1. When will any amendments be issued prior to January 9?
   • The last addendum will be issued at least 2 weeks before due date; if not, the due date will be extended to allow for 2 weeks for final proposals to be prepared.

2. Will building plans showing construction details be made available?
   • PDF/CAD drawings are available as part of this addendum, at https://rice.box.com/s/fugr5t46xrr4hipknzpb8aq3isqwsfh0

3. Will the current AP placements be illustrated on said plans?
   • Yes

4. Will wireless surveys be supplied for all buildings?
   • Yes

5. Is wayfinding part of the POC?
   • No. As stated in RFP section 20.04 (B.7.), “Provide information and documentation on how the proposed solution may integrate with, accommodate, or support a wayfinding solution. Note: Rice University does not intend to procure a wayfinding solution under this RFP.”

6. Is coverage at/in the stadium included as part of this project?
   • The athletics sections and stands at/in stadium are not part of this project, but the office areas there are. Coverage for those athletics areas will be part of a future project.

7. In regarding to the Access Point specifications, does Rice require a single access point model or are models from the same product family sufficient?
   • See section 20.09 (P.5), which indicates the same manufacturer family/line/series of Access Point: “Same family/model access point shall have an internal antenna model and an external antenna model.” Rice University does not require or expect a single AP model to be installed in all locations but any AP proposed must comply with the specifications set forth in section 20.09 (P).

8. Will Rice provide a survey map that shows current coverage?
   • Yes, the survey data to be provided in a future addendum will illustrate current wireless coverage.

9. Will the survey data include AP models, transmit power, other data?
   • To be determined, based on tools used to collect the survey data.
10. The RFP calls for four radios per Access Point. Can you clarify what each are intended for?
   • SPECIFICATION UPDATE: Access points shall provide minimum three radios, two of which shall be capable of running 5GHz concurrently. One radio may be a Bluetooth Low Energy (BLE) Radio.

11. Will future amendments be posted to the Rice Procurement site?
   • Yes

12. In the RFP, it says this: “Access points shall provide four radios, two of which shall be capable of running 5GHz concurrently and be user selectable. One radio shall be a Bluetooth Low Energy (BLE) Radio.” So does this mean that Rice University desires an AP with four radios in which one is 2.4Ghz, another is 5Ghz, another is selectable 2.4 or 5Ghz, and another is BLE, all serving clients at the same time?
   • See specification change in the answer above to question #10.

13. When will detailed floor plans be provided for all bldg’s and areas that need to be covered?
   • PDF/CAD drawings are available as part of this addendum, at https://rice.box.com/s/fugr5t46xrr4hipknzpb8aq3isqwsfh0

14. Can RU additionally provide existing design plans that show AP placements there today?
   • PDF/CAD drawings are available as part of this addendum, at https://rice.box.com/s/fugr5t46xrr4hipknzpb8aq3isqwsfh0

15. Are there any drawings not provided by RU for buildings that need coverage and if so which buildings?
   • No.

16. Can RU provide baseline inside wall construction information per building? Example: Building X has mostly commercial drywall; cinder block around elevators, bathrooms, and basement level floor vs. other floors; concrete walls around stairwells and steps; and concrete filled support columns throughout.
   • Rice University does not have access to construction drawings that outline those details; However, RF survey data and current AP locations will be provided.

17. Is the RF survey being performed an “Active” walkthrough survey of existing AP’s in the environment and their signal, noise, data rates? Or is it an RF survey design on what the vendor believes will be the qty and placement of new AP’s to meet design metrics?
   • Existing RF coverage is not being done in active. It is being done in passive. It is a physical walk-through.
18. Can RU request from vendor producing the RF survey which tools is being used, the AP models were used, what TX power levels from AP’s and client devices, required minimum signal levels for 5 GHz and 2.4 GHz, etc.
   - Power levels vary from 25mW on 5GHz and lower depending on and if external antennas are used to shape signal. Additional cell overlap is afforded to the design to accommodate various vendors. Note: Three different vendor’s APs were tested and compared for survey use. The Eckahau Sidekick was calibrated with an Apple iPhone X for client comparison (-10 dbm offset). The RF design is based on 5GHz. 2.4 GHz will be tuned afterward during post-assessment.

