



Cornell Childcare Center Geothermal System Project

Village of Cayuga Heights
Planning Board
Preliminary Site Plan Approval

December 19, 2022

Purpose and Need

- Cornell Childcare Center's chiller system that provides air conditioning has reached end of life
- The University's sustainability goals incentivize exploration of renewable energy alternative to new chillers
- The Childcare Center is not in close proximity to other University structures served by lake source cooling
- The Childcare Center is on an ample site that can support a geothermal field large enough to provide all heating/cooling needs for the childcare center more reliably and sustainably
- This new geothermal system is expected to provide greatly improved comfort for the children and staff in the center

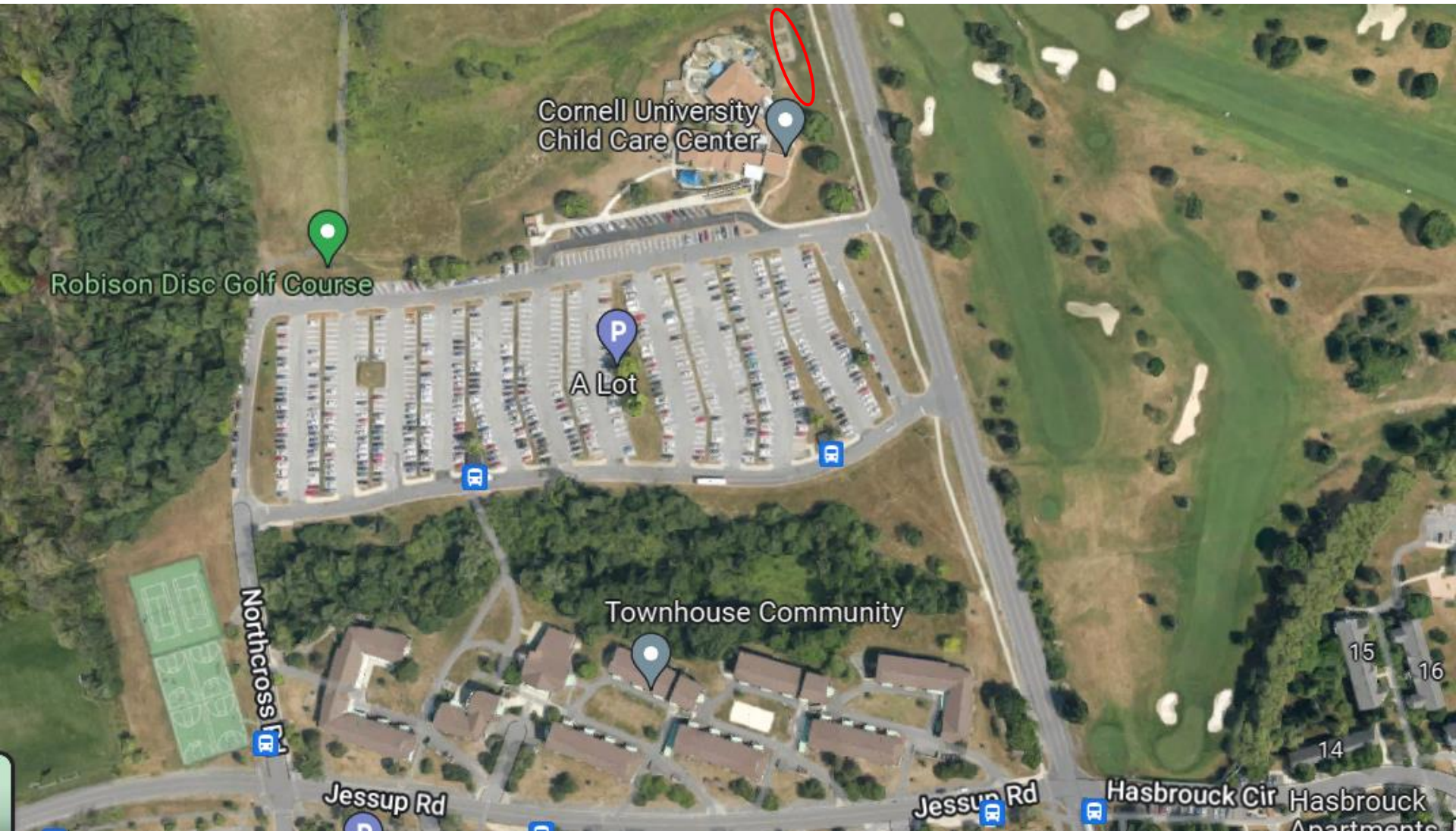
Childcare Center Geothermal System Scope

