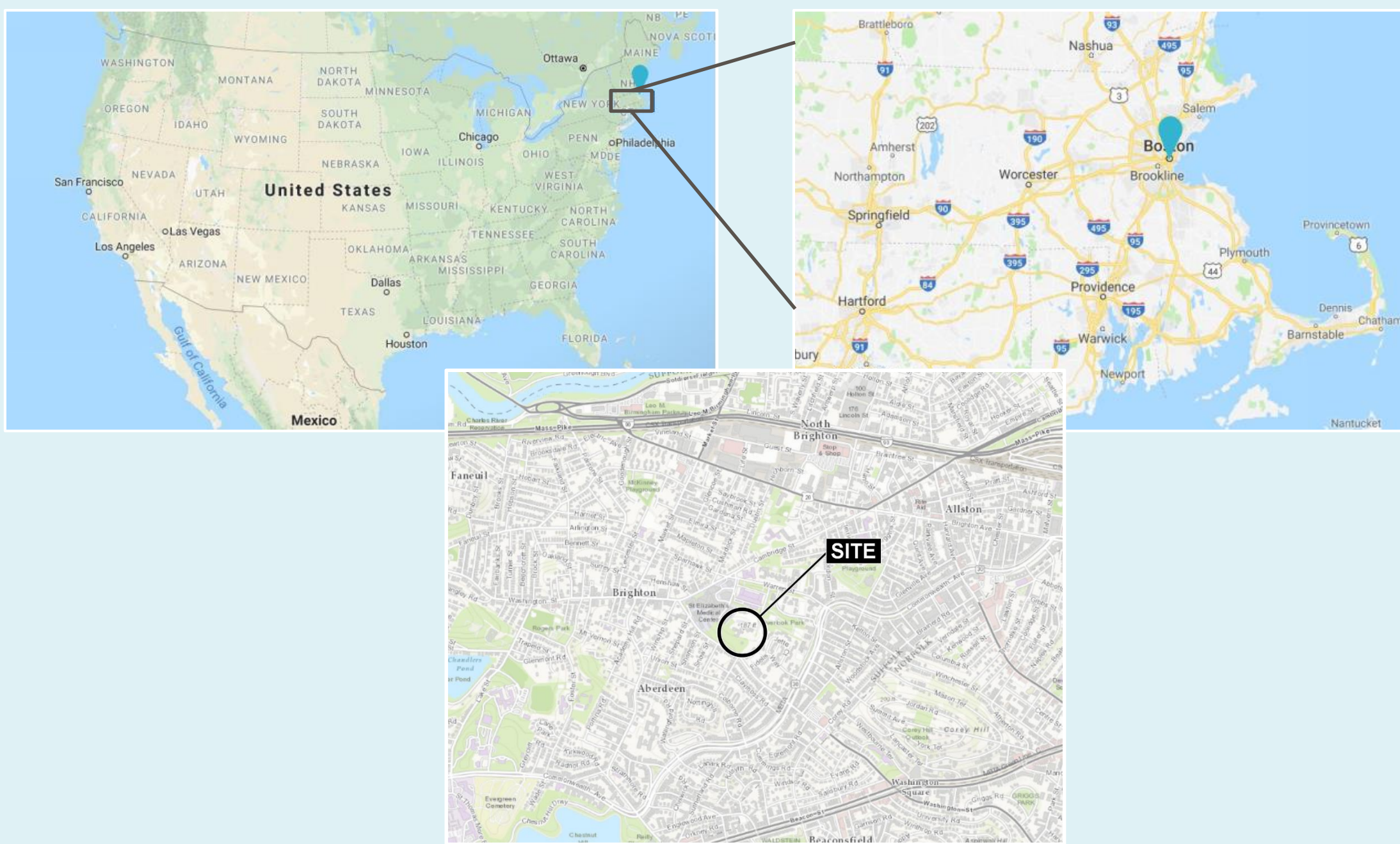


Everything but the kitchen sink: Use of multiple foundation types to allow for construction on a Boston hillside

