



AGENDA

Finance Committee
Special Meeting
Village Hall

1900 Hassell Road, Hoffman Estates, IL 60169

March 2, 2026	Council Chambers	6:50 PM
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1. **CALL TO ORDER/ROLL CALL**
2. **PUBLIC COMMENT**
3. **NEW BUSINESS**
 - A. Approval of a Resolution authorizing an agreement with CDW-G for the purchase of hardware and professional services for Wi-Fi expansion at the NOW Arena.
4. **ADJOURNMENT**

Further details and information can be found in the agenda packet attached hereto and incorporated herein and can also be viewed online at www.hoffmanestates.org and/or in person in the Village Clerk's office. The Village of Hoffman Estates complies with the Americans with Disabilities Act (ADA). For accessibility assistance, call the ADA Coordinator at 847/882-9100.



AGENDA ITEM REPORT

Finance Committee

March 2, 2026

ITEM 3A

REQUEST: Approval of a Resolution authorizing an agreement with CDW-G for the purchase of hardware and professional services for Wi-Fi expansion at the NOW Arena.

FROM: Darek Raszka, IT Director

ITEM TYPE: Agreement - Committee

REQUEST SUMMARY

The existing Wi-Fi setup at Now Arena is primarily designed to support staff and essential venue operations. Coverage is limited to the box office, administrative offices, suite-level areas, and a small portion of the event floor. In its current form, the system was not intended to provide full coverage across all venue locations or accommodate guest connectivity needs.

The existing infrastructure provided by Ruckus Networks is fully equipped to support future scalability. Its robust architecture ensures seamless expansion without compromising performance or reliability. This system is designed to deliver high-speed, secure, and stable digital connectivity, making it ideal for environments with growing demands.

Last year, Ruckus Professional Services completed a comprehensive preliminary design and planning phase for wireless infrastructure. This included conducting a detailed site survey, analyzing coverage requirements, and developing recommendations to optimize wireless performance.

The recommended action is to purchase Ruckus hardware, cloud licensing and professional services through CDW-G, who submitted the lowest quote of four qualified Ruckus resellers (quotes attached).

Staff will be coming back to the Village Board in the future for contractual installation services for this system. We are purchasing the hardware and software now due to anticipated cost increases.

FINANCIAL IMPACT

The cost for the Wi-Fi expansion, which includes hardware and professional services from Ruckus, is \$200,912.83. The funds will be allocated from budgeted account# 602-7486-46020.000.

RECOMMENDATION

RESOLUTION AUTHORIZING AN AGREEMENT WITH CDW-G FOR THE PURCHASE OF HARDWARE AND PROFESSIONAL SERVICES FOR Wi-Fi EXPANSION AT THE NOW ARENA

ATTACHMENTS

1. Ruckus Design Concept
2. Ruckus Proposal
3. Resolution - Purchase WiFi Expansion Now Arena
4. CWD-G Quote
5. Pricing Comparison



NOW Arena

Hoffman Estates, IL, United States

Design Concept for Wi-Fi WLAN and/or LAN Planning

September 29, 2025

Crafted By:
RUCKUS Professional Services
RuckusProServTeam@commscope.com



TM
IW

The function of this presentation is to communicate project scope, concepts, fine points, recommended products, and consequent equipment budgets for a Wi-Fi WLAN and/or LAN concept at the site or project described. RUCKUS Professional Services generated technical response outputs are not buildable designs, which should be subject to feasibility walks, additional discovery, and considerable additional analysis prior to project execution. However, the end solution should adhere to the budget tolerances provided and assuming that scopes and technical requirements are adequately captured in this response. This production can be altered to adjust to needs should any concern arise prior to deeper engagement.



Site or Project Description Based on Intake and Search

Location, Entities, and Project	Detail
Name of Facility, Venue, or Site (Current)	NOW Arena
Street Address	5333 Prairie Stone Parkway
City or Local Jurisdiction	Hoffman Estates
State or Province	IL
Country	USA
Facility, Venue, or Site Primary Purpose	Professional Sporting Events (Stadium/Arena)
Property Management or Governing Organization	Oak View Group
Property Owner(s)	Village of Hoffman Estates
Significant Tenant 1	Windy City Bulls
Projected or Assumed Commissioning Date (M/D/Y)	8/1/2025

- Opened in 2006: Originally known as the Sears Centre Arena, it was renamed in 2020 after NOW Health Group acquired naming rights.
- Events & Tenants: Hosts a variety of events including concerts, sports, family shows, and is home to the Windy City Bulls (NBA G League).

-MS Copilot

Scope



WLAN Scope Areas

Offices / Meeting Rms
Dining / Club
Public Lobby / Gate / Ticketing
Concourse
Outdoor Plaza / Entry Point
Home Locker Room
Lockers / Change Rooms
VIP Suites
Service / Utility Zone
Rank 1 - Event Floor
Rank 2 - Lower Bowl
Rank 3 - Lower Suite/Box Seats
Rank 4 - Upper Bowl
Rank 5 - Suite Seating

The table (left) describes all subject areas studied for this concept and dimensioning effort.

Areas not included in this table are not part of scope. Tolerances may or may not be enough to cover additional needs, so it is important to consider the expressed scope with care. Remember that this technical response can be updated, or questions can be asked to clarify inclusions and exclusions.

Later in this presentation discrete AP budgets per zone will be communicated. If a subject zone is not desired but reflected here, the related equipment count can be subtracted for the purposes of adjusting equipment budgets for planning and provisioning.

Some high-density areas like convention halls, theaters, or seating bowls may be present and divided into “rank” zones. A rank is defined as a subzone where a large space is divided into distinct areas. Equipment installation conditions are similar within a defined rank but different between ranks: perhaps differentiated by design approach or other factors. Each rank will have a defined capacity that is a smaller fraction of a space’s whole capacity.

Additional Notes on WLAN Scope and Project

The scope of this technical response may exceed the intended project scope. In such cases the estimating engineer producing this technical response may have been guided by one or more of the following concerns:

- In cases where scope was uncertain or broad, a reference estimation for all usual or typical areas at a given site was initiated by our sales team.
- The project is a phased construction where the on-site deployment will expand either organically or in steps to some ultimate peak, and this technical response is an attempt to assess the full breadth of a given solution for budgetary purposes.
- Exclusion of adjacent area(s) might have jeopardized the successful coverage of high-density space(s) due to over-stretched coverage or competing systems, which may have necessitated the inclusion of adjacent zones as a technical concern.

This space is reserved for comments from the engineers assessing this site or project's needs. Notes related to scope or project intake assets:

- This dimensioning assumes re-use of existing RUCKUS wireless access points, reducing the AP counts.
- Wi-Fi 7 is backwards compatible with older standards; however, older equipment may not support the newest firmware resulting in a mixed zone environment. Roaming between zones is not seamless so the placement of old and new generation hardware will be a critical design consideration.
- The dimensioning assumed Offices / Meeting Rooms, and Service / Utility Zones will utilize the older hardware, eliminating the need for R670s in the previous version. These areas are still considered in scope but will not appear in the AP tables listing new equipment budgets. Concourse AP count has also been reduced.

Capacity, KPIs and Targets

WLAN Density Capacity Targets and Band Weighting



WLAN Capacity Breakdown	Defined	Note
Target Event Space(s) Capacity	11800	Approximation
Proportion of Persons with Wi-Fi Client Devices	100%	11800
Peak Proportion of Client Devices that Could Associate to Any/All WLAN(s)	95%	11210
Peak Proportion of Attached Wi-Fi Client Devices Actively Consuming Data Concurrently*	50%	5605
Data Rates vs. Airtime: Data Activity Factor (DAF)†	21.7%	1217

*Subject to increase and variation as Wi-Fi clients proliferate and crowd demographics evolve

†DAF’s purpose and impact on dimensioning is described in the “Definitions and Assumptions” section.

WLAN Radio Frequency Bus Attach (Forecast by Commissioning Date)	Band	Note
6GHz Attach Weight	18%	Wi-Fi 6e and 7+
5GHz Attach Weight	75%	Anchor Band
2.4GHz Attach Weight	7%	Legacy/Utility Band
Total	100.0%	

WLAN Radio Frequency Bus Bandwidth	Channel Width MHz	Spectrum Width MHz
5GHz Band	20	420
6GHz Band	40	1200

Table Above:

- Expresses a known or best attempt to assess site capacity and various WLAN take factors like network association and active concurrent user figures

Tables Left:

- Assesses estimated WLAN communications band distribution based on assumed commissioning date (see page 3) and utilizable spectrum

WLAN Traffic Types, Throughput Targets, and Weights

WLAN Per Band Data Service and Target Throughput with Weighting	6GHz Kbps	5GHz Kbps	2.4GHz Kbps	Weight
	Enabled	Enabled	Enabled	
Web Browsing or App Interfacing	4,133	1,000	1,000	20.00%
Email	2,067	500	500	5.00%
In-Browser Internet Video Streaming	8,266	2,000	1,000	10.00%
App Video Streaming	12,399	3,000	2,000	5.00%
Message & iMessage	413	100	100	10.00%
Audio Streaming	2,067	500	300	5.00%
Cloud Syncing & App Push Updating	4,133	1,000	500	10.00%
Social Media Engagement and Streaming	4,133	1,000	1,000	20.00%
Other / Future / VoIP / Etc.	18,599	4,500	1,000	15.00%
Min Throughput per Client - Calculated Based on Services	11,509	2,785	1,043	100.00%
Min Throughput per Client - Rounded Up to Next 100Kbps	11,600	2,800	1,100	
Estimated Average / Typical Throughput per Client - Lower Bound in Mbps	93	23	9	
Estimated Average / Typical Throughput per Client - Upper Bound in Mbps	140	34	14	
Bandwidth Based on Services at 85% UL or DL in Gbps	2.52			
Bandwidth Based on Required Throughput at 85% UL or DL in Gbps	2.60			

These values are important for comparing the RUCKUS solution's target performance expectations to competing vendors who are known to use either average figures or empty facility testing as key metrics. These ranges of performance are what to expect as a typical or average client experience. The range reflects the variety of client devices that may inhabit the site based on a mixture of device capabilities. Only live and operational performance testing can validate the site-specific average, which is often between 8x and 12x of the minimum target KPI. The minimum KPI on the line above these bounded values will be transcended in 90% of cases under fully loaded conditions, approaching the average ranges.

These target minimum values may be overridden if a higher KPI is specified or targeted by the engineer dimensioning the site or project.

WLAN Concept Significant Notes

Rip-and-replace scenarios for updating to Wi-Fi 6e and 7 need to consider existing cable types and supporting switch capabilities because these Wi-Fi standards consume more power and data than many previous era Wi-Fi 4, 5, and 6 products. CAT6 is the new minimum standard at limited ranges with CAT6a as highly recommended to drive 30W+ power needs. RUCKUS products can operate at lower power thresholds but with some performance penalties (see data sheets). Wi-Fi 6e and 7 AP types will exceed data speeds of 1Gbps in some places but not likely in any high-density event spaces: at least not in the near term.

RUCKUS Wi-Fi hardware can operate concurrently on 2.4GHz, 5GHz, and 6GHz radio bands depending on AP product model. Wi-Fi 6 and past era AP models as well as Wi-Fi 6e and 7 AP models in some regulatory domains operate concurrently on 2.4GHz and 5GHz radio bands only.

This dimensioning baselines Wi-Fi 7 (802.11be), which is compatible with legacy Wi-Fi standards. It improves both 2.4GHz and 5GHz data rates and protocol mechanisms over previous standards. It adds 6GHz band and data rates in select regulatory domains.

Wi-Fi 5 (802.11ac, wave 2) is a core standard as the more opportunistic communication mechanisms of Wi-Fi 6, 6e, and 7 mature and proliferate. It too is compatible with legacy Wi-Fi standards. It improves 5GHz capabilities over previous standard Wi-Fi 4 (802.11n).

We are not proposing support for Wi-Fi 2 (802.11b) HR/DSSS rate standards for high-density use, but it may be considered for utility devices such as QR or bar code scanners in limited cases using dedicated RF planning and optimized power calibration

WLAN Concept Significant Notes

Security Standards

- WPA3 is required by the Wi-Fi Alliance for Wi-Fi 6 and 7 certifications
- WPA2-Enterprise version (Private SSIDs Only) can be used for legacy devices
- Open network on-boarding can be accomplished via open SSID, web portal, or another commercial gateway. Choosing a user access gateway may imply performance and solution saturation challenges that decision makers should be aware of before interleaving with a high-density network.

Link symmetry, where a client device both sends and receives at like data rates, is a central goal of our WLAN concepts and solutions. While the Wi-Fi client Tx generally is less powerful than an AP, the AP is reciprocally more sensitive. Expert and environment-specific system calibrations can effectively balance UL/DL throughout the solution.

RUCKUS solution dimensioning starts with a minimum throughput, not an average. Having one client interface at 3000Kbps and another at 250Kbps averages to 1,625Kbps, but one consumer's experience may be unhappy. Ensuring baseline throughputs for all client devices satisfies the spirit of a homogeneous experience in which the consumers do not have to worry about where they are located for ideal WLAN services. Half-duplex, opportunistic communications technologies are inherently probabilistic, so the expectation is that if 90% of data exchanges meet some minimum throughput under peak conditions the consumer experience will be highly positive. The end perception of the system should be like that of tap water: where when a consumer turns a valve, they do not question whether adequate water will flow. As features like OFDMA become more common system-wide experiences should smooth in the years ahead when client device demographics evolve.

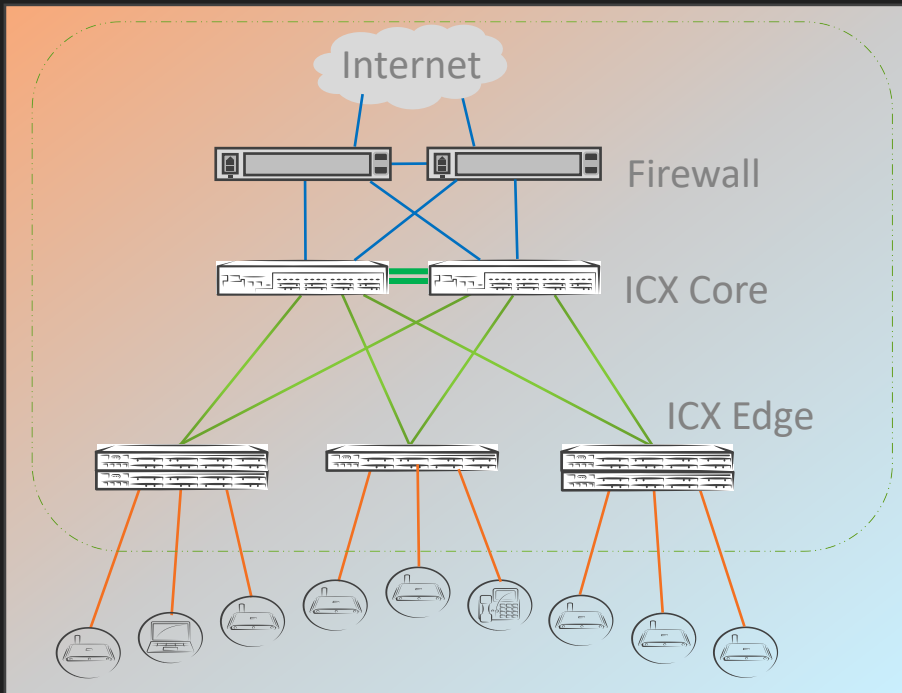
WLAN RF Objectives & Targets

- Best server RSSI target during peak usage and capacity
 - Target metric across any high-density event space(s)
 - $\geq -67\text{dBm}$ for $\geq 95\%$ of scoped areas for the 5 and 6GHz bands and $\geq -70\text{dBm}$ for the 2.4GHz band (if enabled)
 - Target metric across all other zones
 - $\geq -67\text{dBm}$ for $\geq 95\%$ of scoped areas for all bands
- Best server SNR target during peak usage and capacity
 - Target metric across any high-density event space(s)
 - $\geq 30\text{dB}$ for $\geq 90\%$ of the area for the 6GHz bands
 - $\geq 20\text{dB}$ for $\geq 90\%$ of the area for the 5 GHz bands: typically $\geq 30\text{dB}$
 - $\geq 10\text{dB}^*$ for $\geq 90\%$ of the area(s) for the 2.4GHz band (if enabled): typically $\geq 20\text{dB}^*$
*subject to BeamFlex® gains
 - Target metric across all other zones
 - $\geq 20\text{dB}$ for $\geq 90\%$ of the scoped areas for all bands: typically $\geq 30\text{dB}$
- Maximum Total RSS
 - In compliance with RF exposure requirements

Photo Markups and Concepts

ICX LAN Recommended Concept

The recommended design for the LAN supporting the Wi-Fi system is a two-unit redundant core. The core units will be equipped with 10 GbE fiber interfaces for connectivity to IDF Edge/POE switches. There will be copper POE switches within each IDF that will connect to the core devices via qty-2 10 GbE fiber. The Edge/POE switches will provide connectivity and power to APs serviced from that IDF.



