Phase 14 Development and Visibility Assessment

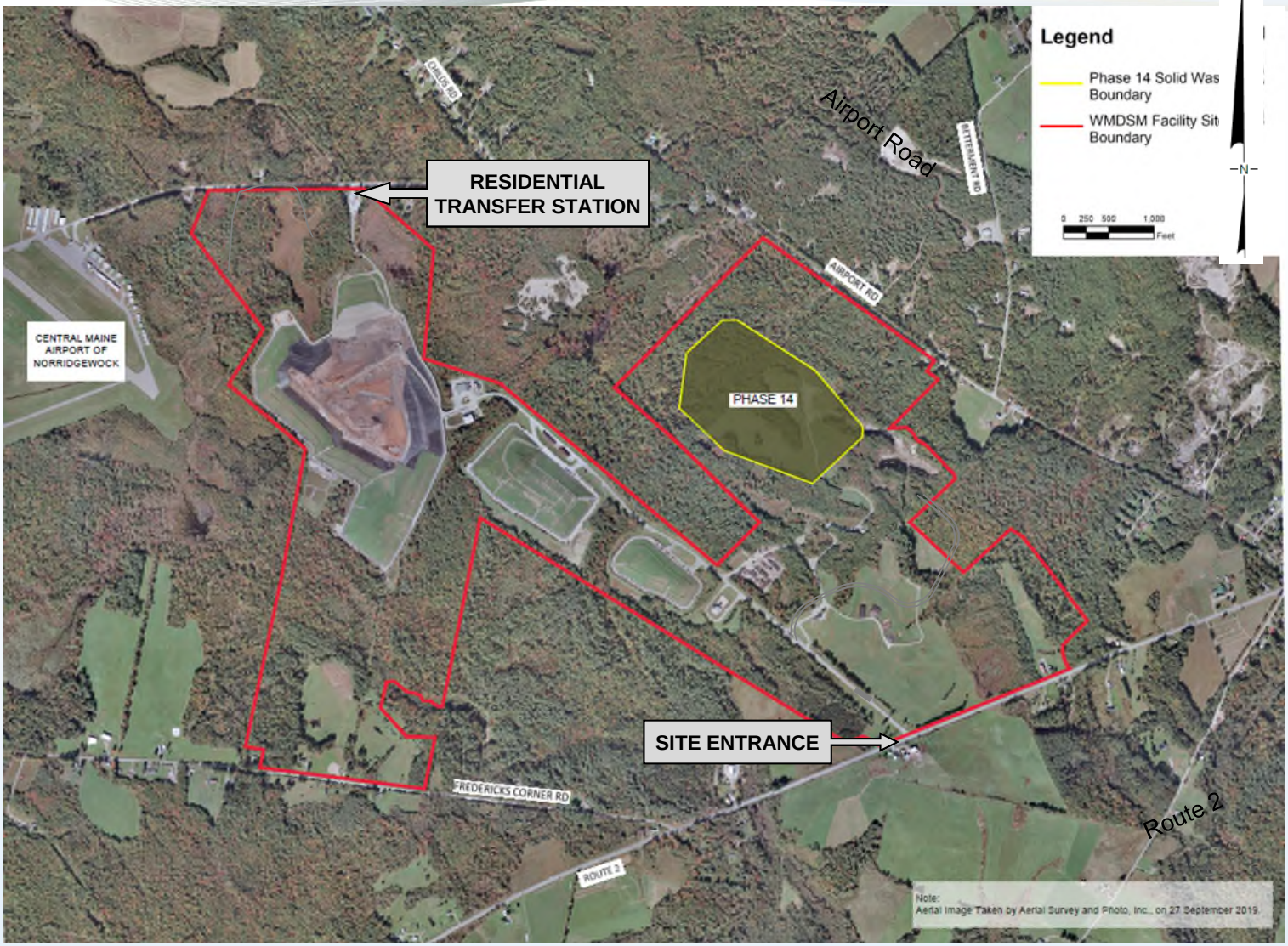
Scott Luettich, PE - Geosyntec Consultants

Geosyntec Consultants Qualifications

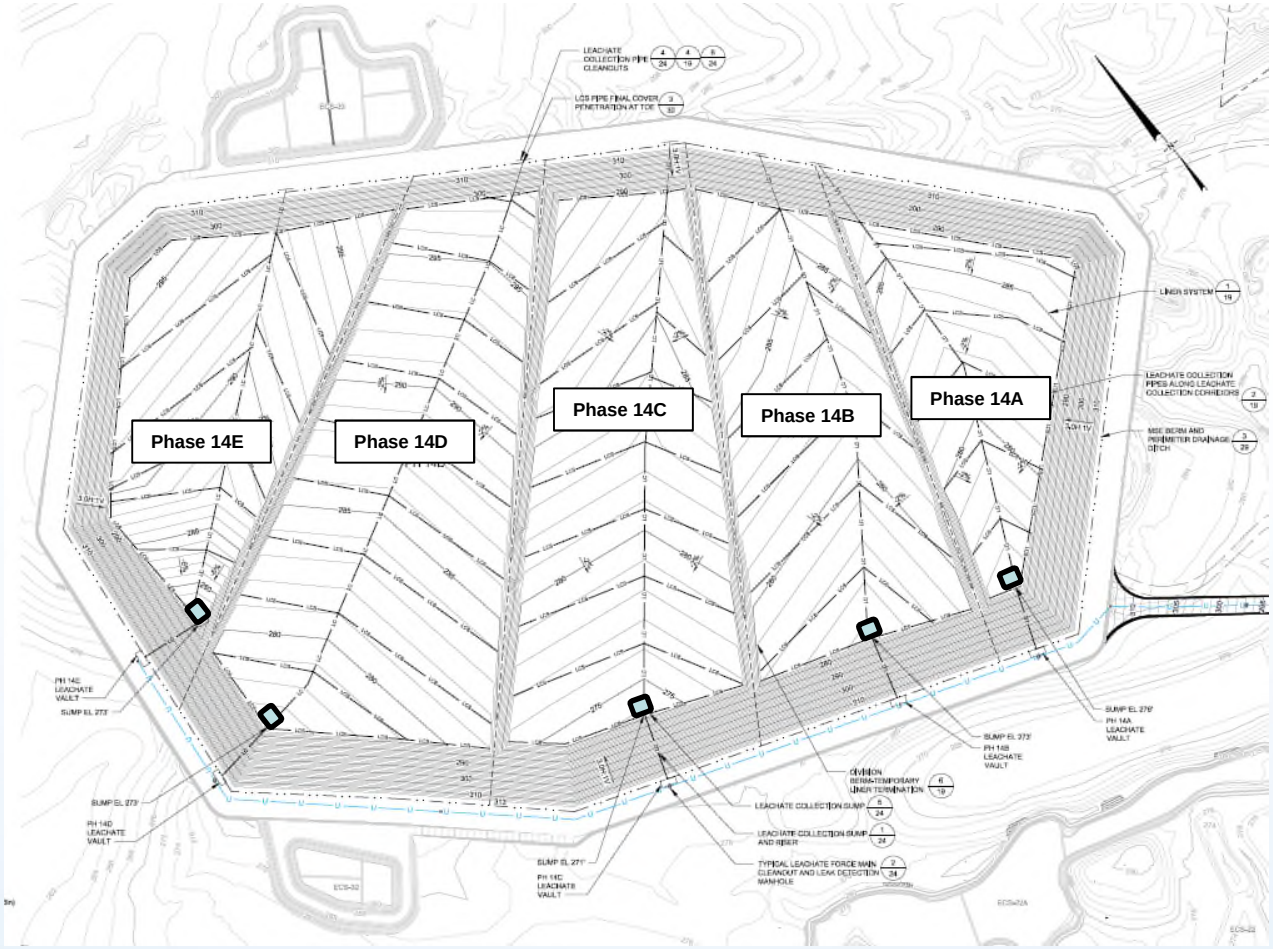
- An environmental consulting company specializing since 1983 in the design, construction, and closure of more than 2,000 solid waste facility projects worldwide.

