

Questions and Answers

The followings are questions and answers (Q&A) the City has been receiving for the Wireless Broadband Network Project. The City will continue to update and post Q&A list every Friday up to February 07, 2020. Proposer can continue to submit questions to:

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January 10, 2020

1. Q: Has the LTE CPE equipment vendor been selected.
A: No, the proposer is to submit a design build proposal using selected technologies that best meet requirements presented in the RFP
2. Q: Who would provide the LTE CBRS Equipment? Or has the CBRS LTE vendor been selected?
A: The proposer is to select all technologies
3. Q: Do you have the specs for the base station equipment for RF engineering design purposes?
A: No, the proposer is to submit their design using their selected technologies
4. Q: Do you have spectrum agreements with the FCC and would you have corporate users of the spectrum like CenterPoint Energy or have to cooperate with for frequency planning?
A: Per the RFP the proposer is responsible for all FCC licensing. Under the CBRS all frequency planning will be automated via the SAS.
5. Q: Would we have to work with cellular providers to fill holes in the network?
A: Per the RFP all end nodes will have cellular failover capabilities.
6. Q: Can you please provide the Standard Front End Documents and General Requirements Document (the links provided do not work)?
A: The Standard Front End Documents and General Requirements Document can be found here: <https://houstonpermittingcenter.org/office-city-engineer/design-and-construction-standards#agency-links-1476>
If you continue to have issues, please email patrick.nguyen@houstontranstar.org for further assistance.
7. Q: Will the City of Houston provide a structure for this procurement to divide into a Design Phase that would then be the inputs required to accurately bid the required equipment applied to the bandwidth, geography, etc. that is specific to the City of Houston in the Implementation/Construction Phase?
A: The City is requiring the proposer to submit a Turnkey proposal comprising of both the design and construction phases of the project as one.
8. Q: If the City is not planning to divide this procurement into a Design Phase and Implementation Phase, will the City provide an extension to the submittal date? It may be necessary to extend the submittal date into April 2020 in order to accurately price the required equipment per the design that must first be completed.
A: No extensions are being considered at this time.
9. Q: If an extension is warranted, will you be informing the proposers prior to Feb 7th?
A: Yes, if extensions become warranted an amendment will be posted on the link provided <https://www.publicworks.houstontx.gov/wireless-broadband>

10. Q: What are the bonding and insurance requirements for the project that are included in the DBA, per Section A.7?

A: The Post-Bid Procedure requires the winning bidder to submit the followings to the City:

Document 00610 - Performance Bond

Document 00611 - Statutory Payment Bond

Document 00612 - One-year Maintenance Bond

Document 00620 - Affidavit of Insurance (with Certificate of Insurance attached)

The document can be found at:

<https://www.houstonpermittingcenter.org/>

January 24, 2020

11. Q: Can the City provide information on any existing FCC Licenses for the current WiMAX network? Call Signs and Frequencies?

A: The current Wimax utilizes a 3.65ghz part 90 FCC license (call sign WQJC308)

12. Q: Is the City looking to acquire Priority Access Licenses? How many are anticipated?

A: The City of Houston is moving forward with a GAA deployment with the anticipation to evaluate opportunities within the PAL spectrum.

13. Q: Is the Last Mile Network intended for Data only or is there a plan or desire to eventually add voice capabilities using Band 48 enabled smartphones?

A: Data Only

14. Q: Will mobile devices need to be supported on the LTE network?

A: No

15. Q: Can the City clarify why an EPC is required at each base station vs a more centrally located system?

A: As a "design/Build" project, all architectural designs will be reviewed for optimum network efficiencies and capacities.

16. Q: Is the Proposer responsible for acquiring Cellular service to support the CPE devices?

A: No. The proposer is responsible for providing equipment/solution that supports cellular failover capabilities with functionalities defined in the RFP.

17. Q: Is it possible to get a list of hardware manufacturers and model numbers for the existing WiMax network?

A: As a "design/Build" project, the City of Houston is evaluating the network as a new build. The City is enquiring for architectural network designs to meet the City's needs utilizing current industry standards and technologies with no influence from the existing infrastructure.

18. Q: Is there a network diagram for the existing network the City can provide?

A: Same answer as #7

19. Q: Can the City clarify what they mean by Comprehensive Radio Network Plan?

A: Provide PtP microwave link paths for both Core and Distribution networks. Provide maps for the Last Mile solution indicating locations, propagations, link budgets with predicted UL/DL throughputs, UL/DL RSSI/SINR, etc....

20. Q: Does the City understand that LTE Bands 42 and 43 are now part of Band 48 (CBRS) and that all licensing is for Band 48.