The 17,079 Childcare Center built in 2008 will be served by:

- A 0.1 acre geothermal system with 21 wells to be located due east of the Center
- The geothermal system will be supported by a small 700 GSF (35' x 20') mechanical building to be constructed adjacent to the SE corner of the Center and connected underground. This mechanical building will be largely buried.

Project Location

Geothermal System location



Project Location

Geothermal System location



Cornell University
Child Care Center

Pleasant Grove Rd

Project Location – Tax Parcel 14.-4-2.2



FOR TAX PURPOSES ONLY
NOT TO BE USED FOR CONVEYANCE.

All acreage and information is derived from the New York State Plane Control Coordinates System using the 1983 North American Datum. Property lines are shown as required by 1605.41 Uniform Zoning Ordinance. Parcel boundaries are shown as required by 1605.41 Uniform Zoning Ordinance. The map is a legal description of the information shown on the map and does not constitute a warranty of any kind.

NOTICE OF DISCLAIMER

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SPECIAL DISTRICT INFORMATION

Special District Information

- Building Footprint (1991-2022)
- Curb Pavement Line
- Railroad
- Hydrography
- Special Districts
- Municipality
- Military Tract Walkway & Easement

LEGEND

- Parcel Boundary
- Property Line
- Former Property Line
- Current Year Changes
- Block Lines
- General Tax Map
- Block Number

- 21** Parcel Lot Number
- +** Previous Lot Number
- +** Subdivision Lot Number
- +** Dead Survey Acreage
- 2.11** Acre Computed Acreage
- 2.11** Acre Grossed (Total) Acreage
- 2.11** Acre Scaled (Calculated) Acreage
- 2.11** Acre Dead Dimension

VILLAGE OF CAYUGA HEIGHTS
TOWN OF ITHACA
TOWN OF ITHACA, N.Y.



