MECHANICAL DESIGN NARRATIVE
HANAWALT ELEMENTARY
HVAC UPGRADES
DES MOINES, IA
December 14, 2020

Summary of DMPS Hanawalt Elementary HVAC Upgrade:
The primary purpose of the project is to improve indoor air quality with better ventilation and humidity control.

Gas Fired DX Cooled Roof Top Units (RTUs) for Multiuse Cafeteria & Gymnasium
The existing gym horizontal water-source heat pumps will be removed and replaced with a new 12.5 ton gas fired dx roof top unit to condition and ventilate the space. The existing multi-use space vertical water-source heat pump will be removed and replaced with a 10 ton gas fired dx roof top unit to condition and ventilate the space.

Gas Service
A new gas service will be brought to the building coordinated with Mid-American Energy Company.

Gas Fired DX Cooled Roof Top ERV & Water Source Heat Pump ERV
The existing core style ERVs in the basement mechanical room will be replaced with water source heat pump ERV to provide conditioned ventilation air to building heat pumps. The existing core style ERVs in mezzanine mechanical room will be replaced with a gas fired dx cooled roof top ERV to provide conditioned ventilation air to building heat pumps.

25% Propylene Glycol and Loop Pumps
The existing geothermal field will be flushed and filled with a 25% concentration propylene glycol. A glycol feed system will be installed to the existing geothermal loop along with new 1750 RPM VFD loop pumps.

Summary of DMPS Hanawalt Elementary Flooring Upgrade:
In conjunction with the HVAC upgrades at Hanawalt, flooring upgrades will be included with this same bid package in order for the flooring subcontractor to work in concert with the HVAC contractor. Classroom carpet will be replaced and corridors will be ground and polished concrete.