19. Can RU clarify in detail its requirement of outdoor coverage where it mentions, “provide coverage in all outdoor spaces within the dormitory courtyards and within campus loop?” Is the campus loop what RU campus maps refer to as the Inner loop from Laboratory Rd. and College Way? Also, does this include parking spaces and areas between all buildings within the Inner loop?
   - Please see “Outdoor coverage” document in folder referenced above: https://rice.box.com/s/fugr5t46xr4hipknzpb8ag3isqwsfh0

20. Will RU accept an Access Point solution that may be less than 4 radios, or not have dual radios selectable for 5 GHz as long as it supports BLE, 2.4 GHz and 5 GHz?
   - Yes, although Rice University encourages any alterations or exceptions from the RFP’s specifications be noted in the Exceptions section of the Respondent’s proposal.

21. Will RU accept an Access Point solution with indoor or outdoor models that do not have external antennas as long as the coverage and signal requirements are met?
   - Yes, although Rice University encourages any alterations or exceptions from the RFP’s specifications be noted in the Exceptions section of the Respondent’s proposal.

22. Is the required Access Point requirement minimum of 4x4 MIMO applicable to indoor products only or does it also apply for outdoor access points? If it is different for outdoor units, what are the minimum requirements?
   - Rice University encourages any alterations or exceptions from the RFP’s specifications be noted in the Exceptions section of the Respondent’s proposal.
23. Does Rice want to provide the wayfinding and location based services to students, faculty and staff, or just the students?
   - Rice University expects to provide wireless services to the entire Rice University community including students, faculty, staff, and guests. Note that while location services are part of the base requirements, wayfinding is not; Rice University merely requests information on a wayfinding solution compatible with the Respondent’s proposed solution for future consideration.

24. Please provide an example of a location based service
   - Rice University does not favor one manufacturer over another. The location-based services are intended to equip Rice University with the ability to pinpoint device locations and provide intelligent tracking of wireless clients, devices and traffic types and flows, among other features. Example solutions include but are not limited to Aruba’s Analytics and Location Engine, Cisco’s Mobility Services Engine, Ruckus’s Smart Positioning Technology, or Extreme’s ExtremeLocation.

25. Does the school have a student app, or will they a mobile interface?
   - Rice University does not fully understand the context of the question, however there is no required app provided to students or faculty/staff at RU.

26. Does Rice want real time availability of facilities and services for students, and automatic real time utilization dashboards for administration?
   - Yes, real-time availability of utilization dashboards for administration of wireless is required. Rice University does not currently have any requirements around facilities and services for students. However, Rice University encourages any value-adds to be noted in the Exceptions section of the Respondent’s proposal.

27. Does Rice have any student facing IoT enabled service today?
   - Yes.

28. Is Rice interested in analytics and insights of utilization data of the facilities/services/ assets there in for resource planning and future investment decisions?
   - Yes. Rice University encourages any value-adds to be noted in the Exceptions section of the Respondent’s proposal.
29. In regards to the following requirement: “The successful Proposer will be required to produce a performance bond in the amount of 100 percent of the award proposal. This bond must be furnished within 10 days of award.”

Pricing for the additional security of a performance bond is $2.4 to $3.72 per $1000 of value for most types of bonds. However, it is possible that this cost will be greater due to onerous bond terms and conditions. Actual rate would depend on the type, value and term of the bond.

Based on our company's financial strength and stability, we respectfully request a waiver of the performance bond requirements. We agree to negotiate in good faith, terms and conditions to the mutual agreement of both parties. Is this acceptable?

- Pending answer from Rice University Risk Management. An update to this answer will be posted in forthcoming Addendum 2, by February 14, 2019.

30. Please confirm that the version of the RFP available on the Procurement website is the most current. The file is dated 11-28-18 and contains multiple, seemingly internal, comments.

- The file has been updated to PDF format, and is the most current version (released 12-5-2018).

