

**PPS Wireless Networking Standards
Classroom and High-Density Common Areas
June 2018 Revision Summary**

Wireless network use is rising in school common areas such as libraries/media centers, cafeterias, gymnasiums, auditoriums/theaters, and outdoor areas. The commoditization of mobile technology, along with the proliferation of consumer devices, has required the PPS IT Department to prioritize the performance and scalability of the wireless network to support organizational goals and objectives while anticipating technology changes over the next three to five years.

The goal to provide a high-performance wireless network for both classroom-oriented and extracurricular activities is evident. To facilitate this goal, the PPS IT Department is designing standards for high-density wireless in school common areas. Rather than focusing on total device count or comparable classroom sizing, this document focuses on high-density using a ratio of area participants to available square footage.

Baseline:

- 30' x 30' Classroom (900 square feet).
- 5' x 5' (25 square feet) per participant.
- 36 total participants.
- Ceiling-mounted in center of classroom unless ceiling heights exceeds 16 feet. In spaces with ceiling height being greater than 16 feet, WAPS will be wall-mounted with horizontal mounting bracket.

Conference Rooms:

- 3' x 3' (9 square feet) per participant.
- Ceiling-mounted in center of room unless ceiling heights exceeds 16 feet. In spaces with ceiling height being greater than 16 feet, WAPS will be wall-mounted with horizontal mounting bracket.

Cafeteria:

- 5' x 5' (25 square feet) per participant.
- Ceiling-mounted grid of access points unless ceiling height exceeds 16 feet. In spaces with ceiling height being greater than 16 feet, WAPS will be wall-mounted with horizontal mounting bracket.

Library/Media Center:

- 3' x 3' (9 square feet) per participant.

- Ceiling-mounted grid of access points unless ceiling height exceeds 16 feet. In spaces with ceiling height being greater than 16 feet, WAPS will be wall-mounted with horizontal mounting bracket.

Gymnasium:

- 2' x 2' (4 square feet) per participant.
- Wall-mounted AP's with directional antennae rather than ceiling-mounted with omni-directional antenna. Easier to access and repair, especially with high ceilings.
- Provide protective enclosure Oberon Model 1026-16148 - no substitutions allowed.

Auditorium/Theater:

- 2' x 2' (4 square feet) per participant.
- Wall-mounted AP's with directional antennae rather than ceiling-mounted with omni-directional antenna. Easier to access and repair, especially with high ceilings.

Outdoor Areas:

- 5' x 5' (25 square feet) per participant.
- Placed strategically for outdoor seating and where students and staff will congregate for educational purposes
- Provide protective enclosure Oberon Model 1026-16148 - no substitutions allowed.
- If mounting to pole, use Oberon 35-POLE-MOUNT-BRACKET.

Notes:

- Architect to collaborate with IT department on wireless floor plan design including all access point locations. Offices and hallways are intended to receive coverage from nearby classrooms or common areas unless in isolated areas.
- Final AP locations and device selections must be verified by IT after architect review.
- All wireless network equipment and mounting hardware to be specified by owner, and typically will be owner-furnished contractor-installed.

