



## TRANSBAY JOINT POWERS AUTHORITY

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### REQUEST FOR PROPOSALS No. 18-02 TWO-WAY RADIO SYSTEM

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#### *QUESTIONS & ANSWERS*

The following questions were received related to the above-referenced RFP:

- Q: Will there be a DAS (distributed antenna system) installed by BOINGO to accommodate the 400-470 MHz UHF repeaters and radios you are requesting? If so, would this DAS include coaxial cable, splitters, amplifiers and frequency specific antennae to operate in conjunction with the radios and repeaters. If so, can the schematics be made available?***

A: Yes, the DAS being installed by Boingo will accommodate the 400–470 MHz UHF repeaters and radio and will include the above-referenced elements. Refer to question no. 5 in the Pre-proposal Q&A posted on the TJPA website.

- Q: Have there been any RF (radio frequency) propagation studies conducted by BOINGO to test coverage for UHF 400-470 MHz portables within the facility. If so, would they be made available?***

A: Yes. However, the study was performed for different antennas than those being installed, which have a wider frequency range. Refer to the files saved here: <https://transbaycenter.app.box.com/s/lpv8q9ydtcrbkskknxbw1tke63r9fvld> (click Download to access a zip file).

- Q: Do you have a target benchmark number for “radio coverage” throughout the main terminal, bus storage yard and bus ramp, such as “90 or 95%”? If so, what signal strength (db) are you wanting to achieve for system acceptance?***

A: The target benchmark for “radio coverage” is 95%. Signal strength of 100 dBm is acceptable.

- Q: In RFP Section 3.8, Item #1. What capacity of lithium-ion batteries is needed with each radio in mAh (milliAmp hour) i.e. 2000, 2300?***

A: The radio lithium-ion batteries must have a minimum capacity of 2000 mAh.

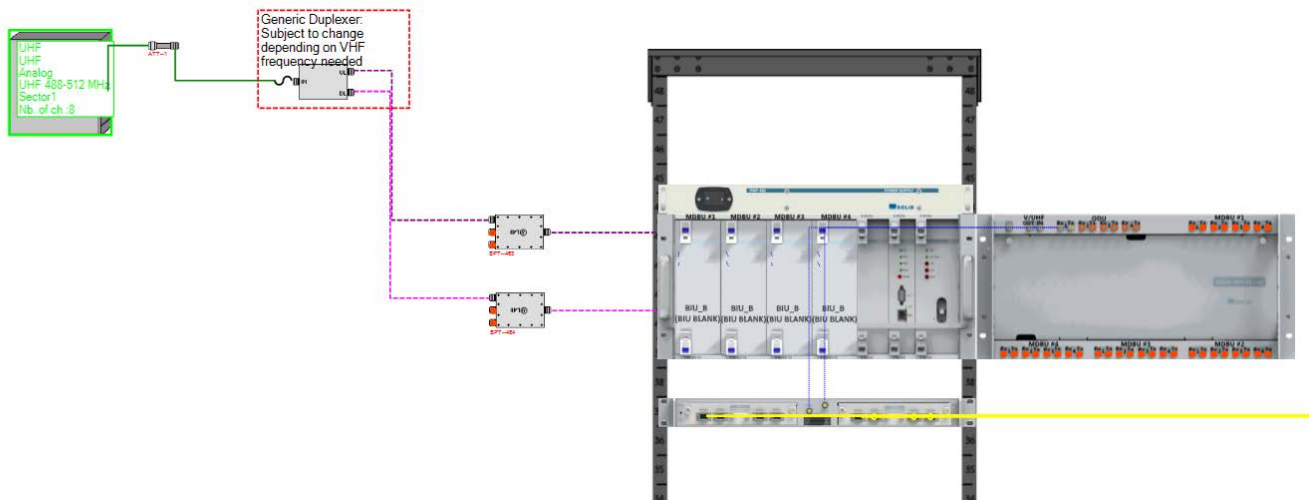
- Q: In RFP Section 3.8, Item #2. What capacity multi-unit rapid charging stations are needed. i.e. 6, 12, 24 slot capacity?***

