



## GOVERNING BOARD AGENDA ITEM AMPHITHEATER UNIFIED SCHOOL DISTRICT NO. 10

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**DATE OF MEETING:**      **October 30, 2018**

**TITLE:**    **School Facilities Board Grant – Harelson HVAC**

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### **BACKGROUND:**

The District submitted a Building Renewal Grant request to replace the existing evaporative cooling system used on the Multi-Purpose Room at Harelson Elementary with a modern heating and air conditioning system. The funding requested was for an assessment and design of a system capable of meeting the SFB guidelines for indoor air temperatures. The new air conditioning systems are also expected to reduce maintenance requirements and water usage as well.

Additional justification was provided to the SFB and is outlined below:

**System Age:** The serial number of the furnaces indicates that they are from the original 1990 install (27 years old). Therefore, these systems have reached the end of their expected service life. The SFB Average Life Cycle of Building Components indicates that gas fired furnaces have a life of 15 – 20 years. Based on the serial number of the evaporative coolers, they were installed in 2003 (14 years old). There is no “evaporative cooler” listed in the SFB Average Life Cycle of Building Components tables. The nearest thing might be a cooling tower which has a life span of 10 – 20 years. These evaporative coolers are within that range.

**Location:** Most of the existing equipment is located within 10 feet of the roof edge which does not have a tall enough parapet to meet the current code requirements for fall protection and pose a hazard to District employees. Several of the existing roof curbs intercept the roof drainage valleys causing damage to system supports.

**Corrosion:** The curb caps to most of the platform curbs were heavily corroded and would need to be replaced if new equipment is placed in the old locations.

**Supports:** The evaporative coolers are all sitting on wood blocks on top of the platform curbs. Some of the wood supports do not span the entire width of the platform curb. All wood supports are showing signs of splitting. The angles that support the rooftop duct were constructed with a small square of sheet metal as a base. These sheet metal bases have been encapsulated into the roof. Any re-roof work would require the duct supports to be replaced.

**Equipment damage:** The evaporative cooler on the southeast roof had a fan failure. The failure sent fan blades into the unit and duct, tearing them into multiple places and is non-repairable.

**Ductwork damage:** There is a large amount of ductwork existing on the roof. Much of it is over 36” wide. Most of the tops of the ducts are caved-in. Therefore, the joints are compromised and are suspect of leaking air and allowing water to enter the ductwork. The wall flashing assemblies for the rooftop ducts that penetrate the building wall (most are like this) show signs of multiple past repairs and are in need of additional repairs.

The School Facilities Board approved a grant for design in the amount of \$22,592 for the design of a replacement HVAC system. To accept this grant the Terms and Conditions must be approved by the Board and signed by the Governing Board President.

Grant Number: 100210107-1012-035 BRG

Grant Amount: \$22,592

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**RECOMMENDATION:**

The Administration recommends that the Terms and Conditions be approved by the Governing Board and the signed by the Governing Board President.

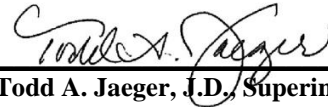
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**INITIATED BY:**



Jim Burns, Executive Manager, Operational Support

Date: October 22, 2018



Todd A. Jaeger, J.D., Superintendent