



GEOTHERMAL

RENEWABLE HEATING & COOLING SOLUTIONS

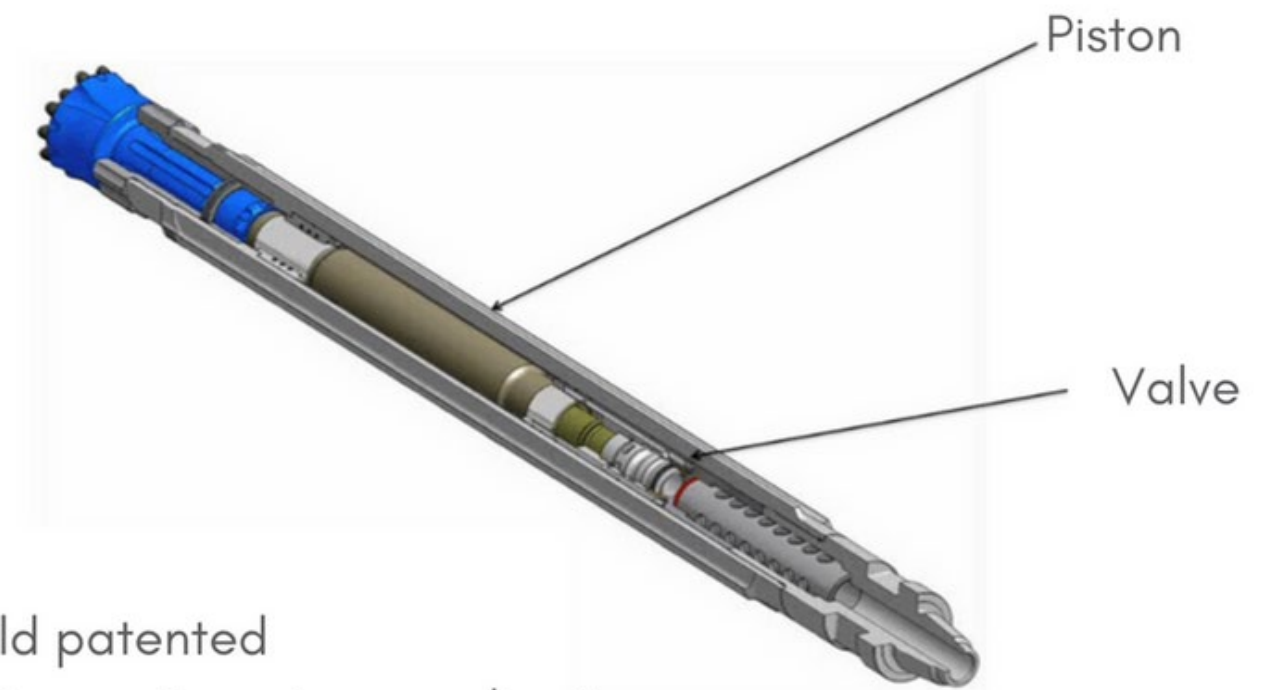
Our geothermal solutions eliminate the use of fossil fuels to heat and cool buildings, reducing carbon emissions and lowering operating costs.



UrbanGeo™ INNOVATIVE DRILLING TECHNOLOGY

Utilizing the Wassara Water Down-the-Hole (WDTH) drilling technology, boreholes are capable of being drilled at inclined angles from very small footprints.

