

Legacy Meetinghouse AP Placement Report_cw9162 Version 3



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Project Description

The AP placement and signal strength predictions are based on assumptions made for signal propagation through interior wall materials.

Based on those assumptions there will be a greater margin of error between the prediction and what may be experienced.

The AP placement was made based on optimizing for 5 GHz signals for both primary and secondary signal strength.

The APs will be assigned a channel for both 2.4 GHz and 5 GHz based on what is detected and reported to the controller. The controller manages channel adjustments as information is reported by each AP.

The Cisco Meraki Catalyst CW9162 access points are represented in this prediction.

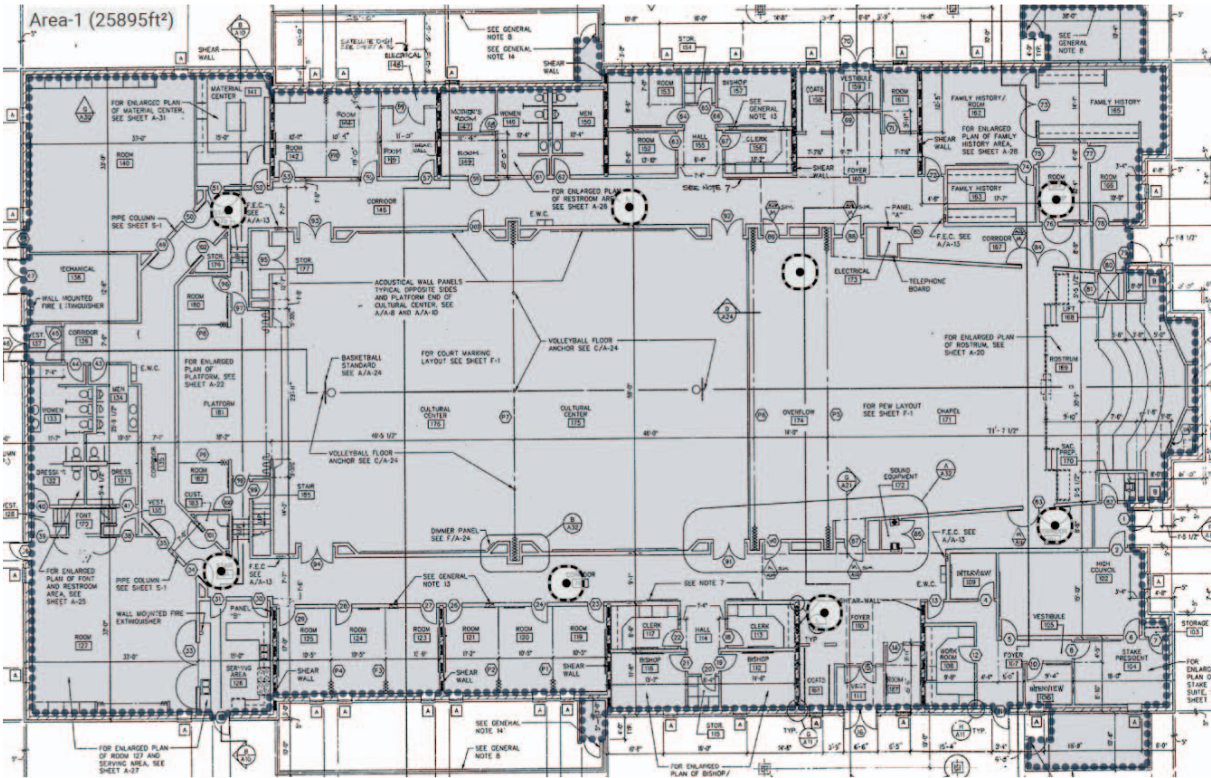
Without measured attenuation and AP signal deviation measurements, the actual signal propagation will vary.

Version 2: Removed 3 (From 18 to 15 APs) APs and shifted several others to provide complete coverage while reducing the total number of APs.

Version 3: Changed the coverage rating requirements from -65Db to -75Db and thus reduced the need for 7 additional APs (From 15 to 8 APs). APs were renamed to still be in numerical order.

