
Demo Planner Report

Prepared for: Design Studio Plc.
Prepared by: Peter Planner
Location: Imaginary Location
Time of Survey: 29/02/2023

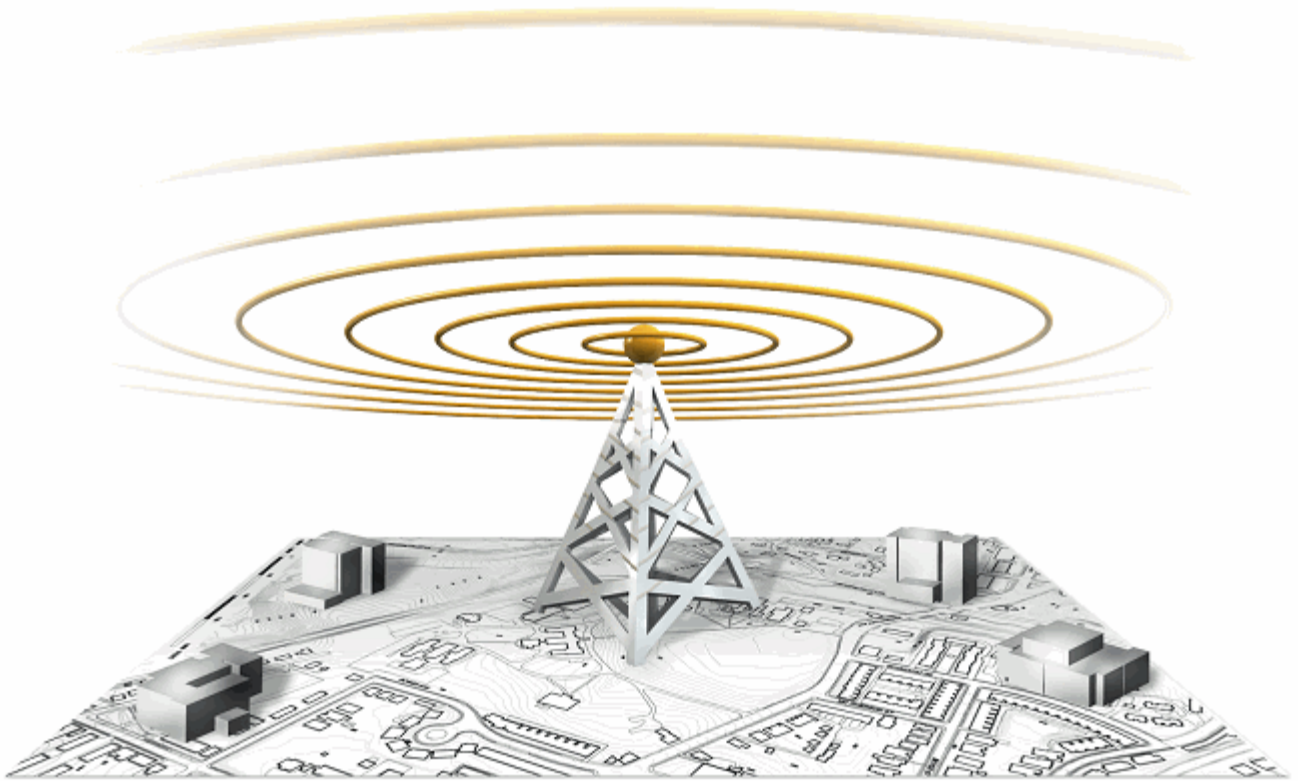


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1 Planner Report

AirMagnet Planner simulates Access Points as well as antenna and building characteristics to predict the number of Access Points needed and their respective locations before an actual WiFi deployment . This report provides real-time Access Point signal coverage for the floor plan and recommends the number of Access Points needed and their locations on a floor plan (marked by numbers in red).

This report also provides detailed information for the Access Points being deployed :

- Name/ MAC address of the Access Point.
- Channel/SSID allocated.
- Planned location co-ordinates for the Access Point.
- Height of the Access Point/antenna above floor level.
- Type of the antenna and its specifications.