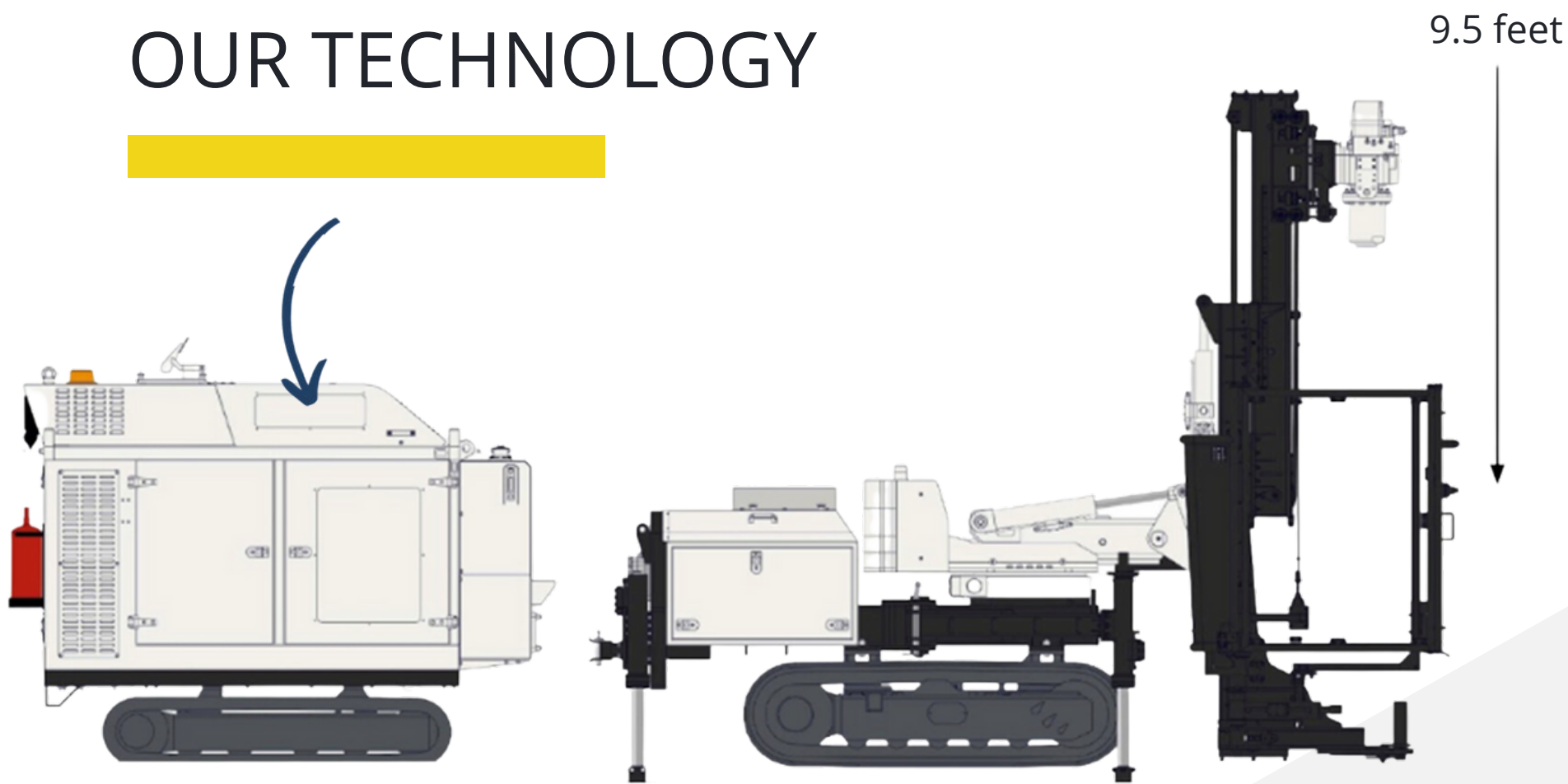
Wassara Water Powered DTH Hammer



- World patented
- > 20 years in various applications
- > 25 million meters drilled in-house by LKAB

Low noise, low vibrations, & NO DUST! System retrofits can be completed in small spaces with low overhead clearance.

WHY BRIGHTCORE? OUR TECHNOLOGY



OUR CUSTOM MINI RIG

Great for installations in difficult terrain and low-clearance spaces. Not available in the U.S. market - until now!

Rig width: 3.4 ft | Rig length: 10 ft
Height (rig derrick up): 9.5 ft
Power pack width: 5.3 ft
Power pack length: 7.5 ft
Power pack height: 5.1 ft

We have access to a fleet of drill rigs and can run several rigs simultaneously to reduce project lead time.



