

April 10, 2017 Network Infrastructure Upgrade Q&A

1. When is the RFP due by and to whom may we deliver it to?

The original due date for submissions was April 20, 2017. This date has been extended to April 25, 2017. The completed RFP should be delivered to:

Attention: Sharon Palmer
Proviso Township High Schools District 209
8601 W. Roosevelt Road
Forest Park, IL 60130

2. Please clarify the schematic diagram?

The diagram provided has the access point locations highlighted in different colors. The colors do not have any significance. They only highlight the locations of the existing Cisco 2702 access points. There are 103 access points installed.

3. What type of controls is the district looking to purchase?

Assuming this question is referring to network controls such as firewalls or antivirus software, no additional purchases are needed at this time.

4. Are you looking to keep the current access points or purchase all new?

There is a belief that the current access points will be incorporated into this project as they are less than 3 years old. Recommendations that will improve capacity and performance of the wireless network are encouraged.

5. Are there higher density areas of the building that will need additional access points?

Yes. Those areas are the band rooms (lower level), student cafeteria, teacher lounge, and auditorium (1st floor), multipurpose room (2nd floor), Learning Resource Center (3rd floor), and the common areas located in front of the elevators (2nd, 3rd, 4th, and 5th floors).

6. Will the building summer school assignment be permanent?

For the 2017 school year, summer school will be held at PMSA. Future plans cannot be determine at this time.

7. What is the expected capacity for the building?

For network capacity purposes only, PMSA has a capacity of 1100 people.

8. Do students currently bring and use their own devices and connect to the network with their devices?

BYOD is not supported at this time.

9. How do students connect to the network currently?

Each student has an active directory account that allows "student" level access.

10. After summer school is completed, will the students return to their home school?

Yes.

11. Do you want us to break out costs for summer school?

You are welcome to do so.

12. What is the average class size for this building?

Each classroom should be networked to accommodate, on average, a group of 40 people.

13. Does the district currently have one-to-one learning?

No, not at this time.

14. What is the target date to complete the student one-to-one?

The district's plan is to provide equitable access to technology to students by the 2020 school year.

15. What type of learning will summer school utilize, classroom or on-line?

Summer school will primarily occur online.

16. What is the total number of students expected for summer school?

An exact number is unknown at this time. Based on 2016 enrollment, there were approximately 650 students in attendance.

17. Where do I direct any additional questions after the walkthrough has completed?

To provide consistency, all questions should be directed to Sharon Palmer at spalmer@pths209.org.

18. Will we be able to see each closet with its existing setup?

Yes. These closets were reviewed during the walkthrough.

19. Will we be required to build a quote based on the maximum capacity?

There is an expectation that what is proposed will provide the district with coverage to support current and future capacities.

20. How will this infrastructure relate to the current learning in the classrooms?

Without a consistent and reliable network infrastructure, teachers and students are unable to take advantage of the of the opportunities that connects them to content, data, expertise, people, and resources, that can empower and inspire them to provide more effective teaching and support.

21. Please clarify the network closets current set up in the basement? Does each closet hold the exact same number of switches?

There is only one closet in the lower level of PMSA. It contains two switches.

The number of switches contained in each closet varies depending on the number of Ethernet connections and access points required in each section of the building.

22. Will the fiber be upgraded as well?

The fiber network was installed in 2005. There may be upgrades needed to accommodate the 10 Gbps uplink speeds that are desired.

23. What is the capacity of the student cafeteria?

The student cafeteria has a capacity of 350 students.

24. Are the security camera's IP based?

No. The system is analog.

25. Please clarify the color mapping on the schematic?

The diagram provided has the access point locations highlighted in different colors. The colors do not have any significance. They only highlight the locations of the existing Cisco 2702 access points. There are 103 access points installed.

26. What year did the district acquire the building and what networking infrastructure construction took place at that time?

The core infrastructure was originally installed in 2005. Upgrades to the firewall, web filter, wireless controller, access points, and internet switches were made during the 2016 school year.

27. How many access points are currently installed in the building?

103 access points are currently installed.

28. Are there currently latency issues with testing?

Yes, throughput is reduced by network constraints because the connection between the core and the access switches have a maximum capacity of 1 Gbps while the connection between the access switches and devices connecting to the network have a maximum capacity of 100 Mbps. There

are also issues with wireless due to the limitation of some devices only accessing the 2.4 GHz spectrum.