Core

- The Core will consist of two (2) ICX7850-48F switches, with 2 X 10 GbE fiber connectivity to each IDF edge switch.
- The Core devices will be providing L2 connectivity to the site Firewall/Router/Controller.
- The Core devices will have redundant power and fans.

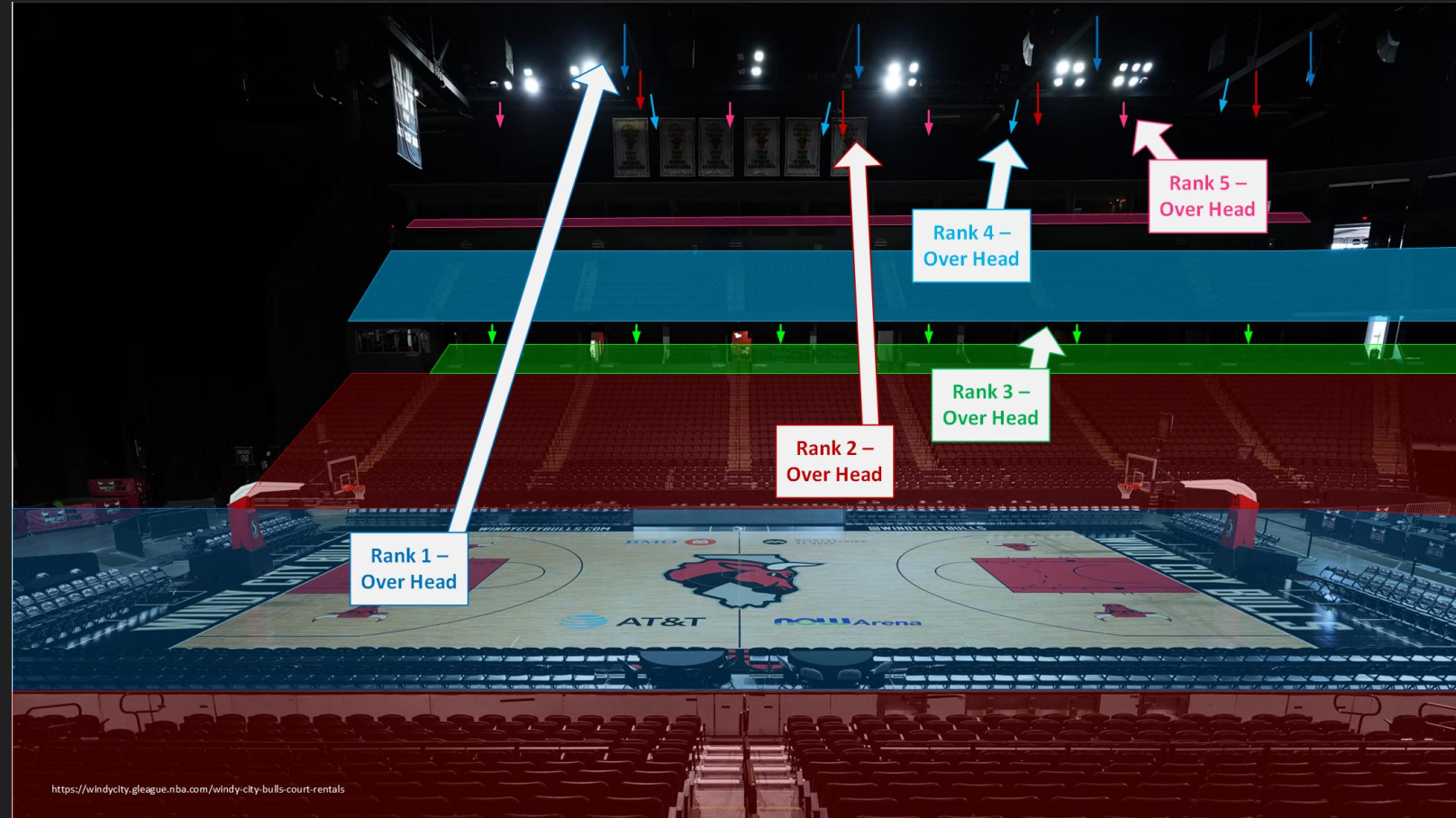
Edge/Access

- The Edge/Access layer will consist of ICX7550/8200 series edge/POE switches. These switches provide the following:
 - 2.5 Gbps RJ-45 PoE to APs
 - 10 GbE uplink SFP/SFP+ ports
 - 802.3bt

The image markup (right) provided is a concept of how we in RUCKUS Professional Services (RPS) suggest covering a key site space. It is not authoritative. Any concepts are subject to validation through site survey and / or construction feasibility exercises.

If the concept solution is over head type, consider the area of coverage boundaries and their marked over head fixed assets where we might attach the solution. Exposed APs can be skinned or painted as needed to blend in (see product warranties).

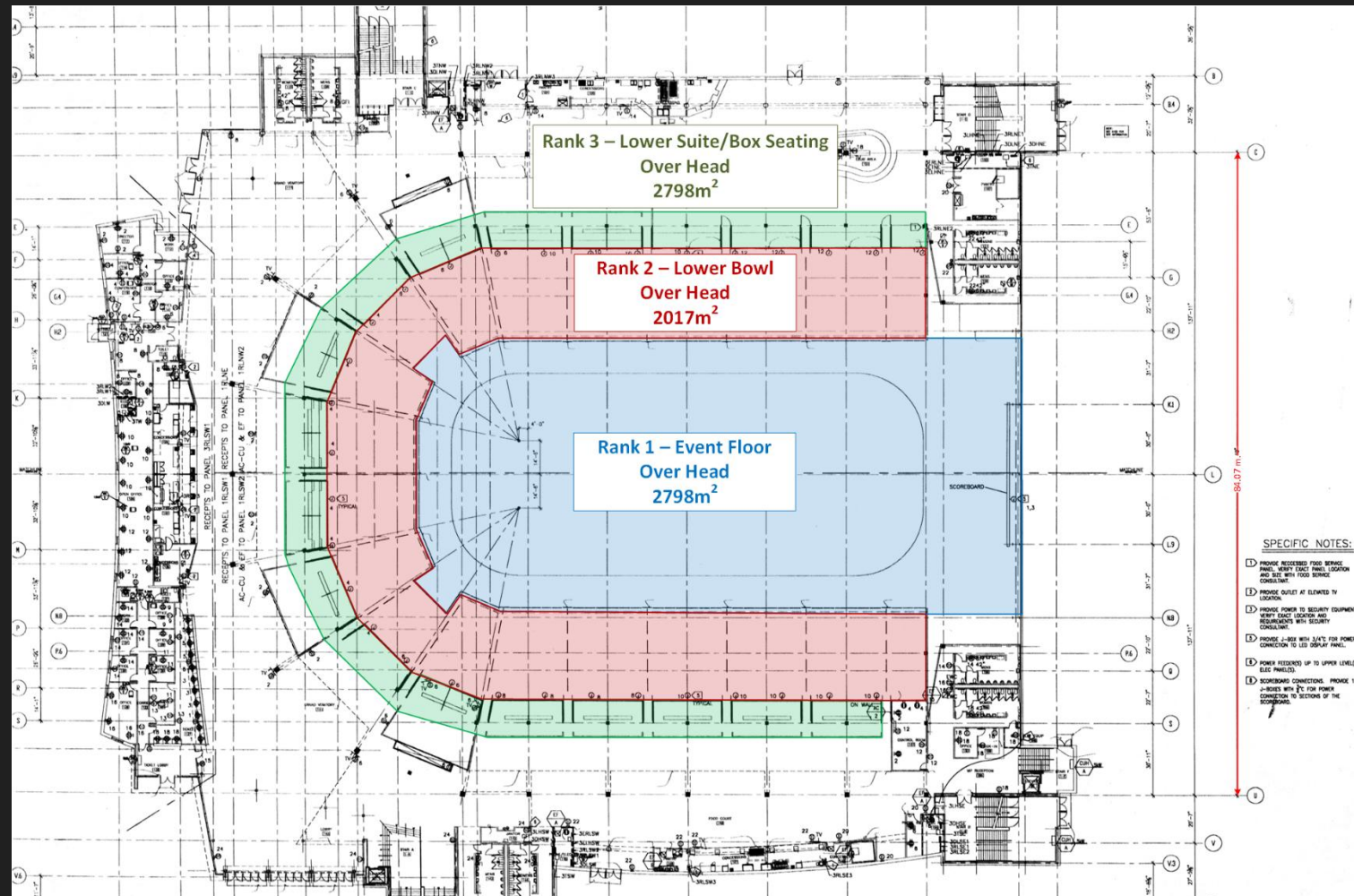
If the concept solution has areas of coverage suggesting APs placed under objects, consider the feasibility of placing equipment at foot, knee, or hip level in the designated area(s). APs can be either rugged type, enclosed, or obscured as needed for security.



Note: Arrows are for illustrative purposes only, and do not correlate to AP counts. For AP models and counts see the table on page “WLAN AP Breakdown Per Floor, Zone, or Rank”

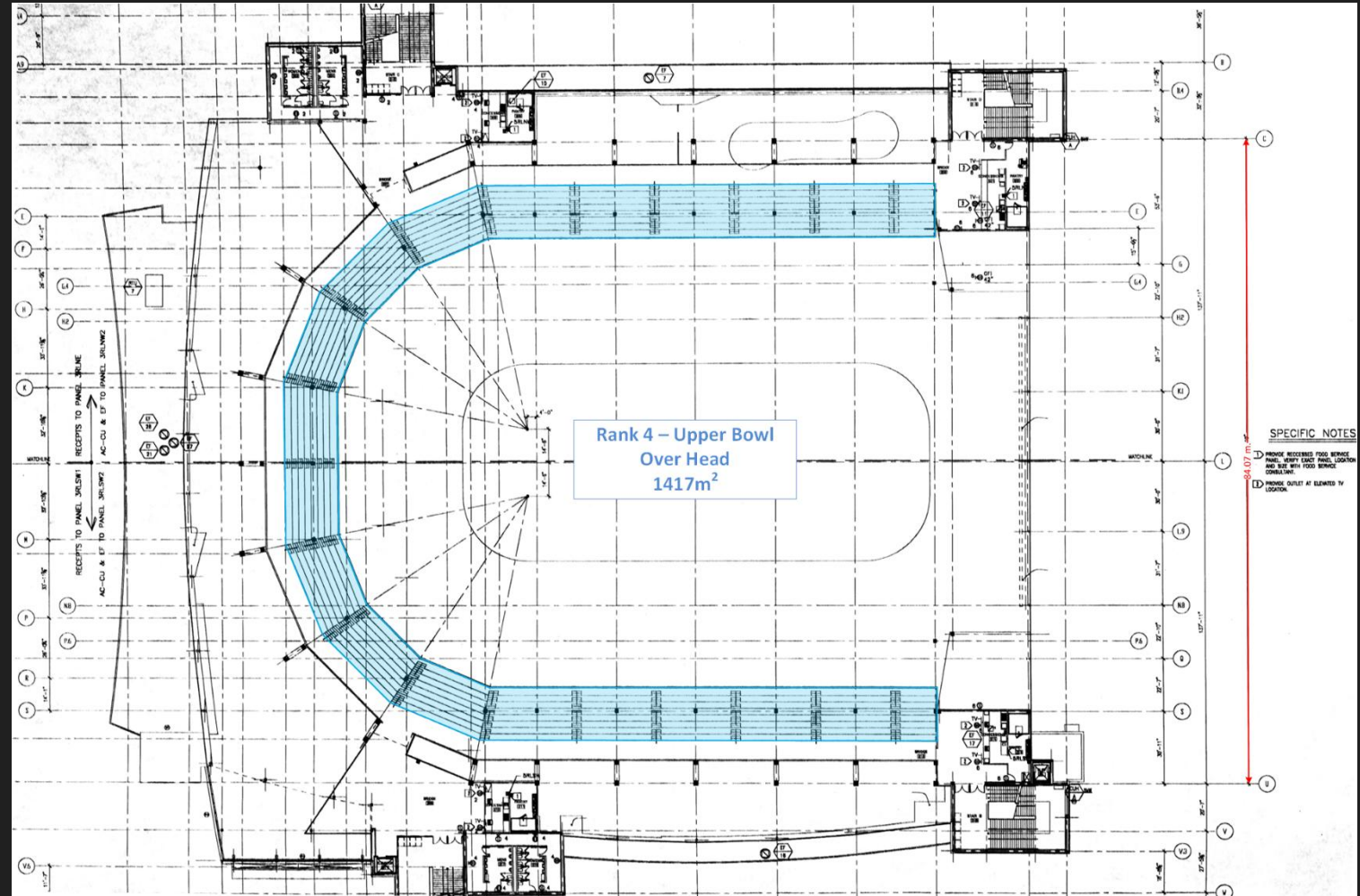
Each bounding box depicts a separate coverage sub-zone or rank of coverage for which a design type has been hypothesized: over head or under objects. Final zone definitions follow a site survey and full design process that includes RF simulations with real world calibrations where possible.

Description:
The Event Floor, Lower Bowl, and Lower Suites/Box Seating polygons are shown on the Level 2 floor plan to the right. All ranks will be serviced by APs mounted overhead to the truss and/or catwalk.



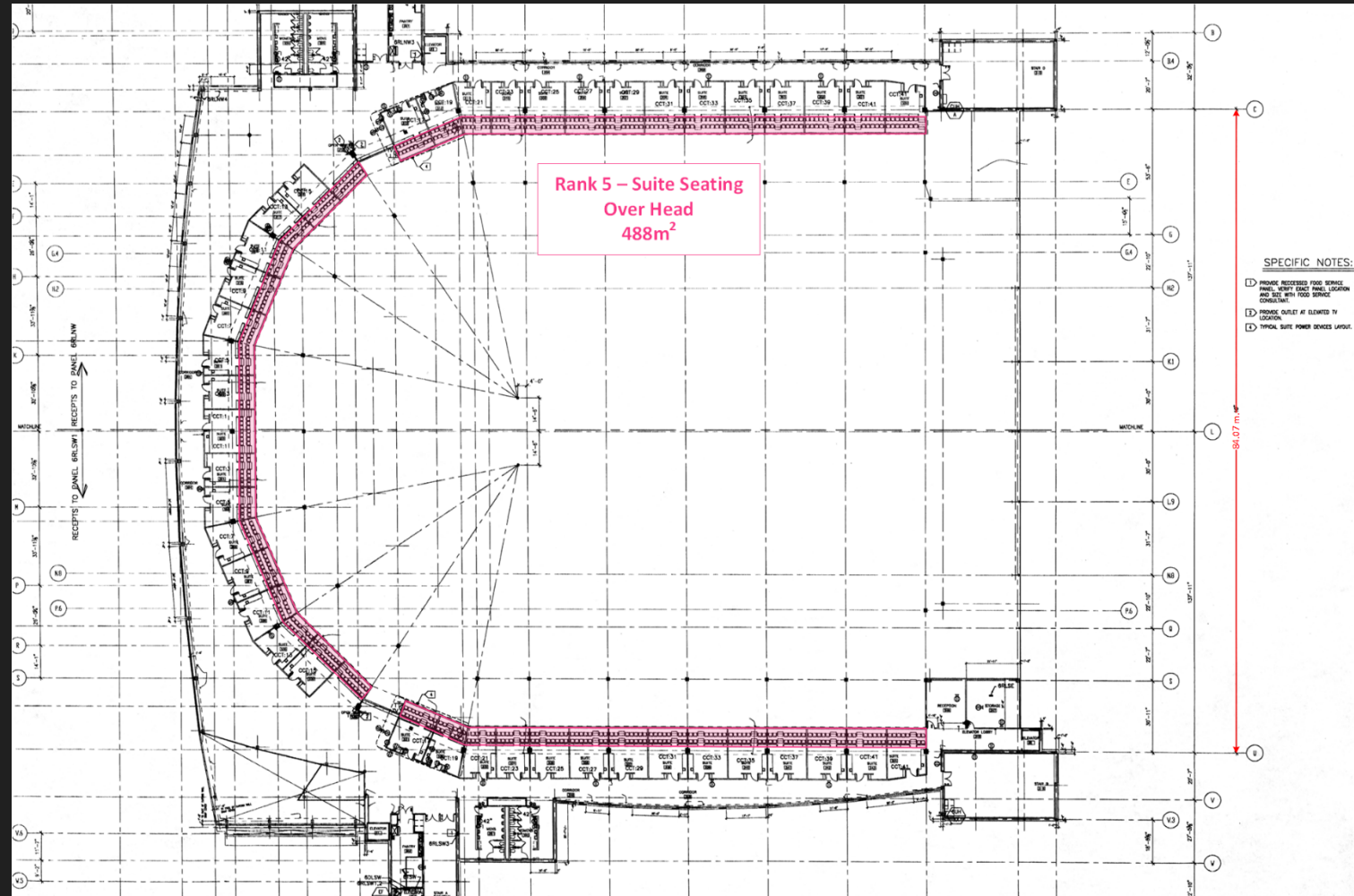
Each bounding box depicts a separate coverage sub-zone or rank of coverage for which a design type has been hypothesized: over head or under objects. Final zone definitions follow a site survey and full design process that includes RF simulations with real world calibrations where possible.