- Scott Luettich, PE – Lead Design Engineer
  - Bachelor of Science (1983) and Masters Degrees (1987) in Civil Engineering
  - Licensed professional engineer in Maine
  - 35 years of professional experience
  - 29 years of experience at Crossroads Landfill
- Nicholas Yafrate, PE., Project Engineer
  - Bachelor of Science (2002), Masters (2004), and PhD Degrees (2008) in Civil Engineering
  - Licensed professional engineer in Maine
  - 12 years of professional experience
  - 10 years of experience at Crossroads Landfill

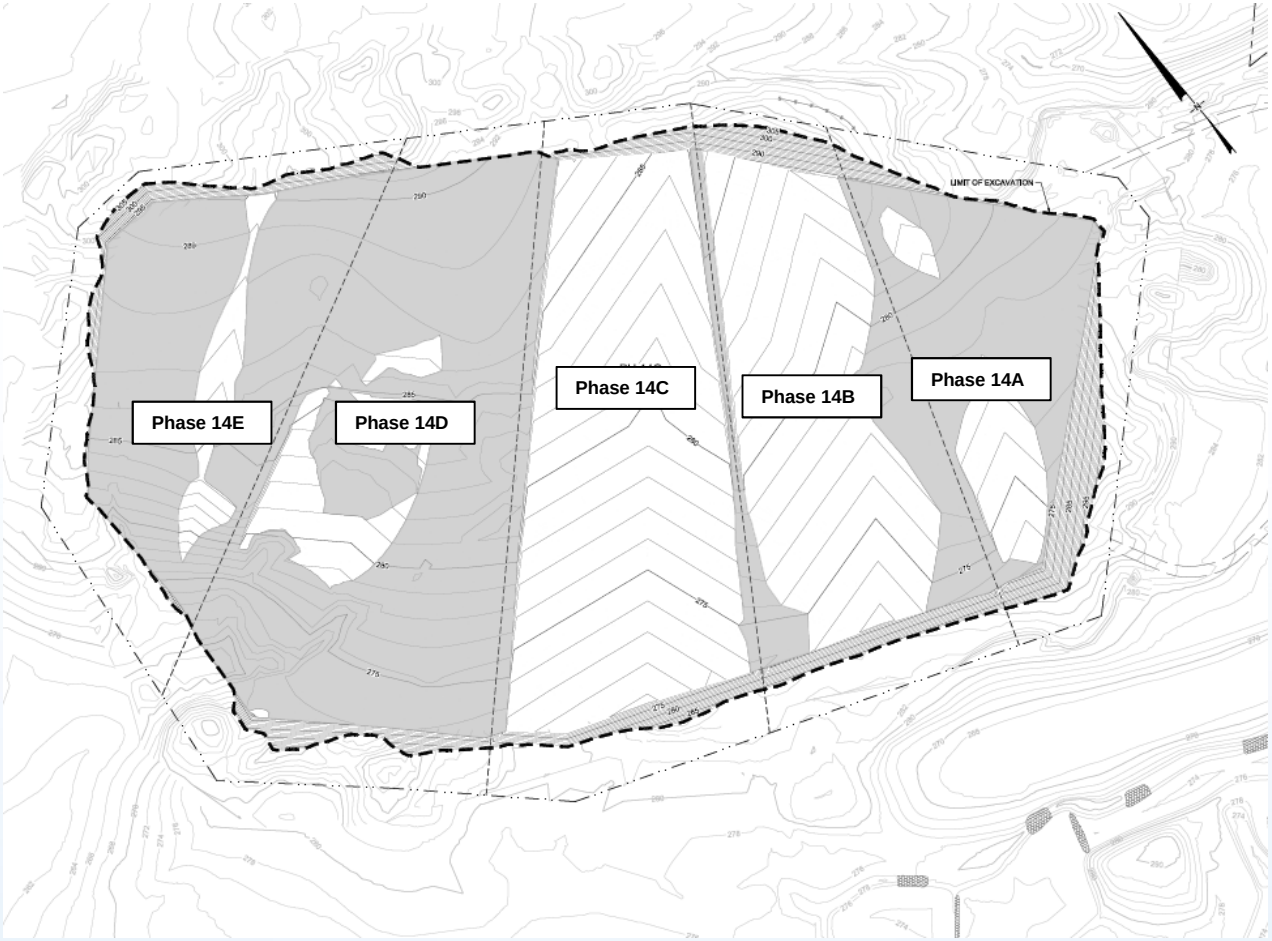
Crossroads Facility Map



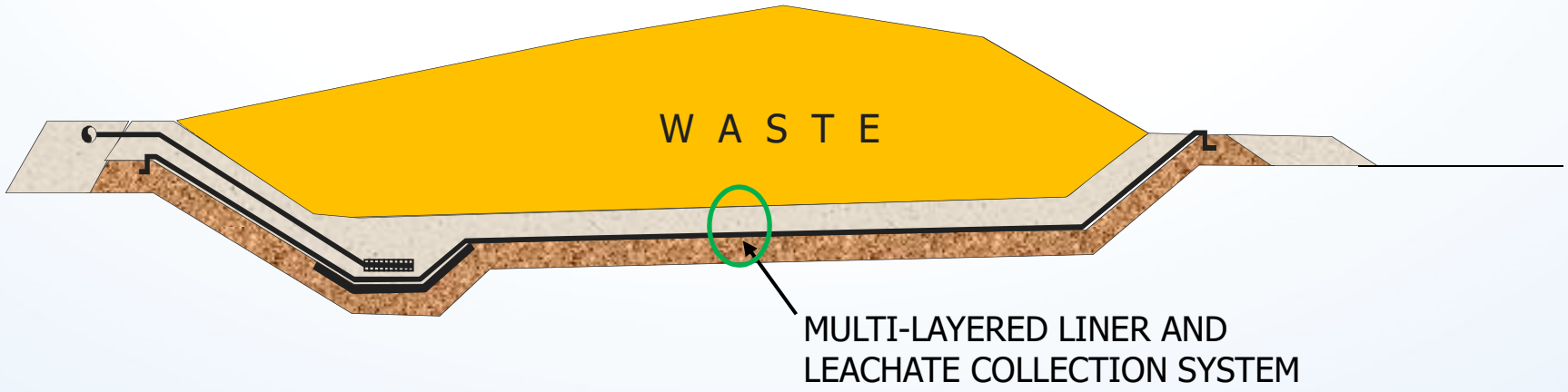
Phase 14 Liner Grades and Leachate Collection System



