# Indian District Chapel Predictive AP Placement Report Version 2


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Review Date: 2/20/2025

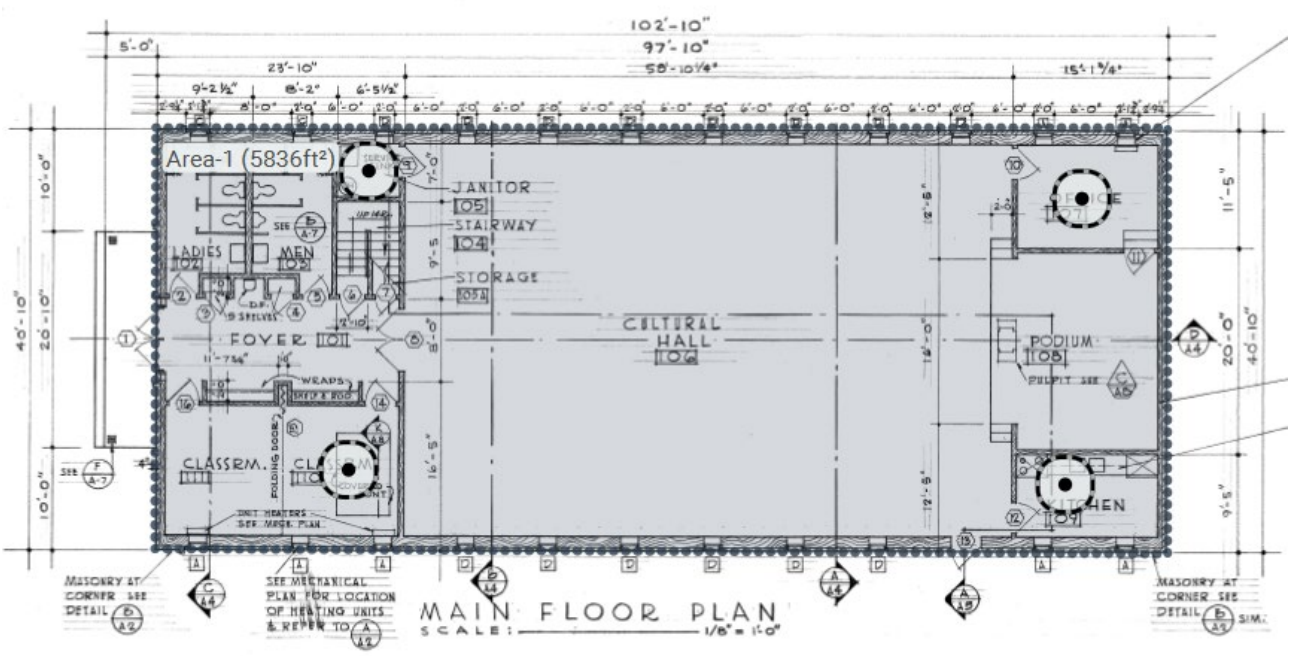
# Project Description

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.
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 Meraki MR36 access points are represented in this prediction.
Without measured attenuation and AP signal deviation measurements, the actual signal propagation will vary.
Assumptions & Caveats:
One access point was placed in the second level. This access point is not entirely necessary and can be removed from the design if needed.

Version 2: Very little change to the plans. Only 1 AP was shifted towards the cultural hall to help with coverage and density.