Description:
The Upper Bowl polygon is shown on the Level 3 floor plan to the right. This rank will be serviced by APs mounted overhead to the truss and/or catwalk.



Each bounding box depicts a separate coverage sub-zone or rank of coverage for which a design type has been hypothesized: over head or under objects. Final zone definitions follow a site survey and full design process that includes RF simulations with real world calibrations where possible.

Description:
The Suite Seating polygon is shown on the Level 4 floor plan to the right. This rank will be serviced by APs mounted overhead to the truss and/or catwalk. This rank may not be necessary, depending on RF coverage from the suite APs.



Equipment Budgets



ICX LAN High-Level



LAN Concept - Critical Information	
Combined Seating Bowl or Event Space Spectator Capacity Cap or Target	11,800
Number of Wi-Fi Users Actively Consuming Data	5,605
Number of IDFs Factored – Seating Bowl/Event Space	5
Number of IDFs Factored – Non-Bowl Supporting Zones	9
Number of Core LAN Switches	2
Number of Access/Edge LAN Switches	14
Switch-to-Switch Interface	56, 2X10 Gbps SM Fiber
Switch-to-AP Interface	101, 1X2.5 Gbps Copper RJ45
Power-over-Ethernet Requirements	802.3bt

Table Above:

Rows 4 and 5 suggest some number of factored IDFs, which are heuristically idealized numbers and not assertive of any current IDF counts. Only discovery from an engineering site survey with an installation feasibility exercise or other like effort can settle final IDF counts.

Please review the switch-to-switch and switch-to-AP interfaces to assure expectations.

ICX LAN Switching Breakdown Per Zone



Venue Space	Estimated Number of IDFs	802.3af APs	802.3at APs	802.3bt APs	Additional Switch Ports	Total Ports per IDF	Average POE Budget per IDF	Recommended Switch Count	Recommended Switch per IDF
Offices / Meeting Rms, Locker Rooms, Service/Utility Zones, etc.	3	0	0	7	0	3	171 W	3	1 x 8200-C08ZP
Ticketing, Entry Points, Dining / Club, etc.	3	0	0	12	0	4	228 W	3	1 x 8200-C08ZP
VIP Suites	3	0	0	22	0	8	456 W	3	1 x 8200-24ZP
Concourse, Rank 3 Lower Suite/Box Seats	3	0	0	17	0	6	342 W	3	1 x 8200-24ZP
Ranks 1, 2, 4 & 5, Event Floor, Lower bowl, Upper Bowl, Suite Seating	2	0	0	43	0	22	1254 W	2	1 x 7550-24ZP

Table Above: No significant comments

LAN ICX Budget



ICX Name	Part	Median Total	Low Tolerance at - 15%	High Tolerance at + 15%	Recommended Spares	Median Total + Spares	Low Tolerance + Spares	High Tolerance + Spares
ICX 7850-48F	ICX7850-48F-E2	2	2	2	0	2	2	2
ICX 7550-24ZP	ICX7550-24ZP-E2	2	2	2	0	2	2	2
ICX 8200-24ZP	ICX 8200-24ZP	6	5	7	0	6	5	7
ICX 8200-C08ZP	ICX8200-C08ZP	6	5	7	0	6	5	7

Table Above:

The **Median Total** (column 3 **salmon**) represents a target ICX count to which we plan to engineer the solution. However, if an engineering site survey has not been conducted to settle precision scope, anticipate the high tolerance ICX counts (column 5 **yellow**) as likely for planning.

Opting for the **High Tolerance + Spares** (column 9 **yellow**) is highly recommended for new construction projects where part breakage during installation is common. This option also adds some standby utility for mission critical projects needing rapid break-fix scenarios once the solution is operational.

WLAN High-Level



Critical Wi-Fi Features	Note, Value, or Statistic
Concept or Solution Confidence Factor (±)	15%
Minimum AP Count Based on Tolerance	81
Maximum AP Count Based on Tolerance	113
Maximum AP Count Based on Tolerance + Spares	119
Performance on 6GHz	Average 93Mbps to 140Mbps; peak time, 90th percentile 11.6Mbps
Performance on 5GHz	Average 23Mbps to 34Mbps; peak time, 90th percentile 2.8Mbps
Performance on 2.4GHz	Average 9Mbps to 14Mbps; peak time, 90th percentile 1.1Mbps
Recommended Egress Circuit for the WLAN System	2.6Gbps

Table Above:

Note the solution tolerance (row 2) where AP counts are expected to fall into a range expressed on rows below it (rows 3 & 4).

We advise for any early planning, provisioning, or quoting to select either the maximum tolerance count or the maximum tolerance count + spares (rows 4 or 5).

Observe performance expectations per band are summarized from earlier tables (rows after 5).

Consider our estimate of internet circuit size based on the solution’s capacity (last row).

WLAN AP Breakdown Per Floor, Zone, or Rank

Zone/Room Name or Coverage Rank	Zone Count	Square Area	Area Units	Zone Capacity	Capacity Description	Base 6GHz Thpt. Mbps	Base 5GHz Thpt. Mbps	Base 2.4GHz Thpt. Mbps	AP Type 1	AP Type 1 Count	AP Type 3	AP Type 3 Count	Cap. to AP Ratio
Dining / Club	1	Not Def.	Not Def.	Not Def.	Not Def.	11.6	2.8	1.1	R770	3	T670-SN	0	Not Def.
Public Lobby / Gate / Ticketing	3	Not Def.	Not Def.	Not Def.	Not Def.	11.6	2.8	1.1	R770	6	T670-SN	0	Not Def.
Concourse	2	Not Def.	Not Def.	Not Def.	Not Def.	11.6	2.8	1.1	R770	10	T670-SN	0	Not Def.
Outdoor Plaza / Entry Point	3	Not Def.	Not Def.	Not Def.	Not Def.	11.6	2.8	1.1	R770	3	T670-SN	0	Not Def.
Home Locker Room	1	Not Def.	Not Def.	Not Def.	Not Def.	11.6	2.8	1.1	R770	3	T670-SN	0	Not Def.
Lockers / Change Rooms	8	Not Def.	Not Def.	Not Def.	Not Def.	11.6	2.8	1.1	R770	4	T670-SN	0	Not Def.
VIP Suites	44	Not Def.	Not Def.	Not Def.	Not Def.	11.6	2.8	1.1	R770	22	T670-SN	0	Not Def.
Rank 1 - Event Floor	1	2798	Units m^2	4283	Estimated	11.6	2.8	1.1	R770	0	T670-SN	17	252
Rank 2 - Lower Bowl	1	2017	Units m^2	3088	Estimated	11.6	2.8	1.1	R770	0	T670-SN	13	238
Rank 3 - Lower Suite/Box Seats	1	988	Units m^2	1513	Estimated	11.6	2.8	1.1	R770	0	T670-SN	7	216
Rank 4 - Upper Bowl	1	1417	Units m^2	2169	Estimated	11.6	2.8	1.1	R770	0	T670-SN	9	241
Rank 5 - Suite Seating	1	488	Units m^2	747	Estimated	11.6	2.8	1.1	R770	0	T670-SN	4	187

Table Above:

The provided table captures the scope previously expressed and relates median AP counts per each floor, zone, or defined rank (sub-zone).

Various dimensioning methods and AP types are used to settle either coverage or density zones, so variables in some columns will display “Not Def.” where a metric or part was not needed or used.

WLAN AP Budget



AP Name	Part	Mount	PoE	Median Total	Low Tolerance at -15%	High Tolerance at +15%	Recommended Spares	Median Total + Spares	Low Tolerance + Spares	High Tolerance + Spares
R770	901-R770-XX00	902-0120-0000	803.3bt5/PoH/UPoE	51	43	59	3	54	46	62
T670-SN	901-T670-XX51	902-0125-0000	803.3bt5/PoH/UPoE	50	42	58	3	53	45	61

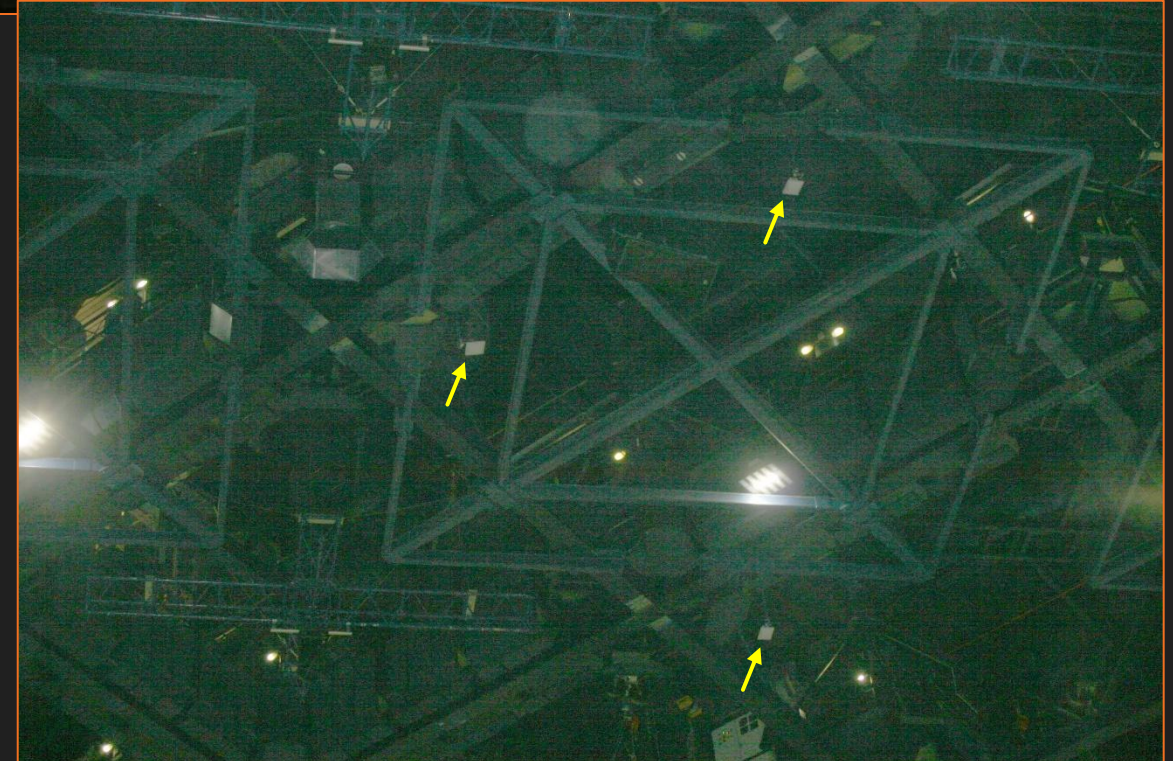
Table Above:

The **Median Total** (column 5 **salmon**) represents a target AP count to which we plan to engineer the solution. However, if an engineering site survey has not been conducted to settle precision scope, anticipate the high tolerance AP counts (column 7 **yellow**) as likely for planning.

Opting for the **High Tolerance + Spares** (column 11 **yellow**) is highly recommended for new construction projects where part breakage during installation is common. This option also adds some standby utility for mission critical projects needing rapid break-fix scenarios once the solution is operational.

Curated Examples

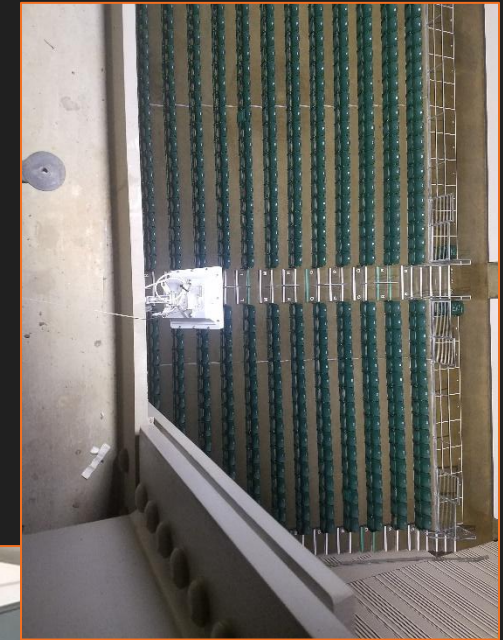




These images show RUCKUS internal, directional antenna type APs in an indoor high-density scenario (yellow arrows). The top photo is the ceiling of an arena as normally lit, where APs are functionally invisible. The bottom photo has light levels altered to show how unskinned / unpainted APs embed in the environment.

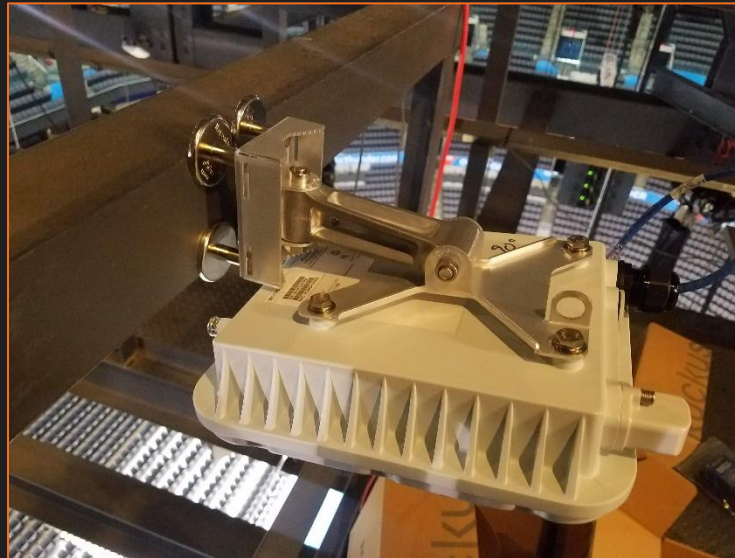
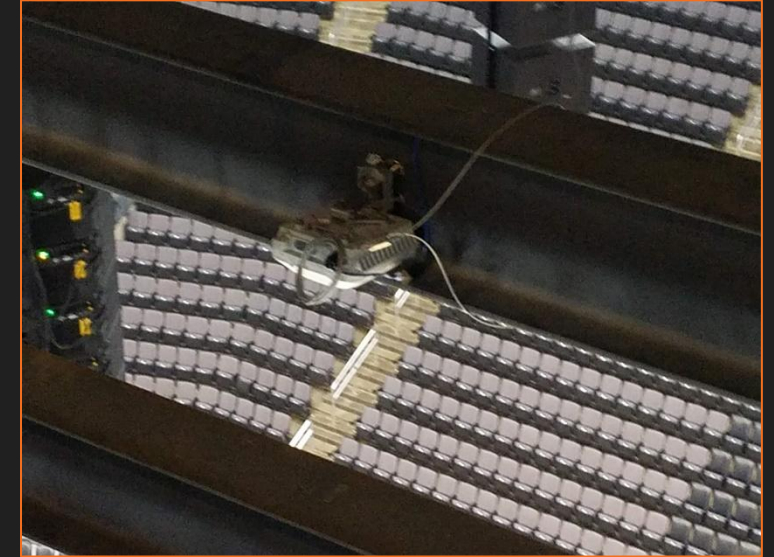
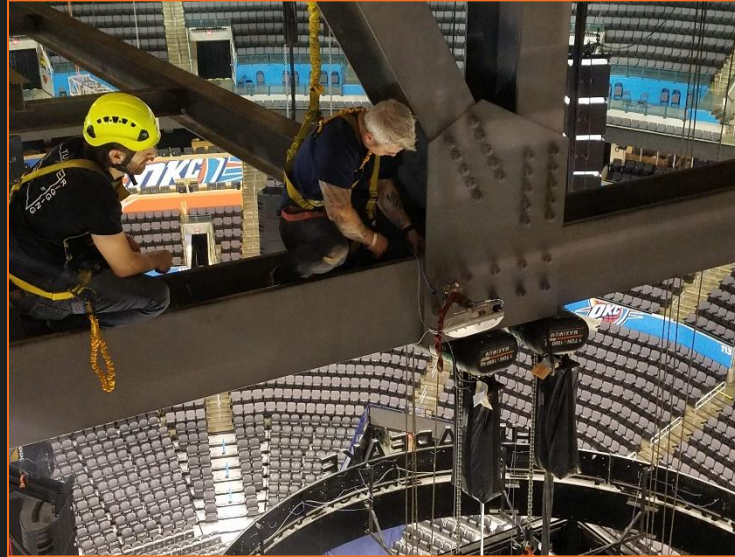
AP Attachment Over Head Misc.

