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Brittingham Park Geothermal Partnership

Prospective Partnership for the Sustainable Redevelopment of the Triangle

Current CDA Triangle Properties

- ✓ 4 Aging Building/Complexes
- ✓ Large site, nearly 10 acres
- ✓ Underutilized area- low density, only 350 residential units
- ✓ Units lack air conditioning, and modern heating and ventilation systems
- ✓ Accessibility challenges in units and on site
- ✓ Extensive surface parking lots
- ✓ Isolated and high needs population
- ✓ Poor connectivity between the buildings and community

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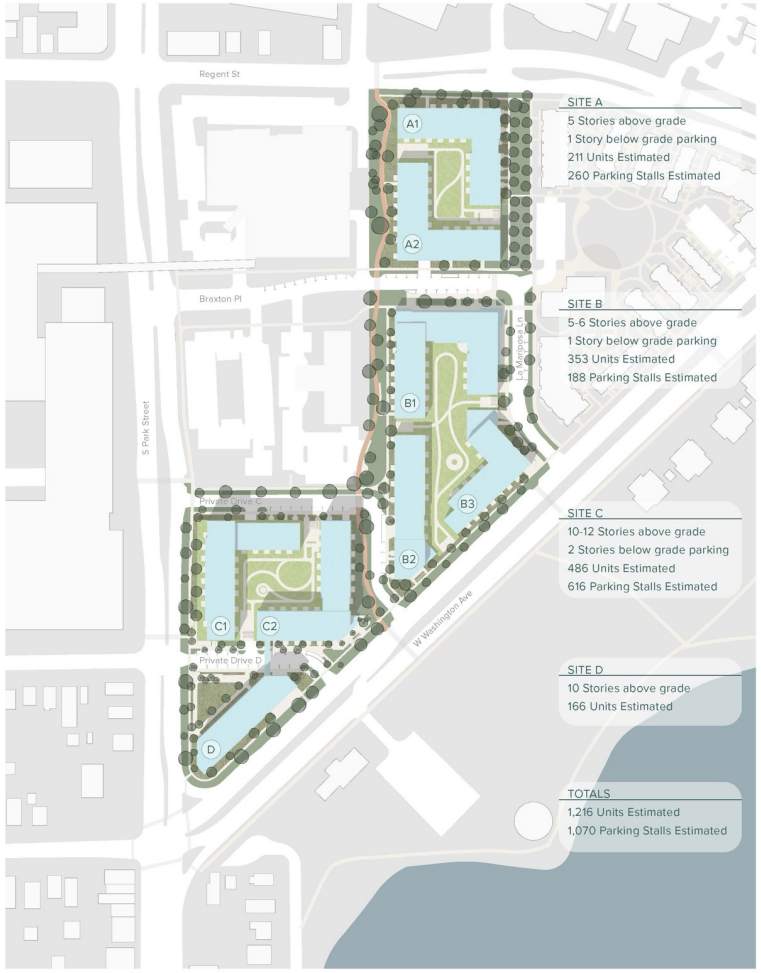
Taking Shape Redevelopment Plan



- ✓ Increases affordable housing opportunities for Madisonians
  - ✓ 340 new replacement units
  - ✓ 860 additional affordable and workforce units
- ✓ Improves living conditions for existing residents
  - ✓ Accessible units built for existing and future needs
  - ✓ Improved connectivity between residents and amenities
- ✓ Expands community facilities
  - ✓ Tenant amenities
  - ✓ Service provider spaces
- ✓ Phased over ten years to ensure no displacement of existing residents
- ✓ Improved private greenspaces for residents
- ✓ Underground parking

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Taking Shape Community Benefits

- ✓ Increases affordable housing production to meet Madison's growing community needs
- ✓ Improves community connectivity between the Triangle Neighborhood, Park and other amenities
- ✓ Creates the continuation of the East Campus Mall with a path that will connect lake to lake
- ✓ Assists the City's goal to achieve 100% renewable energy and zero-net carbon emissions by 2030