# Indian 2.1

Survey routes and Access Points for Indian 2.1




| View as / Project Offset: | Generic Laptop (-3 dB/-3 dB/-) |
|---|---|

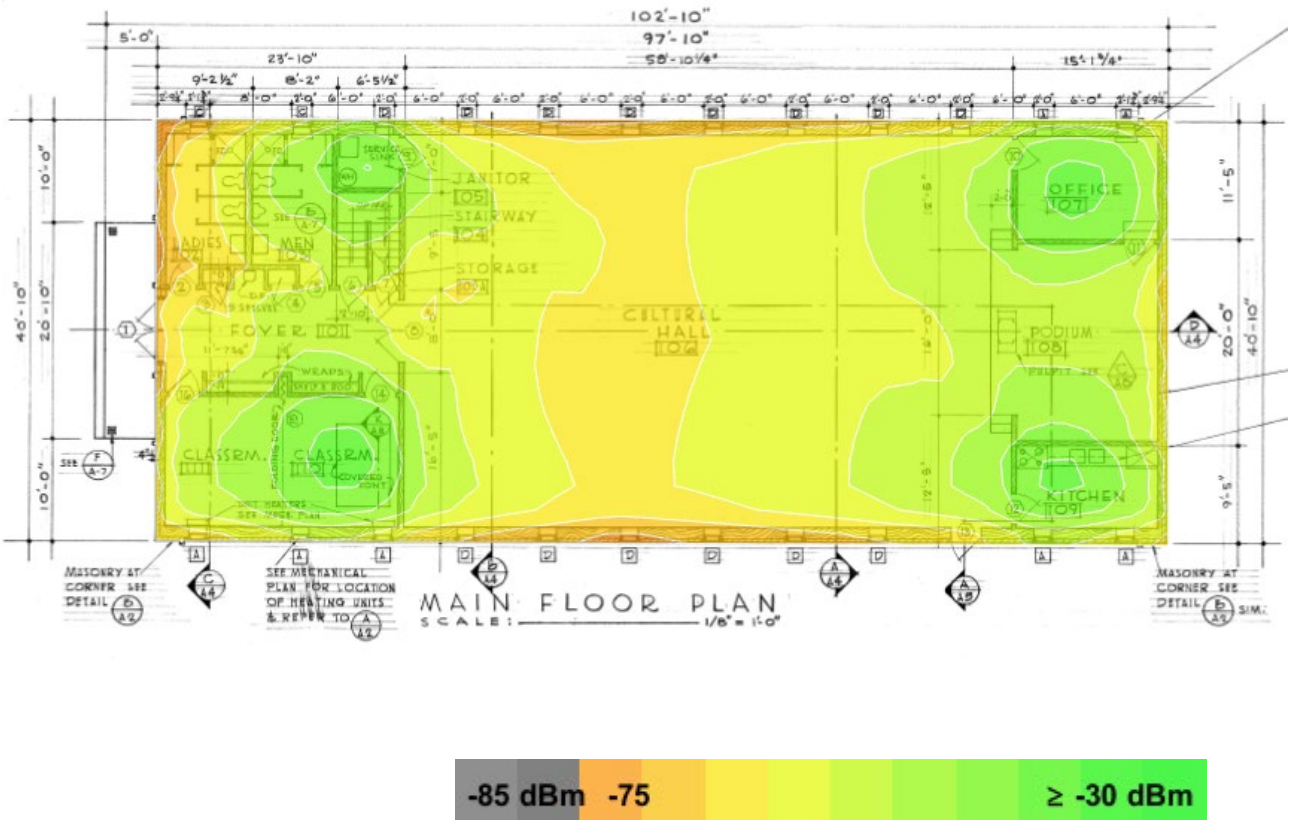
## Area-1 (5,836 ft²)

| Coverage Requirement: **Ekahau Best Practices** | | |
|---|---|---|
| **2.4 GHz** | Signal Strength Min | **-75.0 dBm** |
| | Secondary Signal Strength Min | **-75.0 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 | **-75.0 dBm** |
| | 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 Strength Min | **-75.0 dBm** |
| | Secondary Signal Strength Min | **-75.0 dBm** |
| | 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** | | |