These images show RUCKUS internal, directional antenna type APs in mixture of over head scenarios where attachment to beam or wall was necessary, illustrating the flexibility of our any-angle AP mount (902-0125-0000).



AP Attachment Over Head Via Magnet or Beam Clamp

Although rare, RUCKUS internal, directional antenna type APs can and have been attached to beam or truss via 25lb magnets and / or beam clamps as seen here. Note the inclusion of the safety tether is critical in these scenarios.



RUCKUS ruggedized APs can be deployed in numerous outdoor scenarios, attaching to beams, pipes, c-channel (Unistrut), walls, and truss. The any-angle bracket (902-0125-0000) allows for strapping or bolting to objects.



AP Attachment Ruggedized Indoor

It is common to use RUCKUS ruggedized directional type APs indoors for many different reasons. Here a few examples are for covering ticketing entry points, service areas, and for shaping coverage from walls where either high-density coverage is the aim or where ceiling attachment is less feasible.



Indoor type RUCKUS APs have considerable attachment flexibility when paired with their native security bracket (902-0120-0000). They can attach to ceiling, wall, c-channel (Unistrut), or even electrical boxes. The bracket also allows for securing and locking the AP to its mount.

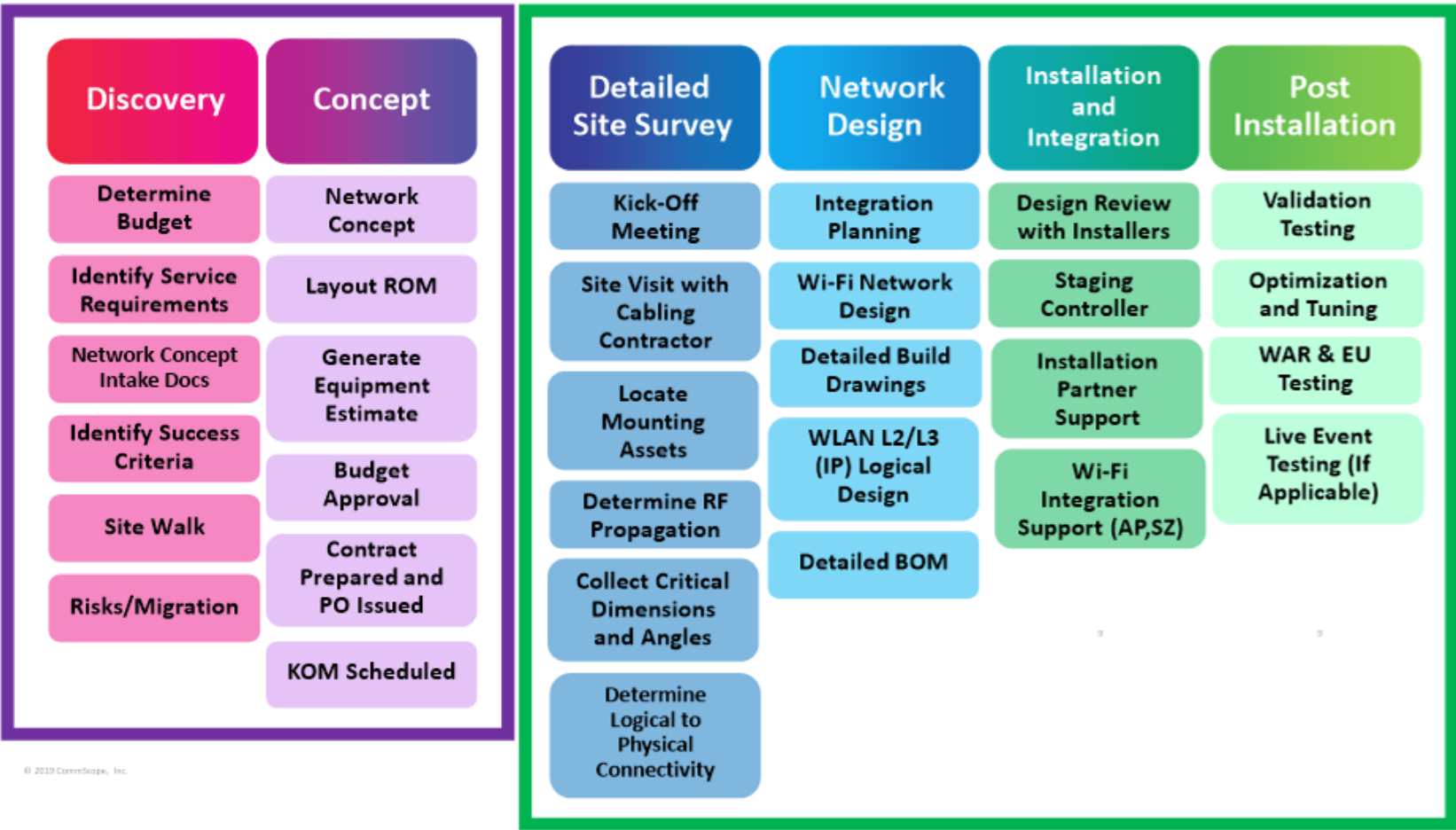


General Project Flow

Milestones

Bid Phase

Design & Deploy Phase



After a project is awarded or engaged commercially, RUCKUS Professional Services and other project managers will coordinate a kick-off meeting (KOM), from which point RPS engineers and partners will be committed to a negotiated scope. Any related concepts and budgets found withing this technical response will provide guidelines for said activities. Task progressions and scope adjustments will be communicated through project managers for tracking and resource dispatching.

Usual SoW for a High-Density or Complex Project

Design Intake

- AutoCAD or other drawing type triage and processing
- Data services requirements settling
- Solution typing and conceptualization for field exploration

Comprehensive Onsite Survey

- Site survey with scope refining and construction feasibility discussion
- Discuss desired or suggested network architecture: authentication, policy, service enforcement, VLANs, SSIDs, etc.
- EM material propagation testing for later simulation calibrations

Network Design

- LAN aggregation and edge IP network design
- EM simulation: heat map(s) sandboxing of scoped coverage areas
- Controller and AP configuration development
- Construction documentation development
- Customer/Partner design review with change request process

Integration and Installation Support

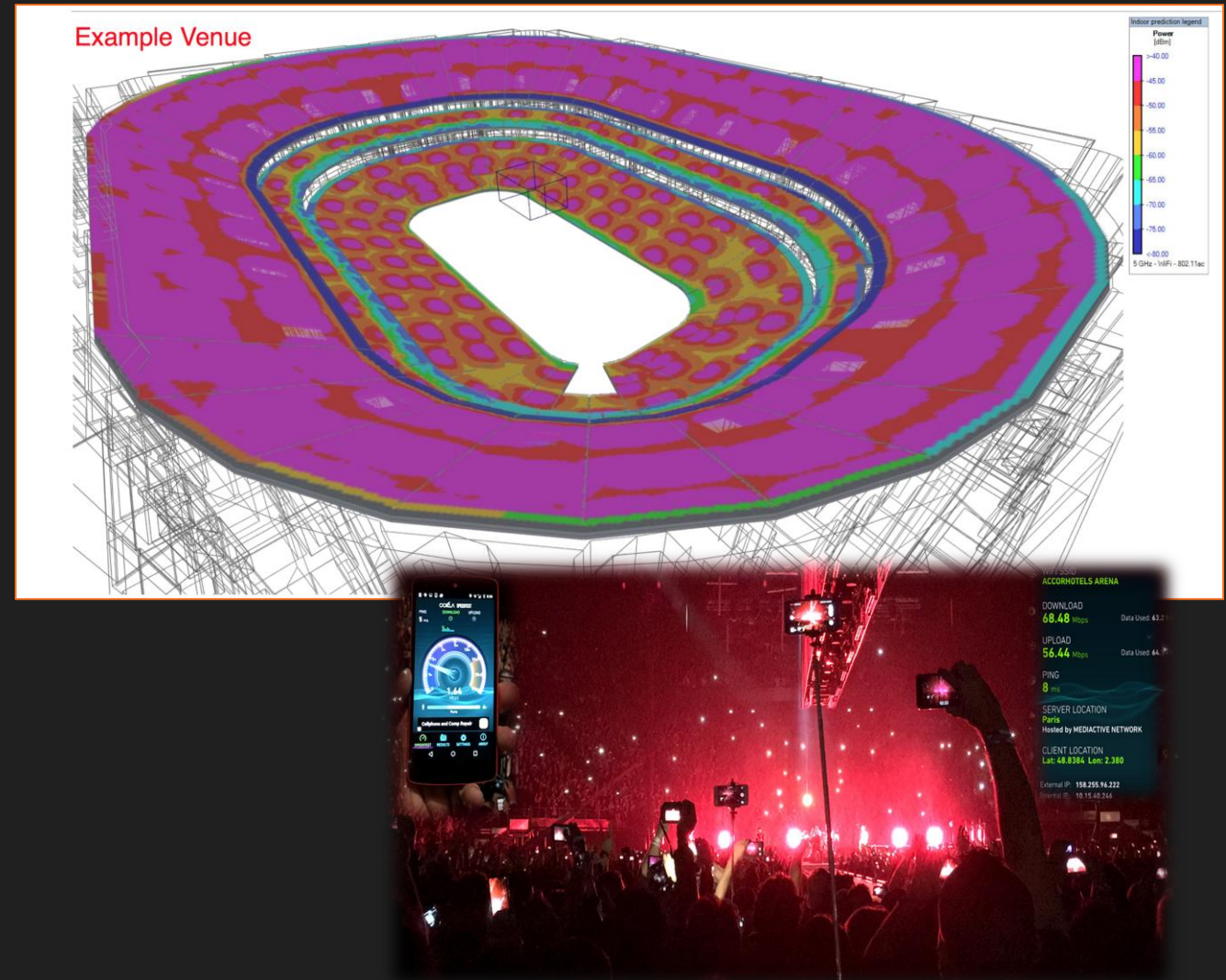
- Installation crew orientation and construction discussion
- Equipment staging and installation oversight checkpoints
- Integration of the controller and any analytics engines into the core

Design Validation Testing & Optimization

- Design and validation test plan development
- Post-commissioning test execution and early reporting

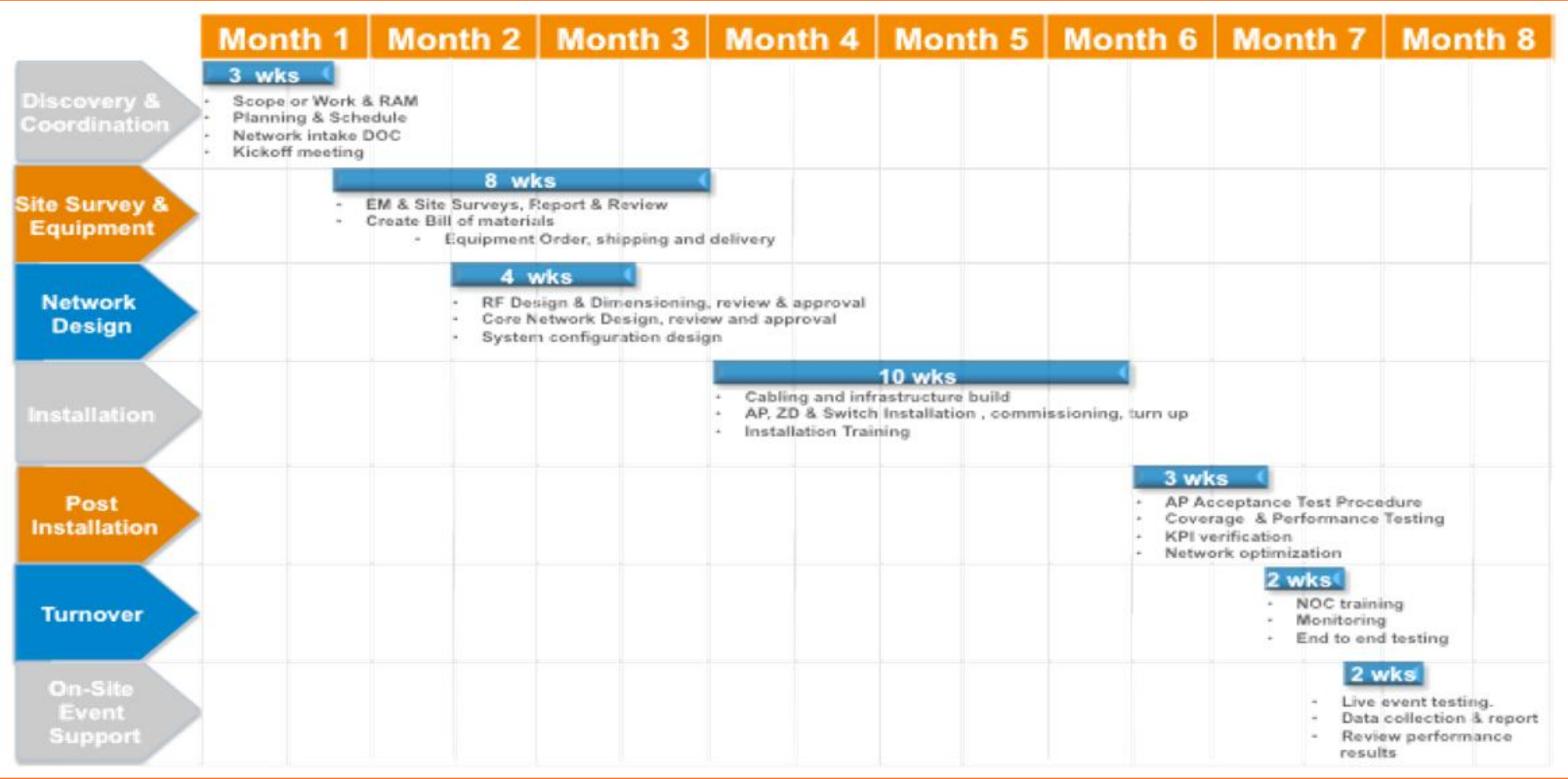
Live Environment Testing

- Develop test plan
- Prepare tools and systems for live and remote data collection
- Execute test, analysis, reporting, and tuning loop(s)



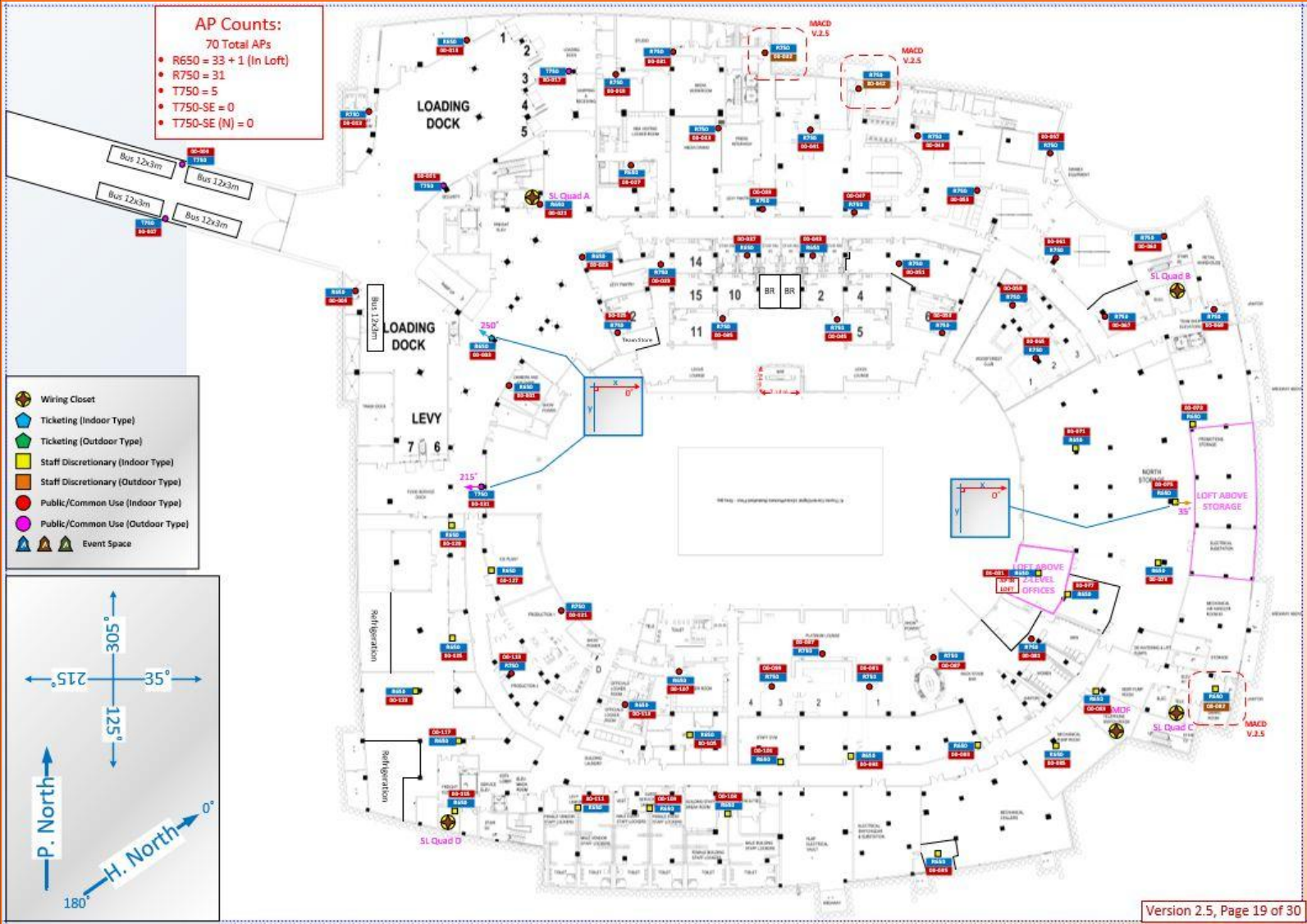
Example Deployment Timeline

The timeline below is typical for a large or complex project. It is provided for understanding the approximate flow of tasks. It does not represent any specific negotiated or actual project timelines related to this subject site or project.