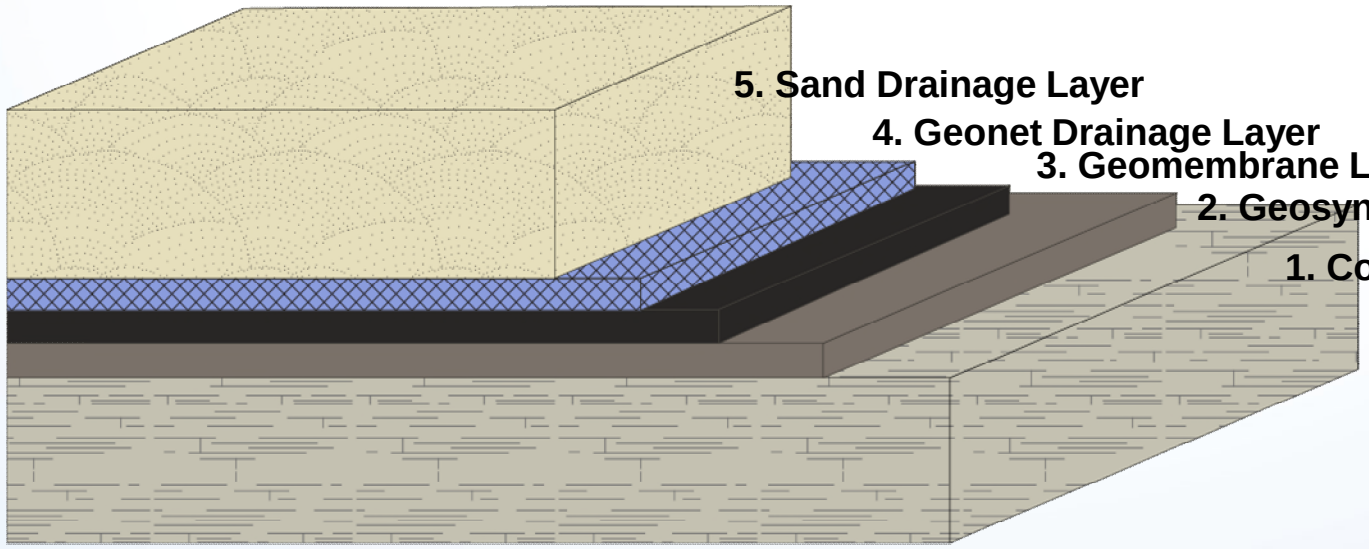
Phase 14 - Areas of Compacted Clay Backfill before Liner Installation



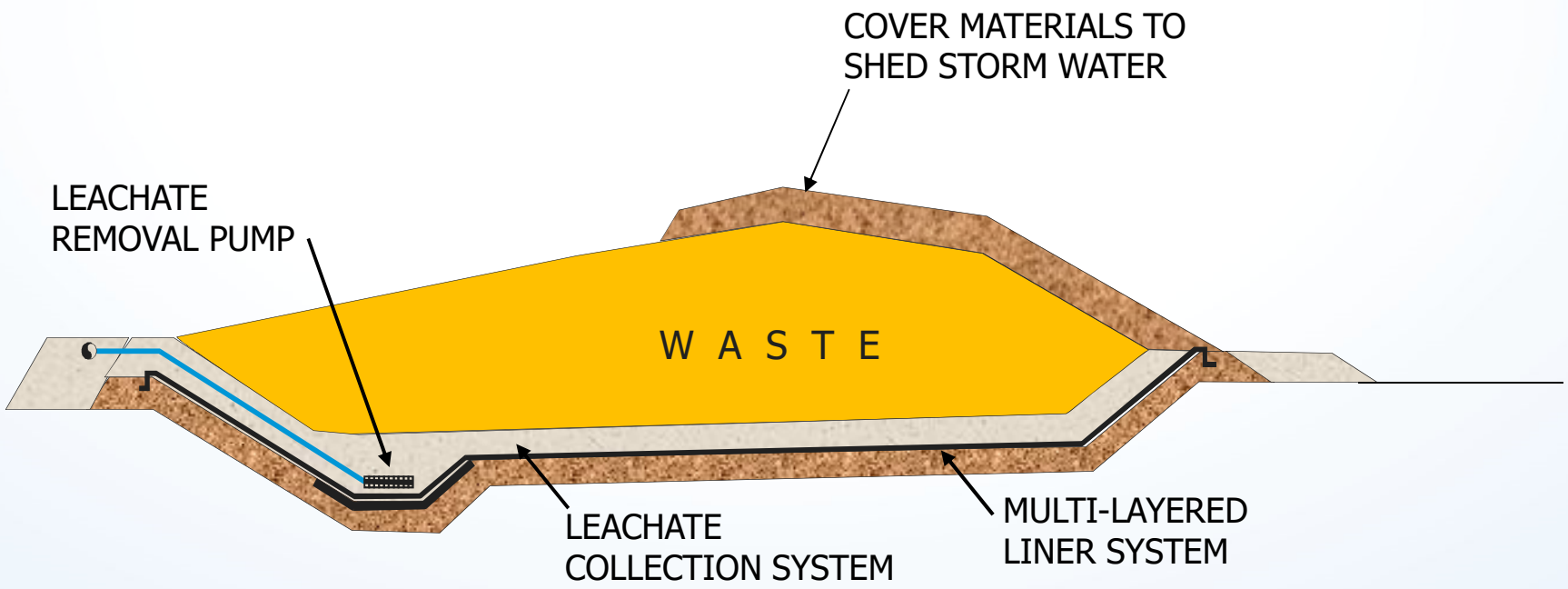
Modern Landfill Waste Containment System