MAP: 14
SCALE: 1" = 100'
DATE: 10/1/2023
MAP PREPARED BY: J. J. JONES

Site Plan



Childcare Center: Existing Conditions



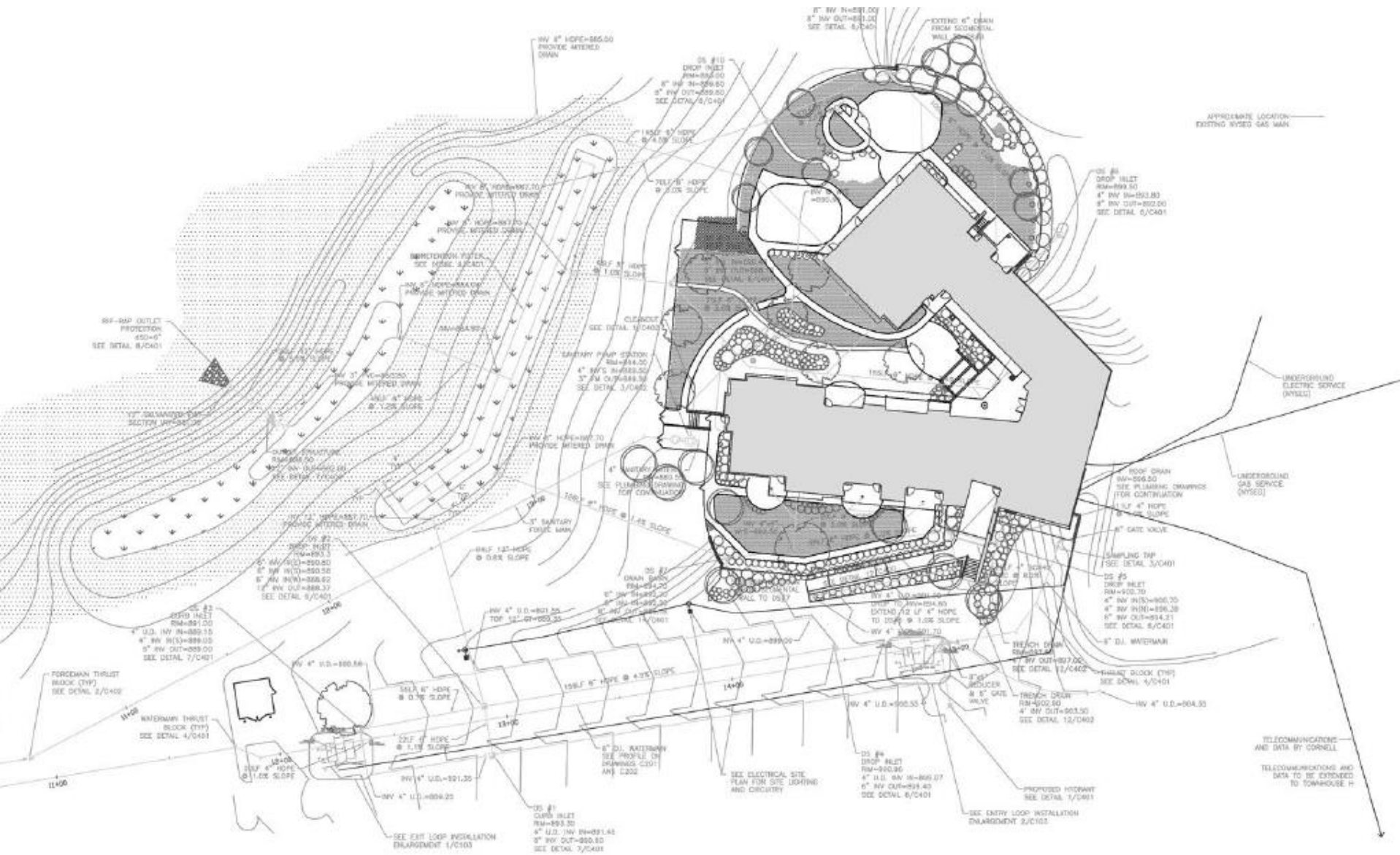
Northbound on Pleasant Grove

Childcare Center: Existing Conditions



Southbound on Pleasant Grove

Site Survey



Zoning and Site Considerations

- Project complies with the Multi-housing Residential zone in the Village of Cayuga Heights
- 49.77-acre tax parcel on northern extent of Cornell's North Campus District includes: Jessup soccer fields; N. Cross Rd; frisbee disc golf course; Palmer Woods
- The project site is between a multiuse pedestrian trail and the Childcare Center, setback from the County's ROW for Pleasant Grove Dr
- Project site and all adjacent lands are Cornell-owned
- Total Project footprint: 0.3 acre