CONVENTIONAL DRILL

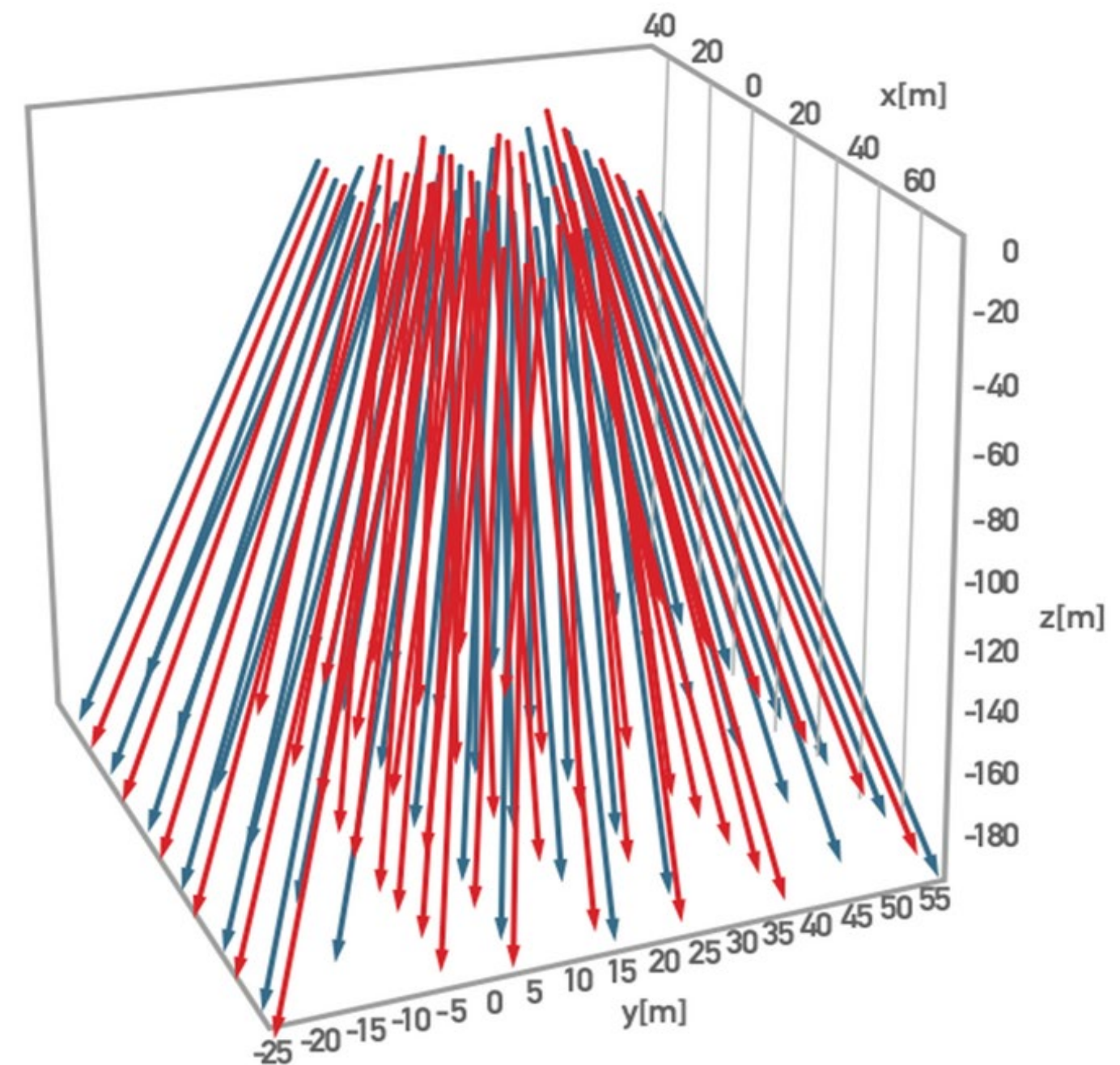
Great for installations in large open areas in certain geological settings.

Height (rig derrick up): 30-33 ft
Length of 6x4 truck: 29.5 ft
Width of 6x4 truck: 8.4 ft
Height of 6x4 truck: 11.2 ft