Site location



Site history



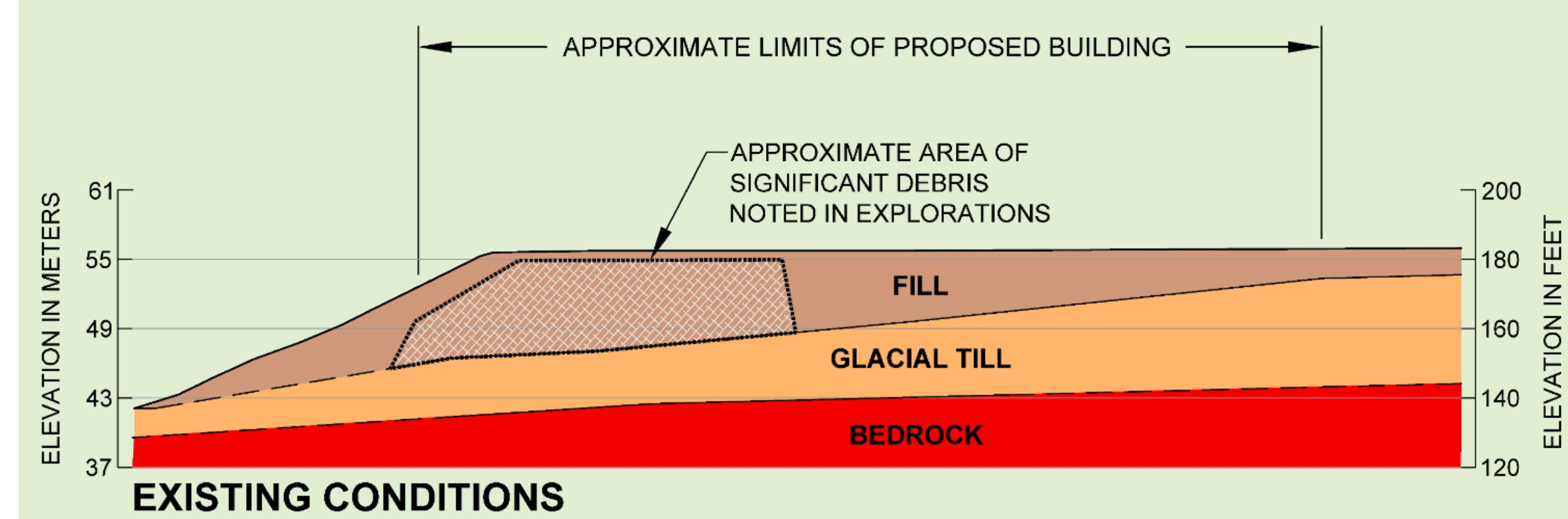
Site and subsurface conditions

Site Conditions

- Urban environment
- Adjacent to hospital, high school, and power plant

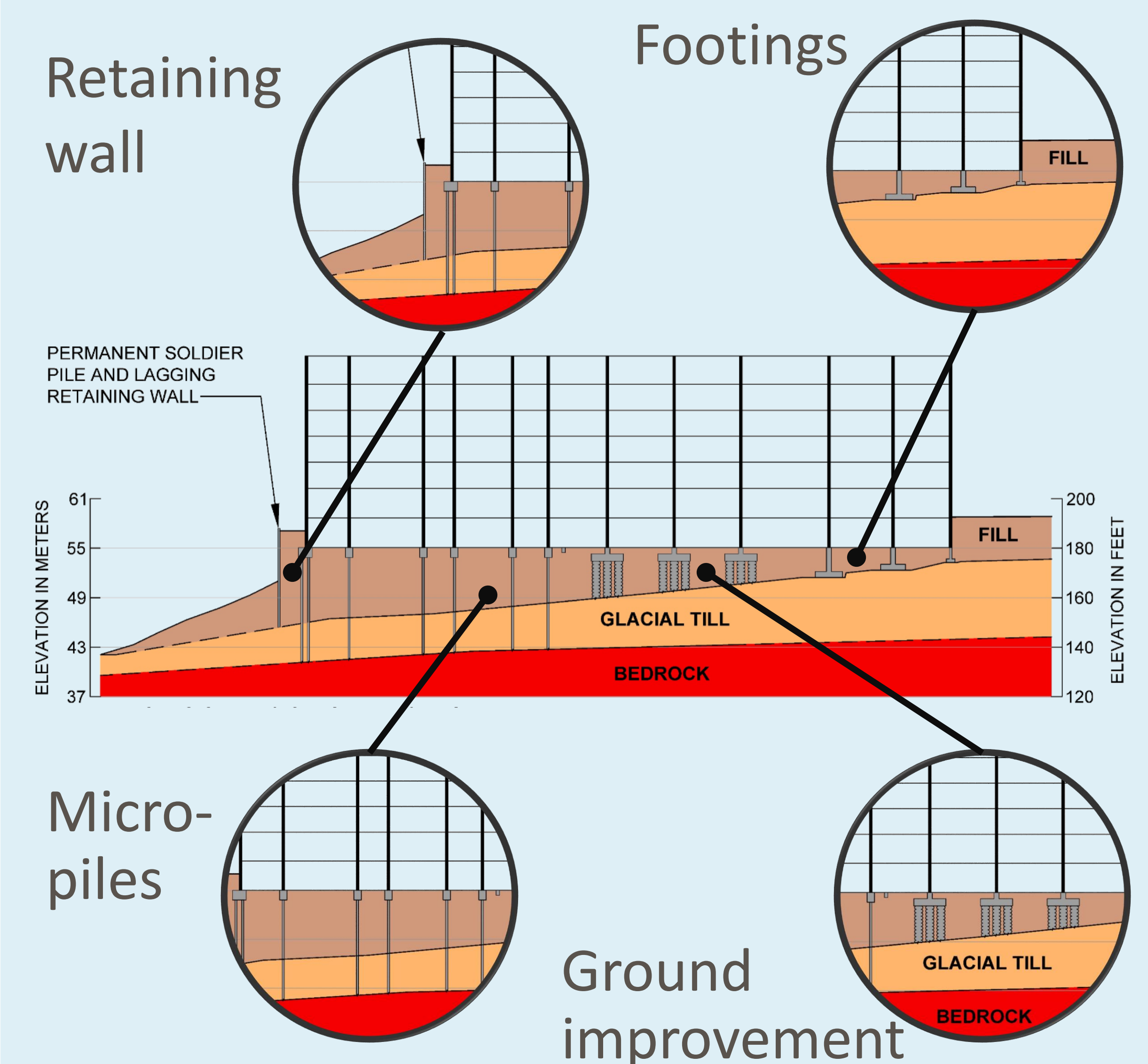
Subsurface Conditions

- Fill thickness varies from 5 to 30 feet
- Fill - placed in multiple phases contained oversize cobbles, boulders, demolition debris, and asbestos containing materials (ACM)
- Competent glacial soils below fill
- Competent glacial soils below fill



Solutions through collaboration

- Collaboration with ownership and construction manager resulting in multiple foundation types in one building to control costs, limit exposure to ACM soils and impacts to abutters, and provide acceptable building performance.
- Robust soldier pile and lagging wall to maximize buildable area, limit exposure to ACM soils, and improve slope stability.