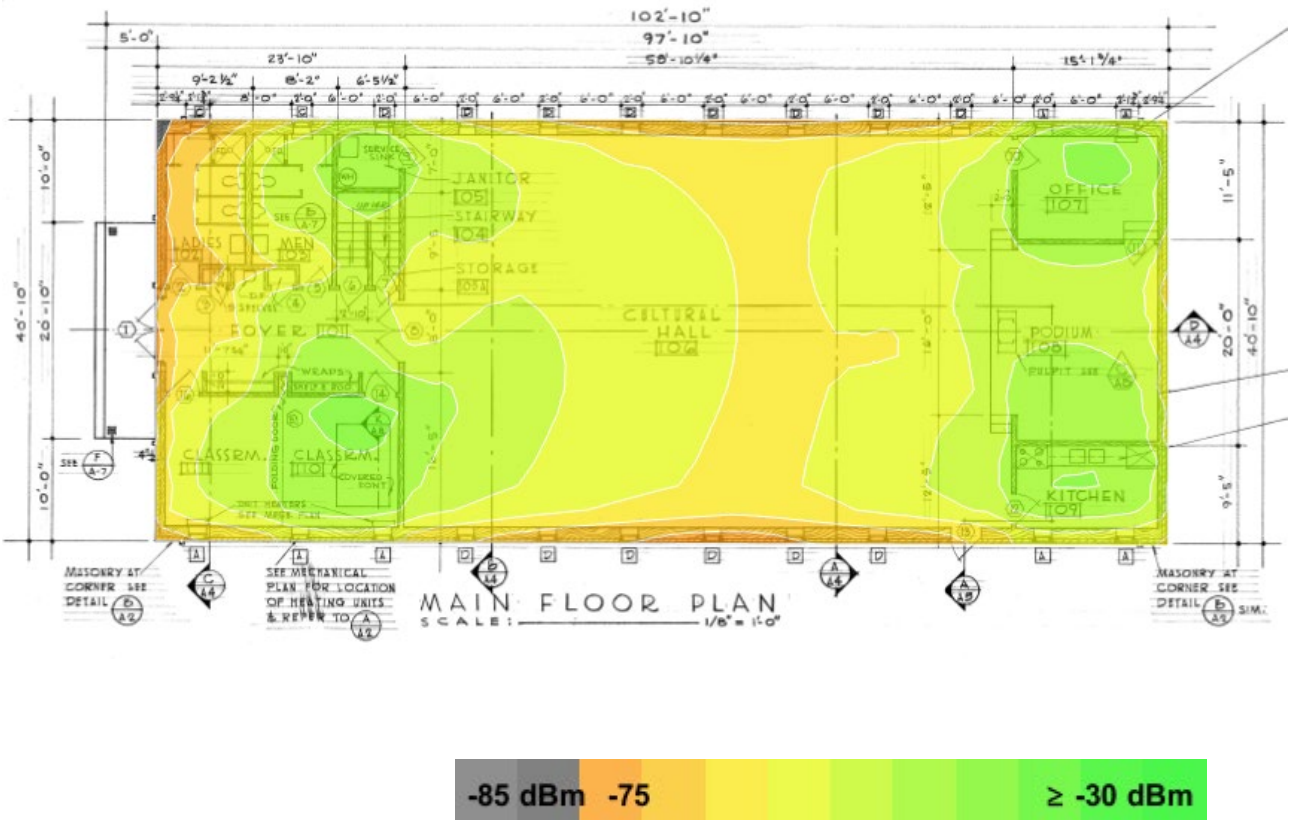
**Signal Strength for Indian 2.1 on 2.4 GHz band**

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.