1.1 Planner AP List

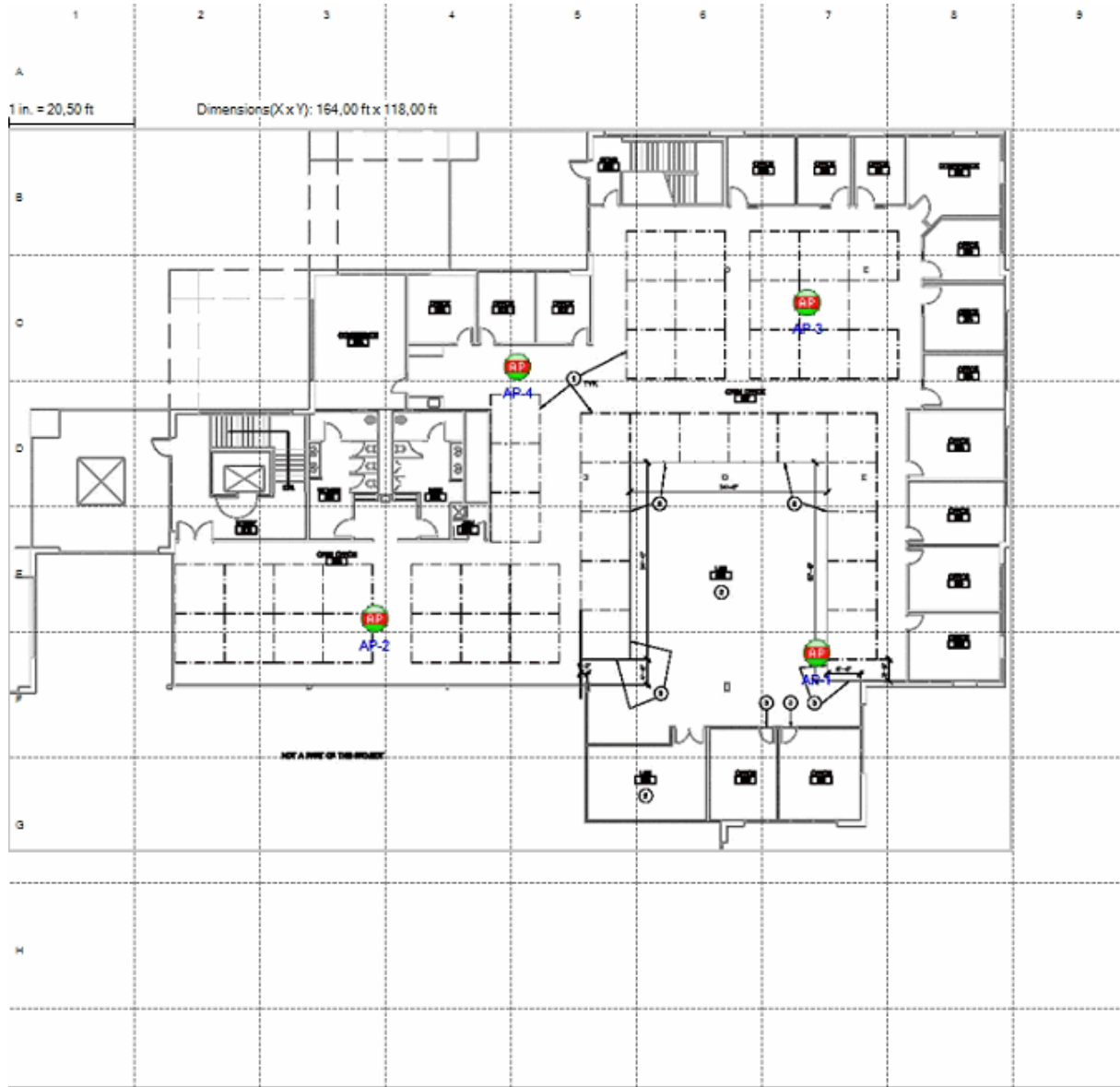
The table below lists the properties for each AP placed on the plan, including its name, location (as obtained from the grid on the previous page), MAC address, SSID, height, antenna type and angle of orientation, channel, and power.

Note that some APs may have two listings: the first represents the AP's 802.11a antenna, and the second 802.11b/g. Since these two mediums may have different antenna types and properties, they are separated in the table. This list can be used as a 'shopping list' or 'bill of materials list' for the wireless equipment to be purchased.

	AP Name	Location:	MAC	SSID	Height
1	AP-1(BGN)	6-E	00:0D:C8:00:00:01	Unknown SSID	10
	Antenna: Omni-Directional (2.15dBi)		Channel: 1	Angle: 0	Power: 10 mWatts
	AP-1(AN)	6-E	00:0D:C8:00:00:02	Unknown SSID	10
	Antenna: Omni-Directional (2.15dBi)		Channel: (36,1)	Angle: 0	Power: 10 mWatts
2	AP-2(BGN)	3-E	00:0D:C8:00:00:03	Unknown SSID	10
	Antenna: Omni-Directional (2.15dBi)		Channel: 6	Angle: 0	Power: 10 mWatts
	AP-2(AN)	3-E	00:0D:C8:00:00:04	Unknown SSID	10
	Antenna: Omni-Directional (2.15dBi)		Channel: (44,1)	Angle: 0	Power: 10 mWatts
3	AP-3(BGN)	6-C	00:0D:C8:00:00:05	Unknown SSID	10
	Antenna: Omni-Directional (2.15dBi)		Channel: 11	Angle: 0	Power: 10 mWatts
	AP-3(AN)	6-C	00:0D:C8:00:00:06	Unknown SSID	10
	Antenna: Omni-Directional (2.15dBi)		Channel: (52,1)	Angle: 0	Power: 10 mWatts
4	AP-4(BGN)	4-C	00:0D:C8:00:00:07	Unknown SSID	10
	Antenna: Omni-Directional (2.15dBi)		Channel: 1	Angle: 0	Power: 10 mWatts
	AP-4(AN)	4-C	00:0D:C8:00:00:08	Unknown SSID	10
	Antenna: Omni-Directional (2.15dBi)		Channel: (60,1)	Angle: 0	Power: 10 mWatts

