

Completed by: **Jon Loutensock**Completion Date: 09/02/2025

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.

Interior wall material was set as hollow block (cinderblock). The only plans available to show complete floor plans and details were from 1924.

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

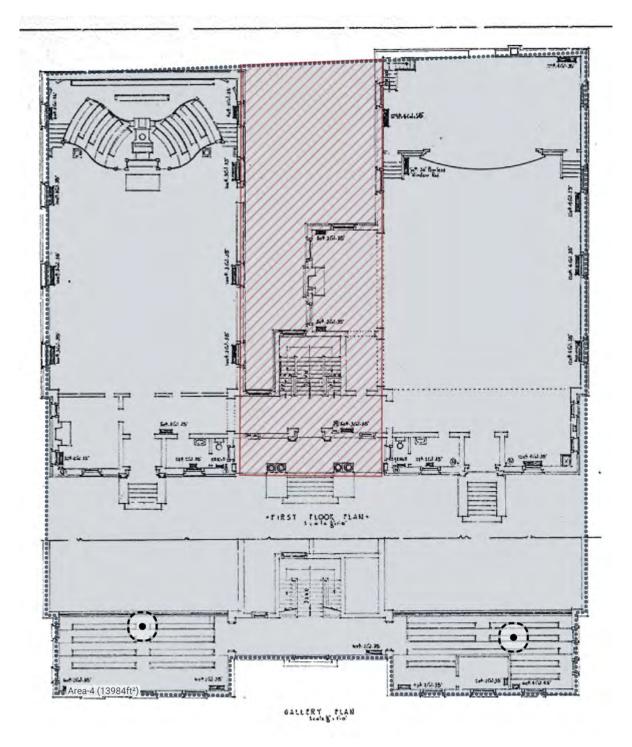
The AP placement was made based on optimizing 5 GHz signals for primary signal strength. Secondary coverage was not a requirement.

The C9172I access point is represented in this prediction.

NOTE: The Gallery Level has an open view of both the Chapel and Cultural Hall areas. Some of the coverage for the Chapel and the Cultural Hall is leveraging the signal bleeding through from access points on the Lower Level and from the Gallery areas.

Westminster - Gallery Plan (overlooks the Chapel and Cultural Hall areas)

Survey routes and Access Points for Westminster - Gallery Plan



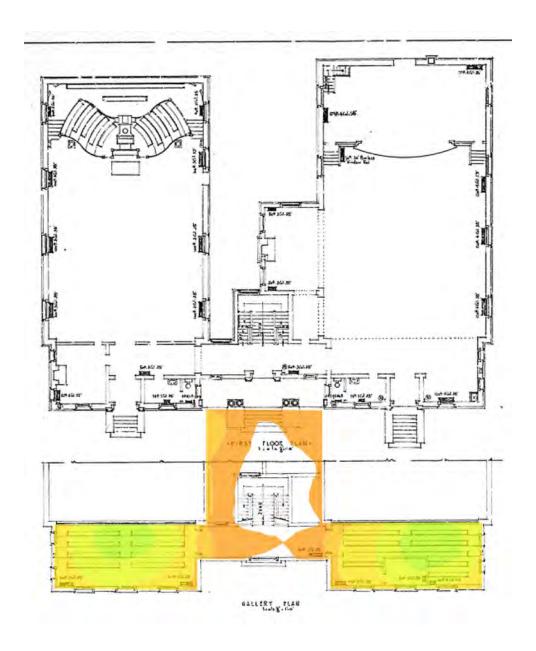
View as / Project Offset:	Mobile Device

Area-4 (2,834 ft²)