SOLUTION: TECHNOLOGICAL INNOVATION

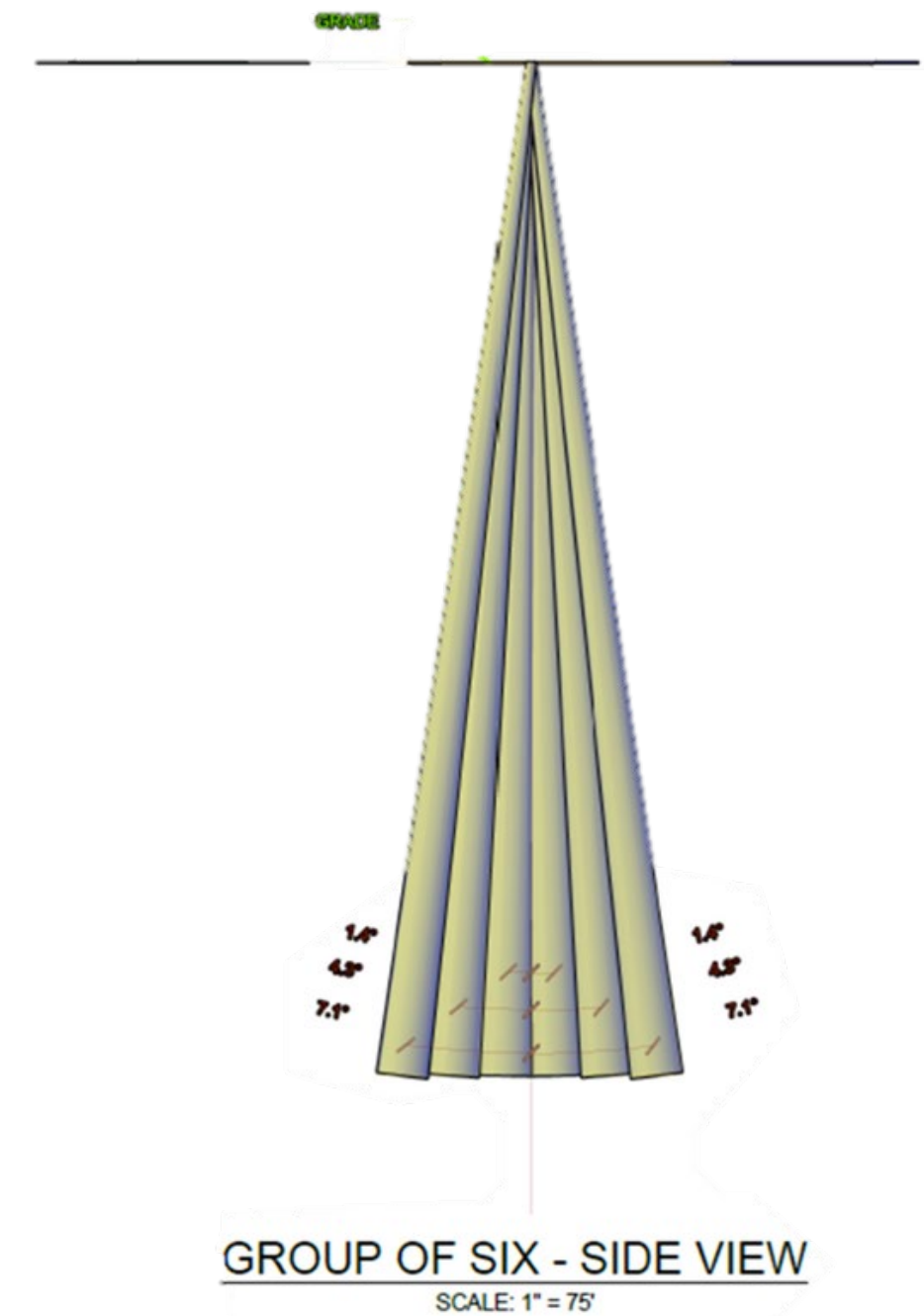
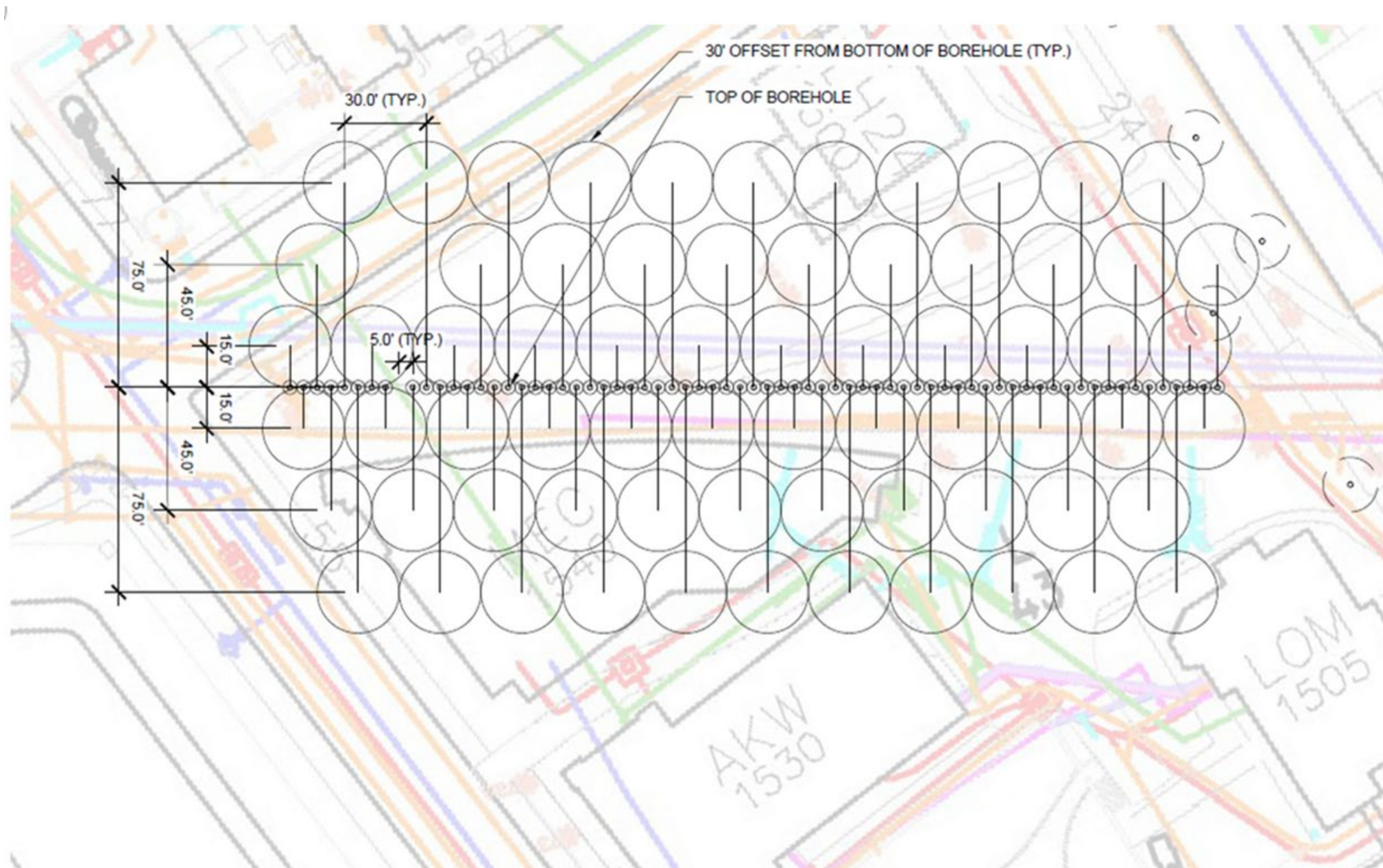
INCLINED BOREHOLES