1.2 Planner AP Location Map

The image below displays the site map with a grid overlay to provide a means of describing each AP's location (for example, an AP placed in the top-left corner of the grid will be described by location "1-A"). The APs are numbered in the sequence that they were placed on the plan; these numbers correspond to the APs listed in the AP List

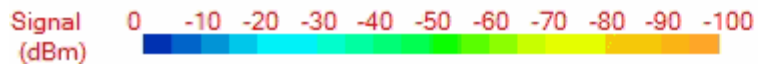
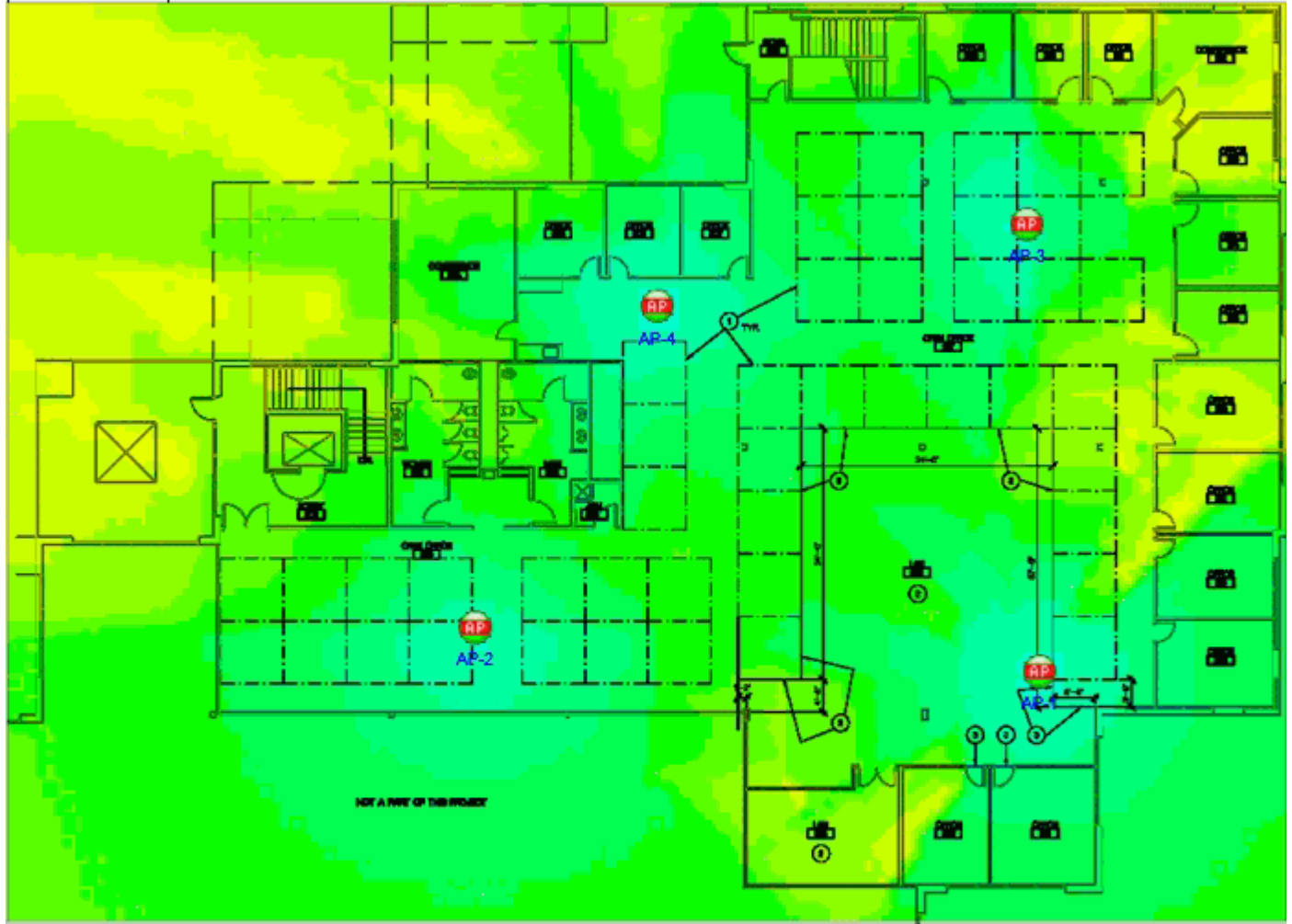


1.3 Planner Signal Coverage

The image below displays the signal coverage (in dBm) at each point in the map layout. Refer to the legend below the map for the dBm values corresponding to each color region. As a general rule, regions with signal strengths below -67 dBm provide insufficient coverage for standard use (this value may vary depending on user requirements, service level agreements, applications used, number of users serviced, etc.). APs are displayed in their planned locations and reflect the specified power and antenna properties.