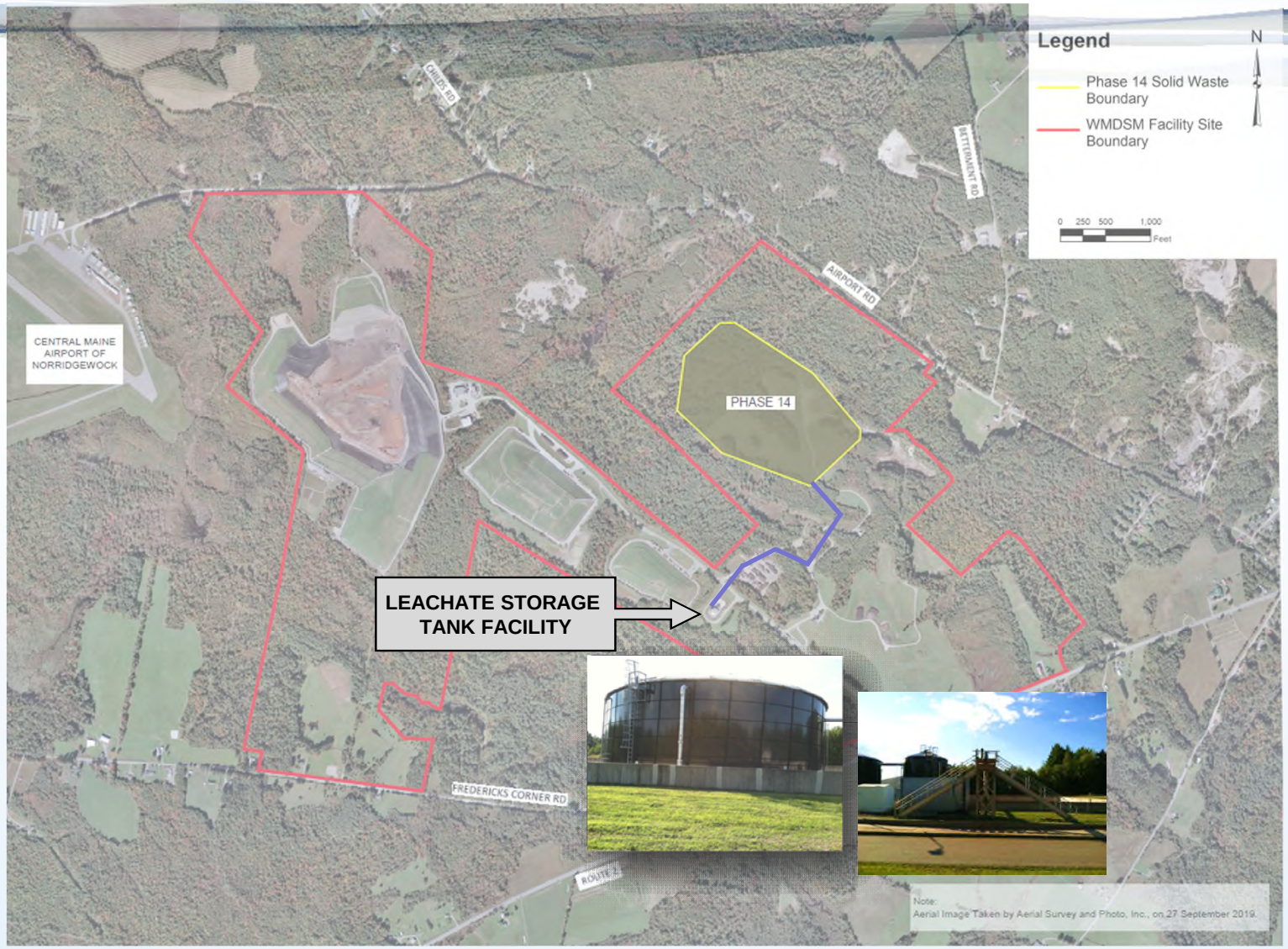
Phase 14 Liner System



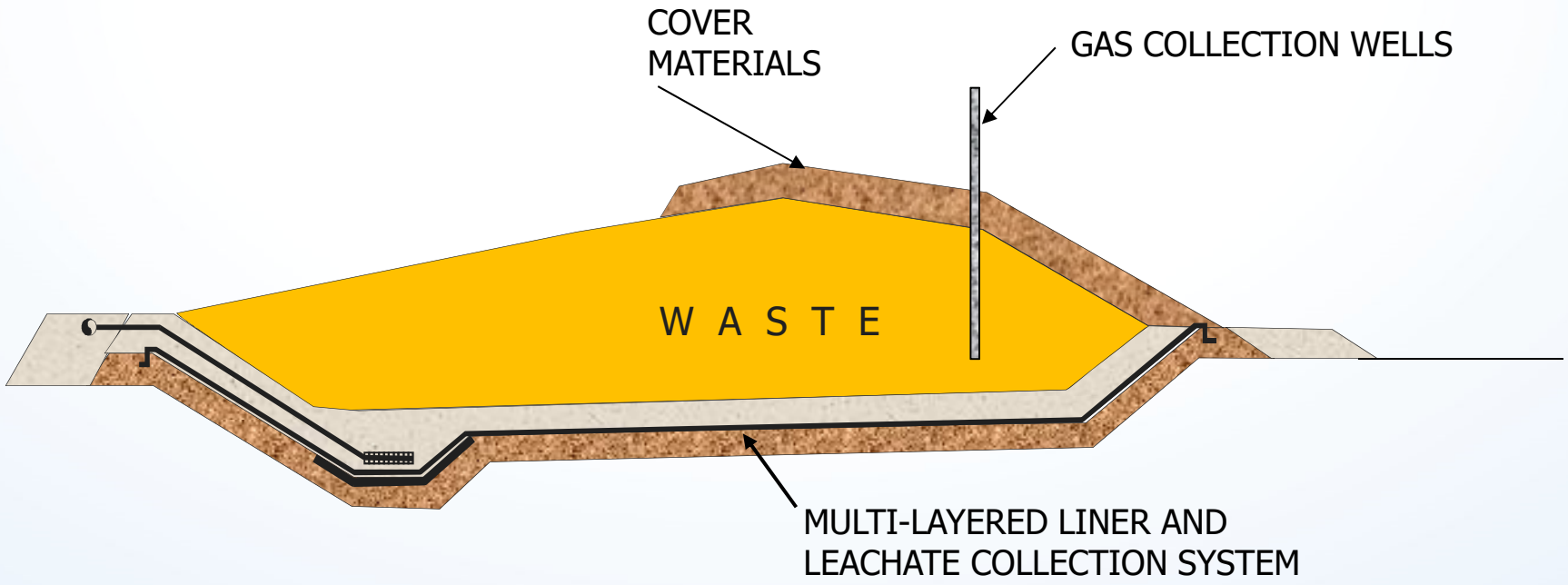
Modern Landfill Waste Containment System



Leachate Storage and Management



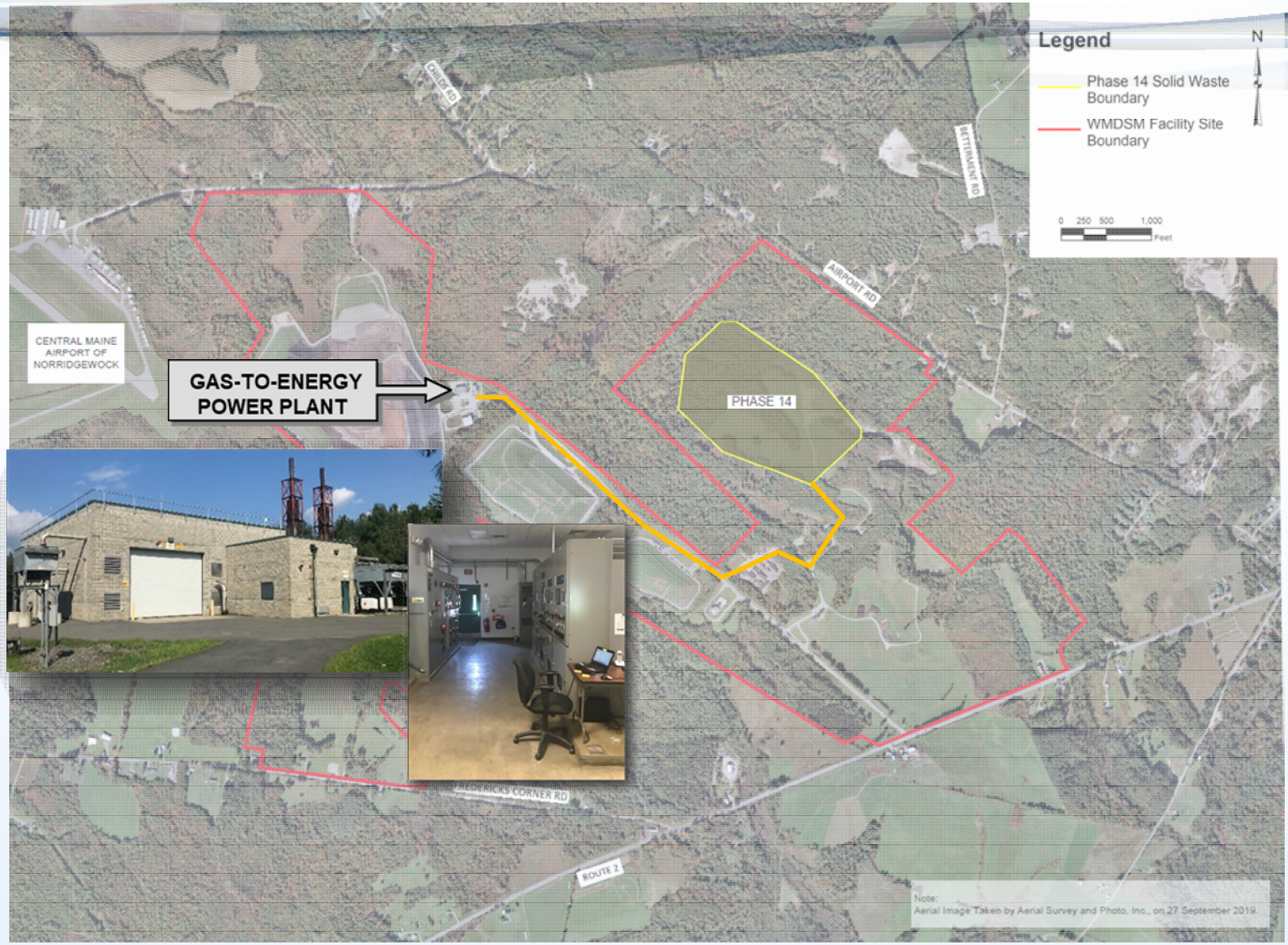
Modern Landfill Waste Containment System



