

City of Crest Hill  
2090 Oakland Ave.  
Crest hill, IL 60403

April 27<sup>th</sup>, 2023

Attn- Blain Kline, Assistant PW Director

**RE- Crest Hill City Center HVAC/Mechanical Inspection Results**

Blaine-

Thank you for contracting us to provide this mechanical assessment of the HVAC/Mechanical systems within the new facility. We are providing a summary of observable deficiencies within our inspection. A majority of the HVAC systems are completed to the point of operation, the facility should be able to become occupied. Many of the issues could be resolved without major disruptions.

***City Hall Systems-***

***FAF-1-***

The test and balance report (TAB) was fully sampled on this system. The supply air performance appears to be correct, while introducing 26% outside air and/or duct leakage due to the return air shortfall. All heating, economizer and cooling functions are working at this time.

***FAF-2-***

The TAB report is indicating that system may have not been balanced, of the diffusers that could be read, the values are well beyond the 10% requirement of most systems. All heating, economizer and cooling functions are working at this time.

***FAF-3-***

The TAB report is indicating that system may have not been balanced, of the diffusers that could be read, the values are well beyond the 10% requirement of most systems. All heating, economizer and cooling functions are working at this time.

***FAF-4-***

The balancer did not read this system as part of his spot check. This system does have a failed thermostat that will require replacement. All heating, economizer and cooling functions are working at this time.

***FAF-5-***

The TAB report is indicating that system may have not been balanced, of the diffusers that could be read, the values are well beyond the 10% requirement of most systems. All heating, economizer and cooling functions are working at this time.

***AHU-1-***

The TAB report is indicating that system may have not been balanced, of the diffusers that could be read, the values are well beyond the 10% requirement of most systems. All heating, economizer and cooling functions are working at this time. There is an issue with the control cabling/connections. The heating and cooling are running simultaneously and the thermostat is located in a poor location.

***Police Department Systems-***

***FAF-1-***

The TAB report is indicating that system may have not been balanced and is low on air flow, of the diffusers that could be read, the values are well beyond the 10% requirement of most systems. All heating, economizer and cooling functions are working at this time.

***FAF-2-***

The TAB report is indicating that system may have not been balanced and is low on air flow, of the diffusers that could be read, the values are well beyond the 10% requirement of most systems. All heating, economizer and cooling functions are working at this time.

***FAF-3-***

The TAB report is indicating that system may have not been balanced and is low on air flow, of the diffusers that could be read, the values are well beyond the 10% requirement of most systems. The heat is working at this time, the air conditioning is not. There is an issue with the condensing unit inverter.

***FAF-4-***

The TAB report is indicating that system may have not been balanced, of the diffusers that could be read, the values are well beyond the 10% requirement of most systems. All heating, economizer and cooling functions are working at this time. The thermostat on this system is on an outside wall and is not reading correctly.

***FAF-5-***

The TAB report is indicating that system may have not been balanced, of the diffusers that could be read, the values are well beyond the 10% requirement of most systems. All heating, economizer and cooling functions are working at this time.

***FAF-6-***

The balancer did not read this system as part of his spot check. All heating, economizer and cooling functions are working at this time.

***SS-1-***

No issues found at this time

***SS-2-***

No issues found at this time

***SS-3-***

No issues found at this time

***Sally port unit heater-***

This unit is functioning correctly, it is missing two of the panels to seal the combustion areas.

***VRF basement systems-***

These systems are incomplete, ducting, control and start-up are required to test them.

***ERV systems-***

These units are not indicated on the drawings dated 12/20/2019. The installation does not appear to be typical with most instances. The unit installation should be properly engineered for this application. Design changes would be proposed, if required.

## *Summary-*

The base installation is about 90% complete at this point. The test and balance may have been started but is not complete. Several diffusers and branches are installed and not indicated on the drawings dated 12/30/2019. The police department basement VRF system is not finished. The FAF-3 within the police department does not have air conditioning at this time. The city hall council chambers system has multiple issues that should be resolved. The ERV systems within the police department should be evaluated by an engineer. The drawings on-hand are not "as-built" and are not accurate to what was installed, drafting should be performed to create accurate as-built drawings for the entire HVAC/mechanical design.

## *Costs to resolve-*

Please note, our evaluation and TAB sampling has given us an opportunity to find the unfinished and non-functioning systems within both spaces. As the building becomes occupied and used through the seasons, other issues will most likely become visible that were not during this inspection.

Description	Cost
Engineer evaluation of the ERVs	\$6,180
Full system HVAC TAB report	\$15,100
Complete the VRF systems	\$6,325
PD- FAF-3 Repair	\$1,255
PD- FAF-4 Repair	\$450
AHU-1 Repairs	\$3,180
Unit heater repair	\$825
CH FAF-4 Repair	\$525
Total	\$33,840

Sincerely,



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