

AV and OIT Coordination on New Builds and Large Renovations  
Updated October 22, 2024

**I. Design Phase (All information to be submitted by 50% CD at the latest)**

**A. PU OCP PM**

1. Provide the AV Designer/Consultant with the following information:
  - a) Facilities codes for buildings
  - b) Information on [PU AV VLANS](#)
2. Facilitate meetings with PU AVS and PU OIT if needed.

**B. AV Designer/Consultant**

1. Clearly Define AV Network Requirements
  - a) Overall
    - (1) Clearly define what VLAN devices are connected to.
    - (2) Clearly define what subnet or building each VLAN is in.
    - (3) Remove all references to “client LAN” or “TBD network” and define them.
    - (4) Submit expected bandwidth and uplink needs per building to PU OIT.
      - (a) Minimum 2 fiber uplinks per switch.
    - (5) Arrange to test any devices relying on a connection over WiFi with PU OIT to confirm they will function on the PU network before the 50% CD submittal.
    - (6) Submit a preliminary estimate for how many devices will be on each subnet in each building for subnet sizing.
  - b) This is for devices connected to PU wall boxes and wall ports.
    - (1) Call out all requested OIT wall box locations on the floor plan and include
      - (a) Number of connections.
      - (b) Connection speed for each connection.
      - (c) PoE needs for each connection.
    - (2) All room computers or other devices on ip4-wiredprivate-xxxx must be plugged into a wall box, not an AV switch.
  - c) For devices connected to an AV Switch.
    - (1) For the switch (Aruba CX6100, CX6200, or CX6300)
      - (a) Clearly define what ports are on what VLAN.



- (b) Clearly define the number of 10Gbps uplinks needed to provide expected bandwidth for devices on the switch.
- (c) Define the total expected PoE total on the switch.
- (d) Define the max PoE draw a single device on the switch that will pull.
- (e) Call out any ports that need to have a higher uplink speed than 1Gbps.

(2) For the individual devices.

- (a) Define the VLAN, PoE, and bandwidth requirements.
2. Specify the appropriate Aruba switches.
  3. Document what NAVigators control what endpoints (in AV over IP systems)
  4. Submit all network requirements to OIT and confirm that the existing OIT design can accommodate AV needs.

#### C. PU AVS and PU OIT

1. Review all submittals and provide comments in a timely manner.

## II. Preconstruction Phase (All tasks to be completed at least one month before installation is scheduled to begin).

### A. AV Vendor/Integrator

1. Engineer the system and confirm all the above calculations are correct.
  - a) If there are any discrepancies, submit an RFI or Change Order to the Project Manager.
2. Specify the appropriate Aruba switches and send the make, model, and qty of Aruba switches and SFPs for PU for ordering.
3. Confirm the device counts on each subnet and send to PU OIT for appropriate subnet sizing.
4. Submit a list of all devices that need to be registered on the PU network with the following information at least a week before installation is scheduled to start.
  - a) Building
  - b) Room Number
  - c) Hostname following PU Guidelines
  - d) MAC Address
  - e) Make



- f) Model
  - g) Subnet to be registered on.
  - 5. Submit a list of wall box ports and what subnet they need to be activated on.
  - 6. Submit a list of commissioning engineer laptops or dongle MAC addresses to connect to the network.
  - 7. Submit a list of all OFE devices that PU is to provide.
  - 8. After submitting the device list, the AV vendor will receive the registered equipment list with DHCP reservations.
- B. AV Designer/Consultant**
- 1. Respond to all RFI's in a timely manner.
- C. PU OCP PM and GC**
- 1. Communicate with all parties to make sure they provide the required information in a timely manner.
  - 2. Provide a list of which departments will be assigned to the spaces to AVS.
  - 3. Arrange any meetings as needed.
  - 4. Ensure any changes to the design or project are captured in timely change order requests.
- D. PU OIT**
- 1. Prepare the subnets and activate the networks based on the provided information.
  - 2. Inform the PU OCP PM if OIT cannot meet any deadlines of AV
- E. PU AVS**
- 1. Register devices for AV Vendor and ensure hostname standards are followed.
  - 2. Advise on AV on the PU campus, flag potential issues, and offer suggestions for solutions to be approved by the AV Designer/Consultant and/or AV Vendor.
- III. Construction Phase**
- A. Any delays in information requested by PU in the earlier phases will result in delays during the construction phase.**
- B. AV Vendor/Integrator**
- 1. Configure the switches and coordinate with PU OIT for fiber uplinks and connections.
    - a) Reach out to PU AVS and OIT for generic templates.
  - 2. Coordinate with PU OIT to ensure all the wall box ports are activated.



3. Set devices to DHCP, connect devices to the network, and report back to PU if any device does not give the proper address based on its DHCP reservation.
4. Configure NAV endpoints per PU Guidelines using assigned ranges and information.
5. Configure devices and program and commission the system.
6. If a device needs special configuration, the AV Vendor will ask PU AVS for a guide on the proper settings.

**C. AV Designer/Consultant**

1. Respond to all RFI's in a timely manner.

**D. PU OIT**

1. Provide a contact to the AV Vendor and coordinate required network activations and connections.
2. Provide support for issues that may arise during installation.

**E. PU AVS**

1. Provide initial support for device registration troubleshooting.
2. Coordinate NAV endpoints across campus.
3. Provide configuration guides for devices such as cameras, NDI encoders and decoders, and Extron SMP recorders.
4. QA the system once commissioning is completed.

**F. PU OCP PM and GC**

1. Communicate with all parties to make sure they provide the required information in a timely manner.
2. Arrange any meetings as needed.
3. Ensure any changes to the design or project are captured in timely change order requests.
4. Keep everyone informed of changes in the project schedule.
5. Coordinate various trades and vendors.