A: Yes

21. Q: Can the City provide information on existing enclosures at the current LTE base station and End Node User locations?
A: City of Houston does not have LTE base station at this time.
22. Q: Requirement for supporting 150 CPEs is per Sector or per Site?
A: Per Sector. Provide throughput budgets based on variable load capacity per sector.
23. Q: Bandwidth requirement for the distribution network is 500Mbps, is it Aggregate or Full Duplex? Same goes for Core Network 1Gbps.
A: Full Duplex. This is an equipment requirement, but limitations could be restricted by FCC spectrum allocation. Flexibility has been given by utilizing 6, 11, 18 ghz or other licensed bands could be considered that meet the 99.99% availability requirements.
24. Q: There's an issue with one of the spreadsheets. 004-Attachment-2-end-nodes-0.xls has invalid LAT and LONG for all the Traffic Ops locations. All 2400+ are unusable. Is there another format that is available?
A: the lat/long for the Traffic Ops intersections are exported from City's GIS layer (with Nad83 projection)
25. Q: Is the 4-sector configuration a hard requirement? Would CoH be open to recommendations with different sector configurations, to optimized site design and meet the best solution?
A: As a "design/Build" project, all architectural designs will be reviewed for optimum network efficiencies and capacities.
26. Q: Is this a preference or a hard requirement as opposed to a centralized LTE Core EPC?
A: As a "design/Build" project, all architectural designs will be reviewed for optimum network efficiencies and capacities.
27. Q: Is Point to Point microwave a hard requirement? Is COH willing to consider a combination of fiber connections alongside microwave?
A: Yes, but no Leased fiber will be considered for this project.
28. Q: Can CoH share the typical use-cases with the exact minimum data throughput per use-case within city service line? So, we can optimize sites design, i.e. where end-nodes will "not" require 10Mbps UL, but 256Kbps will meet the needs.
A: The network is being designed to not only support today's but future technologies that become available to the different service lines. Thus 10Mbps of UL is our baseline budget we are trying to achieve.
29. Q: For each City use-case, what use-case is considered "Critical Infrastructure"? What is the data priority for each use-case? In each use case, does the city require failover to commercial LTE carriers?
A: The proposer is responsible for providing equipment/solution to all end nodes that supports cellular failover capabilities with functionalities defined in the RFP.
30. Q: Does COH require a SIM management platform and Analytics platform?
A: Provide all management platforms that allow the user to optimize and efficiently manage the network being proposed.
31. Q: Shall we consider any infrastructure reuse, or we need to assume a total site solution design for a new install? i.e. cabinet, conduit, power, etc.
A: Assume new install.
32. How many percent Indoor vs. Outdoor cell-sites?
A: 98% indoor
33. Q: Are there any critical and special care needs to be taken into consideration to limit the downtime during the swap or LTE new install?
A: No, a fail over system provided by the City will be in place during the migration.

34. Q: AC or DC power preference? Is proposer expected to perform site power upgrades if required?
A: All sites excluding "End Nodes" will require a new 48vlt system as defined in the RFP
35. Q: Question on De-installation of WiMax: "What specific WiMax equipment (manufacturer, quantity, part number, etc.) by specific site location needs to be removed?
A: Approximately 60 wimax 3 sector base stations (all outdoor transceiver), 120 PtP unlicensed microwave radios (all outdoor transceiver) with dish, 50 licensed PtP split mount microwave radios and dish, and 3000 wimax (all outdoor transceiver) CPE's.
36. Q: How many households is COH targeting to cover with the FWA CPEs?
A: No citizens houses will be covered. Only City of Houston facilities will be provided services with this RFP. All end nodes have been defined in the RFP
37. Q: What is COH throughput target per household?
A: End Nodes have a target of 10mbps UL. All bandwidth capacities are defined in the RFP
38. Q: Do they have an existing ACS management system for the CPEs?
A: Yes
39. Q: Do they require also residential GWs?
A: All End Nodes requirements are defined in the RFP
40. Q: Under FCC CBRS Licensing, Is COH applying for PAL auction in the Houston market? Or is the deployment all GAA?
A: The City of Houston is moving forward with a GAA deployment with the anticipation to evaluate opportunities within the PAL spectrum.
41. Q: Of the two specified bands, is there an implementation requirement based on location?
A: All LTE distributions will be on band 48...formerly known as band 42 and 43.
42. Q: Will the City of Houston acquire PAL license or operate in unregulated GAA?
A: The City of Houston is moving forward with a GAA deployment with the anticipation to evaluate opportunities within the PAL spectrum.
43. Q: What are the current in-building WiMAX solutions? Is the WiMAX the backhaul with wifi inside? Do we provide LTE indoor solution or wifi?
A: No indoor wimax exist in the current infrastructure nor will indoor LTE be required in the RFP.
44. Q: Is there a microwave network map available?
A: As a "design/Build" project, the City of Houston is evaluating the network as a new build. The City is enquiring for architectural network designs to meet the City's needs utilizing current industry standards and technologies with no influence from the existing infrastructure.
45. Q: Does the cost of any R-56 design upgrades need to be included in the original RFP response? Or can these potential upgrades be audited, and cost proposed later? This is for towers, tanks, comm rooms and demarcation points: R-56 audit do not only cover the grounding, but also power design and distribution.
A: To be included in the original RFP response. Grounding is the primary focus point from the R-56 guidelines.
46. Q: Will the original tower drawings and any previous tower mapping and structural analysis for towers and water towers be provided for reference?
A: Yes, any and all available documents will be provided.

