

# | Hennipin County Forensic Science Building Heat Recovery Loop

**LOCATION** | Hennepin County, Minneapolis, MN  
**INSTALLING CONTRACTOR** | Jaytech  
**EQUIPMENT SUPPLIER** | SVL Inc.  
**PERFORMANCE VERIFIER** | CenterPoint Energy

## | BACKGROUND

- The utilities measured 34.8% efficiency improvement after installation of Hydromx nanofluid.
- The addition of Hydromx to the runaround loop qualified for both gas and electric rebates with a 0.8-year project payback.

The Hennepin County Crime Lab is one of six accredited crime labs in the state and provides forensic DNA, firearm examination, fingerprint database and crime scene processing services, along with other forensic services. Due to the various chemicals in the building and services provided, the building is heated and cooled with 100% outside air. Normally, this is an extremely costly way to condition a building.



*Facilities requiring 100% OA have high energy costs and compressor runtimes*

## | CHALLENGE

The heat recovery loop inside of Hennepin County's Forensic Science Building was installed in early 2018. The building runs 24/7, has 14,000 cfm of OA and 11,000 cfm of exhaust air through the heat recovery coils. After learning of Hydromx's efficiency gain over glycol, Hennepin County decided to switch from glycol to Hydromx to improve the energy recovery performance.



*Buildings that install Hydromx experience an average of 30% energy savings*

## | SOLUTION

The utilities measured 34.8% efficiency improvement after installation of Hydromx's nanofluid. The cooling savings resulted in a \$514 rebate from Xcel Energy, the electric utility. The heating rebate should have been \$1,213; however, it was "clipped" to \$321 due to CenterPoint Energy's, the natural gas utility, limit of a 1-year pay pack for natural gas savings.