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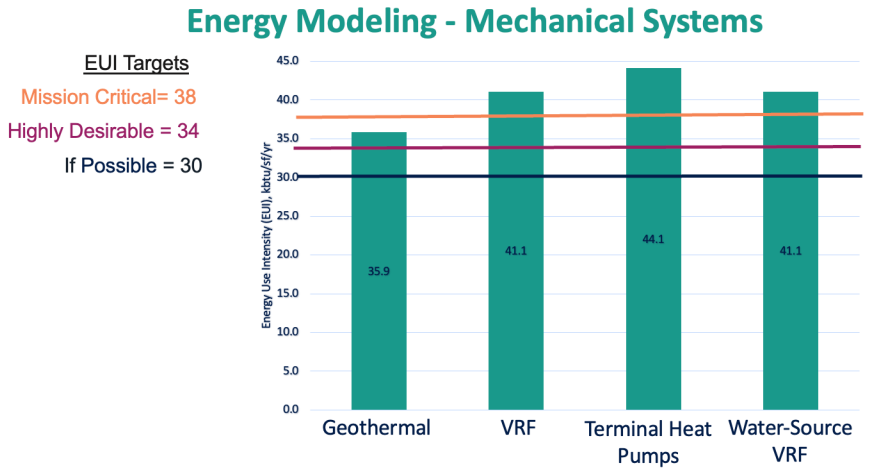
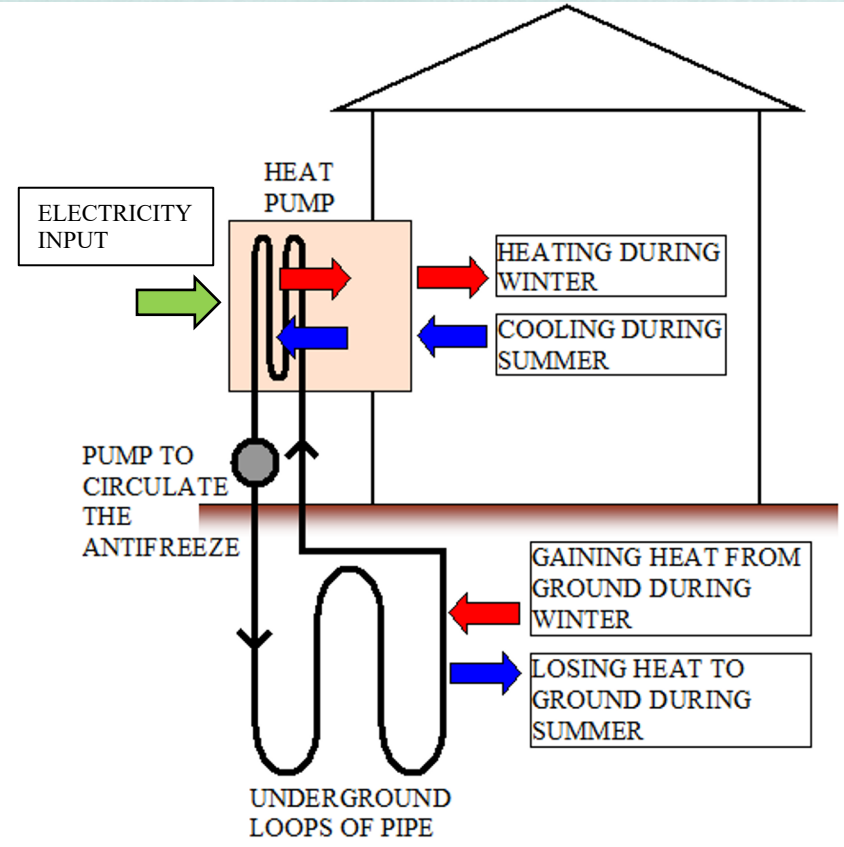
Why Geothermal?

- ✓ Allows Taking Shape Project to meet targeted energy use and sustainability goals
- ✓ Eliminates the use of fossil fuels in HVAC systems of buildings
- ✓ Clearest path to net zero operational carbon is through electrification of heating and cooling systems. The electricity is then supplied by renewables.
- ✓ Proven and reliable technology
- ✓ The useful and operational life of geothermal loop systems is long
- ✓ The Inflation Reduction Act includes a substantial Tax Credit for Geothermal infrastructure and the associated heat pumps



What is Geothermal?



- ✓ Ground heat exchanger is composed of several vertical bores with HDPE plastic pipes inserted to circulate environmentally friendly antifreeze
- ✓ Bores are fully sealed with bentonite grout after the pipe is inserted to increase thermal conductivity and stabilize the bore.
- ✓ The antifreeze solution is circulated through a heat pump which transfers heat energy between the solution and the conditioned space.