Main Floor

Survey routes and Access Points for Main Floor



View as / Project Offset:	Measured
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Area-1 (25,895 ft²)

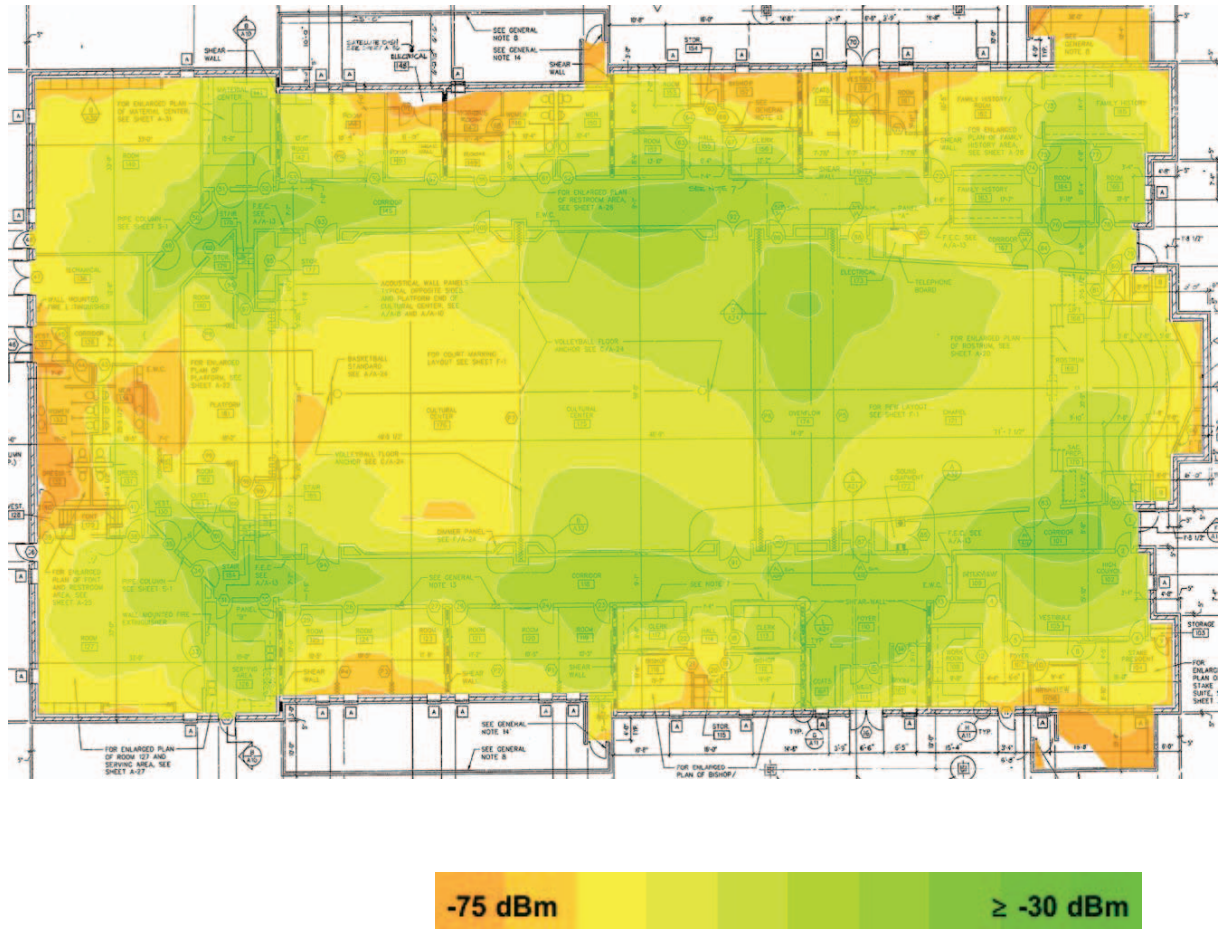
Coverage Requirement: LDS		
2.4 GHz	Signal Strength Min	-75.0 dBm
	Secondary Signal Strength Min	-70.0 dBm
	Signal-to-Noise Ratio Min	20.0 dB
	Data Rate Min	24 Mbps
	Channel Interference Max	2 at min. -85.0 dBm
	Round Trip Time (RTT) Max	200 ms
	Packet Loss Max	0.0 %
5 GHz	Signal Strength Min	-75.0 dBm
	Secondary Signal Strength Min	-70.0 dBm