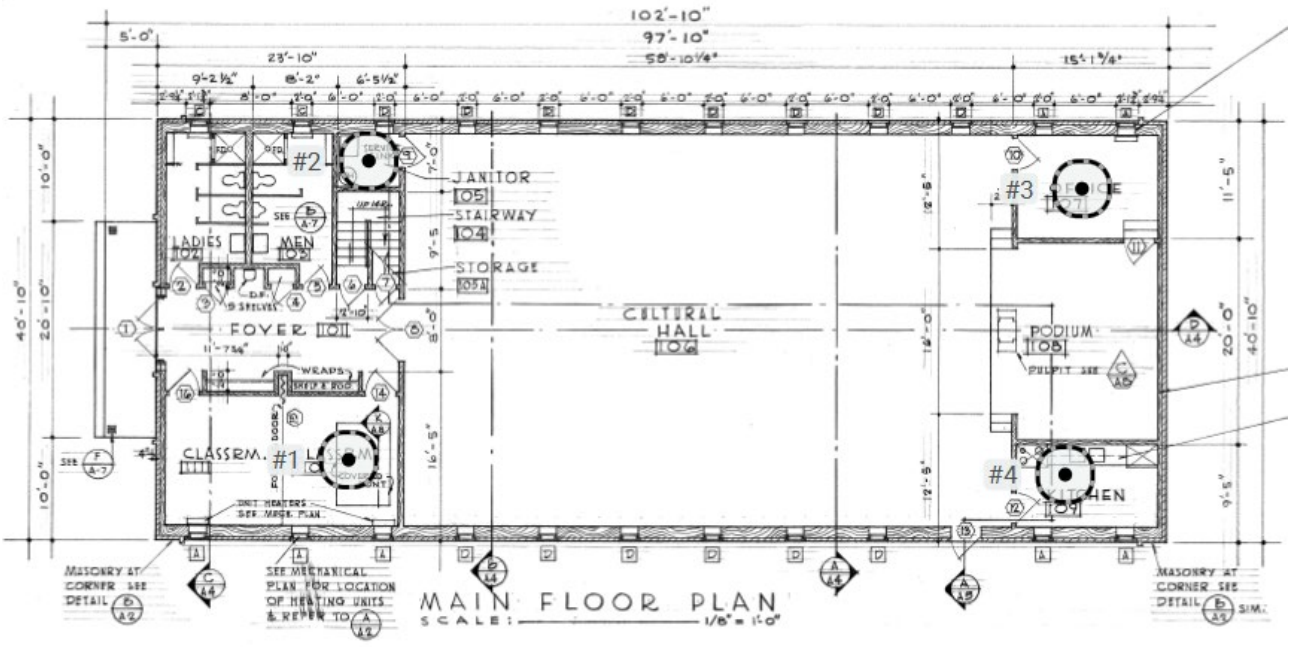


**Signal Strength for Indian 2.1 on 5 GHz band**

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.