- Our Water Down-the-Hole (WDTH) drill is capable of drilling at very precise, straight inclined angles.
- These inclined boreholes can be drilled in a small surface area and extend to contact an overall greater thermal mass.
- Boreholes can extend from drilling area to the building or property footprint boundaries.



ENABLING GEOTHERMAL IN LIMITED SURFACE AREAS

INCLINED BOREHOLES



NYSERDA GRANT PROGRAM

NEXTGEN HVAC PON 3519

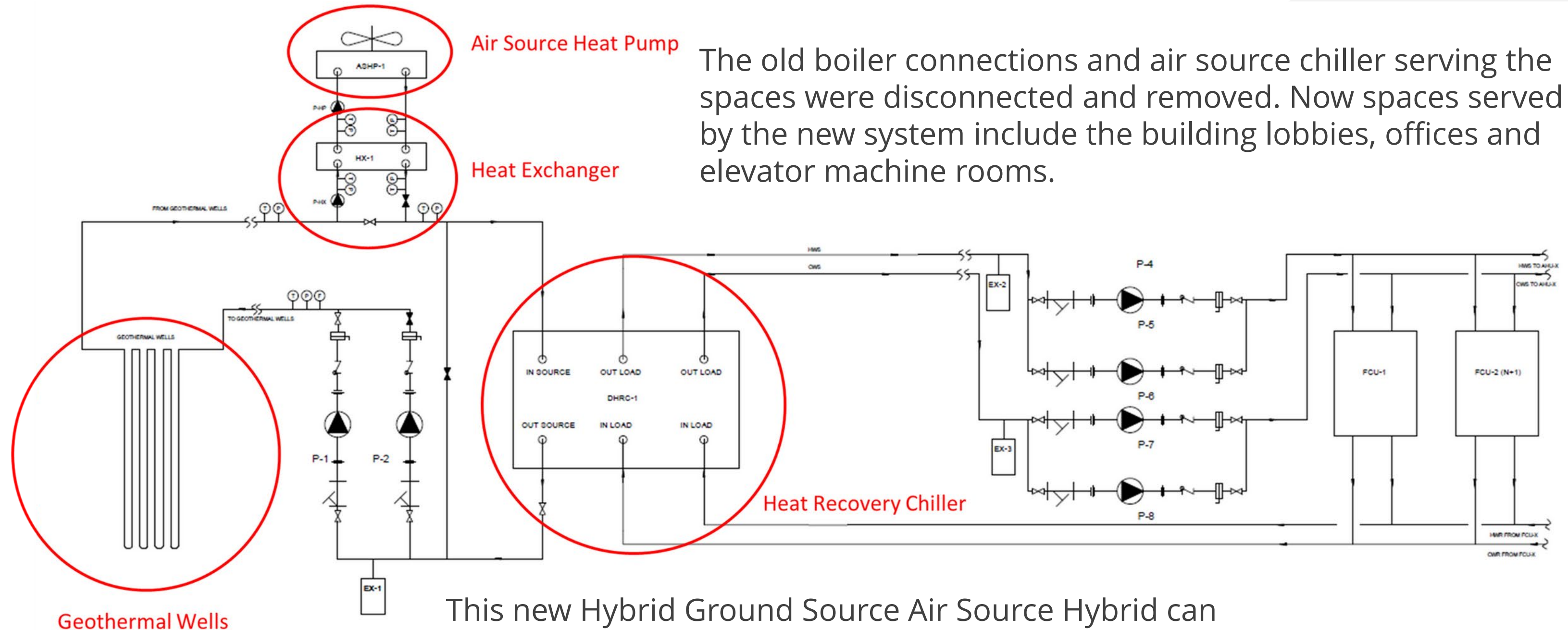
This Program Opportunity Notice (PON) was for the selection of HVAC innovative technology that enables thermal energy storage for building applications. The PON was broken up into five distinct areas totaling over \$30M of award potential; thermal energy storage is one of several areas of focus.