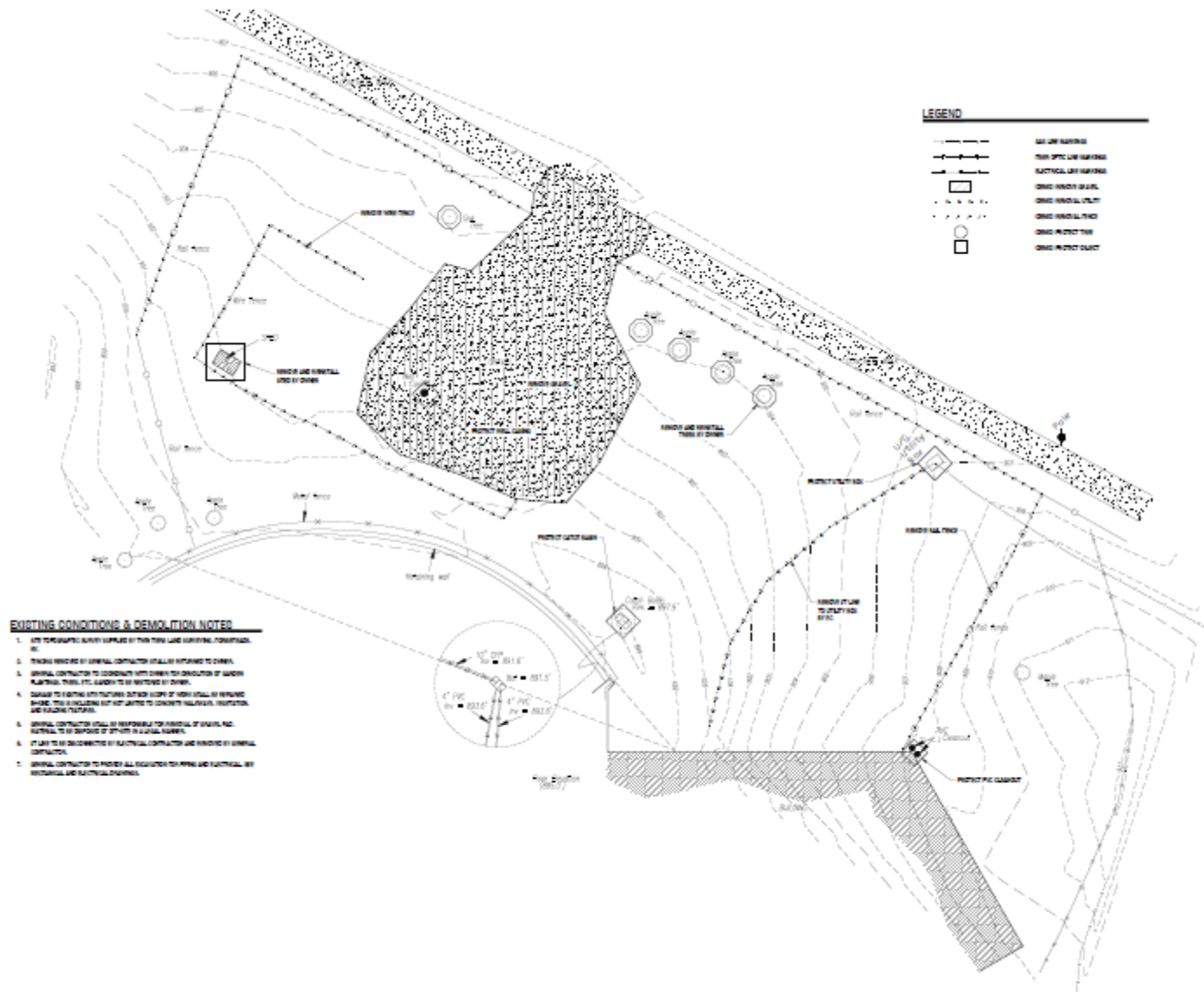
Additional Site Considerations

- No encroachment into any existing wetland or waterbody
- No unique geological features on site
- No significant natural community on site
- No designated public resource on or near project site
- No visual impacts