2.4 GHz Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max O.0 % 5 GHz Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Data Rate Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max O.0 % 6 GHz Signal Strength Min Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Data Rate Min Data Rate Min Channel Interference Max 1 at min85.0 dBm Round Trip Time (RTT) Max 200 ms Packet Loss Max O.0 % Capacity Requirement	Coverage Requirement: Ekahau Best Practices			
Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max O.0 % 5 GHz Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Channel Interference Max Packet Loss Max O.0 % 6 GHz Signal Strength Min Secondary Signal Strength Min Channel Interference Max Packet Loss Max O.0 % 6 GHz Signal-to-Noise Ratio Min Secondary Signal Strength Min Secondary Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Signal-to-No	2.4 GHz	Signal Strength Min	-75.0 dBm	
Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max 0.0 % Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Round Trip Time (RTT) Max Packet Loss Max 1 at min85.0 dBm Round Trip Time (RTT) Max Packet Loss Max 0.0 % GHz Signal Strength Min For.0 dBm Signal-to-Noise Ratio Min Packet Loss Max 1 at min85.0 dBm Secondary Signal Strength Min For.0 dBm Secondary Signal Strength Min Signal-to-Noise Ratio Min Packet Loss Max 1 at min85.0 dBm Round Trip Time (RTT) Max Packet Loss Max 0.0 %		Signal-to-Noise Ratio Min	20.0 dB	
Round Trip Time (RTT) Max Packet Loss Max 0.0 % 5 GHz Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max 0.0 % 6 GHz Signal-to-Noise Ratio Min Secondary Signal Strength Min Secondary Signal Strength Min Secondary Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max 1 at min85.0 dBm Round Trip Time (RTT) Max 24 Mbps Channel Interference Max 1 at min85.0 dBm Round Trip Time (RTT) Max 200 ms Packet Loss Max 0.0 %		Data Rate Min	24 Mbps	
Packet Loss Max Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Packet Loss Max Signal Strength Min Packet Loss Max O.0 % GHz Signal Strength Min Secondary Signal Strength Min Secondary Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max 1 at min85.0 dBm		Channel Interference Max	2 at min85.0 dBm	
Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Packet Loss Max O.0 % GHz Signal Strength Min Secondary Signal Strength Min Secondary Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max 1 at min85.0 dBm Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max 1 at min85.0 dBm Round Trip Time (RTT) Max Data Rate Min Round Trip Time (RTT) Max Data Rate Min Round Trip Time (RTT) Max Data Rate Loss Max O.0 %		Round Trip Time (RTT) Max	200 ms	
Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max O.0 % 6 GHz Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max 1 at min85.0 dBm -75.0 dBm Secondary Signal Strength Min -67.0 dBm Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max 1 at min85.0 dBm Round Trip Time (RTT) Max 200 ms Packet Loss Max 0.0 %		Packet Loss Max	0.0 %	
Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max O.0 % GHZ Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Signal-to-Noise Ratio Min Channel Interference Max Round Trip Time (RTT) Max 25.0 dB Data Rate Min Channel Interference Max 1 at min85.0 dBm Round Trip Time (RTT) Max 200 ms Packet Loss Max 0.0 %	5 GHz	Signal Strength Min	-75.0 dBm	
Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max 0.0 % 6 GHz Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max 0.0 %		Secondary Signal Strength Min	-67.0 dBm	
Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max 0.0 % 6 GHz Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max 0.0 %		Signal-to-Noise Ratio Min	25.0 dB	
Round Trip Time (RTT) Max Packet Loss Max 0.0 % 6 GHz Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max 0.0 %		Data Rate Min	24 Mbps	
Packet Loss Max 0.0 % 6 GHz Signal Strength Min Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max 0.0 %		Channel Interference Max	1 at min85.0 dBm	
Signal Strength Min -75.0 dBm Secondary Signal Strength Min -67.0 dBm Signal-to-Noise Ratio Min 25.0 dB Data Rate Min 24 Mbps Channel Interference Max 1 at min85.0 dBm Round Trip Time (RTT) Max 200 ms Packet Loss Max 0.0 %		Round Trip Time (RTT) Max	200 ms	
Secondary Signal Strength Min Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max -67.0 dBm 25.0 dB 1 at min85.0 dBm 200 ms		Packet Loss Max	0.0 %	
Signal-to-Noise Ratio Min Data Rate Min Channel Interference Max Round Trip Time (RTT) Max Packet Loss Max 25.0 dB 1 at min85.0 dBm 200 ms	6 GHz	Signal Strength Min	-75.0 dBm	
Data Rate Min Channel Interference Max 1 at min85.0 dBm Round Trip Time (RTT) Max Packet Loss Max 0.0 %		Secondary Signal Strength Min	-67.0 dBm	
Channel Interference Max 1 at min85.0 dBm Round Trip Time (RTT) Max 200 ms Packet Loss Max 0.0 %		Signal-to-Noise Ratio Min	25.0 dB	
Round Trip Time (RTT) Max 200 ms Packet Loss Max 0.0 %		Data Rate Min	24 Mbps	
Packet Loss Max 0.0 %		Channel Interference Max	1 at min85.0 dBm	
		Round Trip Time (RTT) Max	200 ms	
Capacity Requirement		Packet Loss Max	0.0 %	
	Capacity Requirement			
No capacity devices for this area		No capacity devices for this area		
Notes	Notes			