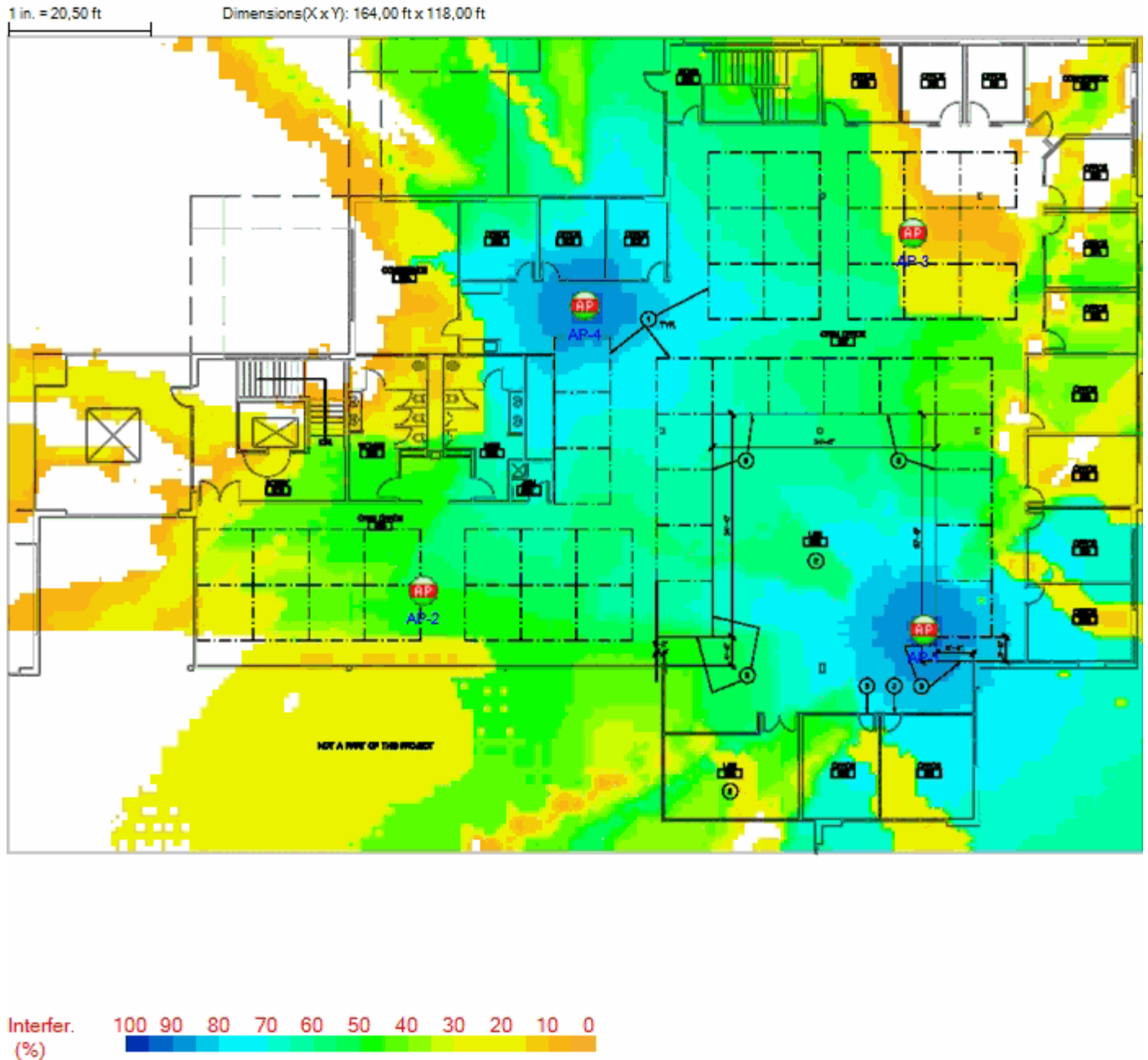
Note that an active WiFi area can incorporate a variety of environmental factors that can vary throughout the day and may adversely affect projected RF coverage.