Stormwater

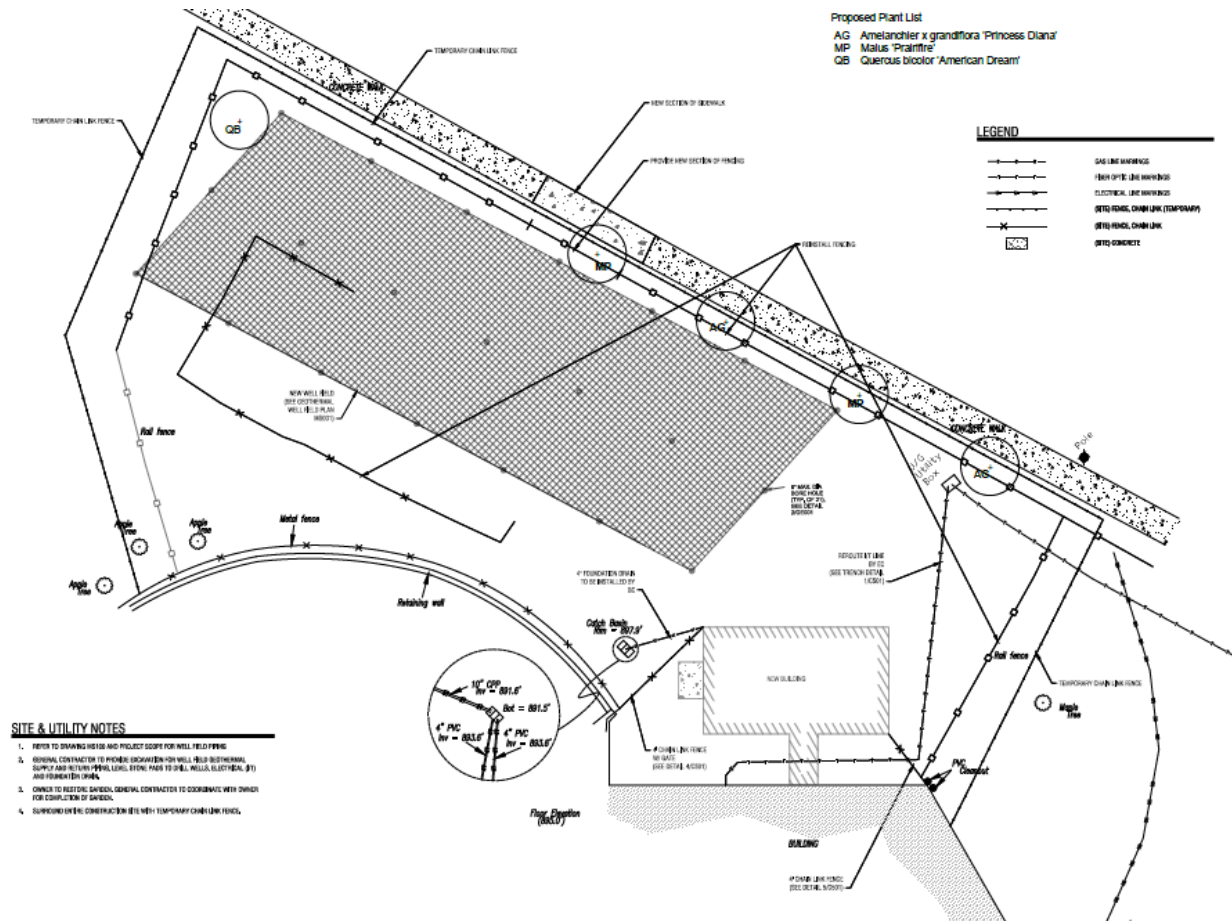
- Approximate 0.3 acre disturbance
- Stormwater and erosion control protocols to be implemented in compliance with all NYS requirements, including filing an Erosion Control Plan with Village prior to construction
- Stormwater runoff from the 700 sq ft roof of the proposed new mechanical facility will not concentrate the flow or significantly change the hydrology from the previously approved and closed Childcare Center SWPPP and can be managed by the existing practices of that project