- A: Multi-unit rapid charging stations with 12-slot capacity must be provided.
6. ***Q: Are the belt clips requested in RFP Section 3.8, Item #6 intended as spares or should they be included as part of RFP Section 3.8, Item #1?***
- A: The belt clips should be included as part of RFP Section 3.8, Item #1.
7. ***Q: The radios specified in RFP Section 3.8, Item #1 call for a range of 400-470 Mhz, yet RFP Section 3.8, Item #10 calls for radio antennas with operating range of 406-512 Mhz. Is it intended for these to be different?***
- A: Yes. The radios provided under Item #1 must operate in the range provided (400–470 Mhz). The DAS radio antennas currently being installed will cover a range of 380 Mhz–520 Mhz.
8. ***Q: RFP Section 5.1 indicates that the Introduction and Executive Summary have a 1-page limit. Does this mean that the Introduction and Executive Summary can each be 1 page? Can the limit on the Executive Summary be increased to 2-3 pages? This is a complex project and there is a lot to explain. One page is not enough.***
- A: TJPA is increasing the Introduction and Executive Summary page limit to a maximum of three (3) pages total. The Qualifications and Experience of Respondent Firm page limit is also increased to three (3) pages.
9. ***Q: Please provide detailed technical specifications pertaining to the frequency bands in operation of the Boingo wireless DAS system that is being installed into the building.***
- A: See response to question no. 7 above.
10. ***Q: What is the acceptance testing criteria and Method of Procedure (MOP) pertaining to the Boingo wireless DAS system that is being installed into the building?***
- A: After the installation of the DAS is complete, Boingo will walk test the entire building using test phones and a scanner for the cellular DAS and a scanner for the UHF.
11. ***Q: Is there anyone from the DAS provider that can be made available to answer questions regarding DAS system coverage and acceptance testing throughout the facility; are proposed coverage maps available?***
- A: Refer to Addendum No. 2 and response to question no. 1 above.
12. ***Q: We were unable to attend the [previous] walk throughs. We are inquiring if there is an alternate date we may walk the site next week?***
- A: Refer to Addendum No. 2.
13. ***Q: Will the RFP respondents be allowed to talk with your service provider Boingo about the DAS system prior to the question deadline of 5/4/18?***
- A: Refer to Addendum No. 2.

14. ***Q: Without additional information about the already contract and installed Boingo DAS system, I am formally asking for an extension of the bid submittal deadline of 5/29/18.***  
A: Refer to Addendum No. 2 and response to question no. 1 above. The proposal due date remains May 15, 2018.
15. ***Q: Will the potential bidders be allowed to take RF measurements on the job site prior to submitting bids?***  
A: Refer to Addendum No. 2.
16. ***Q: Will there be a dedicated IDF closet for the repeaters?***  
A: There will be space available in an IDF room for the repeaters; however, it will not be a dedicated IDF closet.
17. ***Q: Is there existing conduit that will run from the IDF closet to roof of that building?***  
A: There are existing conduits from the IDF rooms to all levels of the transit center.
18. ***Q: On the roof about this closet will there be room to install antennas? combiner?***  
A: Yes.
19. ***Q: May we have a diagram or basic blueprint of this area?***  
A: Yes. See drawing A1-2606, attached.
20. ***Q: Do the radios need to have keypads/limited keypads? Or only displays are necessary?***  
A: Only displays are necessary.
21. ***Q: Regarding RFP Section 3.4 Submittals paragraph b.iii. Does the logging recorder also need to record phone conversations?***  
A: No, the logging recorder is for radio communications only.
22. ***Q: Regarding RFP Section 3.4 Submittals paragraph b.iii. How many logging recorder inputs are required? Example, radio, telephone, etc.?***  
A: Logging recorder inputs are required for radio only.
23. ***Q: Regarding RFP Section 3.8 Equipment List and Accessories, Item #13. Is the vendor responsible for obtaining the FCC channels and what is the required quantity?***  
A: Yes, the vendor is responsible for obtaining the FCC licenses necessary to support ten (10) channels.
24. ***Q: How many different discrete (talk) groups does the system need to support with respect to 130 radio users?***  
A: The system shall support ten (10) discrete (talk) groups.

25. **Q: What is the physical and electrical interface to the Distributed Antenna System (DAS) being installed by Boingo on all the platform levels?**

A: A hard line is expected from the UHF source to the DAS interface (BIU). See below:



26. **Q: When will the DAS system be installed and operational?**

A: The DAS is currently being installed and is targeted to be operational in late June 2018.

27. **Q: What cellular carriers are going to utilize the DAS network & what frequency bands are being supported for cellular and LMR (land mobile radio) communications?**

A: It is anticipated that the major cellular providers will operate on the DAS. Frequency bands (380–512 MHz) for the 400–470 MHz radios and frequency bands of 700 upper and lower, 800, 850, 1900, 2100, 2300, 2500 MHz will be provided.

28. **Q: Can TJPA arrange a telephone conference call meeting with Boingo or the design engineering group to investigate utilization of the DAS and its capabilities with respect to RF coverage and architecture?**

A: Refer to Addendum No. 2.

29. **Q: Regarding RFP Section 2.2 Figure 1 & Table 1. Is this where RF coverage is required: Attachment 6 shows all six levels of the transit center. The square footage of the facility by level and space usage is shown in Table 1. Please define RF coverage requirements with respect to outside the building, number of stairwells, number of commercial stores, number of restaurants, etc.?**

A: RF coverage is required throughout the property, including the transit center and surrounding sidewalks, the bus ramp, and the bus storage facility (BSF), as well as 250

feet beyond the edge of the transit center building, the bus ramp structure, and fence/wall structures at the BSF.