29. Please clarify the schematic? Closet C is labeled 3 on the diagram?

There was an error on the PMSA map that was distributed during the walkthrough. The closets should be labeled by floor and quadrants. For example, "Level 3 Closet C" refers to the third floor in the C quadrant.

30. How many switches are located in each closet? Please clarify

The count of Cisco 3750 switches are as follows:

Level 5 Closets	A = 1, B= 2, C= 2, D= 2
Level 4 Closets	A = 2, B= 3, C= 2, D= 4
Level 3 Closets	A = 2, B= 2, C= 2, D= 2
Level 2 Closets	A = 1, B= 2, C= 3, D= 1
Level 1 Closets	A = 3
Level LL Closets	A = 2

31. Are you currently using single or multi-mode fiber?

Multi-mode fiber is being used internal to building.

32. Can we get some additional information on the current fiber cabling?

Multi-mode fiber that has a maximum speed of 1 Gbps is currently being utilized within the building and single-mode fiber is used for the WAN. Each fiber cable is run from the MDF to the IDF closets on each floor. There may be upgrades needed to our existing configuration to accommodate the 10 Gbps uplink speeds that are desired.

33. Which floors will house summer school?

With the exception of the first floor, all floors will have students participating in summer school.

34. What types of switches are located on the 3rd floor?

All the access switches are Cisco 3750 - 48 port POE

35. Is there redundancy in the switches between the access and the core switches?

Not at this time. This is a desired feature of the new design.

36. What is the current configuration of the 3rd Floor Learning Resource Center?

The Learning Resource Center (LRC) is a multi-purpose room that consists of a lab area of 30 hard wired computers. Two access points support the wireless devices in the open area adjacent to the lab.

37. What type of networking fiber cable is currently being utilized?

Multi-mode fiber that has a maximum speed of 1 Gbps is currently being utilized within the building and single-mode fiber is used for the WAN. Each fiber cable is run from the MDF to the IDF closets on each floor. There may be upgrades needed to our existing configuration to accommodate the 10 Gbps uplink speeds that are desired.

38. Should the bid include POE or POE+ switches?

Recommendations should include considerations for future proofing the network. Both will be considered.

39. Should we include a universal power supply for each closet as part of the proposal?

Yes, universal power supplies (UPS) are required and should be sized for the number of switches in the closet.

40. What would the expected runtime of the UPS need to be for the proposal?

30 minutes.

41. Is the expected access point installation number to be one for each common area?

Recommendations should include considerations of accommodating, on average, 40 people in a common area.

42. What type of construction material is between the walls?

The walls at PMSA primarily consist of aluminum studs and drywall. Areas of concrete are possible. Additional evaluations in collaboration with the building manger will be needed.

43. What type of switch is located in room 513?

This is the MDF and it contains the core switches that were installed in 2005. There are two Cisco 4510s installed.

44. What is the type of network that the district utilizes?

AT&T provides switched Ethernet (ASE) with 1 Gbps WAN connections between each school and 1 Gbps ISP connections from each campus to the internet.

45. What is the current network fiber construction?

Multi-mode fiber that has a maximum speed of 1 Gbps is currently being utilized within the building and single-mode fiber is used for the WAN. Each fiber cable is run from the MDF to the IDF closets on each floor. There may be upgrades needed to our existing configuration to accommodate the 10 Gbps uplink speeds that are desired.

46. How old is the current system?

The core infrastructure was installed in 2005. Upgrades to the firewall, web filter, wireless controller, access points, and internet switches were made during the 2016 school year.

47. What is the total number of switches you are looking to replace?

Proposals should include recommendations that will improve capacity and performance of the overall network. The number of replacement switches would be based on the recommended network design. There are currently 38 Cisco switches installed.

48. How does each school currently connect and who is the service provider?

AT&T provides switched Ethernet (ASE) with 1 Gbps WAN connections between each school and 1 Gbps ISP connections from each campus to the internet.

49. Will there be demolition of the existing cabling?

There is not a need to remove the existing fiber network.

50. What are the expected working hours for construction and installation?

A student's education is important and is protected by the District. There should be a minimal amount of disruption to the students during the day. If there are activities that would violate this rule, an alternate schedule that includes evenings and weekends will need to be considered. Costs associated with these times should be included in the proposal.

51. What are the exact measurements of the closets?

The exact measurements were not available for each network closet at the time this document was written. The closets vary in size from approximately 24 square feet to 120 square feet.