Examples of RPS Design Assets

Design Drawing Example



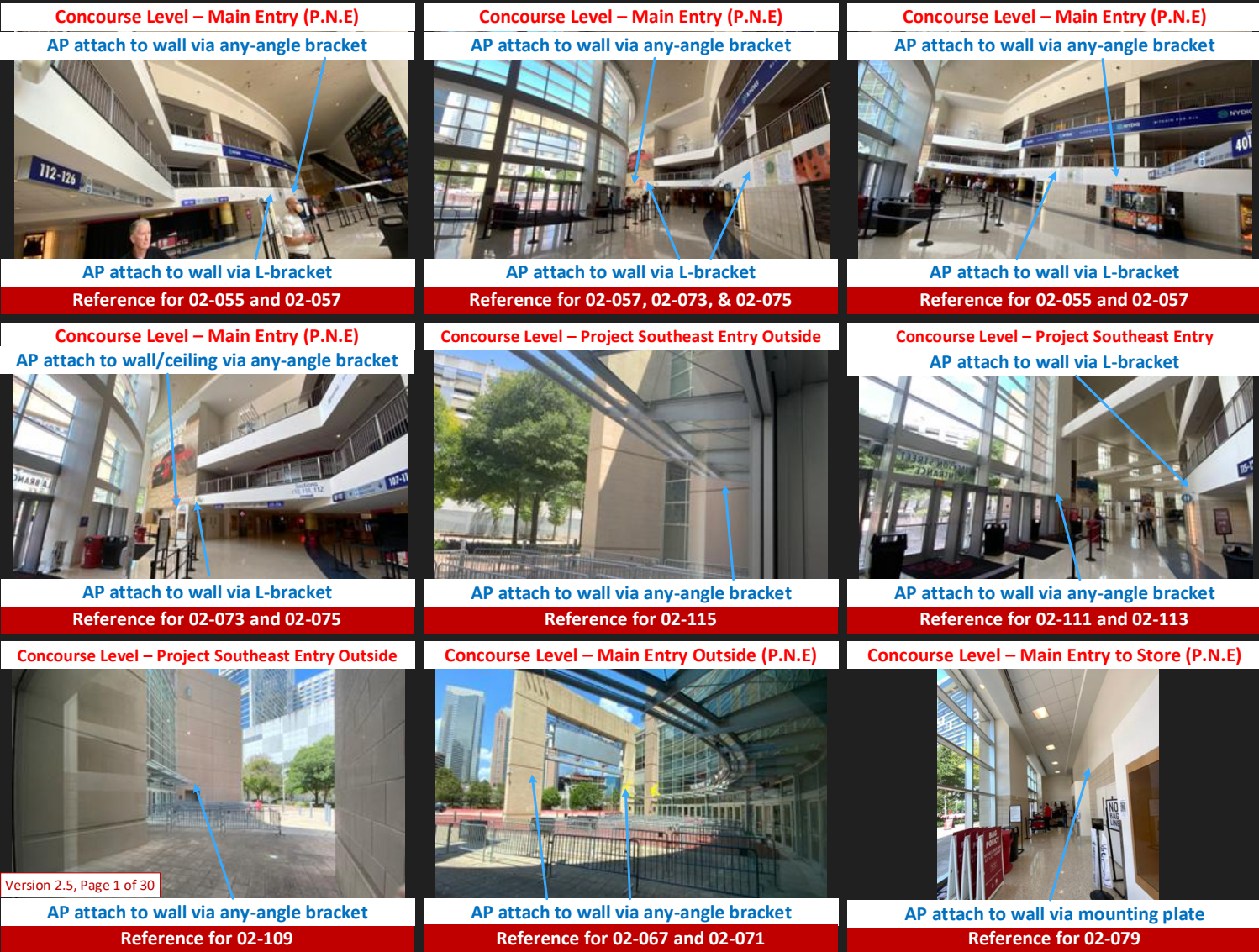
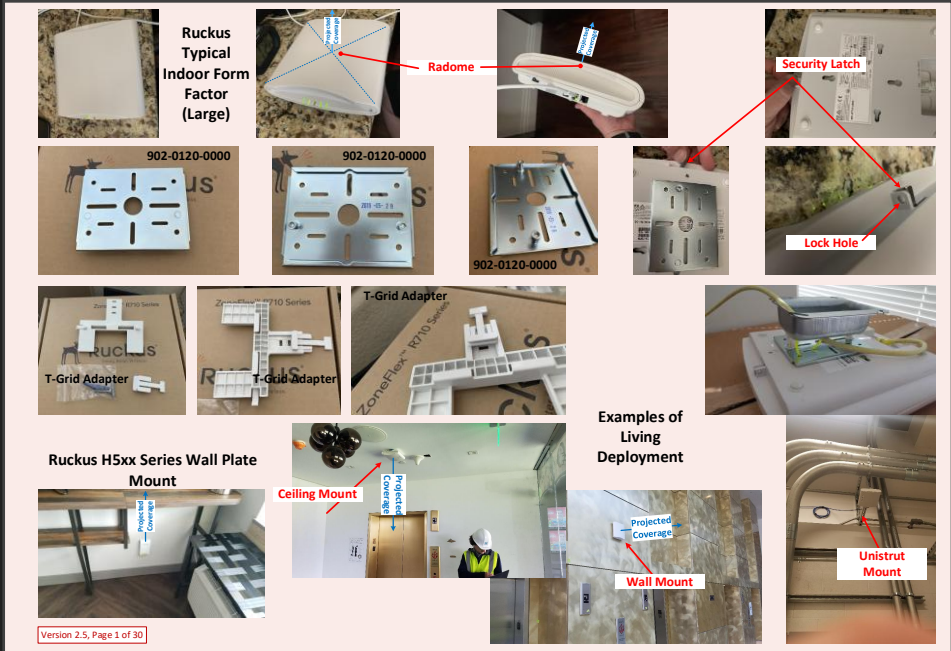
RUCKUS Professional Services design productions include scaled layout drawings of considerable polish. They make clear: AP layouts, types, names, tilts, and azimuths; as well as communication closet locations. These are designs of reference for both the installation and the documentation of the network.



Design Photo Markups Example

Right: RUCKUS Professional Services design productions also include detailed key photo markups, the intention of which is to assist installation teams around interpreting the drawing layouts for equipment placement.

Below: Our primer photo markups are targeted at installation teams to familiarize them with RUCKUS equipment.



Design Construction Table

As companion to photo and drawing assets, a parallel spreadsheet of every access point is delivered for the purposes of assisting installation teams, documenting equipment identity, defining configurations, and serving as what is sometimes called the as-built document. This asset is foundational to documenting the solution for future support activity.

H	O	U	V	W	X	Y	Z	AA	AB
		Utility	Installation						
Name	Recommended PoE Standard	Floor height (m)	Approximate AP Mounting Height (m)	Down-Tilt From X-Axis (Horizon)	Up-Tilt From Y-Axis Tilt (Down)	Azimuth from Heading North in Degrees	Mount Prototype	Mount Type	Mount Part
01-001_R650	802.3at Type 2 [PoE+]	6.65	≈2.7	Down 90°	0°	N/A - Pointing Down	(Ceiling) T-grid - Recessed type	T-grid adapter	902-0120-0000
02-001_T750SE	802.3bt Class 7 (PoE Out, No SFP)	3.51	≈2.7	Down 40°	Up 50°	125	(Wall) Interior - Surface mount	Any-Angle Bracket	902-0125-0000
02-003_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Wall) Interior - Surface mount	Mount plate or posts	902-0120-0000
02-005_T750SE	802.3bt Class 7 (PoE Out, No SFP)	3.51	≈3	Down 40°	Up 50°	135	(Wall) Exterior, angle - Surface mount	Any-Angle Bracket	902-0125-0000
02-007_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Ceiling) Mount to sheetrock or concrete	Mount plate or posts	902-0120-0000
02-009_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Details TBD) Ceiling mounted	Mount plate or posts	902-0120-0000
02-011_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Ceiling) Mount to sheetrock or concrete	Mount plate or posts	902-0120-0000
02-013_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Wall) Interior - Surface mount	Mount plate or posts	902-0120-0000
02-015_T750SE	802.3bt Class 7 (PoE Out, No SFP)	3.51	≈3	Down 35°	Up 55°	235	(Wall) Exterior, angle - Surface mount	Any-Angle Bracket	902-0125-0000
02-016_R650	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Details TBD) Ceiling mounted	Mount plate or posts	902-0120-0000
02-017_R650	802.3at Type 2 [PoE+]	3.51	≈2.7	0°	Up 90°	295	(Wall) Interior - Wall plate	Mount plate or posts	902-0120-0000
02-019_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Wall) Interior - Surface mount	Mount plate or posts	902-0120-0000
02-021_T750SE	802.3bt Class 7 (PoE Out, No SFP)	3.51	≈6	Down 90°	0°	31	(Details TBD) Ceiling mounted	Any-Angle Bracket	902-0125-0000
02-023_T750SE	802.3bt Class 7 (PoE Out, No SFP)	3.51	≈6	Down 90°	0°	31	(Details TBD) Ceiling mounted	Any-Angle Bracket	902-0125-0000
02-025_T750SE	802.3bt Class 7 (PoE Out, No SFP)	3.51	≈6	Down 90°	0°	31	(Details TBD) Ceiling mounted	Any-Angle Bracket	902-0125-0000
02-027_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	0°	Up 90°	305	(Wall) Interior - Wall plate	Mount plate or posts	902-0120-0000
02-029_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Details TBD) Ceiling mounted	Mount plate or posts	902-0120-0000
02-031_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Ceiling) Mount to sheetrock or concrete	Mount plate or posts	902-0120-0000
02-033_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	0°	Up 90°	305	(Wall) Interior - Wall plate	Mount plate or posts	902-0120-0000
02-035_R750	802.3at Type 2 [PoE+]	3.51	≈2.7	Down 90°	0°	N/A - Pointing Down	(Details TBD) Ceiling mounted	Mount plate or posts	902-0120-0000

Modeling and Simulation Methodology

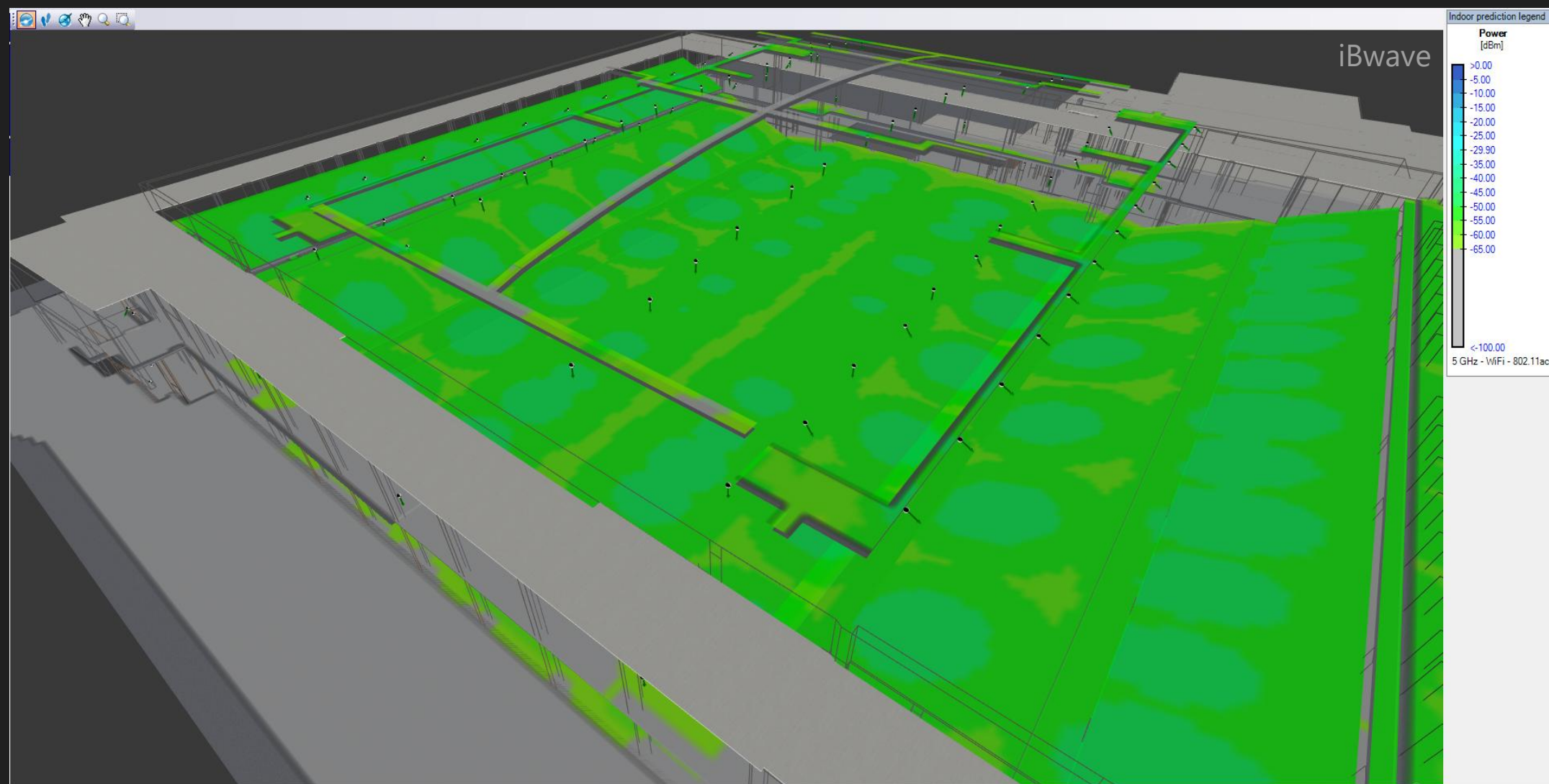
To develop calibrated RF models, Ruckus has pooled real world testing data: measured during live high-density events; serving clients with mobile devices; and under the influences of many other access points of a fully deployed environment. This process removes the uncertainty of theorizing performance results because the data is empiric and throughput curves can be extracted from a sandbox that is live.