# Access Points on Indian 2.1



# Access Points on Indian 2.1

## Simulated Access Points on Indian 2.1

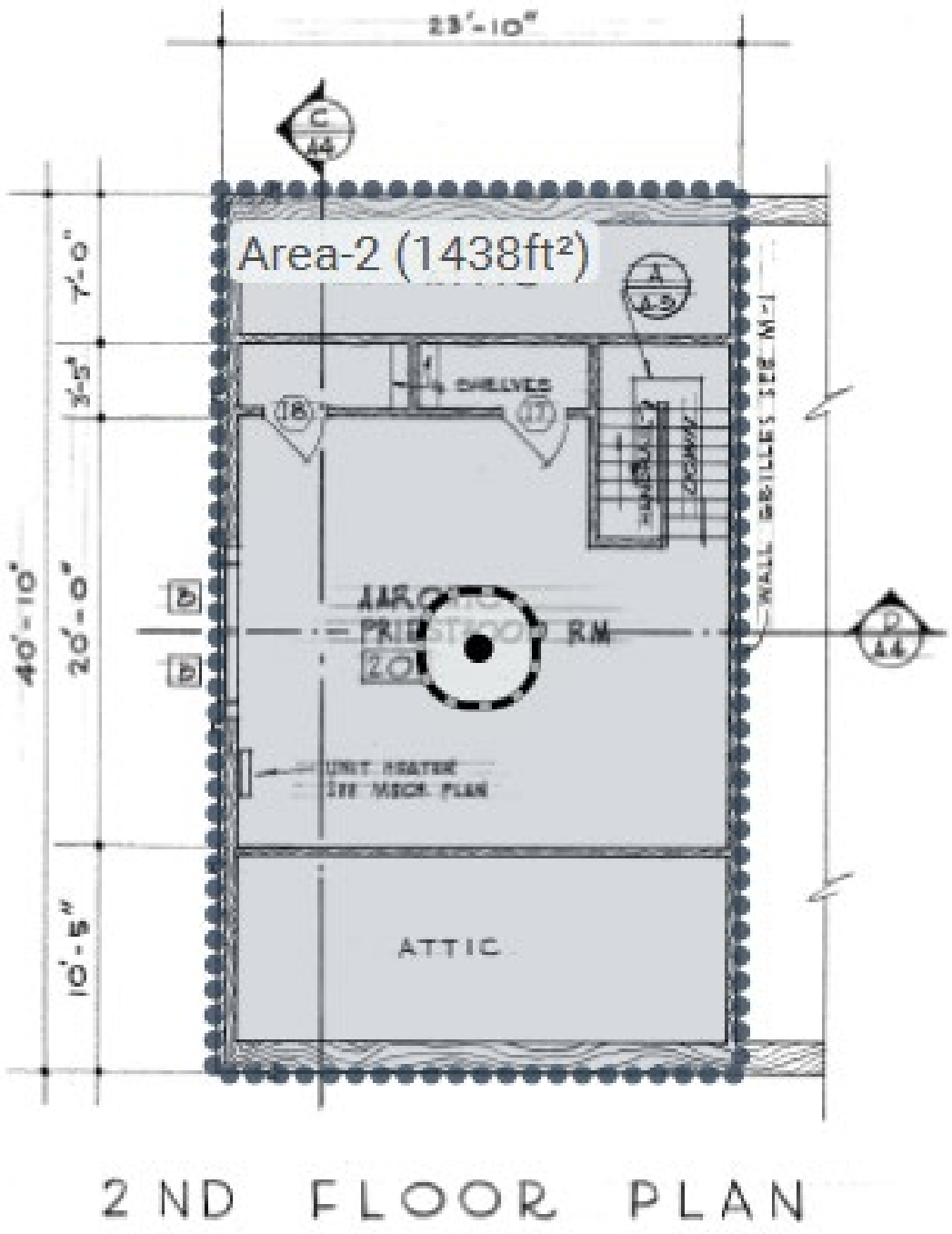
| AP # | Access Point | | | |
|---|---|---|---|---|
| 1 | Simulated AP-001 | | Meraki MR36 | |
| | Wi-Fi 6 | 1 | 6 mW | Meraki MR36 2.4GHz |
| | Wi-Fi 6 | 36 | 25 mW | Meraki MR36 5GHz |
| | Bluetooth | - | 1 mW | Meraki MR36 BLE |
| 2 | Simulated AP-002 | | Meraki MR36 | |
| | Wi-Fi 6 | 1 | 6 mW | Meraki MR36 2.4GHz |
| | Wi-Fi 6 | 36 | 25 mW | Meraki MR36 5GHz |
| | Bluetooth | - | 1 mW | Meraki MR36 BLE |
| 3 | Simulated AP-003 | | Meraki MR36 | |
| | Wi-Fi 6 | 1 | 6 mW | Meraki MR36 2.4GHz |
| | Wi-Fi 6 | 36 | 25 mW | Meraki MR36 5GHz |
| | Bluetooth | - | 1 mW | Meraki MR36 BLE |
| 4 | Simulated AP-004 | | Meraki MR36 | |
| | Wi-Fi 6 | 1 | 6 mW | Meraki MR36 2.4GHz |
| | Wi-Fi 6 | 36 | 25 mW | Meraki MR36 5GHz |
| | Bluetooth | - | 1 mW | Meraki MR36 BLE |

## Measured Access Points on Indian 2.1

None.