Geosyntec
family of companies

Gas Collection Wellhead

Landfill Gas Collection and Electrical Power Generation



Visual Impact Assessment

Governing Regulations:

CMR Chapter 400, Sections 4.F(1)(c) and 4.F(3) of the Maine Solid Waste Management Rules (SWMR).

Two Aspects of Visual Impacts:

1. Regional landforms, vegetation, and land use.
2. Visibility from nearby vantage points.

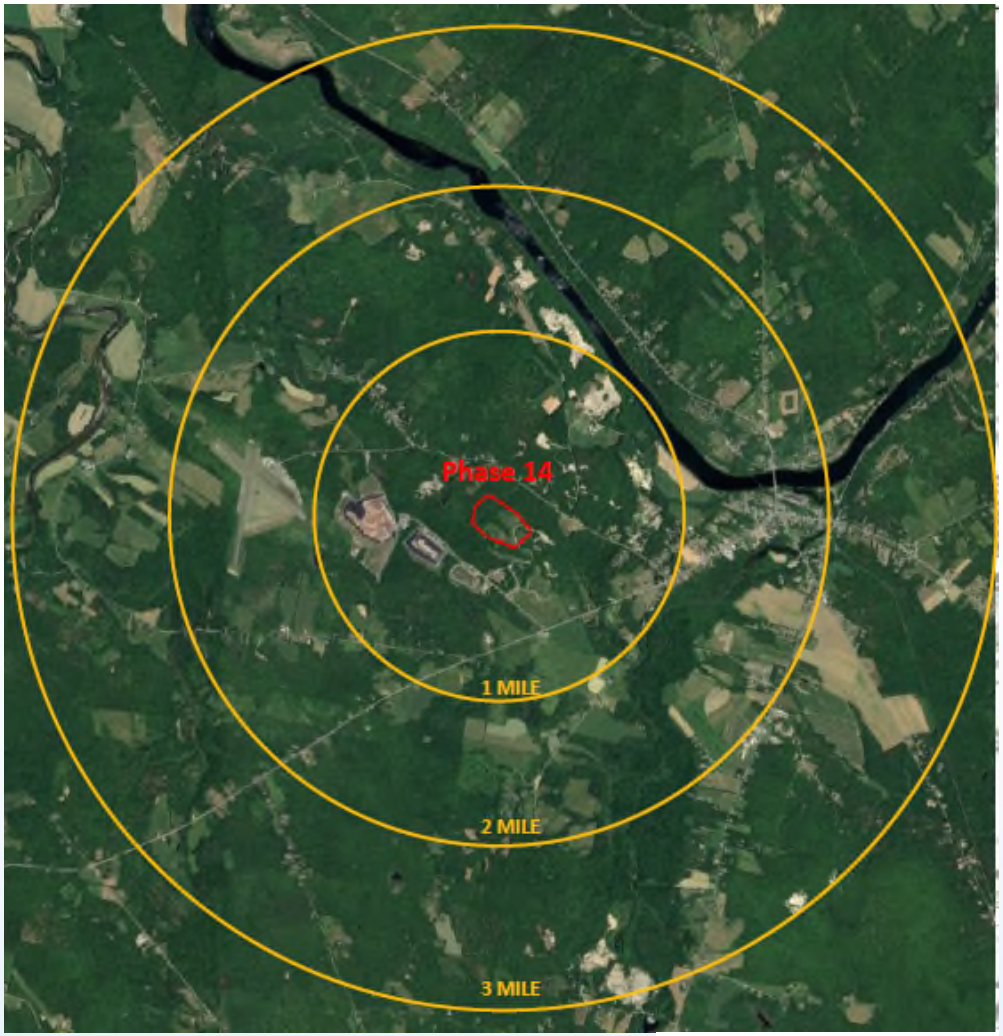
Previous Visual Impact Assessments in 1996 and 2001 were approved by MEDEP for permitting other disposal units at Crossroads.

Visual Impact Assessment

Phase 14 will be constructed and filled incrementally over a period of about 17 years. When filled and closed, it will occupy 48.6 acres with a peak height 150 to 200 ft above the surrounding terrain.