Collected data was used to devise propagation model functions appropriate for high-density or non-high-density venues and campuses. Design type is based on service requirements and RPS may assert one or more type of solution at a site to achieve the desired performance of a WLAN system. Design paradigms are generally classified as “coverage oriented” or “density oriented”. A site can and often does have mixed paradigms depending on the zone types discovered.

iBwave Design, a 3D, RF propagation simulation tool is used to model complex venues and to simulate the effects of different AP locations, orientations and power settings. Calibration of RF in high-density or complex venues presents a sizable challenge that 3D modeling is uniquely powerful to solve. Use of planar planning tools such as Ekahau or AirMagnet produce coverage maps that may be radically out of alignment from real world heat maps due to trigonometric and body loss factors, which can’t be worked around in these tools.

In specific circumstances, complex campuses mixed with outdoor spaces and other examples of simpler infrastructure can be more rapidly modeled and simulated in full or part using tools like Ekahau or AirMagnet. RPS design engineers can decipher which tool is best for a given simulation and will leverage the best tool for the job.

Example Stadium 5GHz – Over Heads (OH)



Definitions and Conventions



RUCKUS Professional Services is providing budgetary guidance for equipment allocation using methods based on real-world outcomes and direct experience at both typical-use and high-density venues. The budgets provided are only as valid as the resolution of the information provided to work from for conceptual purposes. Significant changes to scope or requirements will invalidate the budgets provided, and there is no guarantee that the prescribed equipment can realistically integrate into a subject infrastructure. Only a site survey or significant knowledge transfer (new construction) resulting in a final design can resolve full equipment needs. Please note that site surveys and designs for venues of large magnitude or complexity like arenas, stadiums, cities, large campuses, or exhibition centers are labor intensive and deserving of adequate effort to answer specific needs.

As part of budgeting a $\pm$ tolerance has been set to account for unknowns in infrastructure layout and minor scope adjustments. While our budgeting output provides the equipment allocation to cover a subject venue, we cannot know prior to site survey or knowledge transfer whether placement and mounting assets exist to support a suggested concept. Wireless access point locations are aligned as close as possible with infrastructural assets during the site survey / knowledge transfer and design process, so final equipment requirements are unlikely to align exactly with the median estimates provided. For the sake of pre-procurement please assume that the high tolerance equipment budget is the required equipment budget for planning purposes. Should the project require less equipment, costs will then reduce rather than increase.

General

RUCKUS offers professional services to assist at all levels of development and integration for both LAN and WLAN solutions. The budgeting methods mentioned previously were created from professional services projects and are RUCKUS / CommScope proprietary information. The information and experience at the heart of our dimensioning methods come at considerable cost and resource investment, so please do not share our estimates, resulting proposals, or estimating methods with our competition. As a matter of integrity RUCKUS prides itself of offering transparent information to its customers, so that our budgets are easily explainable and defensible. We understand that every business relationship bears risk, but we would like to arm our customers, potential or otherwise, with as much confidence as possible.

AP placement is a concern for most public exposed properties and any proposed or final design is generally subject to multiple authorities' and committees' approvals. Understand that mounting assets necessary for a successful design are generally few and that it is common for a venue to prohibit all possible options, which then requires either intervention by executive decision makers or agreement that the solution may be subject to performance impacts. In preliminary design concepts caution is exercised. APs are placed in locations where the design engineer is reasonably certain that a mounting asset exists, but these concepts are not expected to be final or entirely optimal until resolved by eventual site survey and construction feasibility exercises.

Plans Intake

Site plans are a critical resource for the actions of creating both solution concepts and final design outputs. It is not simply a matter of garbage-in, garbage-out thinking. RUCKUS Professional Services will not produce garbage. Instead, we will usually move to create what we do not have, which will involve additional costs or inference. The cost here is not necessarily money. It may be that; but do assume that the cost will be time. Plan accordingly.

- Our preferred intake is scaled, AutoCAD (*.dwg format), whole floor, architectural plans. We can filter layers, and measure distances from these kinds of plans.
- We can adapt equivalent vector type Acrobat (*.pdf) format plans to good effect assuming we can decipher scale and that the outputs don't incorporate scaled line weights.
- Raster type Acrobat (*.pdf), TIFFs, JPEGs, PNGs, BMPs, or photos of floor plans are less useful and will require additional effort to remediate and make useful for site survey and design activities.

Electrical (E) plan sets, IT or low voltage plan sets, and reference ceiling plan (RCP) sets are all welcome accompaniments to any architectural (A) set submissions. However, none of them are adequate substitute for the more desirable A sets.

Elevation plans and section elevation plans are highly desirable because when planning a WLAN you must know ceiling other structural heights to model the environment successfully.

Sectorized (divided) plans are also welcome accompaniments to any architectural (A) set submissions due to their added zone details. However, if submitted without whole floor plans they may need to be stitched together at significant time-cost in a tool like PhotoShop. RF simulation tools have limited ability to stitch such plans together, and these tools demand contiguous plans for data collection and rendering heat maps.

Solution Requirements and Methodologies

RUCKUS Professional Services root dimensioning for complex venues is based on the variable data loads required by different data services. It is crucial that any custom requirement is described and weighted into the calculations so that the appropriate minimum throughput per client is computed. Average data exchange throughput will exceed the minimum established by some stated multiple (usually 8x to 12x).

Outside of discussing requirements with the customer, we may only assume default metrics as part of dimensioning. While the default metrics are designed to meet typical demands, we have no way to be certain that we have met customer needs unless they were identified. There are cases where the customer seeks guidance, and if this is one of those cases, our default values should satisfy typical needs.

OFDM rates are essential for the success of Wi-Fi in any high-density solution. Use of Barker encoding or CCK rate devices should be isolated as much as possible from any high-density areas and partitioned on separate SSIDs. Legacy rate Wi-Fi communications should broadcast from dedicated APs with minimal scopes of RF coverage and potentially black-listed channels for said area(s).

Carefully consider the full elimination of the ISM 2.4GHz band in your environment. If you have a wide range of BYOD client devices frequenting the site, you may have technical challenges with some consumers (including VIPs). Likewise, well-aged devices like bar code scanners or PoS devices may not function with either 5GHz or the full range of 5GHz (they might be lower band only), so having a 2.4GHz utility SSID may be wise.

Solution Requirements and Methodologies

Each SSID configured adds beaconing frames and other management traffic overhead to the network, reducing overall airtime for data frames by some %. Because our calculations account for the influence of the number of SSIDs configured, each SSID effectively adds to potential AP counts (or reduces overall system performance). Please note that adding SSIDs to the 2.4GHz band has a much larger impact than if they are added only to the 5GHz band.

- Our concept assumes 2 concurrent SSIDs on 2.4GHz
- Our concept assumes 3 concurrent SSIDs on 5GHz
- Our concept assumes 3 concurrent SSIDs on 6GHz

High-density area adjacent APs will be placed and configured so that their RF emissions minimally interfere with the success of high-density solution(s). This method of ensuring good high-density Wi-Fi design is critical to ensuring optimal partitioning and availability of spectrum in critical spaces like a seating bowl, exhibition space, or other high profile Wi-Fi coverage zone.

Gate entry APs should support resiliency whereby any ticket scanning AP and a public focused AP are co-located to cover a similar area near entry points. Such a method allows for both redundancy (configurable hot-standby for ticketing) and continuity of client attachments as spectators transit from outside to inside the venue. Care will be taken to ensure appropriate AP types and coverage for each purpose: with the public APs designed as broader in their coverage scope.

Miscellaneous Definitions

AP ranks are defined as zones, lines, or rings of emitter devices sharing a common mounting asset from which they project into an event space. They do not necessarily correlate to the number of tiers or seating levels in the space. AP density may be higher or lower the further from clients the APs are installed, which depends on the proportion of clients across bands, so do not assume symmetric AP distribution across ranks. Definitive AP counts for each rank will be determined during a final design process in which all or most technical requirements and infrastructure details are known.

Due to the unpredictability of Wi-Fi client device behavior, at any given moment client devices that appear in some specific sub-zone or rank may or may not attach to a best serving AP covering their area. However, through expert design using tools appropriate to the subject infrastructure, a greatly increased chance of steering client devices to their best serving AP(s) is possible. Additional testing and optimization is recommended to ensure that the solution is segmenting correctly.

Data Activity Factor or DAF: Considerations

The Wi-Fi data rates in a high-density space rarely exceed wired data speeds: for example, 1Gbps; but the closer they come to wire speed the higher the solution's efficiency. For the purposes of understanding DAF, assume it's not a limiting factor.

Even traffic that seems continuous like streaming video or voice calls is packetized and so subject to variable data PHY and MCS rates.

Management traffic operates at lower or lowest MCS (data) rates, and so isn't subject to the previously stated differentiation

There is a floor to the amount of airtime being used by clients under fully loaded conditions that is a combination of management traffic, data transactions, rogue transmitters, etc. with system layout and configuration contributing heavily to it.

There is a ceiling to the amount of airtime that can be used by both system and clients under fully loaded conditions.

System power balance and sensitivity is a critical factor in airtime assessment, where if the solution is **TOO HOT**, we can't reuse spectrum due to CCA; whereas, if it is **too cool** use of airtime isn't efficient because MCS rates from the system will be lower and consume more airtime.

Data Activity Factor or DAF: Explainer

As a thought experiment for understanding DAF's underpinnings...

Assume several identical client devices are associated to the system, all on different channels, and operating over a range of MCS rates

Assume the client devices are sending or receiving one identical (non-management) payload PDU at the same time

Because of the various MCS rates, each channel would be occupied for a different amount of time

If we assume such a mixture most of the time, it is plain that in the period needed to transact the lowest MCS rate there are openings in the airtime across channels that employ any higher MCS rates.

In effect, some clients transact at higher data rates, and so they use less airtime.

The extra airtime can either be thought of as free (non-continuously used) or as reserve capacity for sizing continuous cell demand.

DAF is a mechanism that assists in multiple calculations...

Sizing the network egress (recommended circuit size)

Assessing the airtime utilization in some arbitrarily small period of time assuming a mixture of active MCS rates that consume various amounts of airtime

Bounding the minimum number of clients under normal conditions that are active Tx/Rx in some arbitrarily small period of time, which prevents too little AP provisioning given some defined set of association and activity factors

Bounding the maximum number of clients under normal conditions that can be active Tx/Rx in some arbitrarily small period of time due to CSMA/CA and CCA mechanisms, which prevents too much AP provisioning given some defined set of association and activity factors

Other Service Options



RUCKUS Technical Support Services



	Basic Offering (WatchDog)	Premium Offering (BullDog)
Value Proposition	Reactive Support	Proactive Support
TAC Response Targets	Basic-level	Premium-level
Worldwide Major Account TSE team access	No	Yes
Customer Success Manager (CSM)	No	Yes
- Premium Account Profile	No	Yes
- Weekly Operational Reporting	No	Yes – Remote Delivery*
- Ruckus Asset Management	No	Yes
- Technical Notifications	No	Yes
- Case Monitoring (Response Management)	No	Yes
- Support Business Reviews	No	Yes – Remote Delivery**
Health Checks	No	Yes
Maintenance Activity Process (M.A.P)	No	Yes
Web-based Training	Yes	Yes



Bulldog Supplements
Named Engineer
Dedicated Engineer
PS by Day
No Return - RMA Service

* Weekly operational reporting are as agreed

** Support Business Reviews are up to 4 per year as agreed



Hardware Support



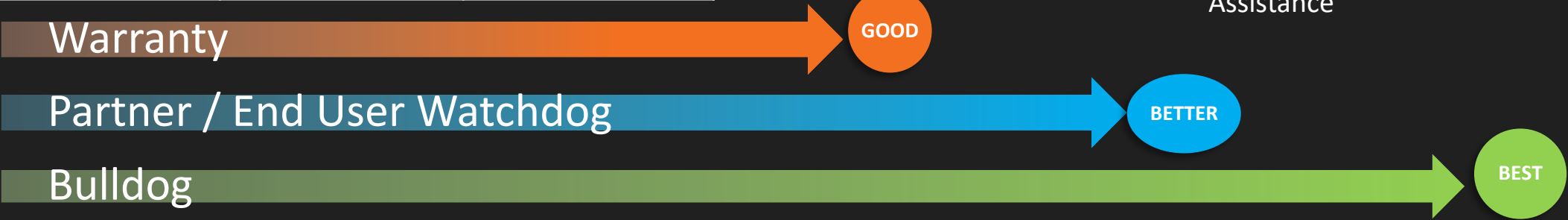
Software Support



Remote Technical Assistance



Proactive Support



BENEFITS

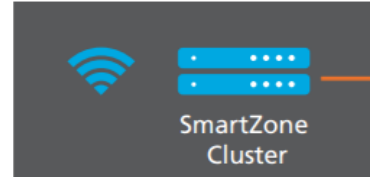
- Delivers comprehensive network intelligence powered by machine learning
- Helps you meet your network SLAs
- Accelerates client and network troubleshooting for faster resolution of service issues
- Gives you the power to drill down from summary views to the most granular detail
- Scales to fit the largest deployments, with effortless capacity expansion

To Learn More:

[Ruckus Analytics Website](#)

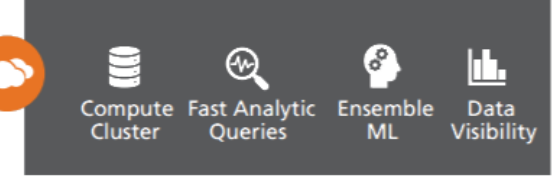
[Ruckus Analytics Datasheet](#)

Customer Premises



Secure Bi-Directional
Telemetry and Control

RUCKUS Analytics



RUCKUS Analytics has an industry-unique combination of:

- Automated data baselining and machine-learning-driven insights
- Network health and SLA monitoring
- Powerful, holistic client troubleshooting
- Automatic classification of incident severity
- No requirement for an on-site data collector or overlay sensors
- Granular access to raw data with deep exploration and customizable dashboards
- 12 month of storage with flexible data reporting

RUCKUS Training/Education Services



RUCKUS offers technology and product training using multiple approaches:

The RUCKUS Training Website: Basic training and product information courses are readily available on the Ruckus Training website. Registration and access to courses is free. Website address:

<https://training.ruckuswireless.com>

RUCKUS Education YouTube Channel: Publicly available training and reference videos are regularly uploaded to the Ruckus Education YouTube channel. Website address:

https://www.youtube.com/channel/UCpjMmx0SYp28_LpM9d2Yf3g

Instructor Lead Training: Standard Instructor Lead Training is available from the Ruckus Education Team and from Authorized Training Partners. Advanced courses are delivered only by the Ruckus Education Team instructors.

Learning Methods:

Online, Self-Paced

In this format, the student follows pre-recorded videos available on demand.

Instructor Lead

Live: This is a live, instructor lead class that takes place in a classroom. Lab access is given to students for the duration of the class.

Virtual/Remote: This is a live class; the instructor administers and delivers the class via remote session. Remote Lab access is given to students for the duration of the class.

Customized: This is a fully customizable approach, where a customer may choose specific topics and/or products. Delivery is flexible, meaning classes may be onsite, at a training center, virtual/remote, etc.



PURPOSE-DRIVEN ENTERPRISE NETWORKS

V1.1

2/5/2026

Statement of Work for
Wi-Fi Professional Services: Survey, Design, Staging,
Commissioning, Design Verification Testing, Live Event
Testing/Optimization

at Now Arena
in Hoffman Estates, IL

Provided For
RUCKUS Partner

By RUCKUS Wireless LLC.

Project ID: 202507021

Proprietary Information

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Document Revision History

Version	Date	Author	Description
V1.0	July 8, 2025	G. Gertson	SOW Document Generated
V1.1	Feb. 5, 2026	G. Gertson	Removal of ICX services

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Disclaimer & Definitions

The services described herein are subject to the following conditions:

- Full disclosure of project details and agreement to this detailed Statement of Work (SOW).
- Agreement on project timeline and confirmed availability of resources within the project timeline and location of service.
- Agreed to contract terms and conditions (See Terms and Conditions section in this document).
- Some or all the services described within this document may be sub-contracted to one or more of RUCKUS' third-party service partners.
- RUCKUS is not providing the following: installation, cabling (fiber/copper), infrastructure procurement, procuring or installing authentication servers, virtual environment servers, the physical installation of the Access Points, AP/network controller, edge PoE switches, aggregation switches, or routers, unless specifically stated within this SOW and the project Bill of Material (BOM). These services are expected to be provided by a third-party integrator or the End User.
- Any changes to this SOW must be made through an agreed Project Change Request ("PCR") form.
- Any changes to the project due to Customer action or inaction that results in project delays requiring additional time and/or travel to complete the project will require a Project Change Request and may require requoteing to Ruckus' authorized distributor.
- RUCKUS conducts a detailed discovery review before the commencement of any project to understand the possible risks that may be uncovered during the deployment phase of the project. However, if any unforeseen work is required to complete the project, RUCKUS will require a separate Statement of Work or PCR, subject to additional fees.
- Ruckus will conform to the description of services documented in this SOW and affirms that such services are in full compliance with the KPIs jointly agreed and documented in the concepts and dimensioning document agreed during the pre-sales stage of this project and referenced in the Introduction section of this SOW below.
- Ruckus retains all rights, title, and interest in any trademark, trade name, logo, copyright, design and testing methodologies, and proprietary tools developed by Ruckus in connection with the services described in this SOW.
- If Customer wishes to use a Ruckus' trademark or trade name in advertising network performance achieved by using Ruckus services, Customer will obtain Ruckus' prior written approval.