1 in. = 20,50 ft Dimensions(X x Y): 164,00 ft x 118,00 ft



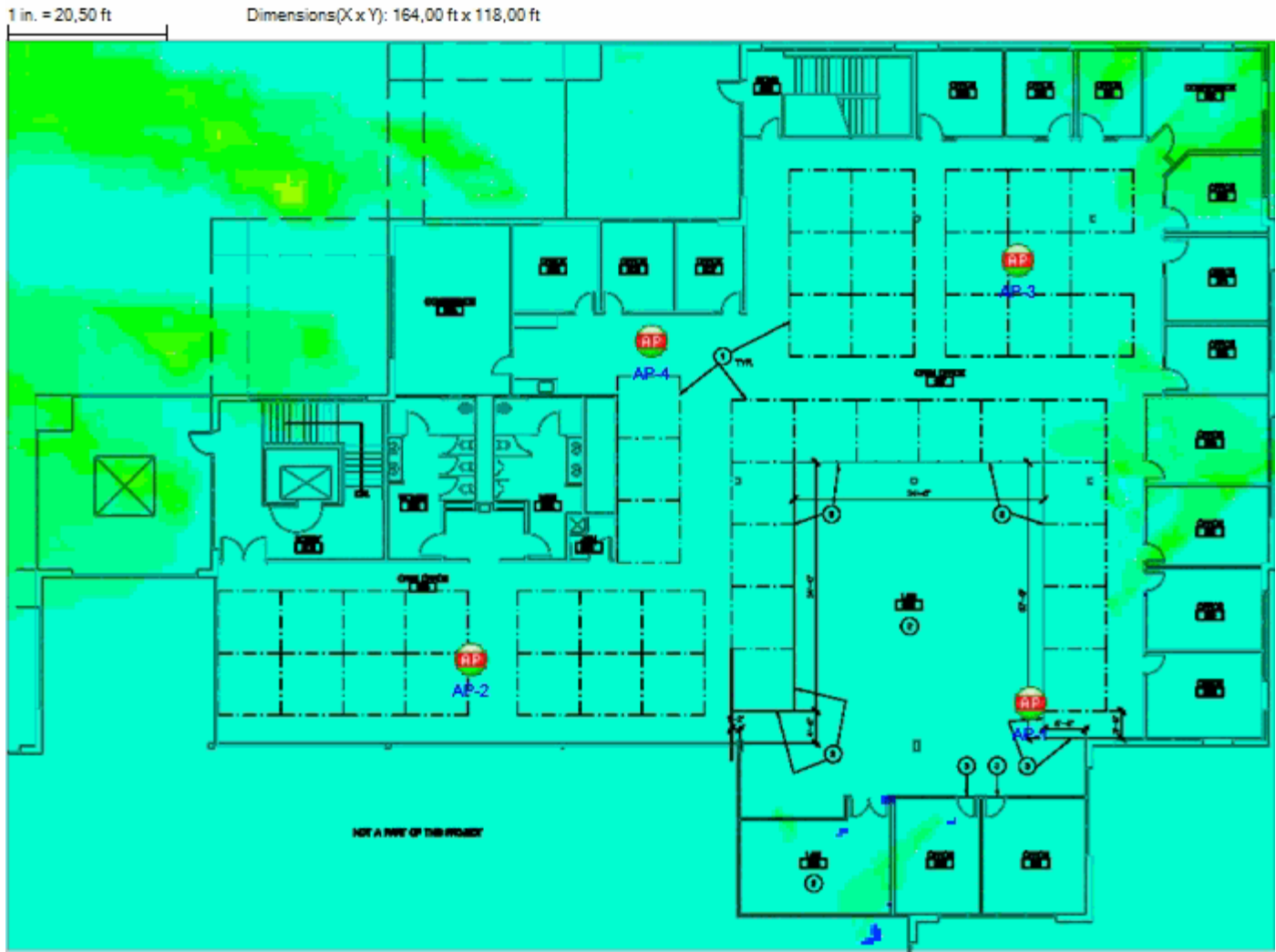
1.4 Channel Interference

The image below displays the interference level (in percentage) at each point in the map layout. Refer to the legend below the map for the percent values corresponding to each color region. APs are displayed in their planned locations and reflect the specified power and antenna properties. Note that the interference levels present in the environment can vary depending on several factors, such as the number of APs on a single channel, number of devices present, non-802.11 interferers, etc.