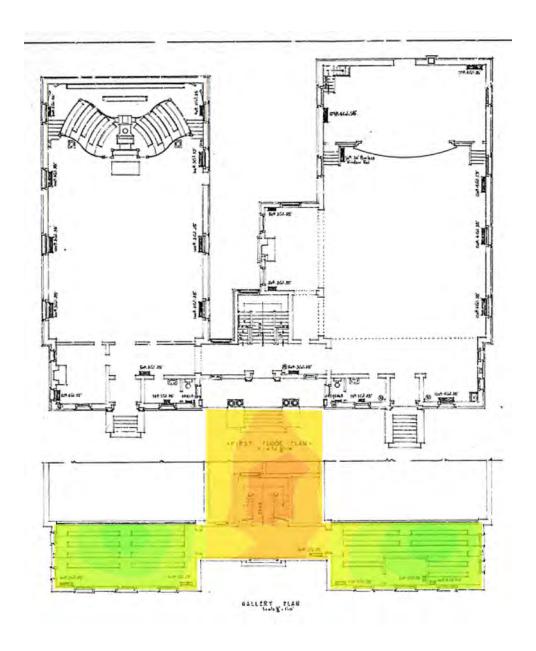
Signal Strength for Westminster - Gallery Plan on 2.4 GHz band

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.



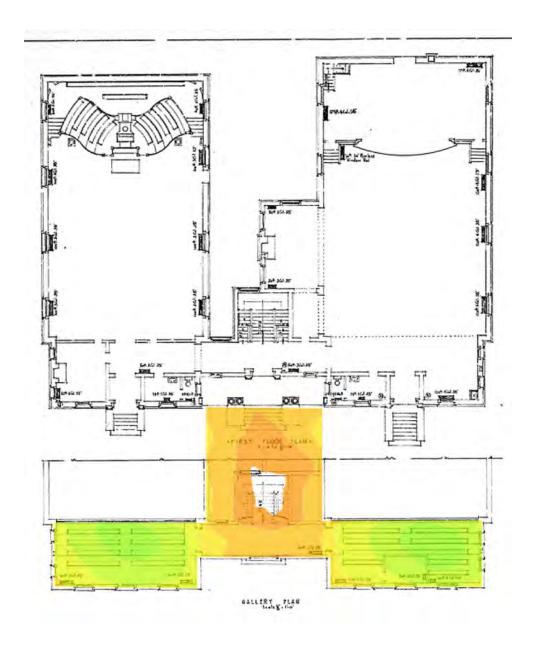
Signal Strength for Westminster - Gallery Plan on 5 GHz band

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.