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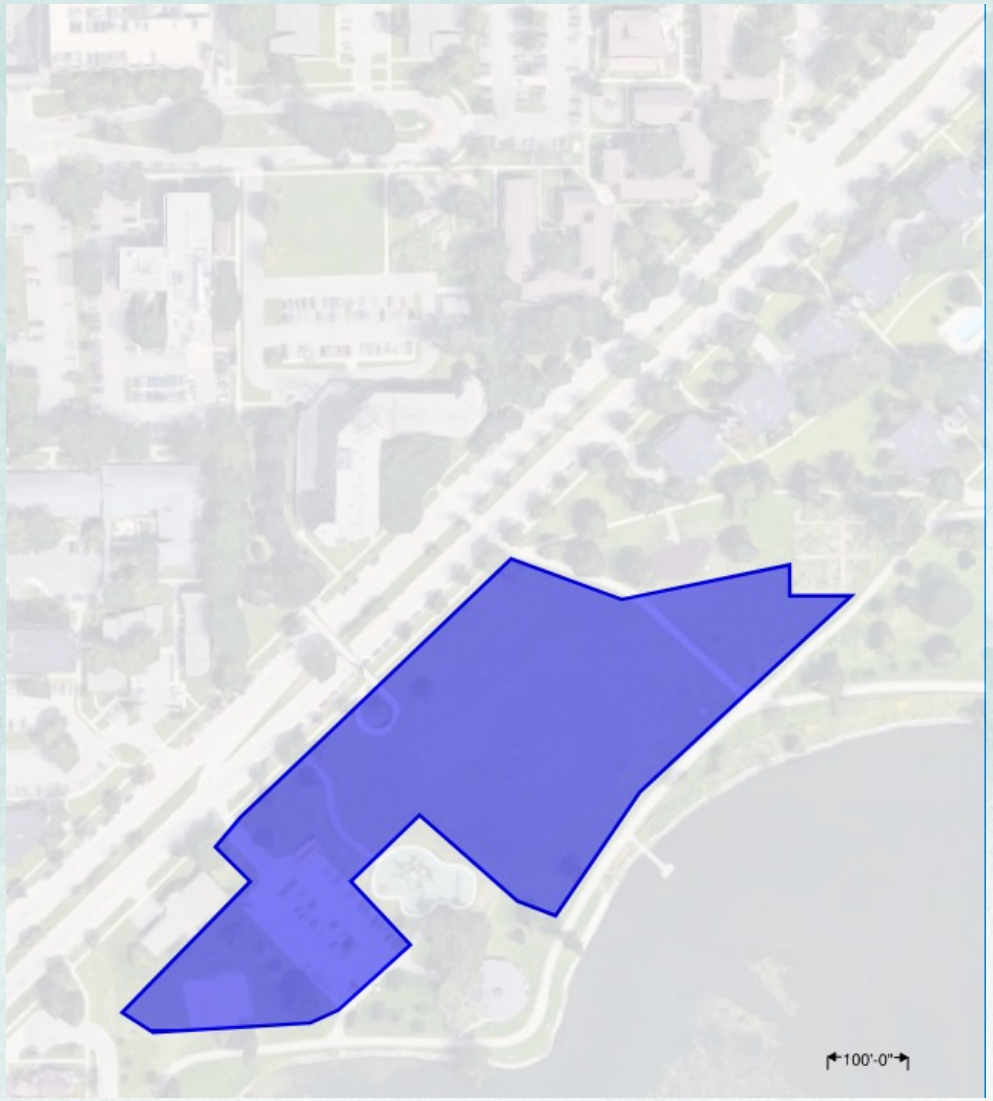
What impact on the Park?