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	Signal-to-Noise Ratio Min	25.0 dB
	Data Rate Min	24 Mbps
	Channel Interference Max	1 at min. -85.0 dBm
	Round Trip Time (RTT) Max	200 ms
	Packet Loss Max	0.0 %
6 GHz	Signal-to-Noise Ratio Min	25.0 dB
	Data Rate Min	24 Mbps
	Channel Interference Max	1 at min. -85.0 dBm
	Round Trip Time (RTT) Max	200 ms
	Packet Loss Max	0.0 %
Capacity Requirement	No capacity devices for this area	
Notes		

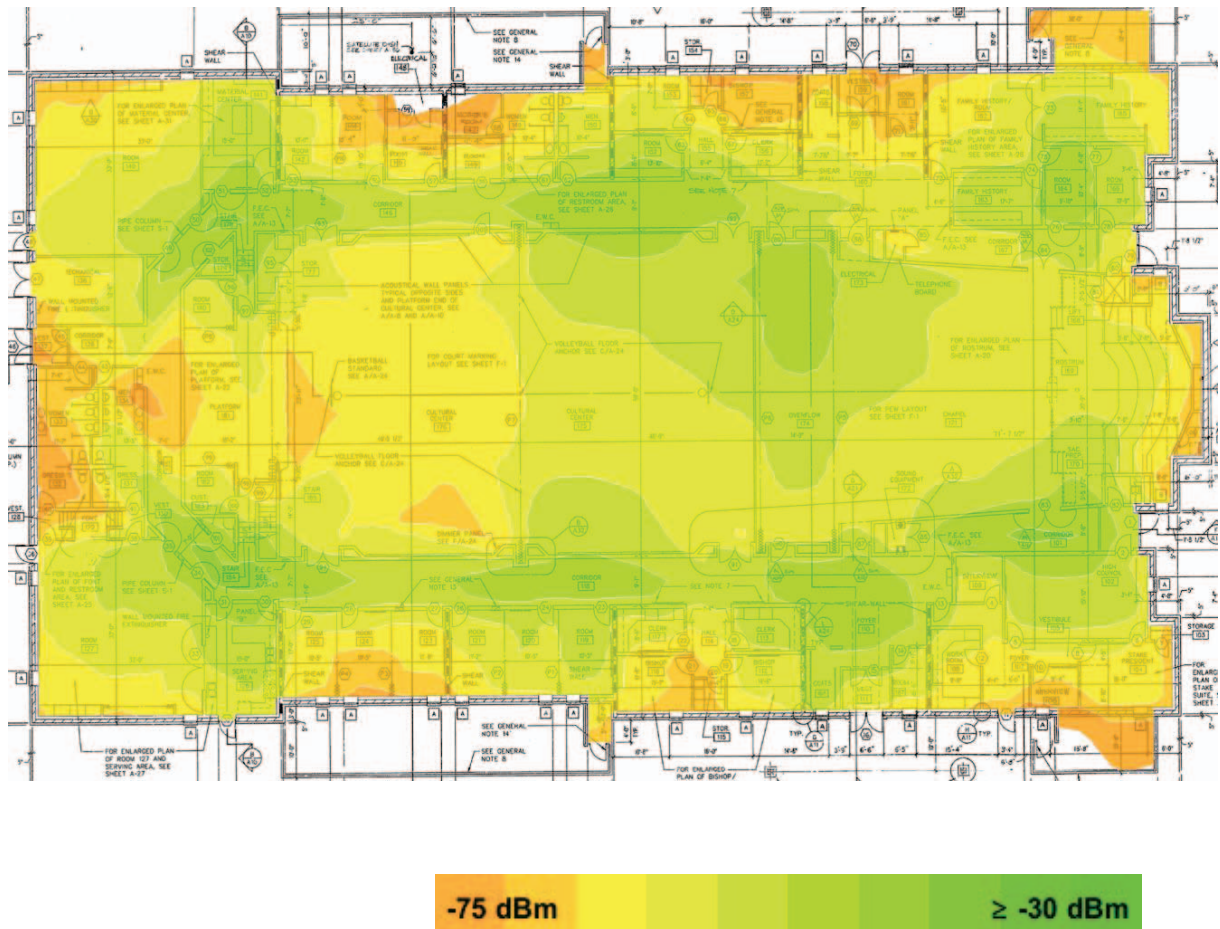
Signal Strength for Main Floor on 2.4 GHz band

Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.



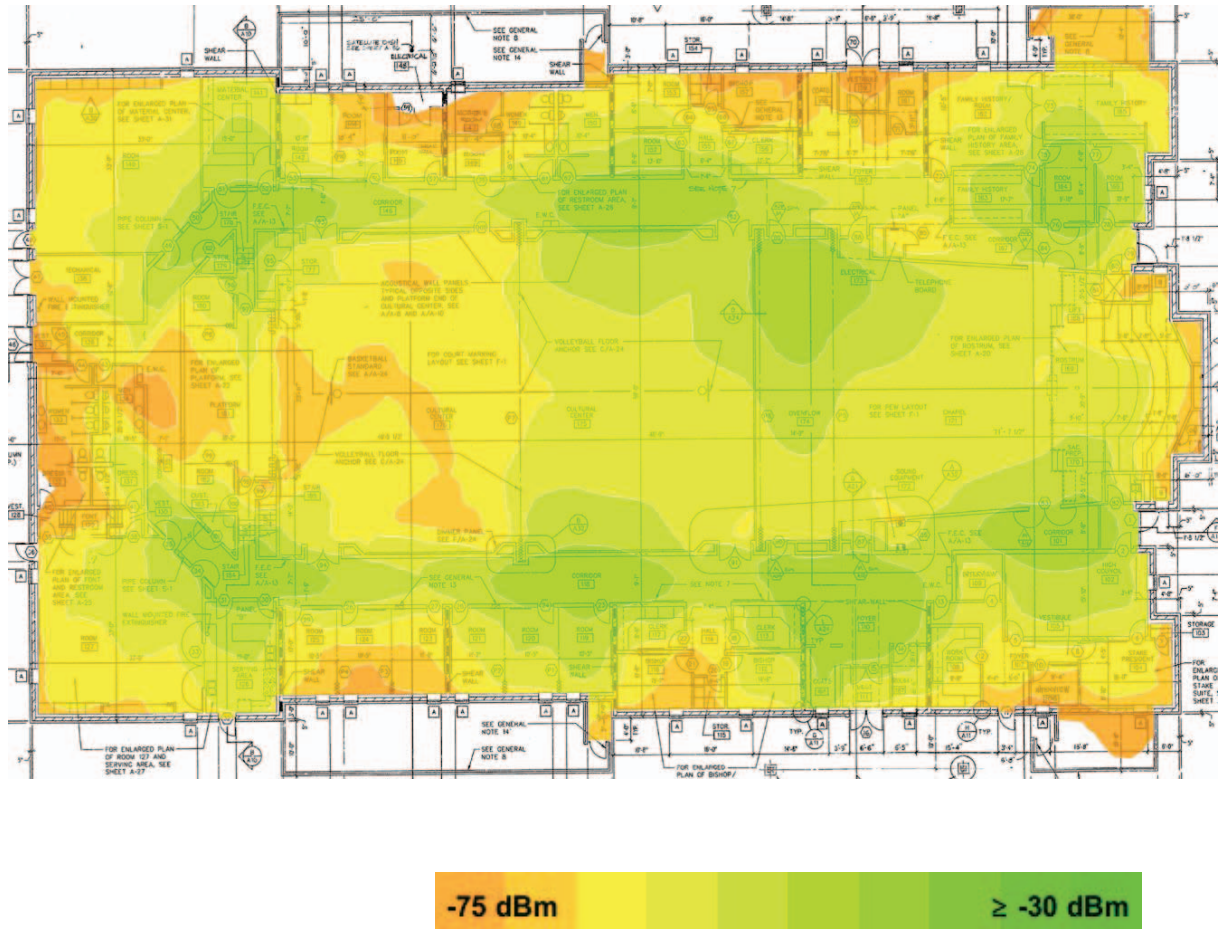
Signal Strength for Main Floor on 5 GHz band

Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.

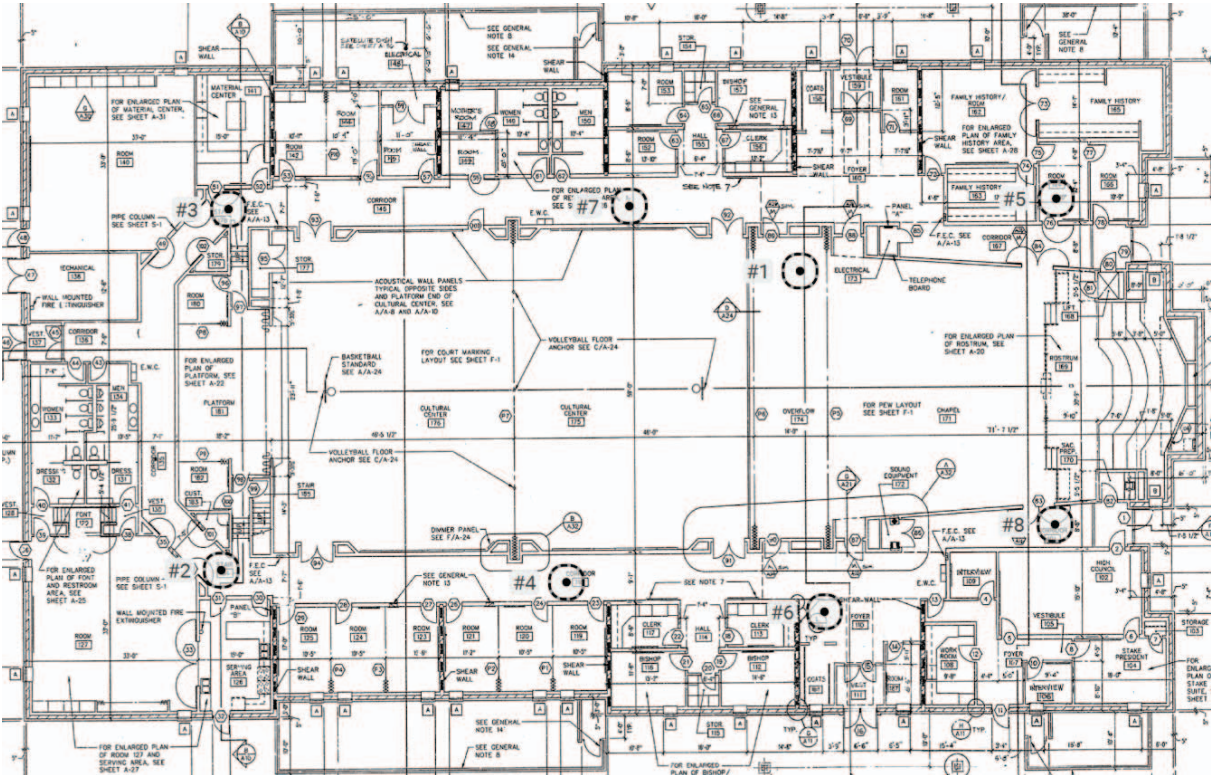


Signal Strength for Main Floor on 6 GHz band

Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.