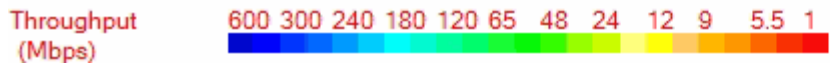
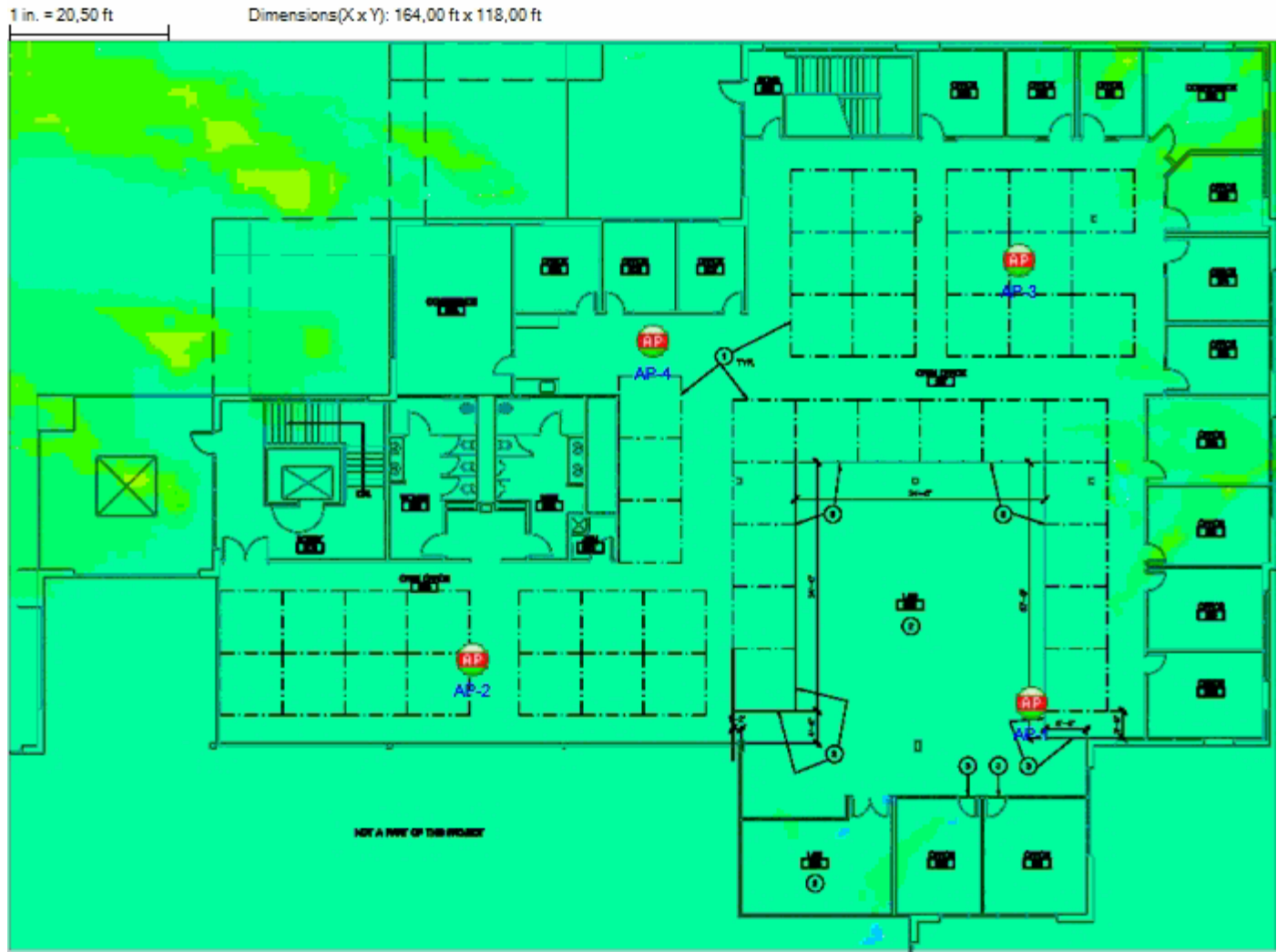
1.5 PHY Data Rate Coverage

The image below displays the Predictive PHY Data Rate (in dBm) at each point in the map layout. Refer to the legend below the map for the dBm value of the signal corresponding to each color region. Although a higher speed is invariably better for any deployment, implementations designed for VoFi operations should pay particular attention to ensuring a favorable data rate, as low rates can have a far greater affect in terms of jitter, voice delay, and call quality than they would for a standard data deployment.



1.6 Throughput

The image below displays the expected Throughput (in Mbps) calculated based on the site's layout. Refer to the legend below the map for the value in Mbps that corresponds to each color region. Although a higher throughput level is invariably better for any deployment, implementations designed for VoFi operations should pay particular attention to ensuring a favorable throughput level, as lower levels can have a far greater affect in terms of jitter, voice delay, and call quality than they would for a standard data deployment.