# Indian 2.2

Survey routes and Access Points for Indian 2.2



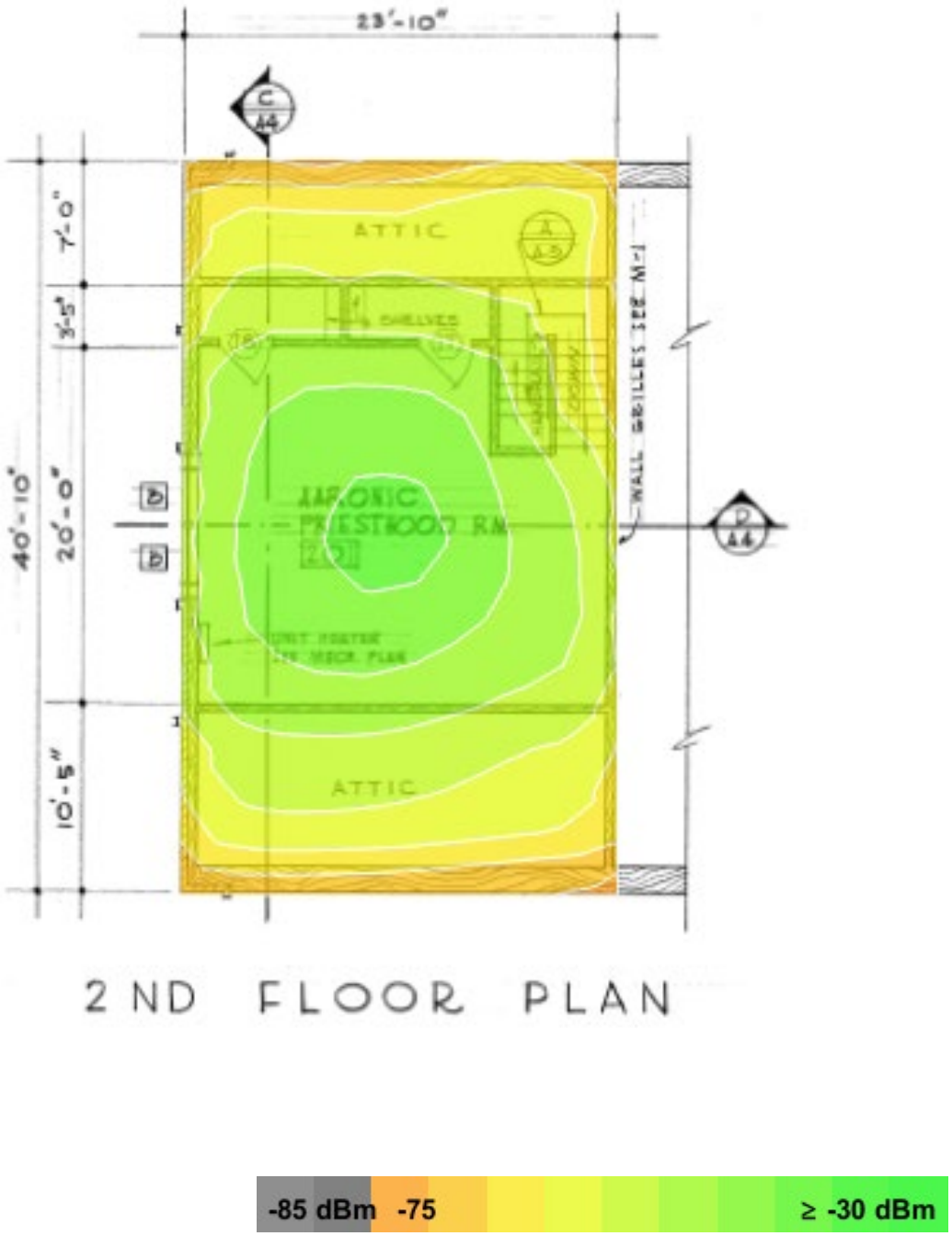

| View as / Project Offset: | Generic Laptop (-3 dB/-3 dB/-) |
|---|---|

**Area-2 (1,438 ft²)**

| Coverage Requirement: **Ekahau Best Practices** | | |
|---|---|---|
| **2.4 GHz** | Signal Strength Min | **-75.0 dBm** |
| | Secondary Signal Strength Min | **-75.0 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 | **-75.0 dBm** |
| | 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 Strength Min | **-75.0 dBm** |
| | Secondary Signal Strength Min | **-75.0 dBm** |
| | 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** | | |