Access Points on Main Floor



Access Points on Main Floor

Simulated Access Points on Main Floor

AP #	Access Point			
1	Simulated AP-001		Cisco Meraki Catalyst 9162	
	Wi-Fi 6	1	6 mW	Cisco Meraki Catalyst 9162 2.4GHz
	Wi-Fi 6	36	25 mW	Cisco Meraki Catalyst 9162 5GHz
	Wi-Fi 6E	1@40 (6 GHz)	25 mW	Cisco Meraki Catalyst 9162 6GHz
	Bluetooth	-	1 mW	Cisco Meraki Catalyst 9162 BLE
2	Simulated AP-002		Cisco Meraki Catalyst 9162	
	Wi-Fi 6	11	6 mW	Cisco Meraki Catalyst 9162 2.4GHz
	Wi-Fi 6	64	25 mW	Cisco Meraki Catalyst 9162 5GHz
	Wi-Fi 6E	1@40 (6 GHz)	25 mW	Cisco Meraki Catalyst 9162 6GHz
	Bluetooth	-	1 mW	Cisco Meraki Catalyst 9162 BLE
3	Simulated AP-003		Cisco Meraki Catalyst 9162	
	Wi-Fi 6	1	6 mW	Cisco Meraki Catalyst 9162 2.4GHz
	Wi-Fi 6	136	25 mW	Cisco Meraki Catalyst 9162 5GHz
	Wi-Fi 6E	1@40 (6 GHz)	25 mW	Cisco Meraki Catalyst 9162 6GHz
	Bluetooth	-	1 mW	Cisco Meraki Catalyst 9162 BLE
4	Simulated AP-004		Cisco Meraki Catalyst 9162	
	Wi-Fi 6	6	6 mW	Cisco Meraki Catalyst 9162 2.4GHz
	Wi-Fi 6	132	25 mW	Cisco Meraki Catalyst 9162 5GHz
	Wi-Fi 6E	1@40 (6 GHz)	25 mW	Cisco Meraki Catalyst 9162 6GHz
	Bluetooth	-	1 mW	Cisco Meraki Catalyst 9162 BLE
5	Simulated AP-005		Cisco Meraki Catalyst 9162	
	Wi-Fi 6	6	6 mW	Cisco Meraki Catalyst 9162 2.4GHz
	Wi-Fi 6	100	25 mW	Cisco Meraki Catalyst 9162 5GHz
	Wi-Fi 6E	1@40 (6 GHz)	25 mW	Cisco Meraki Catalyst 9162 6GHz

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	Bluetooth	-	1 mW	Cisco Meraki Catalyst 9162 BLE
6	Simulated AP-006		Cisco Meraki Catalyst 9162	
	Wi-Fi 6	11	6 mW	Cisco Meraki Catalyst 9162 2.4GHz
	Wi-Fi 6	165	25 mW	Cisco Meraki Catalyst 9162 5GHz
	Wi-Fi 6E	1@40 (6 GHz)	25 mW	Cisco Meraki Catalyst 9162 6GHz
	Bluetooth	-	1 mW	Cisco Meraki Catalyst 9162 BLE
7	Simulated AP-007		Cisco Meraki Catalyst 9162	
	Wi-Fi 6	6	6 mW	Cisco Meraki Catalyst 9162 2.4GHz
	Wi-Fi 6	149	25 mW	Cisco Meraki Catalyst 9162 5GHz
	Wi-Fi 6E	1@40 (6 GHz)	25 mW	Cisco Meraki Catalyst 9162 6GHz
	Bluetooth	-	1 mW	Cisco Meraki Catalyst 9162 BLE
8	Simulated AP-008		Cisco Meraki Catalyst 9162	
	Wi-Fi 6	1	6 mW	Cisco Meraki Catalyst 9162 2.4GHz
	Wi-Fi 6	157	25 mW	Cisco Meraki Catalyst 9162 5GHz
	Wi-Fi 6E	1@40 (6 GHz)	25 mW	Cisco Meraki Catalyst 9162 6GHz
	Bluetooth	-	1 mW	Cisco Meraki Catalyst 9162 BLE

Measured Access Points on Main Floor

None.