Existing Conditions and Demo Plan

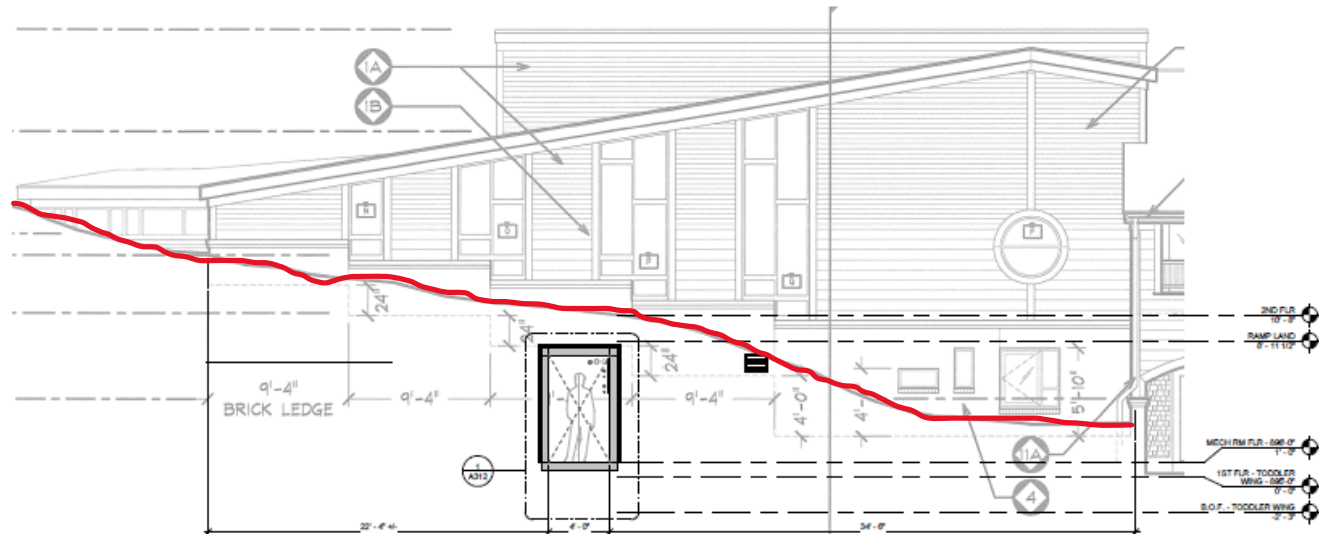


Landscape Plantings

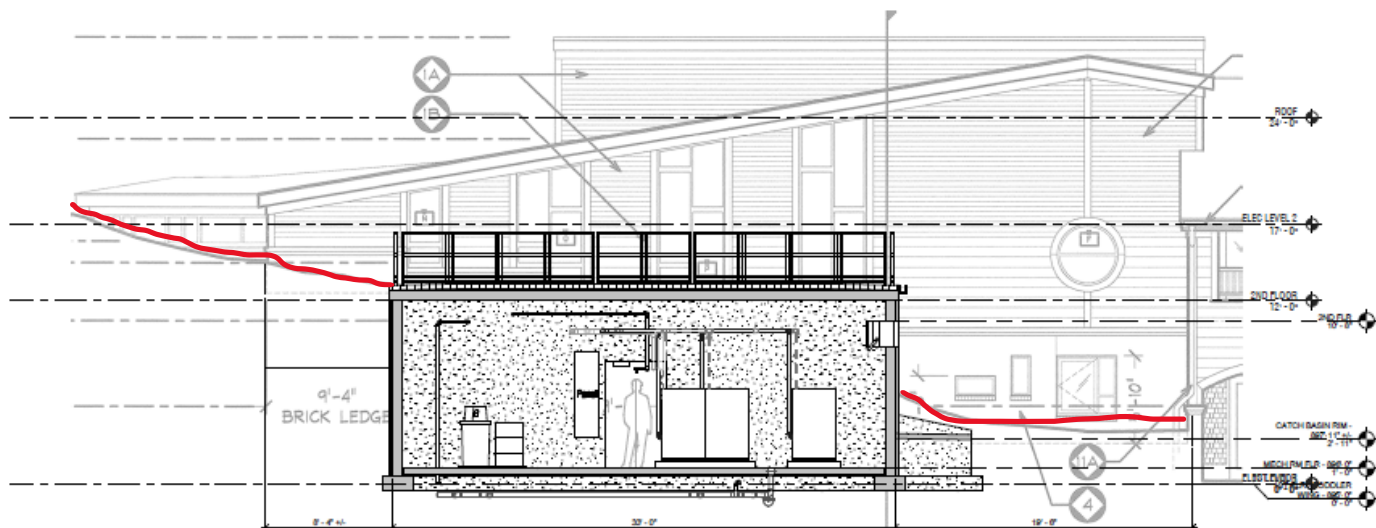
- 5 trees are proposed for removal (4 apple and 1 oak)
- To be replaced with flowering deciduous trees: 2 serviceberry, 2 crabapples, and 1 swamp white oak
- To be planted as a tree allée between the pedestrian path and the Childcare Center



Proposed Elevation from Pleasant Grove Dr



SECTION / ELEVATION THRU TUNNEL
1/4" = 1'-0"



Energy and Sustainability

- New Geothermal System is projected to save energy for the Childcare Center, eliminate natural gas for heating, and provide renewable source for heating/cooling
- Improved comfort for children and staff with new system is expected to greatly enhance childcare experience
- This site in the Village of Cayuga Heights will be Cornell's first installation of a geothermal well system to support a University facility on the Ithaca campus

Project Timeline

Geothermal Well Test (success!)	Summer 2022
Geothermal System design and site layout	Fall 2022
Preliminary Site Plan Approval & SEQR Determination	December 2022
Final Site Plan Approval	January 2023
Bids & Contracting	Feb-March 2023
Construction Begins	June 2023