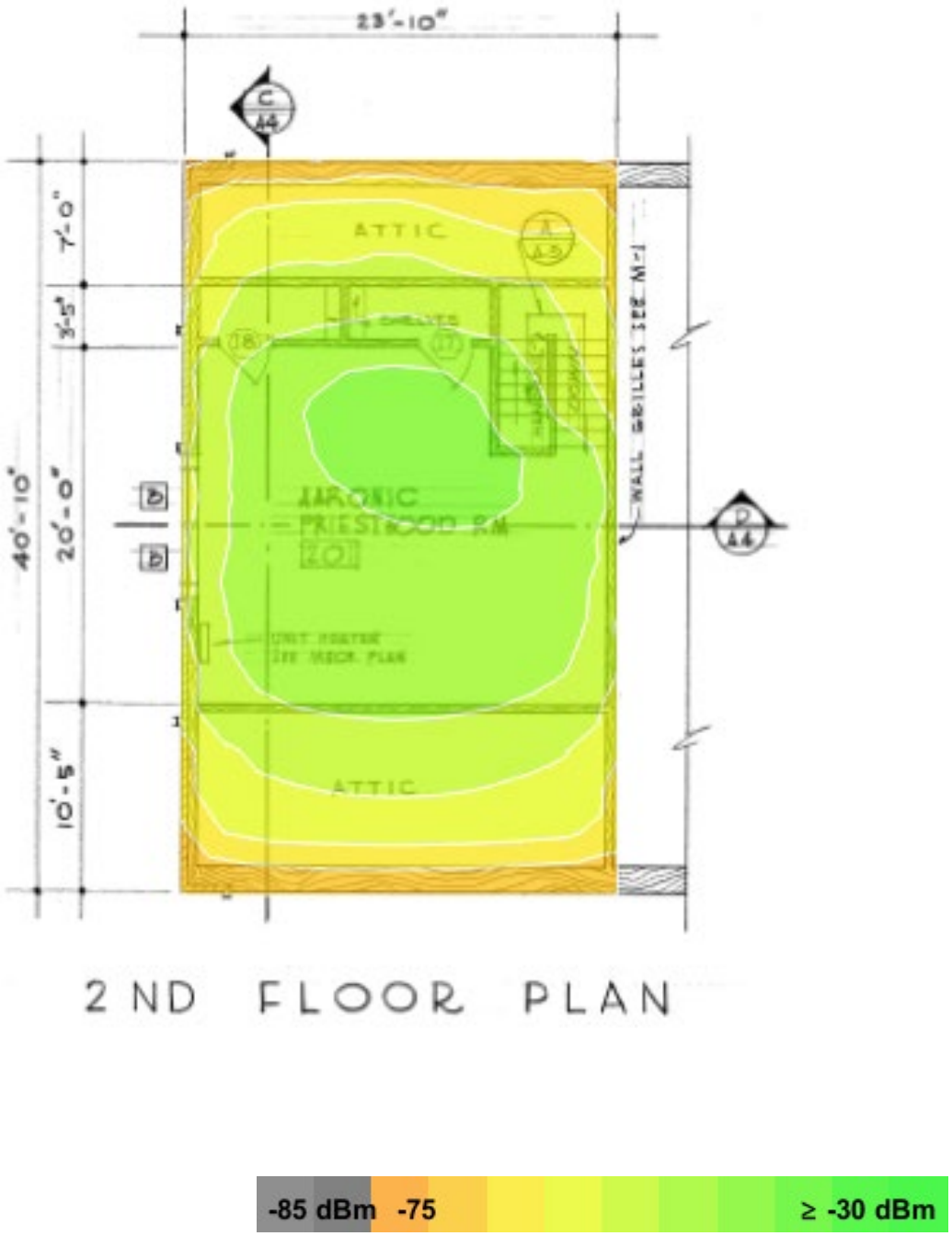
**Signal Strength for Indian 2.2 on 2.4 GHz band**

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.

