**Turner Construction Company**
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**1. Requirement** - Wireless Infrastructure design shall be kept separate from the rest of the network infrastructure.

**Question** – Our assumption is this is in reference to physical infrastructure only, where we will have dedicated switch and uplink for wireless. Wireless segregation based on vlans or layer 3 is not in this scope? Confirmed. Separation of wireless infrastructure is limited to physical infrastructure only including dedicated patch panels, switches, etc. Any configuration of switches beyond "rack and stack" will be by owner.

**2. Requirement** - Wireless access points are to be mounted on ceiling grid at the center of the room or otherwise noted.

**Comment** – If APs are placed in the center in each room, then between each floor we will end up stacking APs, which is not a good design. Location of APs should be based on the survey, not necessarily in the center of the room. Wireless access points are to be provided based on wireless site survey at the time of installation for 100% building coverage. In addition, a dedicated wireless point is to be provided within each learning space as shown on the bid documents regardless of site survey.

**3. Requirement** - Wireless system shall be completely operational, all wireless access points are to be connected to assigned wireless access point switch located in the TR/TER rooms.

**Comment** - Our assumption of scope is that we will be performing surveys, based on survey install access point and ensure AP gets the correct POE. Please confirm if this is the correct understanding of the scope. Confirmed.

**4. Requirement** - Network, Wireless and IP Equipment has been provided, installed and tested for functionality.

**Comment** – Define scope of testing? for e.g. for wireless, if above assumptions are correct, what we can test is that AP is not physically damaged, does not have a factory defect, gets right POE and powers up as expected. Testing includes power up, connection and "ping" as defined in Part 3 of Specification 27 20 01 of the bid documents. In addition, contractor shall provide verification of signal strength as called out in section 3.1-A-6

**5.** How many Cisco 7841 Phones needed and locations? Technology scope notes on drawing TSD-001 of bid documents calls for 84 Classroom VoIP handsets. Owner will provide locations.

**6.** How many Cisco 7861 Phones needed and locations? Technology scope notes on drawing TSD-001 of bid documents calls for 15 Admin VoIP handsets.

**7.** Can you please provide the number of switches and models required for each closet? Switch counts per closet are already shown in the rack elevations and notes section of each Telecom Room as shown on drawings TSD-500 and TSD-501 of bid documents. Switch model numbers are provided in Specification 27 20 01 of bid documents.

**8.** Regarding 1.3C, can you please provide the total number of network outlets or the port types and counts required for each closet. Network drop counts per closet have already been listed in the notes section of each Telecom Room as shown on drawings TSD-500 and TSD-501 of bid documents.

**9.** Regarding 1.6B.1, does it mean to show uplink connection from Access Switches to 4500x or you require the drawings to include connections form access switches to end devices as well? Detailed connections between network equipment is to be shown in line drawings.

Generic connections out to end devices should include quantities as opposed to detailed single lines to each device.

10. Regarding 1.6C, can you clarify the specific data/report to be included in the quality control documents? Contractor to submit test data and reports to include cable test results for installed cable plant with exact labels used on cables, patch panels, and faceplates.
11. On 2.2, 4.C, it wasn't clear on the number of SFP modules and types for all the connections. Please provide the number and types of SFP modules required. Section 2.2-A-2. list quantity and model of SFP modules to be provided per switch
12. On 3.2, 4.A, it's mentioned to maximize the fiber strands available to the Core switch. Do you require to connect every single access switch interpedently to the core? Doing so will result in consuming more SFPs, Fiber patch cords, and eating up the fiber link to Core (limiting future expansion/use) and at the same time managing every single switch can be more cumbersome. We recommend to use stacks for access switches and rather utilize ether channel for redundancy and high availability. Please clarify if stacking is allowed, and if yes, up to what number of switches. Edge switch stacking is acceptable for up to 3 switches as shown on data connection diagram and Telecom Rack notes of drawing TSD-500 of the bid documents.
13. Regarding 3.4, we have a standard switch testing sheet and can utilize the commands to show the functionality. Please specify if you require any specific test methods/results. As called out in section 3.5-A-2. Switching equipment is required to allow a "ping" from any point on the LAN to equipment outside of LAN.
14. We didn't find specific information regarding the configuration of switches, will it be done in collaboration with the school's IT team or are there specific requirements mentioned? Configuration of switches is to be done by the owner.
15. **Requirement** – Please clarify any Bond requirements. To be answered by MSA.
16. Wireless outlets shown on the plans may or may not provide complete coverage. This will not be known until a Wireless Survey can be completed which would be after bid award. Can a quantity of AP's be provided for bidding purposes? The minimum quantity is shown on the bid documents.
17. Can you provide the number of Vizio 42" Displays required and locations? The quantity and locations are shown on the floor plan drawings. Takeoffs should be used to verify the quantity.
18. Can you provide the number of the SMART Board Interactive Panels required and locations? The quantity and locations are shown on the floor plan drawings. Takeoffs should be used to verify the quantity.
19. Will the (2) 4" Conduits for the DAS System be installed by others? Conduits for low voltage systems are included in the Package 1 documents.
20. For bidding purposes, can you provide the quantity of 4" sleeves needed between floors and locations? Will the floors need to be X-rayed. Pathways for low voltage systems are part of Package 1 documents.
21. The A/V system requested will require a Page Override Function. Since the Intercom System and A/V System are to be installed and commissioned by (2) separate companies who shall have the responsibility of making the final connection into the Intercom System? Our understanding is that the intercom contractor shall provide the page feed wiring from the

public address system to the classroom AV equipment for this contractor to install, terminate and test.

**22.** As discussed in the meeting, much of the Technology Package is Back end loaded. With such a tight timeline can you please explain what is required from the Technology Contractor to be substantially complete in Mid-October? To be answered by MSA.

**23.** Will a second shift be an option? To be answered by MSA.

**24.** Should we change the specified cable to 6e and have an add alternate to "upgrade" to 6a? No.