31. Will population densities be provided for the various sites along with the wireless site survey results?

- No.

32. Page 2 - This contact information form seems to need to be completed and returned with the proposal, but is not mentioned as such. Please advise where in the bid we are to supply this completed form, if any.

- See Proposal Requirements, section 4.02, starting on page 10.

33. Page 4 / Respondent Checklist - The Respondent Checklist has a column for "Respondent Initials" implying that this form is to be returned with the bid, but no instructions are provided as such. Please advise if and where in the bid we are to supply this page.

- See Proposal Requirements, section 4.02, starting on page 10.

34. Page 5 - This page has a block for "Proposer's Signature" implying that bidders are to sign and return with their bid. Please advise if and where in the bid we are to supply this page.

- See Proposal Requirements, section 4.02, starting on page 10.
35. Submittal Requirements / Pg 5 vs. 3.02C / Page 8 - The submittal instructions on page 5 state we are to mail the bid via USPS. Section 3.02 C states other couriers and hand delivery are acceptable. Please clarify which set of instructions are correct.
   • Section 3.02 (C) takes precedence.

36. 3.02F / Page 8 - Please advise where the "Proposal Certification Form" is located.
   • Please see signature section on page 14

37. 4.02F / page 11 - Can you define what you mean by “Pricing Guarantee Letter” referenced on page 11 section 4.02 F (for Tab 5 of the response)?
   • A formal letter with the company letterhead and signed by an authorized person from the company that the pricing in the proposal is guaranteed and will not change during the bidding process or during the course of the project if awarded.

38. 4.07 / Page 13 vs. Section 270500 Part 1.05 / Page 85 - There are contradictory reference requirements for structured cabling in 4.07 and Section 27 05 00 Part 1.05. Can Rice confirm the distinction between references for large wireless projects and structured cabling systems and clarify the requirements for each?
   • Three references are sufficient.

39. 15.05A / Page 41 - Section 15.05 implies that we have the opportunity to visit the sites prior to the delivery of the RFP response. Is this accurate and how would that be coordinated with Rice?
   • No site visits will be conducted prior to award.

40. 17.03 / Page 51 - Section 17.03 discusses "Service After Installation." Can Rice elaborate on what kind of service they are envisioning with regards to the Wireless System? Is it more along the lines of equipment replacement from the manufacturer, ad-hoc troubleshooting support from local engineers, or a managed service relationship with specific SLAs?
   • Rice University aims to understand what support capacity and capabilities, such as the service examples listed in the supplied question, the Respondent has once the implementation team has completed the project.

41. 20.09 A.1 & A.2 / Pages 62-63 - 20.09 A 1 specifies radius authentication for Rice Owls SSID. A2 says that ISE is serving for authenticating only wired devices. Please confirm whether that should be only wired, vs. only "wireless"?
   • Confirmed; ISE is only used for wired devices’ authentication.

42. 20.09 A.6 / Page 63 - Please provide information regarding the existing wireless traffic volume generated by the client devices listed in section 20.09 A6 - specifically average per user or device utilization and aggregate throughput?
   • Average of 2Gb/client/24 hours
43. Building maps, existing wireless placement maps and RF Site Survey maps have not been provided at this time. Would it be possible to open up a second Q&A timeline after maps and RF surveys are provided?
   - Yes – A second Q&A session will be held on Thursday, February 14, 2019 at 9:00 a.m.