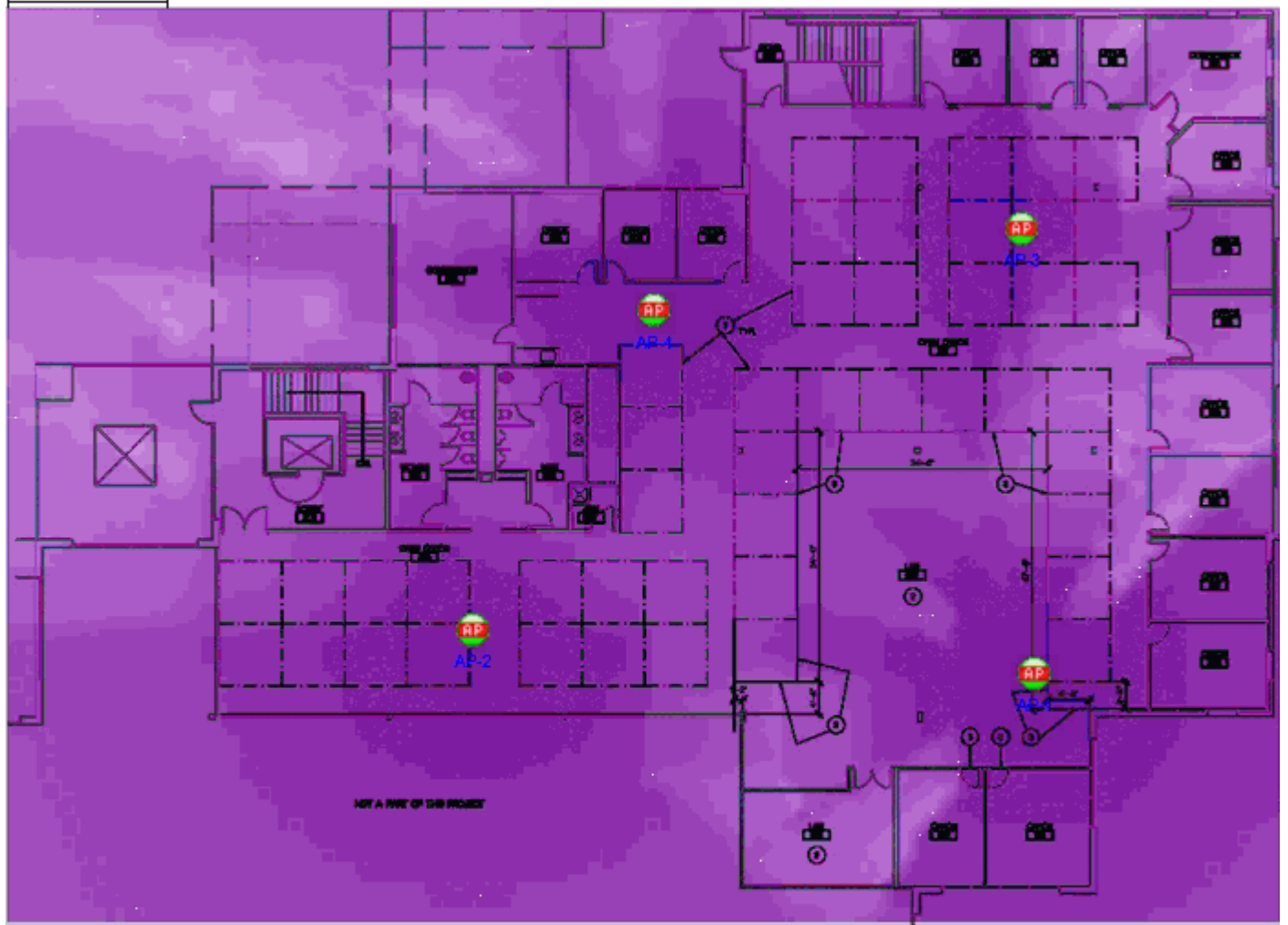
1.7 Operating Mode

The image below displays the Operating Modes supported by the APs in the site plan. Refer to the legend below the map for the color that corresponds to each mode (Legacy, Mixed HT, or Greenfield HT). For 802.11n deployments, Greenfield mode is generally best, as it provides the highest throughput and speed levels of the different options. However, Greenfield deployments must use only 802.11n-enabled devices, and as such cannot support legacy connections.

Note that the heat map displays the color corresponding to the strongest AP detected at any given point. Therefore, locations shown as Legacy may contain Greenfield data and vice versa, but the strongest AP in that area utilizes a Legacy implementation.