Brightcore was selected after a rigorous review and multi-stage down from 80 submissions and was selected to receive our full submission request of \$500k.



The Beresford, an architectural landmark and prestigious CO-OP, is located in the Central Park West neighborhood of NYC.

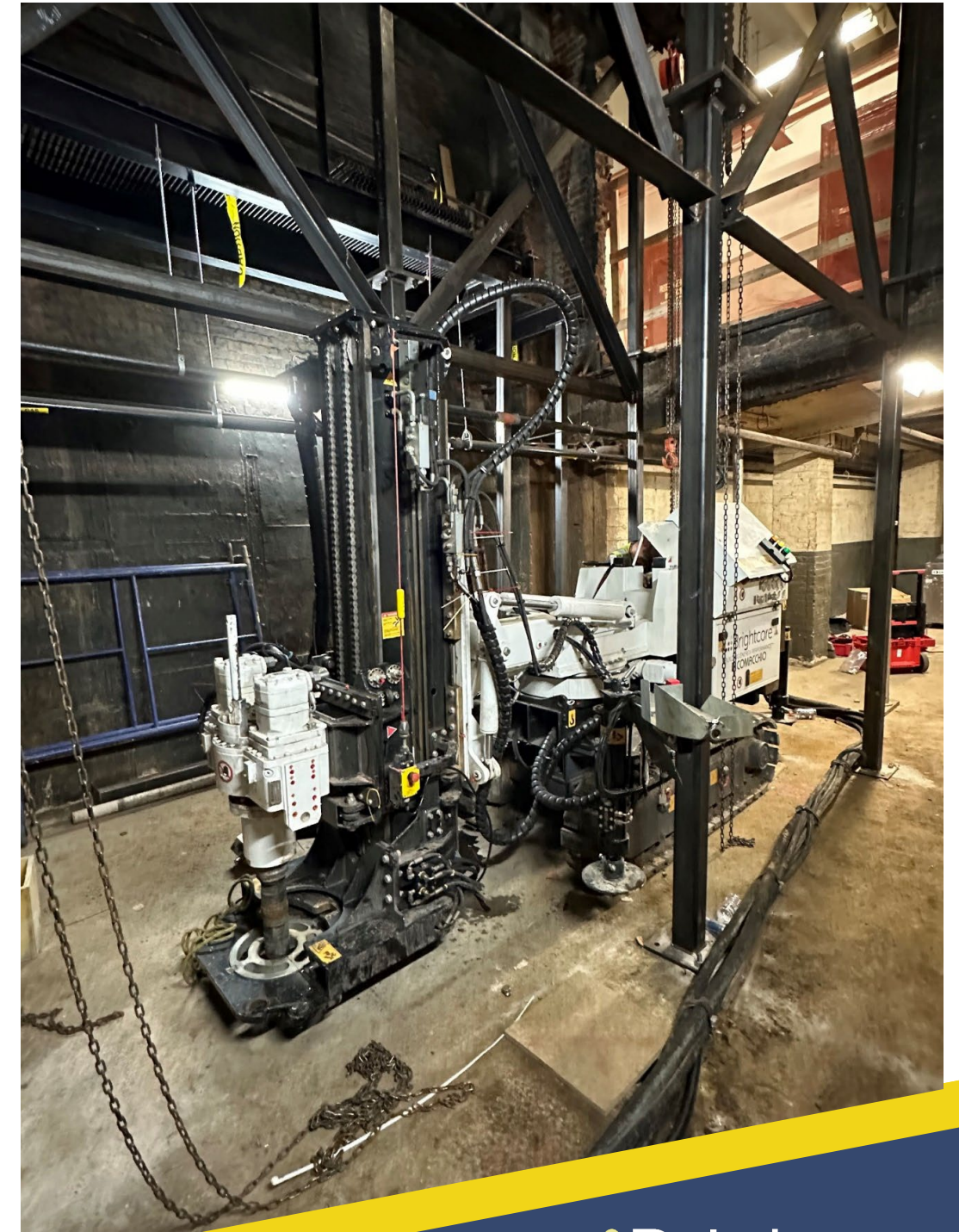
NYC BTES APPLICATION GSHP SYSTEM DESIGN



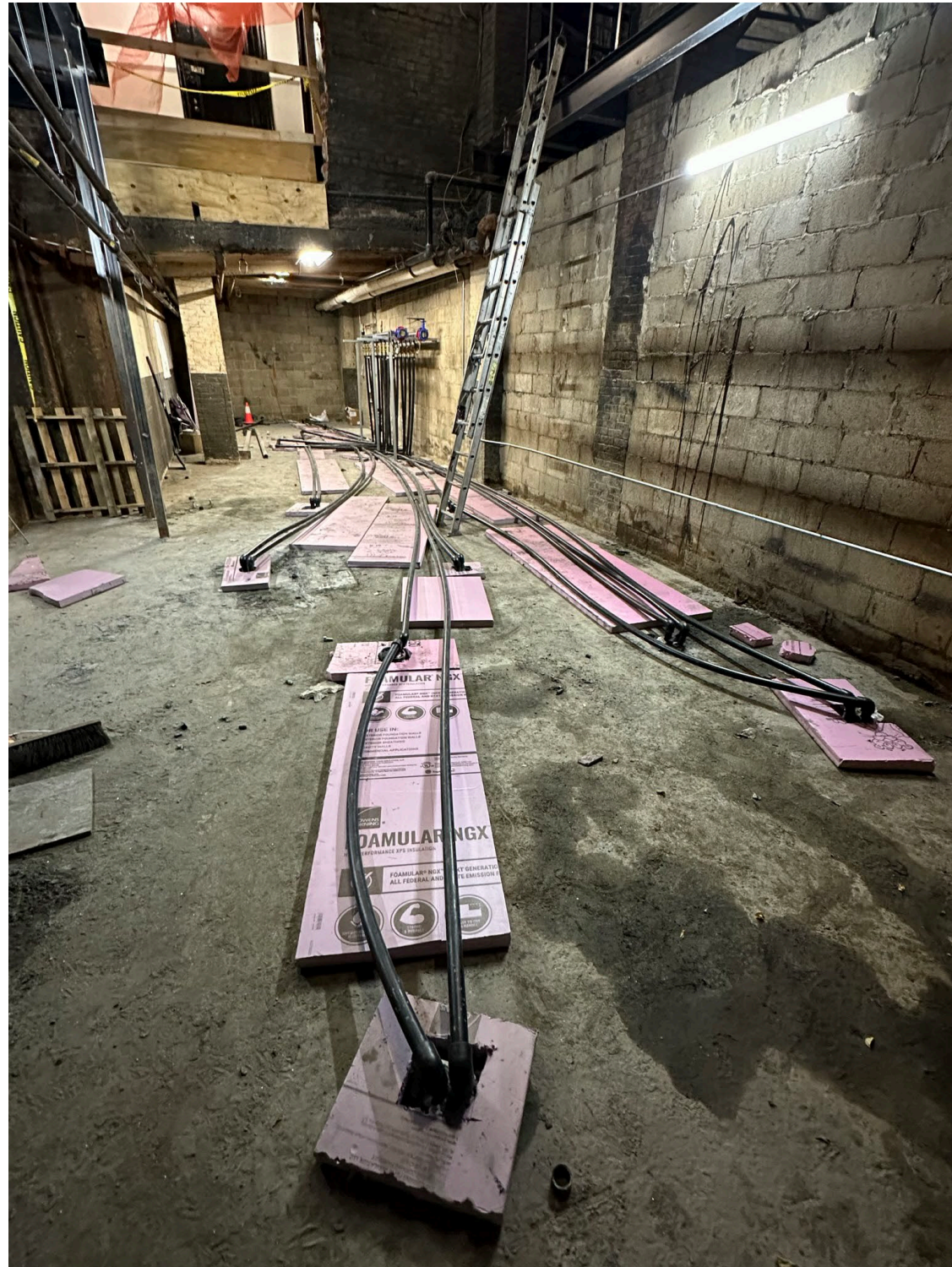
The old boiler connections and air source chiller serving the spaces were disconnected and removed. Now spaces served by the new system include the building lobbies, offices and elevator machine rooms.

This new Hybrid Ground Source Air Source Hybrid can leverage the benefits of both types of heat pumps to provide high efficiency and peak cooling demand reduction.