If the Customer wishes to cancel the project prior to completion, a PCR will be generated for Customer signature, and the Customer shall pay for services completed prior to the date of termination and for costs necessary to wind down the project.

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1. Introduction

This document describes the Statement of Work for the following:

- **Service Description:** Wi-Fi Professional Services: Survey, Design, Staging, Commissioning, Design Verification Testing, Live Event Testing/Optimization
- **Client:** RUCKUS Partner
- **Venue:** Now Arena
- **Service Location:** Hoffman Estates, IL
- **Integration Partner:** TBD

This document includes the scope, responsibilities, and pricing for professional services as understood after intake of data, objectives, restrictions, and the dependencies of the planned activities. The content within is based on the requirements communicated by either RFP or detailed scoping discussions, and how the listed items fit into the overall Project Plan.

RUCKUS Professional Services will be involved with RUCKUS' integration partner early in the project starting with the initial planning phase. This phase encompasses learning the environment and RUCKUS' integration partner goals and objectives for the network including any service requirements, budget, and timeline expectations.

The project milestones listed herein are generic for this type of professional services project. The applicable activities for this project are included in the sections listed below:

- Onsite Physical Survey and EM Survey (Section 4)
- Detailed RF Network Design Development (Section 5)
- Pre-Install Wi-Fi Staging and Configuration (Section 6)
- Post-Install Wi-Fi Design Validation & Service Testing (Section 7)
- Onsite Live Event Testing and Optimization (Section 8)
- Key Project Milestone and Times (Section 10)

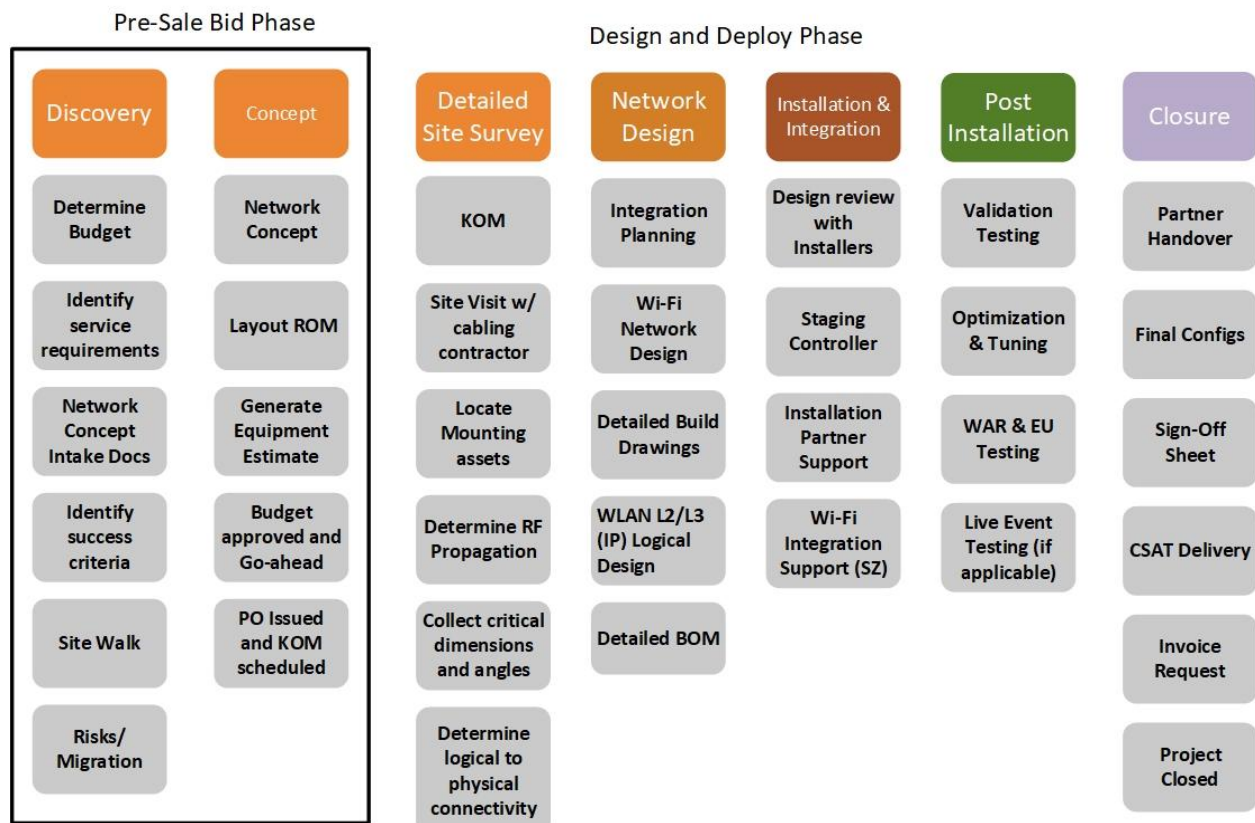
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2. Key Project Phases

The phases shown below are typical for most design and integration project types:

- Project Discovery and Design Intake
- High Level Preliminary Design
- Site Survey
- Network Design
- Installation and Integration
- Post Installation
 - Validation Testing
 - End to End Testing
 - Optimization and Tuning
- On-Site Live Event Testing
- Turn over package (final test deliverables, as-built reports, etc.)



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3. Discovery and Coordination

3.1. Project goals and objectives

- Formalize the performance and application requirements
- Conclusion of service requirements, type and number of devices expected
- Verify joint agreement between the client, RUCKUS Professional Services and RUCKUS's integration partner (if applicable), with realistic goals and objectives.

3.2. Network Design Requirements Intake Document

RUCKUS will provide the template for the Network Design Requirements Intake Document to RUCKUS's integration partner (if one is involved) and the client's staff. RUCKUS's Partner Staff will complete the documents with RUCKUS Professional Services assistance as needed.

Once the document is filled out, reviewed, and approved by all required parties; it shall be sent to RUCKUS. The purpose of this document is to obtain the requirements for a RUCKUS wired and/or wireless network prior to the design phase of the project. Therefore, it is vital to the project that this document is properly completed and jointly agreed by RUCKUS, the client's staff and/or RUCKUS's integration partner (if involved).

The guidelines in the document are needed to properly dimension and design the required RF and IP systems to provide the required coverage and services.

A list of network requirements is necessary to make the best possible design based on a specific scenario. The network design requirements intake document will include information such as:

- Type of deployment scenario.
 - Indoor and/or Outdoor
 - Facility blueprints, CAD drawings.
- Coverage areas zones, and identity of areas out of scope
- Service area types
- Client behavior (where are they, how many are there, and what are they doing)
- Types of devices
- Service and performance requirements for data, video, or voice.

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- Capacity requirements per zone and users
- Applications to be used
- Edge switch L1-L3 requirements
- Core and Distribution Network requirements, when pertinent
- Security requirements
- Physical installation guidelines for wired devices and wireless Access Points

3.3. Project Budget and Design Go-A-Head

- Build a High-Level project scope, services specific scope of work (SOW), and responsibilities in agreement with the proposed project budget. *(This document comprises the bulk of this detail)*
- Contract terms and conditions agreement closure.
- Formalization of the network requirements document and design objectives.
- Go-A-Head for the next step in the project. Contracts and purchase orders.
- Start next phase of scope of work

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4. Onsite Physical Survey and EM Survey

SKU: 905-PRO1-SRV3

4.1. Deliverables:

- Site Survey and Electromagnetic report for use by the RUCKUS Design Team

4.2. Content:

Comprehensive On-Site Survey

- Determines possible installation locations for Access Points.
- Determines suitable mounting method, cable runs, power availability, grounding points, network connections, etc.
- Provides site photos and identification of target service areas.
- Documents any significant observations.
- Takes needed physical measurements (heights, distances, angles) to complement CAD drawings.
- Conducts Electromagnetic survey; captures a baseline of what interference and noise is in the Wi-Fi bands.
- Creates a survey report with sketches and pictures and all observations and technical details.
- A propagation survey will be performed on certain portions of the Venue to better calibrate the design tools if needed.

4.3. Constraints:

- RUCKUS's integration partner or a 3rd party is responsible for estimating, sourcing, and installing all cabling (CAT6 and fiber), conduits, PoE switches, AP mounting structures, back haul circuits, media converters and installing the APs.
- If any part of the venue is not constructed or otherwise not available for an onsite survey before final designs start, it will be important to have access to venue models, architectural concept

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drawings and detailed explanation of the CAD drawings (3D rendering would be most useful). This can be performed at the architectural office, the prime construction contractor office, or RUCKUS's integration partner office location if such information is available there.

5. Detailed RF Network Design Development

SKU: 905-PRO1-SRV3

5.1. Deliverables:

Design report

- The Design Report encompasses the buildable Wi-Fi RF design. The IP LAN design and conclusions are RUCKUS's integration partner's (or 3rd party integrators) responsibility.
- This report will be reviewed with RUCKUS's integration partner during a meeting or conference call (webinar).
- Final sign-off by RUCKUS's integration partner will be coordinated by the local RUCKUS Sales team and is required prior to starting any installation work.

(The above may be delivered in separate documents depending on scheduling and ease of distribution.)

SZ/AP System Configuration Settings.

- The Design Report encompasses the buildable Wi-Fi RF design and the controller configuration.
- This report will be reviewed with RUCKUS's integration partner during a meeting or conference call (webinar).
- Final sign-off by RUCKUS's integration partner will be coordinated by the local RUCKUS Sales team and is required prior to starting any installation work.

(The above may be delivered in separate documents depending on scheduling and ease of distribution.)

5.2. Content:

Each of these phases is detailed in the following sections.

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Wi-Fi RF Design

- This service uses the design intake document and the site survey report as inputs.
- The purpose of the RF design includes these aspects:
 - Selection of final venue approved Access Point locations to meet the service requirements.
 - Defining the specific AP mount location, orientation, angle, and tilt.
 - Service Area definition (Heat/coverage maps).
 - Frequency Allocation for AP's (or defining the channel range to be used).
 - Network dimensioning for service capacity targets for each customer device class.
 - AP and backhaul connection assignments.

Coverage Design

- This step is performed by simulation using an RF Network Planning tool.
- The tool uses the facility's CAD drawings provided by RUCKUS's integration partner to build a model of the venue, using the service definitions from the design intake and survey report as inputs. The coverage design is conducted using RF propagation modeling which determines the number of wireless Access Points, and their locations that will be required to cover the coverage areas. (Note: predictive propagation simulation for under seat coverage must be calibrated by empirical testing. RUCKUS already has an empirical model and may only use propagation modeling for areas certain areas and areas other than the bowl.)

Capacity Design

- Utilizing the same RF Network Planning tool and service inputs mentioned above, the tool can determine the Access Points mounting locations, types of wireless devices devices/models to meet the specific capacity defined within the coverage area. This includes antenna types, channelization, power limits, tilts, and orientations.
- The Bill of Material (BOM) may be updated based on the final coverage/capacity design simulations.

Network Design (IP)

- Utilizing the network design requirements intake document, the network design architecture is defined where all protocols, IP addressing schemes, QoS mechanism, access points, and backhubs will be analyzed.

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- RUCKUS will support RUCKUS's integration partner and/or the 3rd party integrator design efforts for the Layer 2/3 architecture from the SmartZone/WLAN perspective. RUCKUS's integration partner and/or the 3rd party integrator with support from RUCKUS are responsible for defining data flows into a deliverable that defines what other equipment is required and the configurations for that equipment, as well as the configuration of RUCKUS equipment.
- Network Architecture Design includes:
 - Protocols, IP address plan, QoS mechanisms.
 - Architecture for Access Points and Backhaul equipment.
 - PoE switching requirements.
 - Media converting equipment.
 - AP controller (SmartZone) configuration settings.

5.3. Constraints:

- RUCKUS's integration partner and/or the 3rd party integrator are primarily responsible for the core and edge networking equipment and design, and will be responsible to provide IP addressing, DHCP, DNS, VLAN and routing architecture to RUCKUS.

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6. Pre-Install Wi-Fi Staging and Configuration

SKU: 905-PRO1-SRV3

6.1. Deliverables:

- Pre-Installation Support
- Staging
- Integration Support (SZ)
- Installation Support

6.2. Content:

This document is prepared with the assumption that RUCKUS's integration partner or a 3rd party integrator will be fully responsible for the installation of the Wi-Fi network. However, RUCKUS will assist in this effort by onsite visits, phone, Email, and/or online meetings. Installation and commissioning activities covers most, all, or portions of the following work (dependent on the agreed scope or work):

Pre-Installation

These services below may be conducted in person or via webinar:

- RF Design Document Review.
- Review of the process for:
 - Inventory of Materials.
 - Planning of Installation Activities.
 - RUCKUS will provide installation training (show installation contractors how to interpret the design drawings and understand how to install APs accordingly, usually ½ day).
 - Awareness of Access Requirements.
 - Review of Change Order and Escalation Process.

Staging

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The staging process for APs needs to be done before the installation of the APs, preferably right before the APs start to be installed. This process allows APs to be identified by the controller as they are mounted and are connected to the switching network. Activities entail the following:

- Obtain MAC address list and assign each to a corresponding AP name in construction sheet.
- Import AP Pre-provision list into controller (All APs in the construction sheet) – usually done by the RUCKUS lead engineer remotely or onsite.
- Proceed with staging of each AP and make a controller connection for the first time.
- Verify AP has registered with the controller and the controller has upgraded its firmware (takes a few minutes).
- Physically label each AP with Name & MAC for installation.
- Proceed to installation of APs. APs should be immediately recognized by the controller as they are connected through the switching network.

Integration Support (SZ)

- RUCKUS will provide support to RUCKUS's integration partner's networking group (or its 3rd party contractors) for the vSZ, vSPoT, RUCKUS Analytics, to LAN and APs network integration as required. The RUCKUS engineer will configure the vSZ per the IP design document and test the successful integration into the core network. This work does not include the physical racking, installation, powering of the controller equipment.

Installation Support

- RUCKUS will provide support to RUCKUS's integration partner's installation staff should any questions come regarding AP placement or design interpretation.

6.3. Constraints:

- Configuration of the other needed network systems such as aggregation switches, routers, patch panels, interconnecting cabling, AP PoE switches and internet back haul circuits are to be completed by the responsible parties.

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7. Post-Install Wi-Fi Design Validation & Service Testing

SKU: 905-PRO1-SRV3

7.1. Deliverables:

IQT report:

- For all installed Access Points
- List of fixes and or rectification in installation.
- Network test report
- End to End Test Report

7.2. Content:

RUCKUS will develop a test plan to validate the required coverage, capacity and service requirements as defined during the network intake process. RUCKUS will provide onsite resources to oversee and manage this task.

The validation testing process generally includes these steps:

Installation Qualification Testing (IQT).

- Verification of physical installation of each AP and configuration per design.
- Confirmation of AP performance per design.
- Confirmation of AP coverage per design.
- Confirm backhaul performance from AP to SZ.

Coverage, Performance Testing and KPI Verification

- Measuring campaign will be performed with Wi-Fi coverage and performance test tools to compare the actual performances to the planned design.

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- Network devices like those intended to be used in the network will be configured and put into operation to validate data performance and service requirements.
- This will be done on a systematic basis and will serve as part of the final network acceptance.
- If any optimization steps are identified, an action plan will be integrated to this activity as needed.

End-to-End system test support:

- End-to-End testing validates that client devices can obtain service via the portal or landing page (as determined during the IP network design planning) and that their method of authentication works.
- RUCKUS will support RUCKUS's integration partner and/or the 3rd party integrator with the development and execution of the final system end-to-end test.

Once the Network Test report has been delivered and it shows that the network's requirements have been met, the network will be ready for sign off and it will be ready to begin preliminary commercial operations.

