

**ROBSTOWN INDEPENDENT SCHOOL DISTRICT
AGENDA ACTION SHEET**

Date: April 14, 2025

Subject: Discuss and Consider Approval of HVAC Work and Issuance of Final Payment to Carrier

Administrator Responsible: Dr. Marc Puig

Position: Superintendent

A. Purpose of Agenda Item:

Information Only

Action Needed

B. Authority for this Action:

Local Policy _____

Law or Rule _____

C. Strategic Objective, Goal, or Need Addressed: Approval of HVAC work and issuance of Final payment to Carrier.

D. Summary: Please see the attached information for your review.

E. Alternatives Considered: N/A

F. Comments Received: N/A

G. Administrative Recommendation: That the Board approves the administration's recommendation.

H. Fiscal Impact and Cost: N/A

I. Monitoring and Reporting Timeline: 2024-2025 School Year



MEMO – FIELD REVIEW

WHEATON ENGINEERING AND ENVIRONMENTAL SCIENCE, LLC

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Corpus Christi, Texas 78405
Bus: (361) 299-1801
TBPE FIRM REG # F-7915

Submitted To: Robstown ISD/Carrier

Final Walk-Through

Project: HVAC Upgrades

Location: Robstown, TX

FR #01292025A

Attachments: none

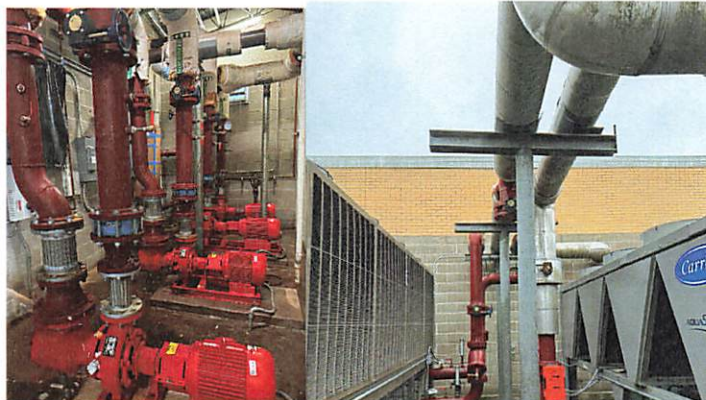
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Documentation:

Field review Robstown ISD chiller HVAC upgrade project. Notes per site are documented in the order that the visits were completed. Notes are as follows: **updated April 9, 2025**

Sealed Junior High School

1. Chiller installation is complete, and the unit has been started up and operated, at the time of the walk-through it was not operational due to some modifications and reprogramming of controls. **Unit installation is complete and operational**
2. Decisions were made at the site to modify the insulation system on the interior of the building (below left) at the pumps. To expedite work and provide a flexible system for the couplings at the pump connections it was decided to use 1½ inch thick Rubatex foam insulation, to be painted with protective vinyl lacquer paint in white. Small section areas of interior existing fiberglass insulated sections of piping will be replaced with matching fiberglass systems. Contractor will repaint/refinish all interior jackets in the mechanical room utilizing appropriate white paint system or mastic such as Childers CP 30. The intent will be to refinish the piping such that it presents a reconditioned and homogenous look. **All insulation installed new and modified has been completed per notes.**



3. The contractor will complete the installation of the check valve in the primary-secondary bypass eliminating backflow potential between the primary and secondary loops to control discharge water temperature. This valve system regulates the secondary loop volume if it exceeds the primary loop volume. No control valve is required installation shall be per keynote 16 sheet M1.1, and as diagramed on sheet M1.2. **Valves and bypasses are complete. The Onicon flow meter is not installed and needs to be completed, including DDC programming. Warranty item**
4. Exterior piping will be re-insulated with phenolic foam and aluminum jacket covers on all exterior piping. (previous page right) **This work is complete.**

Robert Driscoll Elementary School

1. Chiller installation is complete; however, startup has not been performed, and the system is not operating currently. **Startup complete.**
2. Exterior insulation shall be completed with specified phenolic insulation and aluminum jacketing. Only sections which have been modified or damaged during construction need to be updated. Fiberglass insulation with aluminum jacketing will remain intact. **Complete.**
3. The flexible conduit installed for control wiring (below) is incomplete and needs to be completed with secure mounting systems. **Complete.**



