

HVAC Control System Concerns

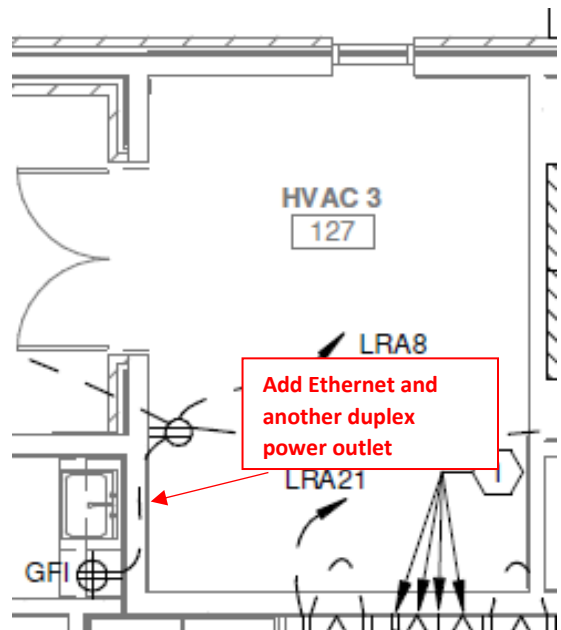
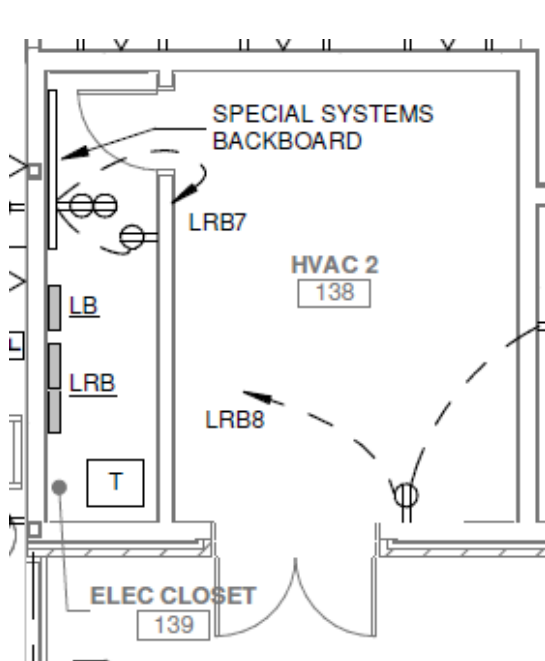
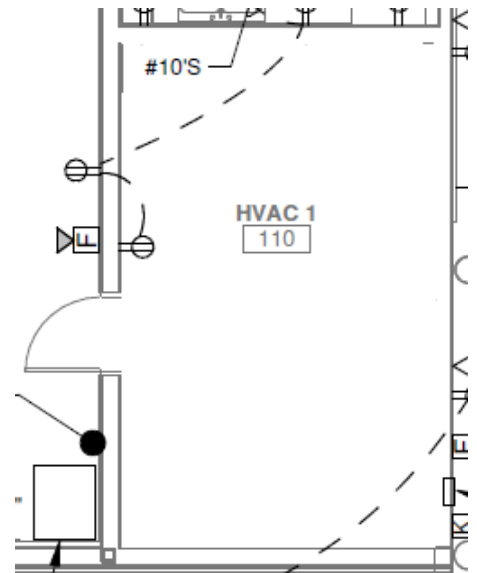
(Section 15650, Pages 702-728)

September 23, 2022

Responses from the phone call with David Code from GVA on 4/25/2023 in red.

From an IT standpoint, there seems to be several inconsistencies with the HVAC section of the Project Manual, as described below:

- Internet connections.** In reviewing this whole section, it looks like the HVAC system will have one to as many as three HVAC building controllers, with a standard PC computer installed in HVAC 3 (Room 127). In order for this PC and controller(s) to talk to the outside world, they need to be attached to the library's LAN Ethernet as specified in section 3.8, page 727. It is unclear from the plans if two more HVAC controllers will be installed in the other rooms to control each air handler, which would require them to have Ethernet jacks also. I see nothing in the electrical plans for Ethernet jacks in any of the HVAC rooms. We will need at very least 2 Ethernet jacks in room HVAC 3, one jack is for the PC and one for the controller.



Connections between the controllers and HVAC devices are installed by the HVAC team. They might use Ethernet or simple twisted pair wire, depending on the system.

There is only one controller connection to the Library's internet LAN. While this connection could be "piggy backed" onto the controller PC, they can also keep it separate and have 2 connections...one to the controller, and one to the PC. The plans will be changed to allow two Ethernet jacks in HVAC 3.

2. **Power outlets.** The HVAC 3 room is supposed to have a table that supports the PC running the monitoring software (Part 2.4.B.2, page 713). I only see one power outlet in that room, which will be used to plug in the PC and the monitor. There are no additional power outlets for the HVAC technician to plug in his tools. Please provide an additional duplex outlet.
Another duplex outlet will be added to the HVAC3 room.
3. **Update computer specs.** Part 2.4.B.2 on page 713 mentions an operator workstation computer which has been cut-and-pasted from an old document. Windows XP, Windows 2000 were discontinued by Microsoft over a decade ago, and now Windows 7's support has expired too. The CPU, computer memory and disk space requirements required by Windows 10 (and the current Windows 11) are significantly higher than what is listed. In section 2.5 it also mentions a web interface accessible by both Internet Explorer and Netscape browsers. Both of these browsers have been discontinued. Please update the document to reflect the current software needs of the operator control software.
This was a "glaring error" that was overlooked. The Project Manual document will be changed to use Windows 10 and current browsers.
4. **Laptop.** The document states that a laptop (now probably a tablet computer) will be needed (Section 2.6.A, page 717), there is no further information about it. Presumably it will also be running the HVAC software and will need to connect to the Library's Wi-Fi. Who owns this PC? Who uses this PC (library staff and HVAC people)? Where is it going to be stored?

Most service contractors will have (and bring) their own portable computer device to control the system. If not, they can use the PC in the HVAC3 room. This requirement will be removed from the Project Manual document.

5. **Access.** Section 2.7.D specifies that all registered users will have access to a scheduling, calendar, duty cycle, and temperature override functions. It does not specify who these people are, or what or how this is to be accomplished. Are these people library staff, parish government staff, designated maintenance crews or someone else? For example:
- a) How can the library staff control the temperature in the meeting room when a special event is held?
 - b) How do we communicate our needs to keep the building temperature higher when the library is closed due to a hurricane?

After the system is “tuned”, the installer will ask about library holidays and program the system for the first year. They will also provide a “user” password so library staff can control and program the thermostats. Dwight asked that the “admin” password be given (and stored) by the library staff, for the sole purpose of giving it to a new HVAC maintenance company if we decide on a new contract in the future.

(Current vendors mentioned are Siemens and Johnson Controls.)