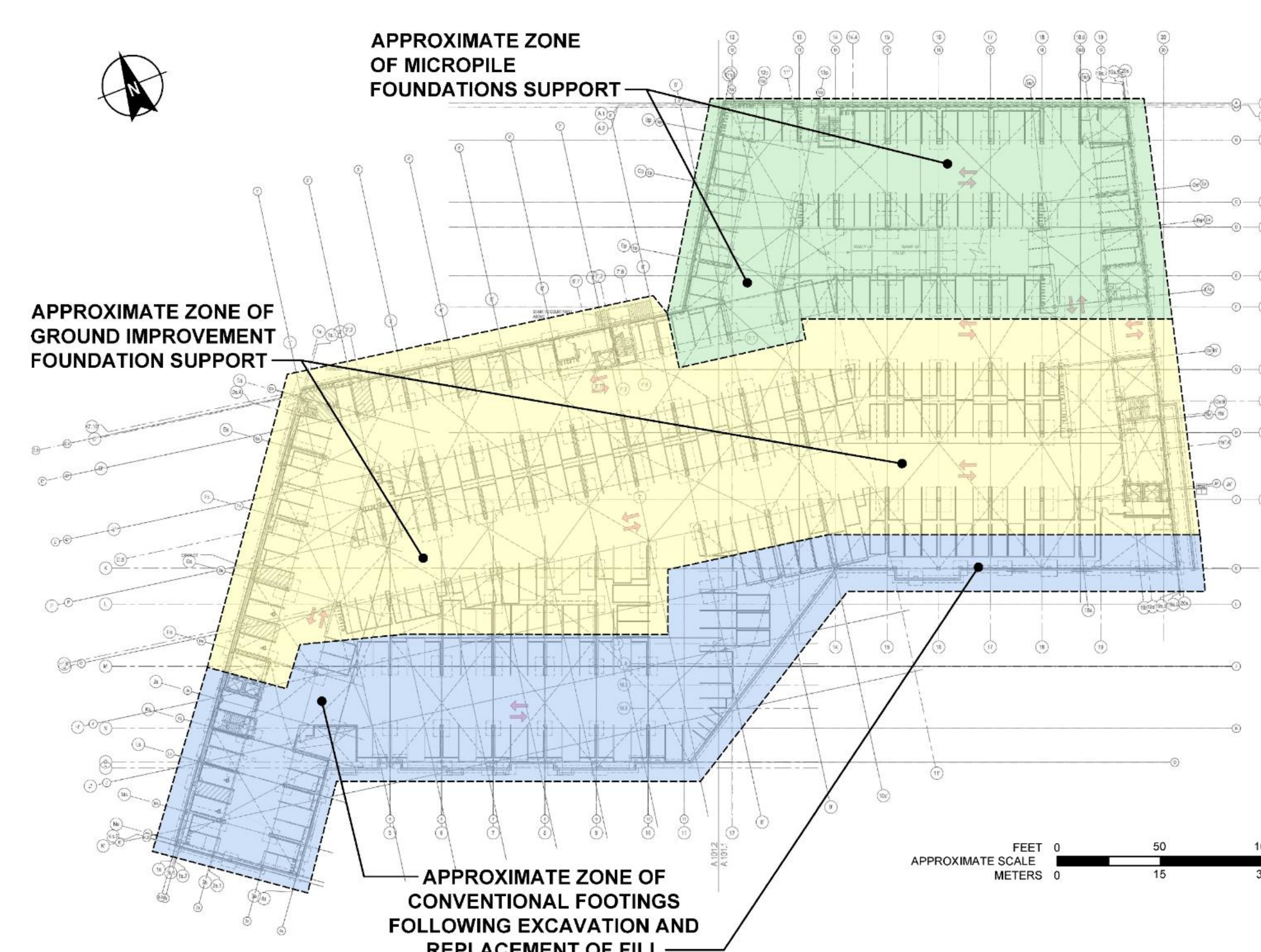
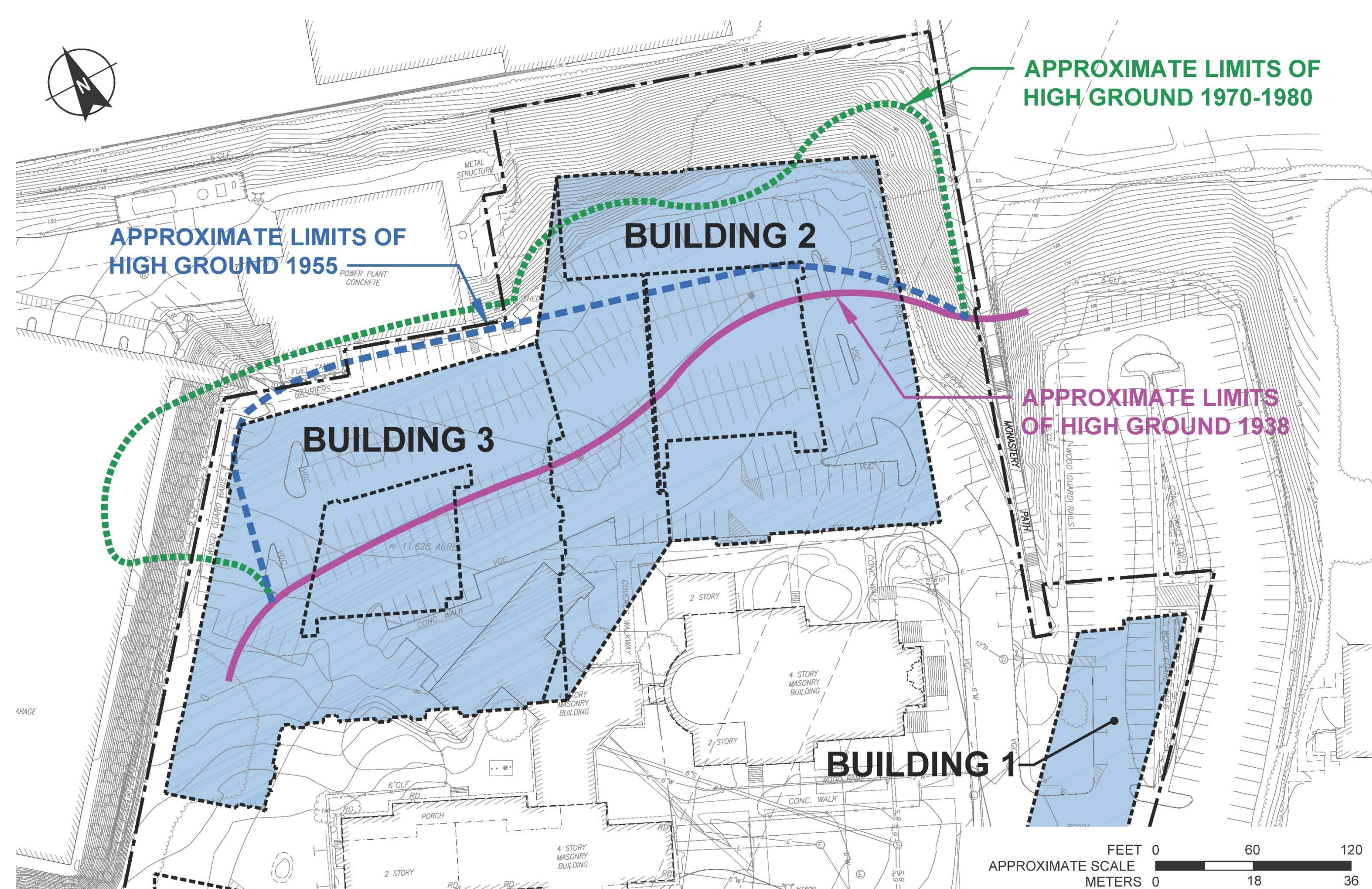


Design and construction challenges

- Maximize buildable area of site
- Sensitive abutters (hospital, high school, & power plant)
- 30 ft+ grade change to adjacent properties
- Variable fill thickness
- Obstructions in fill
- Limit disturbance to ACM soils
- Slope stability



Examples of debris in the fill



Conceptual site plan
(courtesy of Cabot, Cabot & Forbes)

Michael Weaver



For a copy of this paper or poster after the conclusion of the conference

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