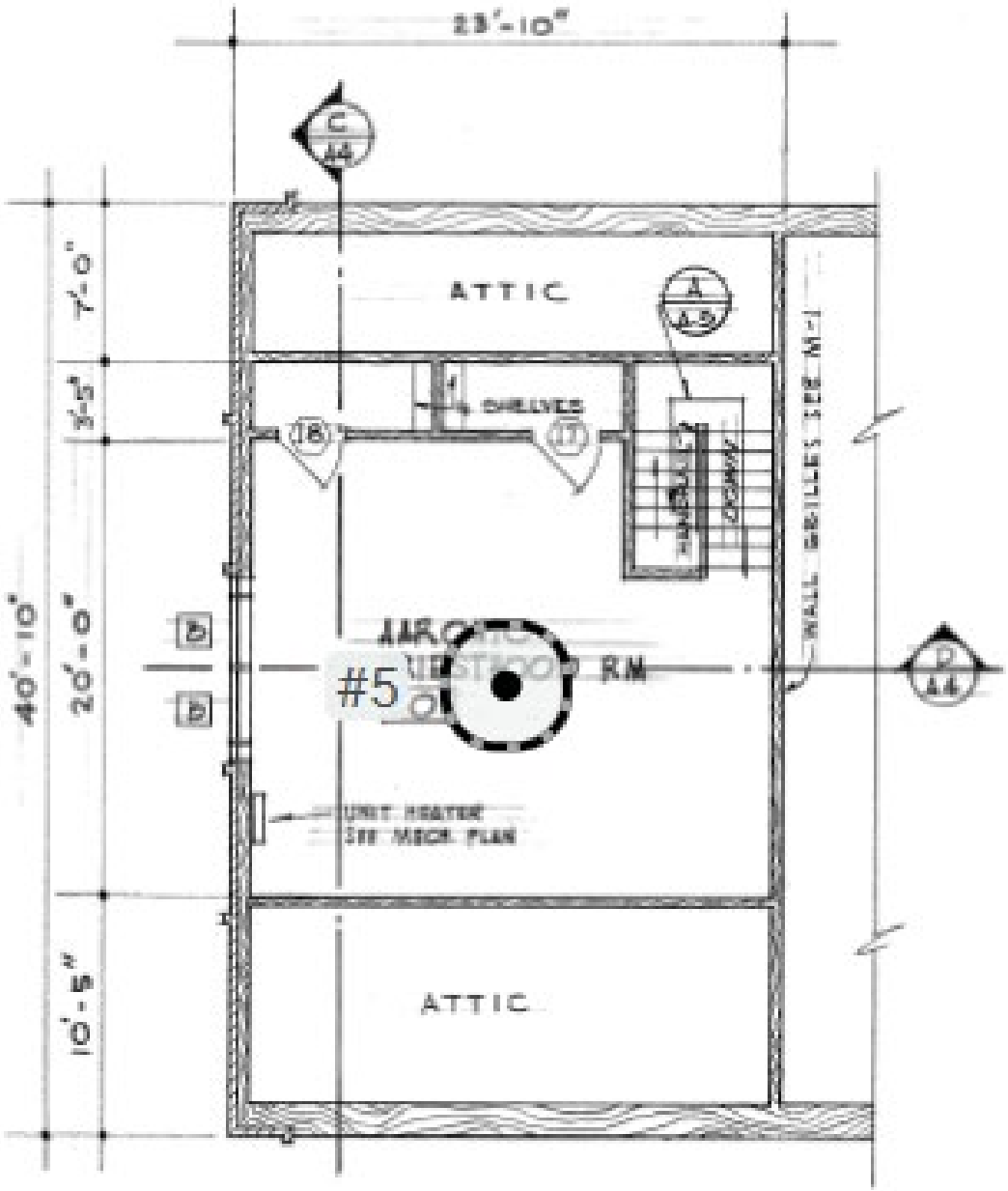


**Signal Strength for Indian 2.2 on 5 GHz band**

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.



## Access Points on Indian 2.2




2 ND FLOOR PLAN

# Access Points on Indian 2.2

## Simulated Access Points on Indian 2.2

| AP # | Access Point | | | |
|---|---|---|---|---|
| 5 | Simulated AP-005 | | Meraki MR36 | |
| | Wi-Fi 6 | 1 | 6 mW | Meraki MR36 2.4GHz |
| | Wi-Fi 6 | 36 | 25 mW | Meraki MR36 5GHz |
| | Bluetooth | - | 1 mW | Meraki MR36 BLE |

## Measured Access Points on Indian 2.2

None.