Geothermal Field would be:

- ✓ Located in an area primarily used as athletic fields.
- ✓ Additional area could be needed below parking lot and sand volleyball area.
- ✓ Area would be restored after construction, including new parking lot.
- ✓ Single phase of construction and restoration
- ✓ No routine maintenance
- ✓ No components above grade
  - ✓ Manholes – Can be strategically located



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Geothermal Examples

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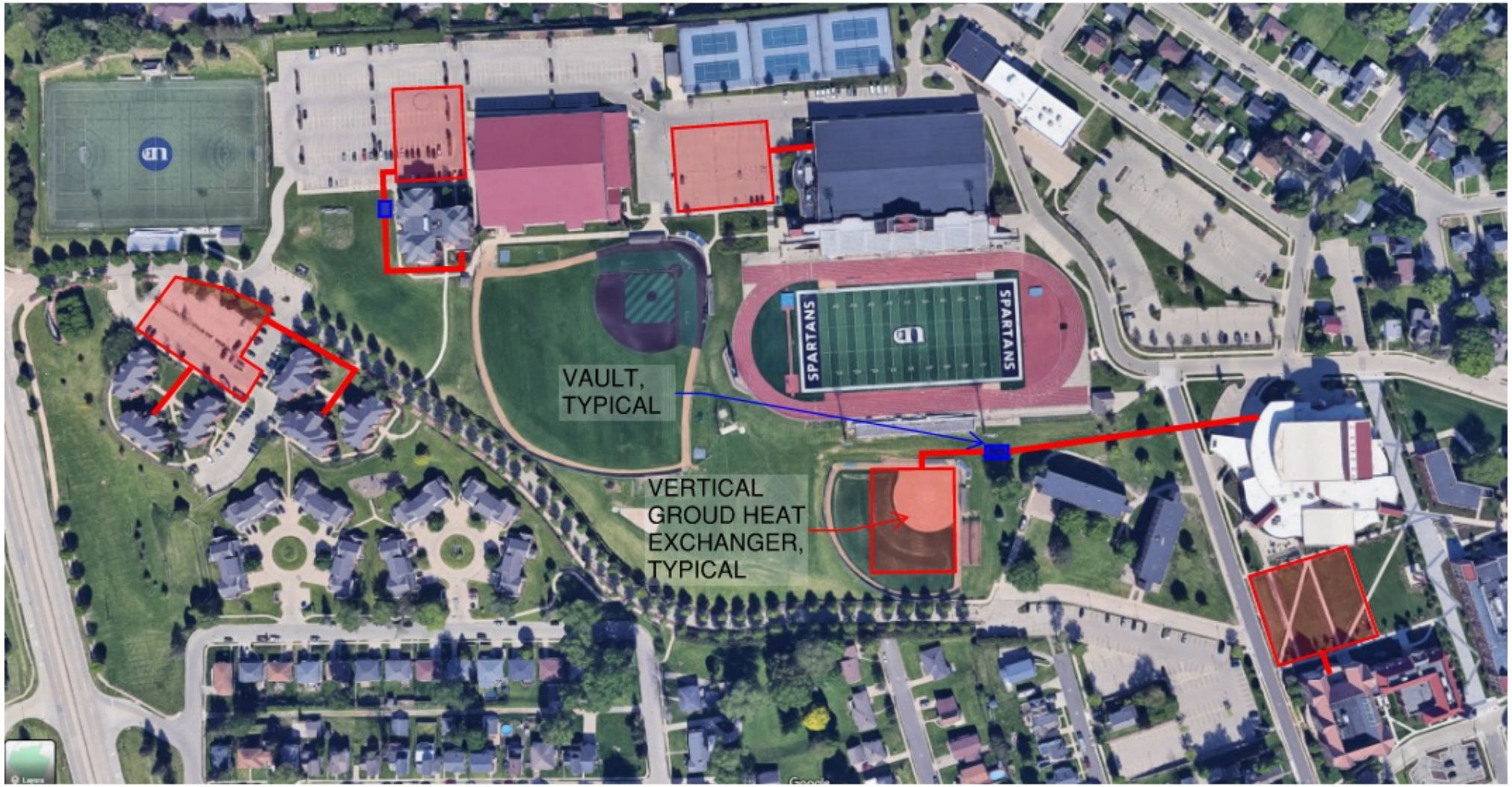

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Opportunity for Partnership

- ✓ Prospective partnership between CDA and Parks
- ✓ Short-term impact to Brittingham Park
- ✓ Low maintenance (by CDA)
- ✓ Opportunity to:
  - ✓ Collaborate between City entities- CDA and Parks
  - ✓ Support affordable housing creation
  - ✓ Participate in a demonstration sustainability project
  - ✓ Support the City's goal to achieve 100% renewable energy and zero-net carbon emissions by 2030

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