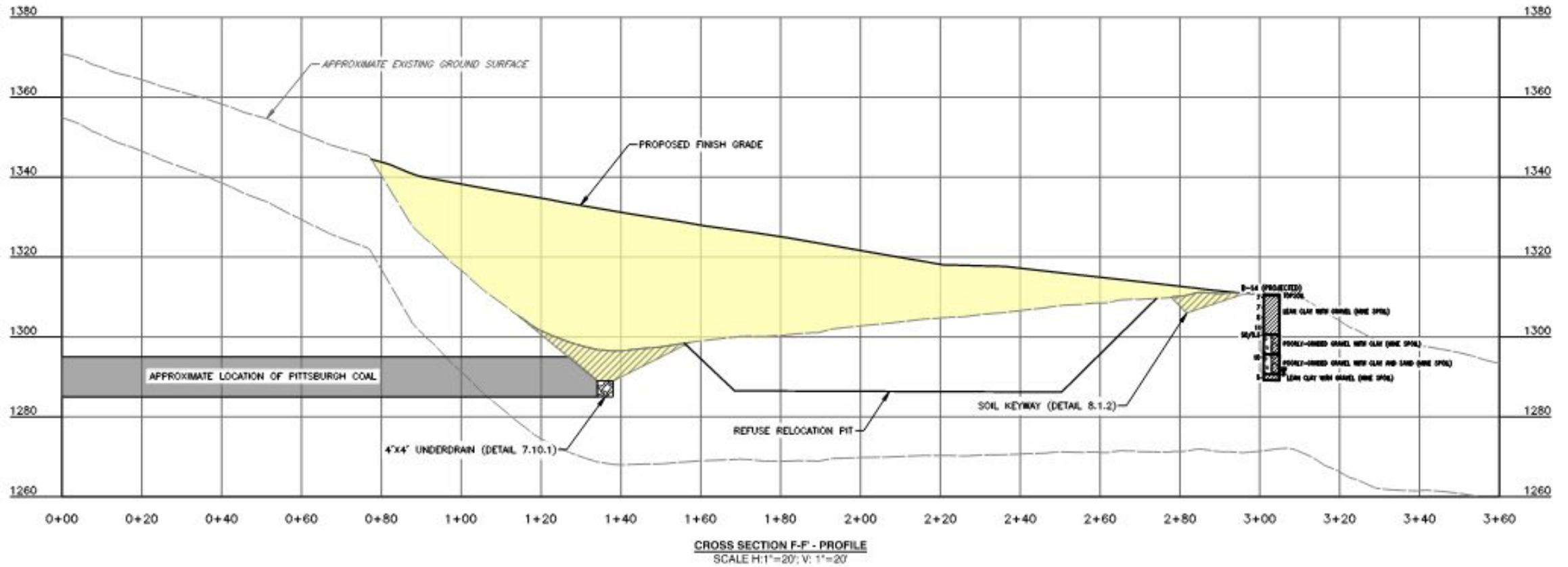
Brownton Refuse #2 - Key Site Issues

- Priority 2 High Walls:
 - 6,100 LF
- High Wall Grading
 - Earthwork: 565,000 CY



Brownton Refuse #2 - Key Site Issues

- Priority 2 High Wall – Section



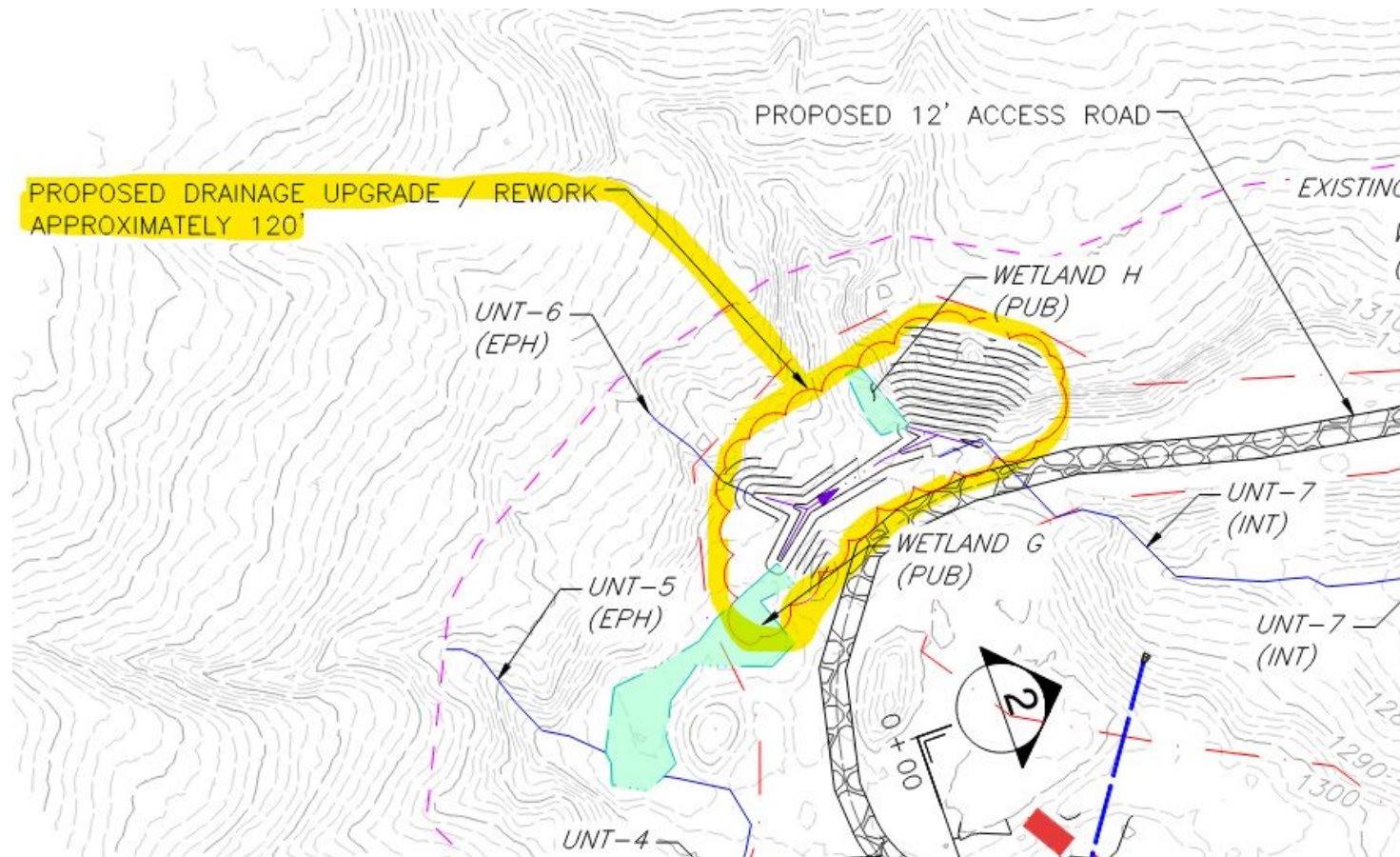
Brownton Refuse #2 - Key Site Issues

- Blocked Stream Drainage Improvement



Brownton Refuse #2 - Key Site Issues

- Blocked Stream Drainage Improvement



Brownton Refuse #2 – Schedule

- Schedule:
 - Concept Design - Completed
 - Preliminary Design – January
 - Final Design – April
 - Design Issued for Bid Documents – May
 - Permitting – Submission January
 - Estimated Regional General Permit – 5-6 months
 - Estimated NEPA EA Permit – 4-6 months
 - Pre-Bid Project August



Questions?

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