MID-CONSTRUCTION INSTALLATION IN PROGRESS



MID-CONSTRUCTION INSTALLATION IN PROGRESS

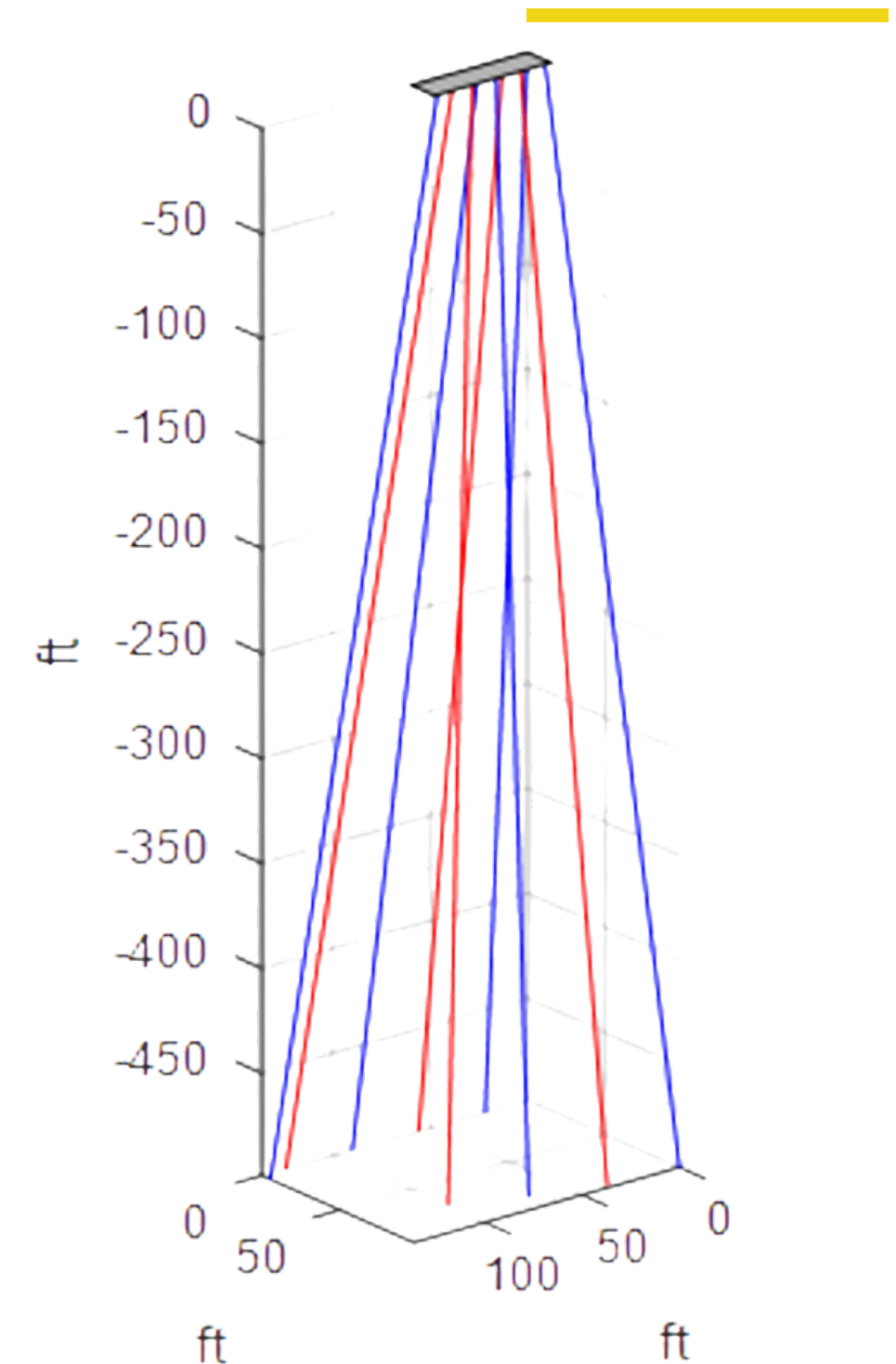


NYC NTES APPLICATION BERESFORD ANALYSIS

- System would replace conventional HVAC equipment serving building lobbies, offices and maintenance areas. Peak capacity of approximately 25 tons cooling, 170 kBtu heating.
- System was optimized to minimize peak cooling demand by pre-charging BTES during off-peak (overnight) hours.

RESULTS SUMMARY

- BTES Annual COP is 24% greater than an Air to Water Heat Pump Chiller.
- Peak electricity in the summer can be decreased by 18% by precooling the BTES during off peak hours from June 1 to September 30.
- Peak electricity during the winter season was 65% lower than the air source heat pump chiller.
- Reduced current annual GHG emissions by 41%.



THANK YOU!



BrightcoreEnergy.com