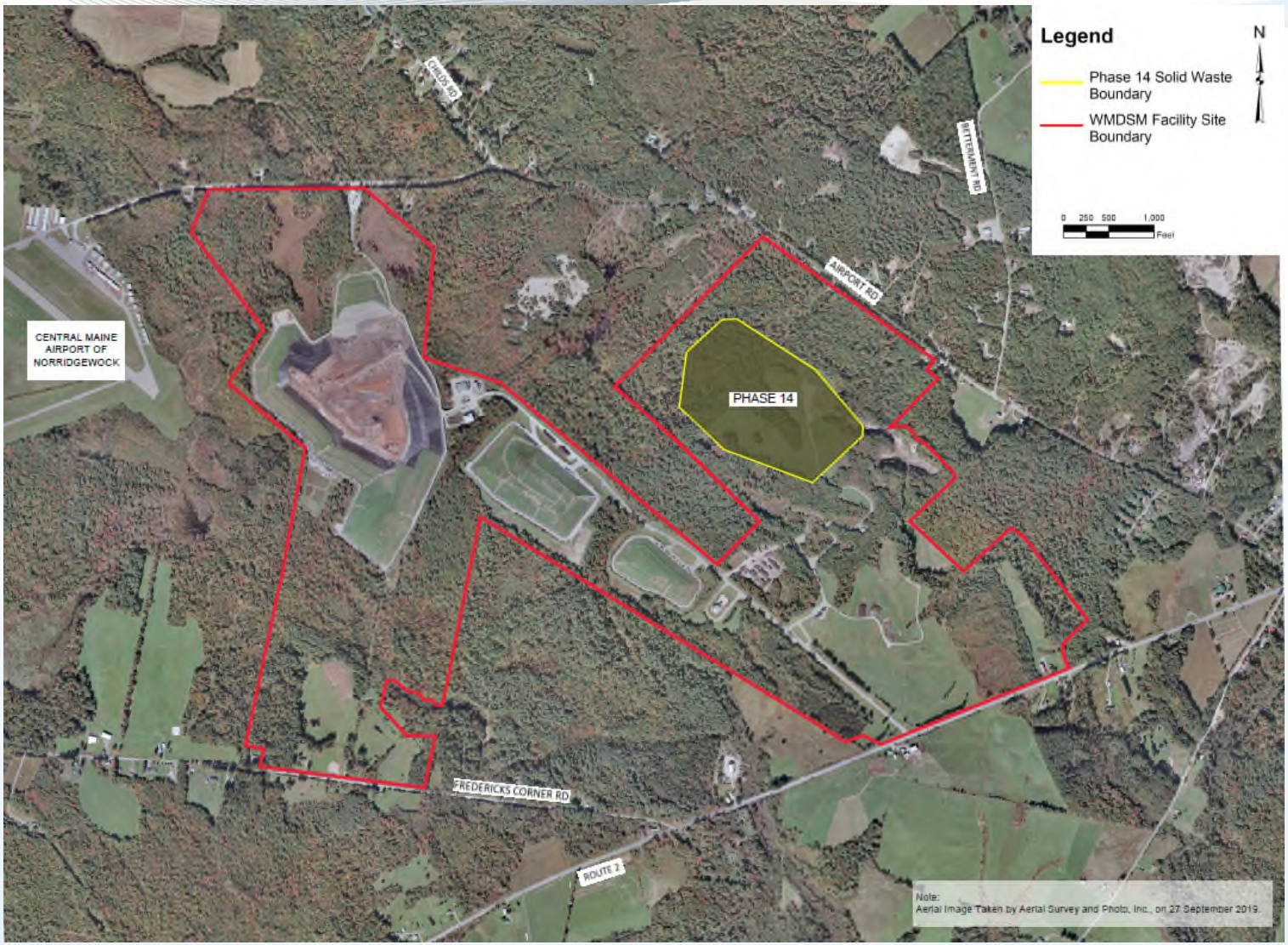
- During filling, the landfill will be covered every day with daily cover materials.
- Temporary membrane covers may be used to further prevent stormwater from percolating into the landfill and to minimize potential odors.
- As portions of the landfill reach full height, a final cover system consisting of multiple layers of protective barriers and then vegetation will be incrementally constructed until the landfill is closed.