4. Variable primary minimum flow bypass needs to be installed and programmed; routing was reviewed in the field. The agreement was to modify the bypass shown on sheet M1.1 to connect piping in a similar configuration to the vertical runs in the same corner of the mechanical room. Bypass operation shall match that shown and described on sheet M1.2. **Complete.**
5. Control system connection to the new VFDs require completion (above photo). **VFD's are connected but operating under an alternative programming method which is approved after discussion with Robstown ISD. The system is not operating in variable primary mode, however if the AHU valves are updated at some point to two-way chilled water control valves, the system will have the ability to be programmed using a variable primary control method. Currently VFD's allow maintenance and compliance with the International Energy Code.**

6. Interior insulation sections removal shall be replaced with phenolic foam or fiberglass with matching thicknesses. All of the interior insulation covers within the mechanical room shall be recoated/refinished with appropriate white paint system or mastic such as Childers CP 30. The intent here remains the same throughout the project as described in item 2 above to provide a reconditioned and homogenous look to the system. **Completed**
7. Potential ground fault discovered between the variable frequency drive and one pump system needs to be investigated potentially with a Meger test unit to determine if there is a ground fault and the existing pump motor winding. **Pump motor was replaced by Robstown ISD, however the lead district HVAC Tech discovered that the pump itself is seized, which explains the motor failure. There is a probability that the scroll on the pump could be scored or otherwise damaged, rebuilding the unit may be more expensive than buying a new pump at this point. Wheaton can assist with making a selection of a new pump at the District's request. The existing chiller on this campus will also need attention within the near future due to excessive corrosion on the condenser coils. Robstown ISD work notes**

San Pedro Elementary School

1. Chiller installation is complete; however, startup has not been performed, and the system is not operating currently. **Completed.**
2. There's a broken control sensor head (below) on the new chiller body; it appears as if someone vandalized the system by unscrewing it tearing the wire system up. This needs to be repaired. **Completed.**



3. Exterior fiberglass insulation damaged areas and new piping systems shall be insulated with new phenolic foam systems and aluminum jackets. The exterior primary pumps shall be re-insulated with Rubatex, and painted with white vinyl lacquer, to improve appearance and protect the Rubatex from ultraviolet light. **Insulation work is complete.**

4. The bypass between the primary and secondary loops needs to be provided with a check valve, the bypass piping on the system is in place, the valve just needs to be installed such that the flow is from the supply to the return of the primary pumps. This valve eliminates the potential of recirculating return water into the supply side of the secondary system. The valve and piping will need to be re-insulated after the installation. No control valve is required. **Installation complete, the secondary loop pumps on this campus need to have the differential pressure point control evaluated. Only one pump should be required to operate the campus at normal loads. Warranty item**
5. The contractor will replace the section of fence eliminated to extend the concrete pads allowing chiller installation. The new fence will be located a minimum of 2'0" from the new edge of the concrete to allow access to piping at the building and of the new chiller system. **Fence clearance is minimal, but the work is completed.**

Lopspeich Elementary School

1. Chiller installation is complete; startup has been performed, only part of the system is operating currently. Some parts and repair work under warranty are anticipated from Johnson Controls. **Unit is operational**
2. Exterior fiberglass insulation damaged areas and new piping systems shall be insulated with new phenolic foam systems and aluminum jackets. The exterior primary pumps (below left) shall be re-insulated with Rubatex, and painted with white vinyl lacquer, to improve appearance and protect the Rubatex from ultraviolet light. **Insulation work is complete.**



3. The bypass between the primary and secondary loops needs to be provided with a check valve, the bypass piping on the system was removed (above right) during the new chiller installation and will need to be reinstalled. The valve needs to be installed such that the flow is from the supply to the return of the primary pumps. This valve eliminates the potential of recirculating return water into the supply side of the secondary system. The valve and piping will need to be re-insulated after the installation. No control valve is required. **Installation complete, the secondary loop pumps on this campus need to have the differential pressure point control evaluated. Only one pump should be required to operate the campus at normal loads. DDC control needs here are outside of the contract are typical of both this campus and San Pedro. Warranty item**

4. The contractor will replace the section of fence eliminated to extend the concrete pads allowing chiller installation. The new fence will be located a minimum of 2'0" from the new edge of the concrete to allow access to piping at the building and of the new chiller system. **Fence work is complete with minimal clearance.**

5. There is a phase issue noted on one of the VFD control screens. It appears to be a reverse rotation problem with one of the pump motors which needs to be fixed. **Reverse rotation was fixed by Robstown ISD.**

References:

Attachments: 0 Pages

The original of this report was sealed by Ronald B Wheaton P.E.

WHEATON ENGINEERING AND ENVIRONMENTAL SCIENCE, LLC

(WHEATON)
Authorized
Signature

_____  _____

Ronald B. Wheaton, P.E., Vice President

TBPE # 73355`

Date: April 9, 2025

Responses:

Signature: _____
(Client)

Title/Firm: _____