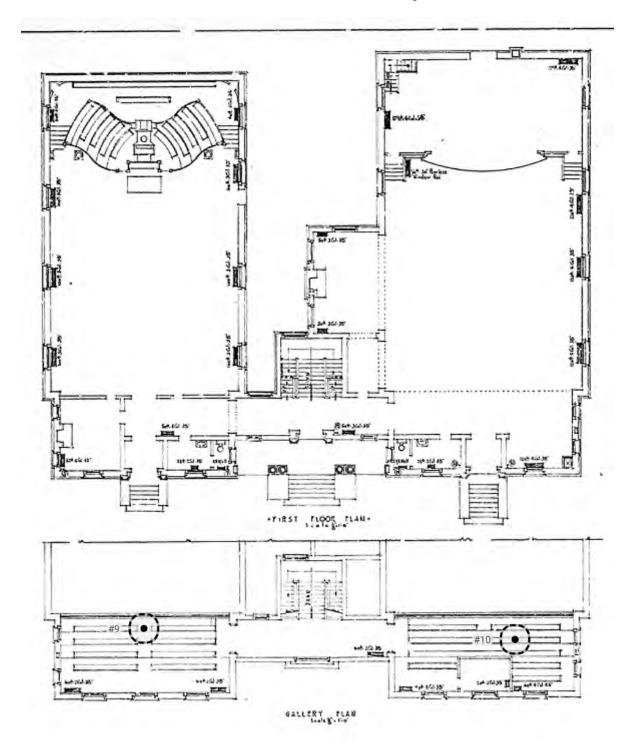


Signal Strength for Westminster - Gallery Plan on 6 GHz band

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 Westminster - Gallery Plan



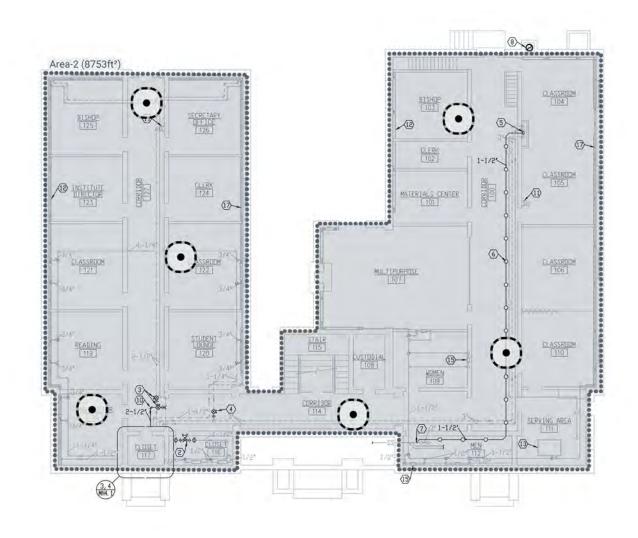
Access Points on Westminster - Gallery Plan

Simulated Access Points on Westminster - Gallery Plan

AP#	Access Point			
9	Simulated A	P-009	Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172l BLE
10	Simulated AP-010		Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE

Westminster - Lower Level Floor Plan

Survey routes and Access Points for Westminster - Lower Level Floor Plan



View as / Project Offset:	Mobile Device

Area-2 (8,753 ft²)

Coverage Requirement: Ekahau Best Practices			
2.4 GHz	Signal Strength Min	-75.0 dBm	
	Signal-to-Noise Ratio Min	20.0 dB	
	Data Rate Min	24 Mbps	
	Channel Interference Max	2 at min85.0 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	-67.0 dBm
	Signal-to-Noise Ratio Min	25.0 dB
	Data Rate Min	24 Mbps
	Channel Interference Max	1 at min85.0 dBm
	Round Trip Time (RTT) Max	200 ms
	Packet Loss Max	0.0 %
6 GHz	Signal Strength Min	-75.0 dBm
	Secondary Signal Strength Min	-67.0 dBm
	Signal-to-Noise Ratio Min	25.0 dB
	Data Rate Min	24 Mbps
	Channel Interference Max	1 at min85.0 dBm
	Round Trip Time (RTT) Max	200 ms
	Packet Loss Max	0.0 %
Capacity Requirement		
	No capacity devices for this area	
NI. 2		
Notes		

Signal Strength for Westminster - Lower Level Floor Plan 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 Westminster - Lower Level Floor Plan 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.

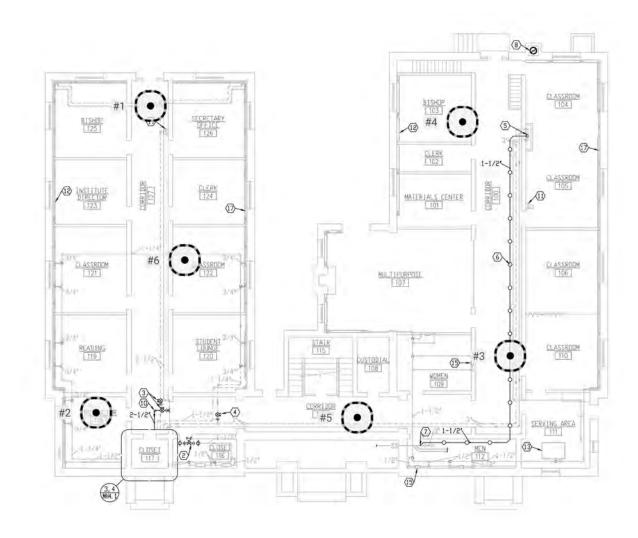


Signal Strength for Westminster - Lower Level Floor Plan on 6 GHz band

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 Westminster - Lower Level Floor Plan