Regional Landforms

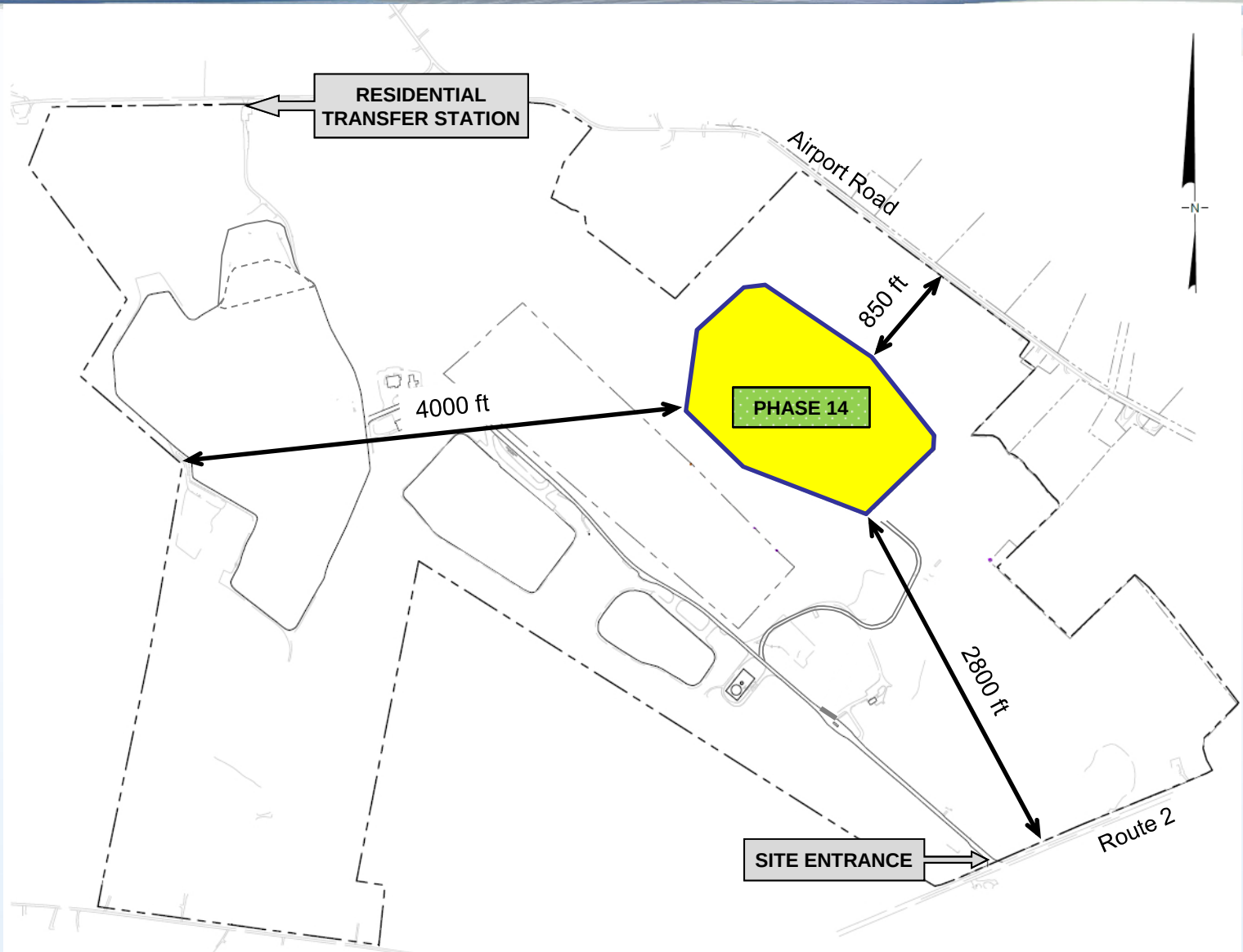


Base aerial image from Google, dated June 2018

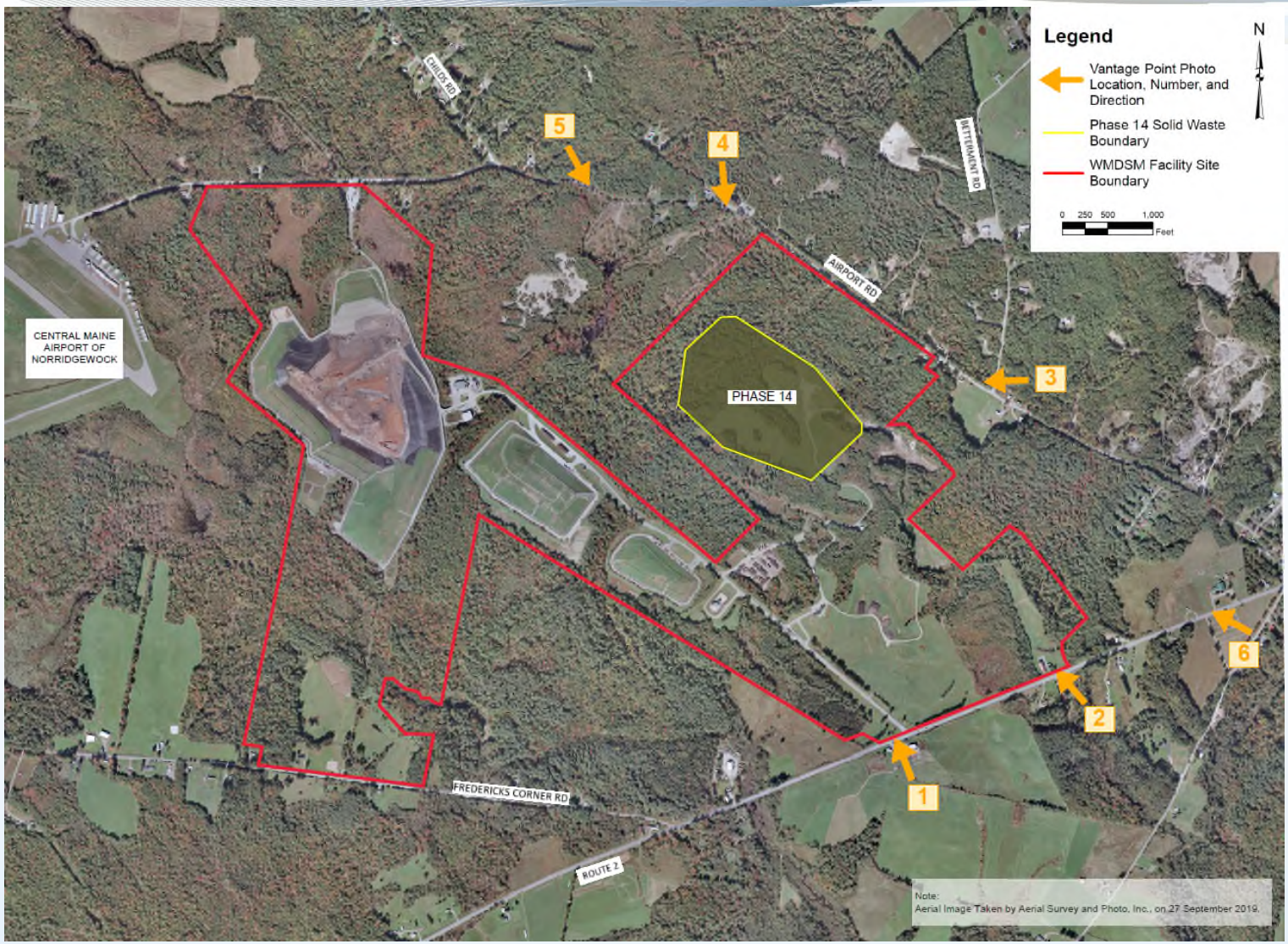
Regional Vegetation and Land Use



Visual Assessment from Nearby Vantage Points

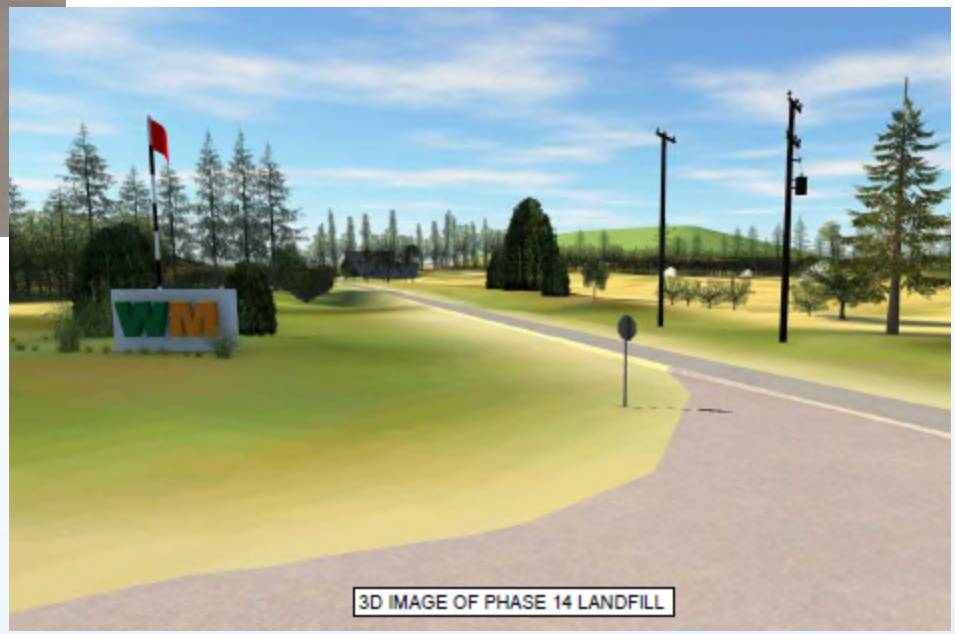


Visual Assessment from Nearby Vantage Points



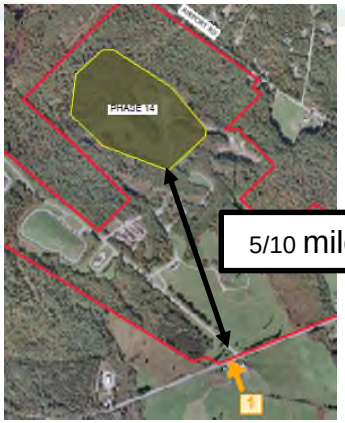
Visibility from Vantage Point 1

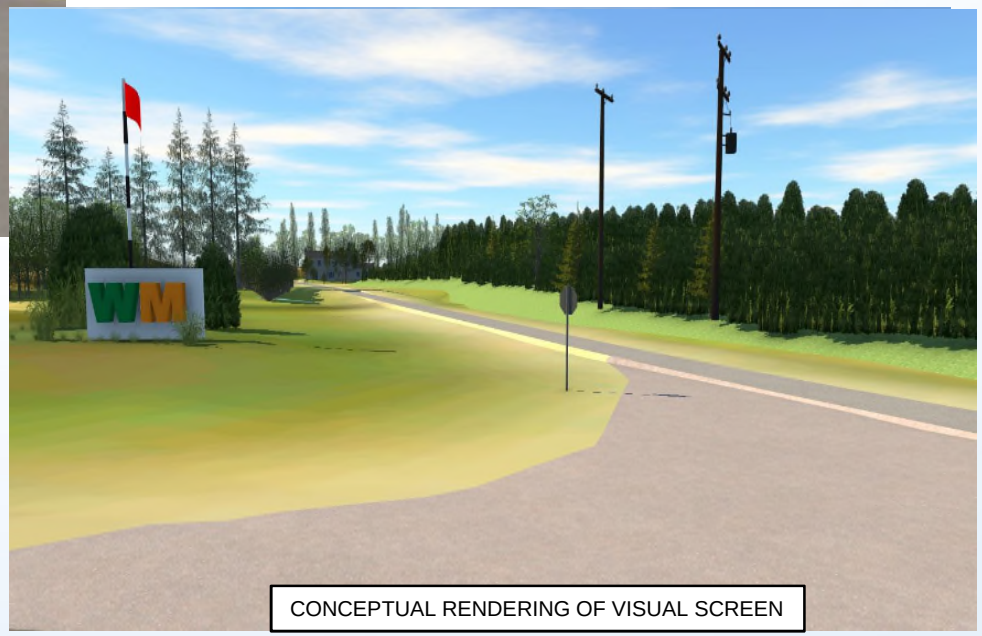

PHOTOGRAPH OF EXISTING CONDITIONS


3D IMAGE OF PHASE 14 LANDFILL

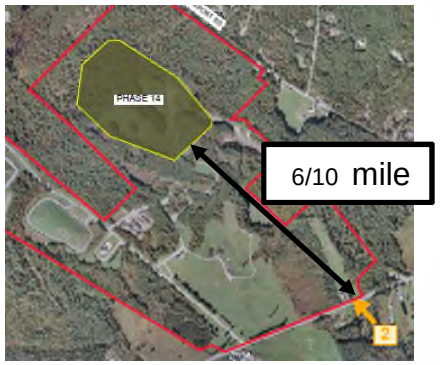
Existing Visual Barriers along Route 2

Visibility from Vantage Point 1 with Future Visibility Screen



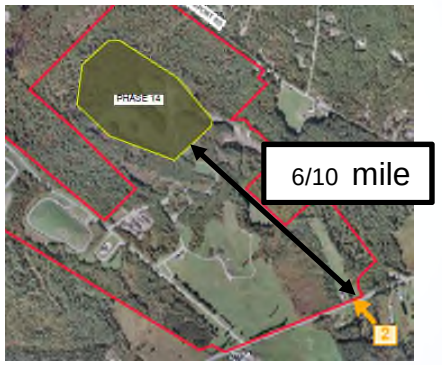


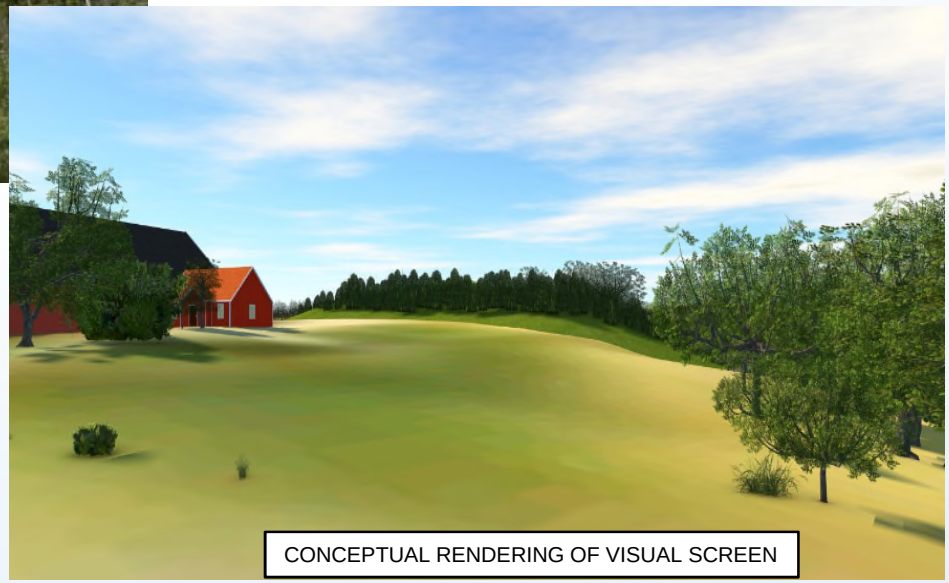
Visibility from Vantage Point 2



Visibility from Vantage Point 2 with Future Visibility Screen


PHOTOGRAPH OF EXISTING CONDITIONS

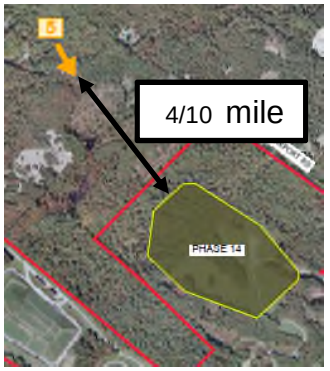


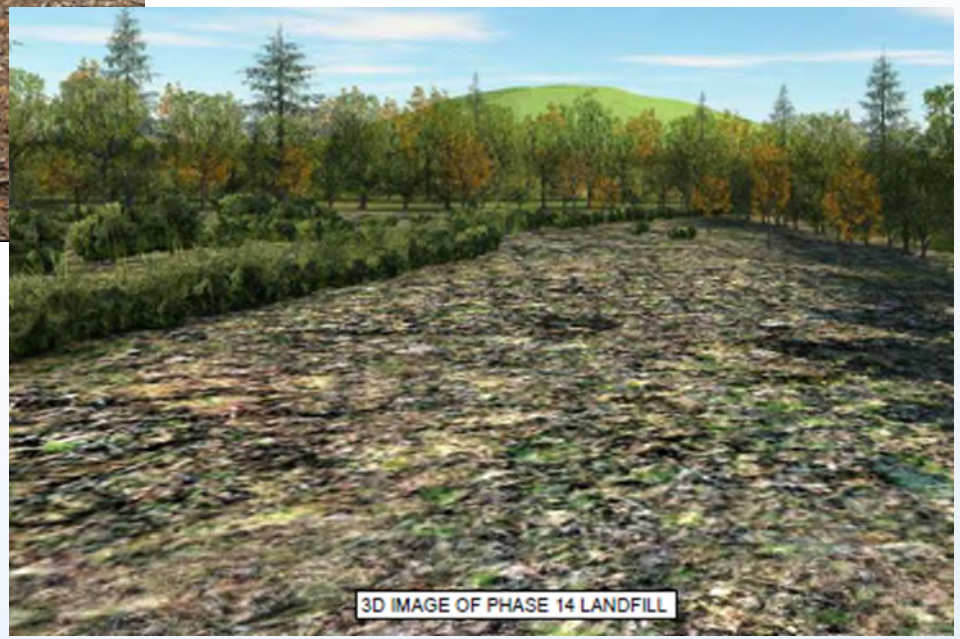

CONCEPTUAL RENDERING OF VISUAL SCREEN

Visibility from Vantage Point 3

Visibility from Vantage Point 4

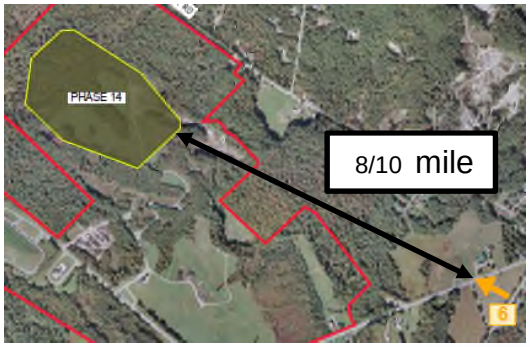
Visibility from Vantage Point 5





Visibility from Vantage Point 6


PHOTOGRAPH OF EXISTING CONDITIONS




3D IMAGE OF PHASE 14 LANDFILL

Visual Impact Conclusions

- Phase 14 will not have unreasonable adverse effects on current scenic character.
- The potential visual impact of the Phase 14 landfill will be limited to a relatively short duration only as the landfill reaches its final stage of filling.
- During filling operations, the color and texture of Phase 14 will be consistent with dark earthen color (daily cover).
- A vegetated final cover system will be incrementally installed over Phase 14 until it is completely closed.
- When visible from distant locations, the appearance of Phase 14 will be compatible with the surrounding areas and will look like a natural landform.
- Phase 14 will not unreasonably interfere with views from surrounding areas and established public viewing vantage points. Visibility of the landfill from nearby vantage points will be largely obscured by the large setback distances and existing or planted vegetation, much of which will continue to grow in height and fill out as the site is developed.
- WMDSM will construct additional visual barriers at Vantage Points 1 and 2.