1 in. = 20,50 ft

Dimensions(X x Y): 164,00 ft x 118,00 ft

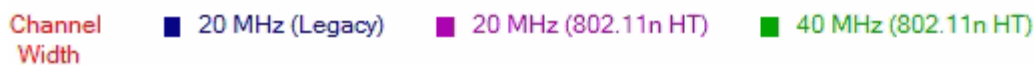
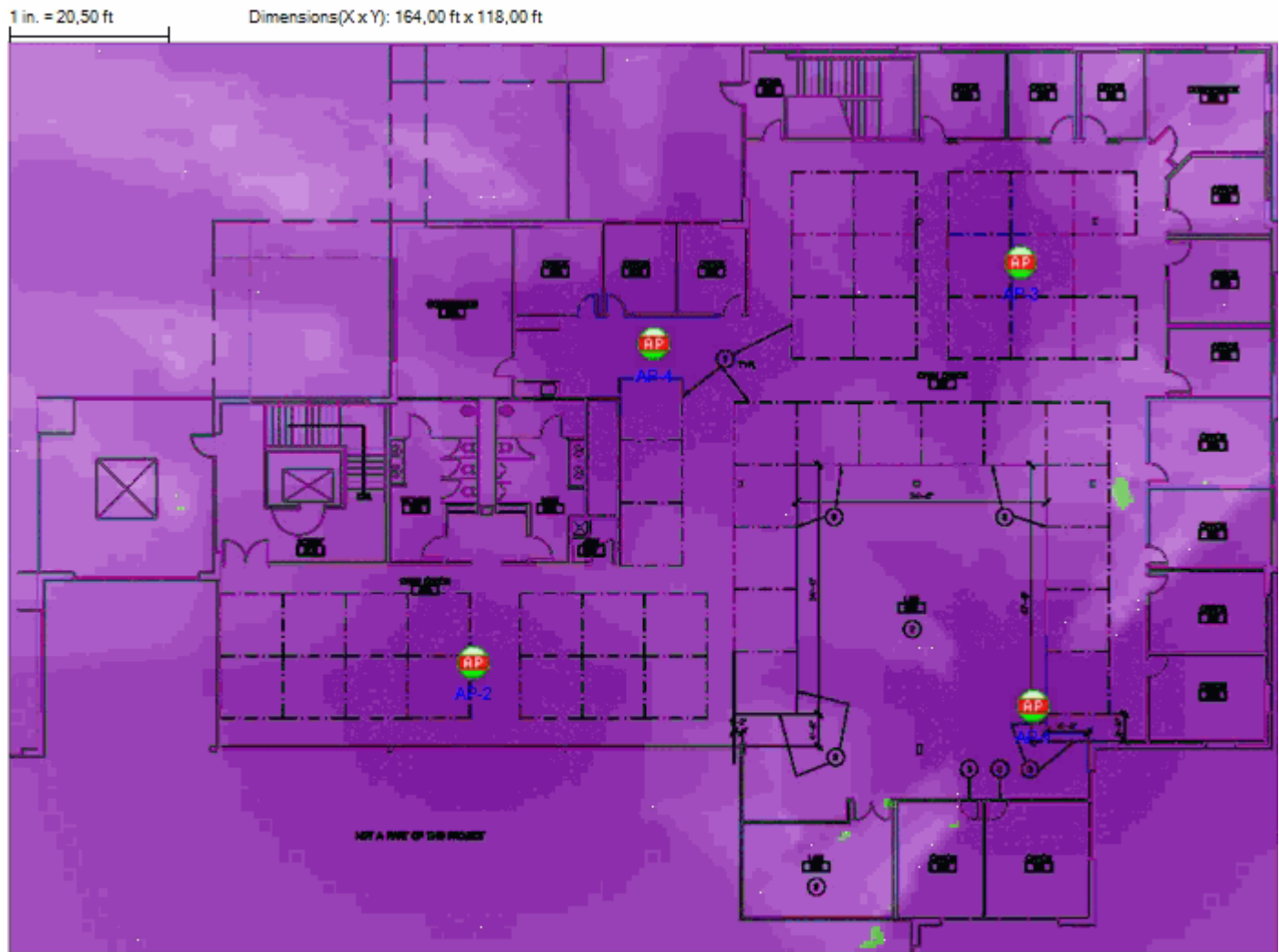


Operating Mode

■ Legacy	■ Mixed HT	■ Greenfield HT
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1.8 802.11n Channel Width

The image below displays the Channel Width options supported by the APs in the site plan. Refer to the legend below the map for the color that corresponds to each mode (20 MHz, 20 MHz 802.11n HT, or 40 MHz 802.11n HT). The 802.11n-specific 40 MHz HT option transmits wireless data over two legacy channels, providing higher speeds as well as improved network reliability. Note that the heat map displays the color corresponding to the strongest AP detected at any given point. Therefore, locations highlighted in blue (20 MHz) may contain 40 MHz data and vice versa, but the strongest AP in that area utilizes a 20 MHz channel width.



1.9 802.11n Highest MCS Index

The image below displays the Highest MCS Index values used by the APs in the site plan. Refer to the legend below the map for the color that corresponds to each value (ranging from 0 to 32). Higher values of MCS generally correspond to higher data transmit speeds.