44. The timeline states Proof-of-Concept Candidates and a POC timeline. However, the RFP does not provide any information around the scope and expectations of the what would be required in the proof-of-concept. Can we receive a little more detail around scope, size of deployment, functionality required, etc to make sure this is accounted and planned for accurately?
   - Functionality: demonstrate that the solution meets all the requirements from the RFP including but not limited to performance, management, reporting, analytics, location, authentication, and roaming. The contractor will be expected to work with Rice University staff for any required integration with the Rice University network which may include directory services, DHCP scopes, firewall exceptions, routing, etc.
   - Size of deployment: one indoor building/department and one nearby outdoor space, such that it will be a live production space. Alternatively, a separate lab (non-production) environment consisting of an indoor and outdoor space. No cabling will be necessary during the POC.
   - Endpoints: The winning contractor can expect endpoints to include Apple and Android phones and tablets; Windows, Mac, Chromebook laptops; and IOT devices. Exact endpoint list will depend on the nature of the POC environment (production or lab).
   - Responder’s POC requirements: in their proposals, Responders shall supply requirements for setting up the POC including any physical or virtual space, directory services accounts/credentials, DNS/DHCP, IP addresses, firewall exceptions, remote access, MAC address lists, etc.
   - POC success tracking: Responders are highly encouraged to record and track their solution’s compliance against the RFP requirements towards RU evaluation.
   - Expected timeline: Rice University expects each finalists’ POC to last two weeks, from setup through testing and performance reporting, but is open to recommendations from each finalist.
45. 20.04 B.3 states “Install new Category 6A horizontal cabling (2x per access point) with cable provided by Rice University. Provide and install patch panels and jacks.” However, the slide presentation in the pre-proposal meeting stated that Rice would provide all horizontal cabling and the contractor would be responsible for the patch panel and below. Can we get some clarification? Will the contractor be running the cables (provided by Rice) between the Access Point and the Patch Panel or will Rice be providing “all” horizontal cabling including the physical installation?
   - Rice University will provide the cable spools themselves and the contractor will run, terminate, and test the horizontal cables, in addition to terminating and installing patch cables at both the switch and access point ends.

46. 20.06 For existing access point locations, are two new data drops being provided as well, or will one of the existing drops be re-used?
   - As stated in the RFP, two new drops will be installed per access point. In locations with existing Cat6A, cable and patch cable may be re-used.

47. 20.07 B states that contractor will re-use existing patch cords at existing access point locations. Will the contractor be re-using the patch cord at existing locations for both the AP side and the closet side or just the AP side?
   - All existing horizontal cabling and patches can be re-used.

48. For these locations are there two patch cords currently or only one? If only one, will the contractor be required to provide a second patch cord for the second drop being requested?
   - The Contractor shall provide four (4) patch cables per access point (two drops with a patch cable each for the switch sides and the AP sides).

49. 20.08 F states that all electronic equipment will be shipped directly to the University to inventory, asset tag and label. Will the University be performing these steps or will the contractor need to perform these steps at the University location?
   - Rice University staff will perform asset tagging.

50. 20.08 N & R Will the contractor be required to implement any new VLAN plans or QoS configurations on the University’s existing switch network or will this be taken care of by University staff if it is required to support the new wireless network?
   - Rice University staff will be responsible for all configuration changes in regards to the existing network infrastructure.
51. 20.09 O.14 states “The system shall support AP packet capture from the controller.” Can you provide some clarification around what this means?
   • The controller shall have the capability to run packet captures to troubleshoot issues such as communication failures with WLAN components like access points, RADIUS, or other controllers.

52. 20.09 P.3 states “Access points shall provide four radios, two of which shall be capable of running 5GHz concurrently and be user selectable. One radio shall be a Bluetooth Low Energy (BLE) Radio.” Does user selectable mean algorithmic/automatic as well as manual/static? What is the role/requirements of the 4th Radio?
   • See specification clarification in response to question #10 above.

53. 20.09 P.6 states “Same family/model access point shall have an internal antenna model and an external antenna model?” It was my understanding from the pre-proposal meeting that the AP could be within the same family and not specifically the same model. Is this accurate?
   • See clarification in response to question #7 above.

54. 20.09 Q.4 states “APs shall be deployed in a manner that supports location-aware coverage.” What is the required accuracy of the client/device location?
   • Responders shall include in their proposals what the accuracy capabilities are of the system proposed.

55. 20.09 Q.5 states “The system shall support automatic radio management for optimizing radio channel settings, transmit power, and other RF parameters.” Does this encompass dynamic radio role assignment of 2.4GHz, 5GHz or monitor?
   • Automatic radio management should be enabled for 2.4GHz and 5GHz. Management for any other modes should be noted in the proposal.