Access Points on Westminster - Lower Level Floor Plan

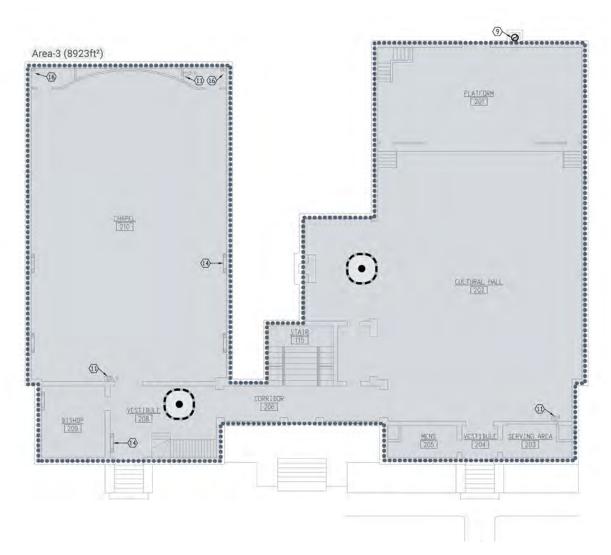
Simulated Access Points on Westminster - Lower Level Floor Plan

AP#	Access Point			
1	Simulated Al	P-001	Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE

2	Simulated Al	P-002	Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE
3	Simulated Al	P-003	Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE
4	Simulated Al	P-004	Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE
5	Simulated Al	P-007	Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE
6	Simulated Al	P-008	Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE

Westminster - Main Level Floor Plan

Survey routes and Access Points for Westminster - Main Level Floor Plan



View as / Project Offset:	Mobile Device

Area-3 (8,923 ft²)

	Coverage Requirement: Ekahau Best Practices			
2.4 GHz	Signal Strength Min	-75.0 dBm		
	Signal-to-Noise Ratio Min	20.0 dB		
	Data Rate Min	24 Mbps		
	Channel Interference Max	2 at min85.0 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	-67.0 dBm
	Signal-to-Noise Ratio Min	25.0 dB
	Data Rate Min	24 Mbps
	Channel Interference Max	1 at min85.0 dBm
	Round Trip Time (RTT) Max	200 ms
	Packet Loss Max	0.0 %
6 GHz	Signal Strength Min	-75.0 dBm
	Secondary Signal Strength Min	-67.0 dBm
	Signal-to-Noise Ratio Min	25.0 dB
	Data Rate Min	24 Mbps
	Channel Interference Max	1 at min85.0 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 Westminster - Main Level Floor Plan 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 Westminster - Main Level Floor Plan 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.

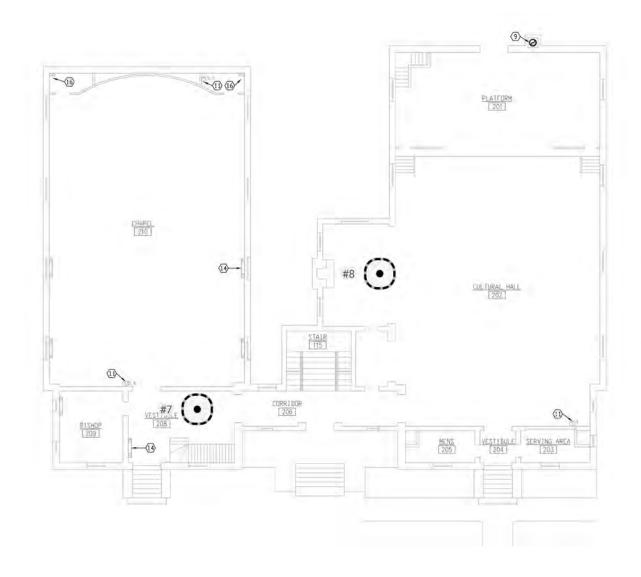


Signal Strength for Westminster - Main Level Floor Plan on 6 GHz band

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 Westminster - Main Level Floor Plan



Access Points on Westminster - Main Level Floor Plan

Simulated Access Points on Westminster - Main Level Floor Plan

AP#	Access Point			
7	Simulated AP-005		Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE
8	Simulated AP-006		Cisco CW9172I	
	Wi-Fi 7	1	8.0 dBm	Cisco CW9172I 2.4GHz
	Wi-Fi 7	36	14.0 dBm	Cisco CW9172I 5GHz
	Wi-Fi 7	1@80 (6 GHz)	14.0 dBm	Cisco CW9172I 6GHz
	Bluetooth	-	0.0 dBm	Cisco CW9172I BLE