47. Q: Is current traffic cutover to commercial network(s) via meraki routers and/or aircards to be reused? Who will be responsible for maintaining this service/equipment?
A: No, the Meraki/aircard solution is only in place until the new LTE migration is completed. The City is responsible for maintaining this service.
48. Q: Will and/or when City GIS data be available?
A: Specific request will be submitted for approval after a contract has been awarded.
49. Q: What is the warehousing expectation? Can/will the City provide?
A: The City does not have warehouse space to facilitate the needs of this project.

January 31, 2020

50. Q: Who will be managing the network? The City of Houston or the proposer?
A: City of Houston
51. The City is asking for redundant data centers, are these City of Houston facilities or provided by the proposer?
A: City of Houston Facilities defined in the RFP
52. Who will maintain the desktop workstations, NMS Systems and Authentication servers?
A: City of Houston

February 7, 2020

53. Q: The RFP specifies two separate internet access sources, what location(s) should be designated as the main data center?
A: (1) 6922 Katy Rd. (2) 4545 Groveway. The proposer's equipment and design are to support 2 internet access sources for failover. The City will provide the Commercial Internet source.
54. Q: What are the required internet access speeds for these feeds?
A: 1Gb
55. Q: Is there a preferred VPN provider?
A: No
56. Q: At this time does the RFP team have Terms and conditions under which Houston would want to contract the contemplated work for this project?
A: Terms and conditions are in accordance with City procurement process.
57. Q: The RFP says 250 locations but Attachment 2 lists 299 CBD locations.
A: 298 CBD locations
58. Q: Are just the locations along Main St, Rusk St and Capital St to be used as Base Stations? Or are the proposers to assume there are 250/299 available locations for Base Stations?
A: Main St, Rusk St and Capital St are the corridors with Fiber connectivity back to the Transtar Data Center that can be utilized for backhaul. The proposer can utilize any location for their design.
59. Q: Are there locations that *must* be Base Stations or totally up to the Proposers?
A: Up to the proposer
60. Q: Does the City plan to extend the deadline for the Proposal?
A: The City does not plan to extend the deadline of this proposal. The deadline for submitting proposal remains to be February 21, 2020.

61. Q: What is the expectation of any/all decommissioned equipment? Disposal; recycle; return to CoH?
A: [Return to City of Houston](#)
62. Q: In regard to the microwave work; will the expectation be overlay with parallel operation or hot cut were we are expected to maintain connectivity and perform work in a maintenance window?
A: [City of Houston will maintain End Node operations with a cellular solution while services are being migrated to the new solution following an agreed upon migration plan.](#)
63. Q: The Wi-Fi coverage from router deployed at service line locations is limited to 3000 SFT. Is this acceptable or do we need to provide Wi-Fi access points to enhance coverage with the targeted area?
A: [Wi-Fi coverage is not required in this project.](#)
64. Q: Can we have a list of all city owned fiber locations available for use in this project?
A: [The only City Fiber accessible for this project is located at the traffic intersections along Main St, Rusk St and Capital St corridors in the direct downtown area \(CBD\).](#)
65. Q: Can we please have identification on which locations the Public Works have fiber access for this network?
A: [There is no City owned Fiber accessible for this project.](#)
66. Q: Is the City Core MPLS network different than MPLS core we are asked to provide?
A: [Proposer is to provide an End to End Turn Key solution.](#)
67. Q: If the City Core MPLS network is different from the one requested to be provided by bidder, can you please provide a scope of work for the configuration into the City Core MPLS network?
A: [N/A \(see previous answer #66\)](#)
68. Q: Do the traffic intersections require 14 useable IP's for 14 different devices on one subnet behind the CPE or are you requesting 14 different Subnets behind the CPE?
A: [14 useable IP's for 14 different devices behind the CPE.](#)
69. We note that the attachments relating to the project contract documentation are still not available on the link set out in the RFP document. We attach a screenshot of the link and resulting webpage (content has moved). Please share an updated link that works to ensure the bidders can factor in any relevant requirements by the city.
A: [The link in RFP document has been redirected to: <https://www.houstonpermittingcenter.org/office-city-engineer/design-and-construction-standards>](#)