End to End Testing and Optimization:

- End-to-End testing validates that client devices can obtain service via the portal or landing page (as determined during the IP network design planning) and that their method of authentication works.
- RUCKUS will support RUCKUS's integration partner and/or the 3rd party integrator with the development and execution of the final system end-to-end test.
- This test is onsite and not during a live event.

Optimization Steps

- Review baseline test data. This establishes the baseline reference from which the optimization steps will be compared. This data comes from the RUCKUS Analytics system. (If RUCKUS Analytics is not purchased by RUCKUS's integration partner and/or the 3rd party integrator, RUCKUS PS will utilize its own system for this purpose then remove/disconnect it afterwards).
- Compose optimization step priority.
 - Using a list of best practices parameters and anything that may come from the initial analysis, the optimization changes are ranked by potential gain first to lowest.
- Optimization steps and analysis
 - This is an iterative process of implementing each optimization step as follows:
 - Make the change; settings, AP physical changes, AP additions/removes.

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- Monitor during an event.
 - Report and analyze.
 - Repeat until all changes are completed and KPIs are met, or best performance is achieved.
- These steps are usually performed remotely.

7.3. Constraints:

- A firewalled/VPN connection into the SZ is required.
- An administrative user ID and permissions to the RUCKUS Analytics systems (if purchased) is required. If not purchased, RUCKUS PS will establish connectivity from the network controller to a RUCKUS-owned system for the purpose of the IQT.
- The IQTP, coverage, performance and KPI testing may be all in one report.

8. Onsite Live Event Testing and Optimization

SKU: 905-PRO1-SRV3

8.1. Deliverables:

Live event test report

- Summary Statistics
- Daily Trends
- Device Type Distribution
- User distribution among APs
- AP Transmit Statistics
- User Transmit/Receive Statistics
- Application/speed performance (if applicable)

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8.2. Content:

On-site Live Event Testing

RUCKUS will develop a test plan for a Live Event to analyze the newly designed and deployed Wi-Fi network during a maximum capacity event.

- RUCKUS is the lead for the initial test plan and RUCKUS's integration partner and/or the 3rd party integrator Wireless Engineering Staff will conduct the actual tests.
- RUCKUS is prepared to provide testing support for up to 1 live events. Expect up to 4 people plus additional staff from the client depending on the event. Total RUCKUS staff requirements include preparation and post analysis time.
- During the live event the following is typically performed.
 - Data collection is performed behind the scenes by a performance collector server.
 - All network traffic is collected by AP, user devices.
 - Peak and average throughput is collected by AP and devices.
 - Peak hour usage.
 - QoE (Quality of Experience) may be measured via speed tests or the use of other venue applications (if applicable) at certain locations during the live event.

8.3. Constraints:

- None.

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9. Project Responsibility Assignment Matrix (RAM)

This is a high-level Responsibility Assignment Matrix (RAM). If applicable, a very detailed RAM will be required with the contract between RUCKUS Wireless, RUCKUS's integration partner, and the cabling installers, network equipment integrators and any other parties involved.

9.1. RUCKUS Partner and/or Integrator:

1. Confirms project goals and direction jointly with RUCKUS.
2. Coordinates overall project management.
3. Provides facilities for lab testing of hosting services and devices if needed (may also be at RUCKUS).
4. Provides all required architectural drawings for the venue (Incl. PE sealed drawings for wireless environments).
5. Provides construction coordination and pays the costs of deployment, including modifications to MDFs, IDF's, CO's, cabinets, racks, trenching, cable management structures and power (load needs and installation).
6. Provides IP network design in accordance with internet hosting service requirements, mobile operators networking requirements, or special application hosting services (any or all that apply) with support from RUCKUS.
7. Provides Gigabit Ethernet/Fiber & POE+ switches, routers, aggregation switches and required interfaces where non-RUCKUS switches are being used.
8. Provides backhaul transport / architecture for internet services.
9. Installs all RUCKUS Access Points per RUCKUS design documents (RUCKUS APs come with basic mounting hardware).
10. Procures, installs, and labels all related cabling/fiber and cabling installation/management materials.
11. Installs all Gig Ethernet/Fiber POE+ switches, routers, aggregation switches, media converters.
12. Conducts Installation Qualification Test Procedure (IQTP) for non-RUCKUS Switches, including interconnectivity.
13. Provides warehousing and facility for equipment pre-staging.
14. Provides on-site location for disposal of shipping materials/refuse.
15. Provides IQTP and onsite Live Event testing resources (in addition to those from RUCKUS) to work with RUCKUS per RUCKUS test plan.

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16. Conducts end to end testing services jointly with RUCKUS.
17. Provides close-out documentation and turns over the system to the client/venue's administration team once tests are completed.

9.2. RUCKUS: (In accordance with the scope detailed in this document)

1. Confirms project goals and direction jointly with the RUCKUS integration partner and/or the 3rd party integrator.
2. Provides remote, high-level Project Management of RUCKUS SOW.
3. Performs comprehensive site survey, as well as EM survey and Propagation Survey (where needed).
4. Provides pre-installation design review for installers and integrator.
5. Supports, identifies, and approves AP locations for installation.
6. Supports the completion of the requirements document for Wi-Fi network design.
7. Provides buildable Wi-Fi RF Network design.
8. Provides support for Commissioning and Testing services.
9. Performs installation qualification test procedure for in-scope APs.
10. Performs (on-site included) network wide post installation and optimization testing.
11. Provide on-site testing during live events as stated in the SOW.

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10. Key Project Milestones and Times

This section shows the approximated times and/or elapsed time for each project service component. This is a project estimate and is used to aid in project planning:

- Onsite Physical Survey and EM Survey: 1 to 2 weeks.
- Detailed RF Network Design Development: 2 to 3 weeks.
- Pre-Install Wi-Fi Staging and Configuration: 1 to 2 weeks.
- Post-Install Wi-Fi Design Validation & Service Testing: 1 to 2 weeks.
- Onsite Live Event Testing and Optimization: 1 to 2 weeks.

Total time needed for this project: 6 to 11 weeks. This is not a proposed timeline or reflection of a typical timeline but is only a representation of the approximate time required for each of the RUCKUS activities outlined herein.

Milestone	Product Family	Product SKU	Service Description
1	Professional Services	905-PRO1-SRV3	Onsite Physical Survey and EM Survey
2	Professional Services	905-PRO1-SRV3	Detailed RF Network Design Development
3	Professional Services	905-PRO1-SRV3	Pre-Install Wi-Fi Staging and Configuration
4	Professional Services	905-PRO1-SRV3	Post-Install Wi-Fi Design Validation & Service Testing
5	Professional Services	905-PRO1-SRV3	Onsite Live Event Testing and Optimization

11. Terms and Conditions

- Except where inconsistent with the terms of this SOW, and unless the parties have entered into a master services agreement, the terms of sale located at <https://www.commscope.com/about-us/terms/> shall govern this SOW.
- This SOW outlines the details of the services to be provided to Customer; however, Customer is purchasing the services through a Ruckus authorized distributor. All pricing, order, and payment terms shall be between Customer and such distributor.
- Ruckus' quotation to distributor valid for 90 Days from the date of issue of the SOW.
- Any changes in project scope may render the quote to distributor invalid and require re-quoting.

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- Costs of special travel permits, or visas are Customer's responsibility and may be added to the quote to distributor if required.
- Work is to be performed during normal business hours at the venue location.
- All costs associated with customer required background checks, drug testing, and/or security requirements will be Customer's responsibility and may be added to the quote to distributor as part of this project.
- The work set forth in this SOW shall commence on a date to be mutually agreed to by the parties upon execution of this SOW and RUCKUS' receipt of a purchase order. Project mobilization is typically 2-3 weeks after receipt of purchase order.
- Providing RUCKUS with a purchase order against this proposal indicates agreement to the scope of work, including the Terms and Conditions defined herein.
- Client will have five (5) days from completion of the applicable milestone to notify RUCKUS of any nonconformance of the services to this SOW. If no such notice is received, Client will be deemed to have accepted the services.
- Out of Scope Professional Services: Services and material products not expressly described within this SOW are out-of-scope. Out of scope PS services require a separate Statement of Work or PCR and a new Purchase Order and may require a minimum notice of 5 to 10 business days for personnel mobilization.
- Idle time and/or travel time may be billed through RUCKUS' authorized distributor up to the applicable daily rate when prerequisites have not been completed when RUCKUS is scheduled, arrives onsite, and must wait to begin work.
- Services will be performed in a workmanlike manner and warranted for a period of thirty (30) days from the date of acceptance. THIS WARRANTY IS EXCLUSIVE. RUCKUS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AND SPECIFICALLY DISCLAIMS AND EXCLUDES ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY, NONINFRINGEMENT, OR FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION OR WARRANTY ARISING BY USAGE OF TRADE, COURSE OF DEALING OR COURSE OF PERFORMANCE.

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RESOLUTION NO. _____ - 2026

VILLAGE OF HOFFMAN ESTATES

RESOLUTION AUTHORIZING AN AGREEMENT WITH CDW-G FOR THE PRUCHASE
OF HARDWARE AND PROFESSIONAL SERVICES FOR WIFI EXPANSION AT THE
NOW ARENA

WHEREAS, the Village of Hoffman Estates (“the Village”) is a home-rule municipality located in Cook County, Illinois; and

WHEREAS, in 2025, the Village engaged Ruckus Professional Services to provide a comprehensive design and planning phase to survey the wireless internet infrastructure and needs at the NOW Arena; and

WHEREAS, as a result of that planning process, Village Information Services has determined the requisite hardware and professional services needed to complete WIFI expansion at the NOW Arena; and

WHEREAS, Village staff utilized a process of obtaining quotes for the purchase of hardware and professional services in order to obtain a lower price for hardware before an announced price increase occurred; and

WHEREAS, the Corporate Authorities have determined that it is in the public interest for the Village to enter into an agreement with CDW-G, who provided the lowest quote, for the purchase of hardware and professional services in an amount of \$200,913.82.

NOW, THEREFORE, BE IT RESOLVED, by the President and Board of Trustees of the Village of Hoffman Estates, as follows:

Section 1 RECITALS The facts and statements contained in the preamble of this Resolution are found to be true and correct ad are hereby adopted as part of this Resolution.

Section 2 APPROVAL OF AGREEMENT The President and Board of Trustees hereby approve the grant agreement with CDW-G for the purchase of hardware and professional services for WIFI expansion at the NOW Arena.

Section 3 AUTHORIZATION TO EXECUTE AGREEMENT. The President or Village Manager is hereby authorized to execute and agreement and any other documents in furtherance of this Resolution in accordance with the Village Code and state and federal law.

Section 4 EFFECTIVE DATE This Resolution will be in full force and effect from and after its passage and approval as provided by law.

RESOLVED THIS _____ day of _____, 2026

VOTE	AYE	NAY	ABSENT	ABSTAIN
Trustee Karen V. Mills	_____	_____	_____	_____
Trustee Anna Newell	_____	_____	_____	_____
Trustee Gary J. Pilafas	_____	_____	_____	_____
Trustee Gary G. Stanton	_____	_____	_____	_____
Trustee Karen Arnet	_____	_____	_____	_____
Trustee Patrick Kinnane	_____	_____	_____	_____
President William D. McLeod	_____	_____	_____	_____

APPROVED THIS _____ DAY OF _____, 2026

Village President

ATTEST:

Village Clerk

Published in pamphlet form this _____ day of _____, 2026.



Thank you for choosing CDW. We have received your quote.

Hardware

Software

Services

IT Solutions

Brands

Research Hub

QUOTE CONFIRMATION

DAREK RASZKA,

Thank you for considering CDW•G for your technology needs. The details of your quote are below. **If you are an eProcurement or single sign on customer, please log into your system to access the CDW site.** You can search for your quote to retrieve and transfer back into your system for processing.

For all other customers, click below to convert your quote to an order.

This quote is subject to CDW's Third Party Cloud Services Order Form Terms and Conditions set forth at <https://www.cdwg.com/content/cdwg/en/terms-conditions/third-party-cloud-services-order-form-terms-and-conditions-.html>

Convert Quote to Order

QUOTE #	QUOTE DATE	QUOTE REFERENCE	CUSTOMER #	GRAND TOTAL
PTMV446	2/18/2026	RUCKUS NOW ARENA UPGRADE	334905	\$200,912.83

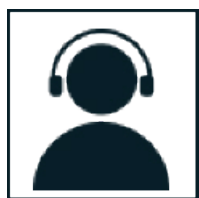
QUOTE DETAILS

ITEM	QTY	CDW#	UNIT PRICE	EXT. PRICE
Ruckus security bracket Mfg. Part#: 902-0120-0000 UNSPSC: 31162313 Contract: OMNIA Mesa 2024056-01 (2024056-01)	107	3712269	\$12.00	\$1,284.00
RUCKUS PS WIFI SVC Mfg. Part#: 905-PRO1-SRV3 Electronic distribution - NO MEDIA Contract: OMNIA Mesa 2024056-01 (2024056-01)	33393	7632183	\$1.17	\$39,069.81
RUCKUS ONE PRO SUB 3Y Mfg. Part#: CLD-PROF-APSW-REC3 Electronic distribution - NO MEDIA Contract: OMNIA Mesa 2024056-01 (2024056-01)	107	7492388	\$222.82	\$23,841.74
Ruckus R770 Wi-Fi 7 Tri-Band Concurrent Wireless Access Point Mfg. Part#: 901-R770-US00 Contract: OMNIA Mesa 2024056-01 (2024056-01)	54	7634863	\$946.65	\$51,119.10
Ruckus T670SN - wireless access point - outdoor - Wi-Fi 7 - cloud-managed Mfg. Part#: 901-T670-US51 Contract: OMNIA Mesa 2024056-01 (2024056-01)	53	8276903	\$1,615.06	\$85,598.18

These services are considered Third Party Services, and this purchase is subject to CDW's [Third Party Cloud Services Terms and Conditions](#), unless you have a written agreement with CDW covering your purchase of products and services, in which case this purchase is subject to such other written agreement.

SUBTOTAL	\$200,912.83
SHIPPING	\$0.00
SALES TAX	\$0.00
GRAND TOTAL	\$200,912.83

PURCHASER BILLING INFO	DELIVER TO
Billing Address: VILLAGE OF HOFFMAN ESTATES FINANCE DEPARTM 1900 HASSELL RD HOFFMAN ESTATES, IL 60169-6302 Phone: (847) 882-9100 Payment Terms: Net 30 Days-Govt State/Local	Shipping Address: VILLAGE OF HOFFMAN ESTATES FINANCE DEPARTM 1900 HASSELL RD HOFFMAN ESTATES, IL 60169-6302 Phone: (847) 882-9100 Shipping Method: DROP SHIP-COMMON CARRIER
	Please remit payments to:
	CDW Government 75 Remittance Drive Suite 1515 Chicago, IL 60675-1515



Sales Contact Info

Fede Guerra | 800.808.4239 | fede.guerra@cdwg.com

LEASE OPTIONS			
FMV TOTAL	FMV LEASE OPTION	BO TOTAL	BO LEASE OPTION
\$200,912.83	\$5,685.83/Month	\$200,912.83	\$6,537.70/Month

Monthly payment based on 36 month lease. Other terms and options are available. Contact your Account Manager for details. Payment quoted is subject to change.

Why finance?

- Lower Upfront Costs. Get the products you need without impacting cash flow. Preserve your working capital and existing credit line.
- Flexible Payment Terms. 100% financing with no money down, payment deferrals and payment schedules that match your company's business cycles.
- Predictable, Low Monthly Payments. Pay over time. Lease payments are fixed and can be tailored to your budget levels or revenue streams.
- Technology Refresh. Keep current technology with minimal financial impact or risk. Add-on or upgrade during the lease term and choose to return or purchase the equipment at end of lease.
- Bundle Costs. You can combine hardware, software, and services into a single transaction and pay for your software licenses over time! We know your challenges and understand the need for flexibility.

General Terms and Conditions:

This quote is not legally binding and is for discussion purposes only. The rates are estimate only and are based on a collection of industry data from numerous sources. All rates and financial quotes are subject to final review, approval, and documentation by our leasing partners. Payments above exclude all applicable taxes. Financing is subject to credit approval and review of final equipment and services configuration. Fair Market Value leases are structured with the assumption that the equipment has a residual value at the end of the lease term.

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This order is subject to CDW's Terms and Conditions of Sales and Service Projects at <http://www.cdwg.com/content/terms-conditions/product-sales.aspx>

For more information, contact a CDW account manager.

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Ruckus "Commscope" Wi-Fi expansion

CDW-G	\$ 200,912.83
Sentinel Technologies, Inc	\$ 202,562.08
Scientel Solutions	\$ 205,746.30
Pique Technologies LLC	\$ 217,635.96