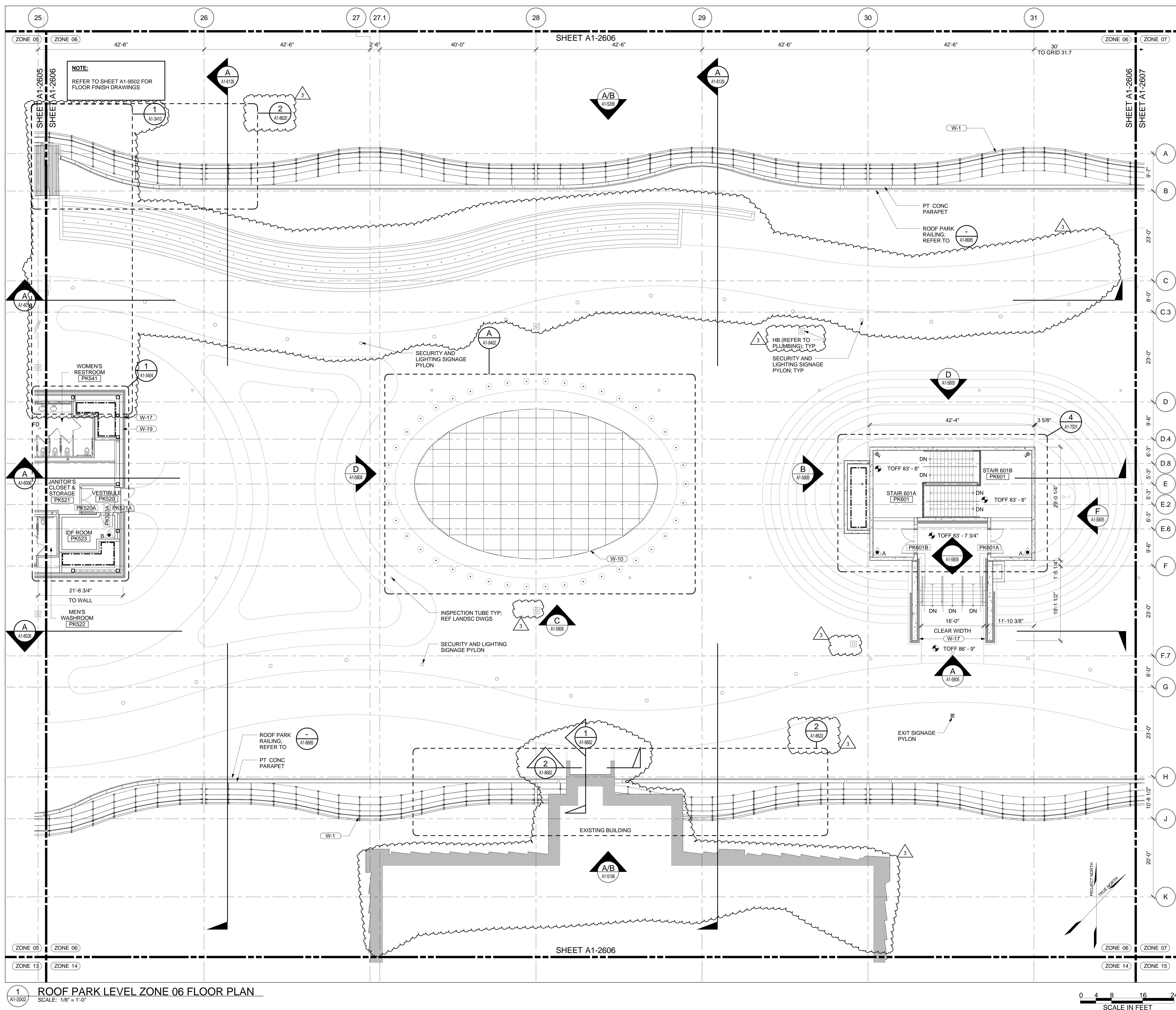
**30. Q: *What is the expected reliability of the RF coverage design?***

A: Boingo is required to provide 99.9% availability over 95% of the coverage area.

**31. Q: *Can another one-day site visit be conducted for RF testing?***

A: Refer to Addendum No. 2.

Note: If this sheet is not 44" x 34", it has been revised from its original size. Scales noted on drawings/details are no longer applicable.



Transbay Transit Center  
TRANSBAY JOINT POWERS AUTHORITY

Pelli Clarke Pelli Architects  
adamson ASSOCIATES INC.

01	02	03	04	05	06	07	08
09	10	11	12	13	14	15	16

Key Map

NO.	DATE	DESCRIPTION
1	03/27/14	ISSUED FOR CONSTRUCTION
2	12/16/14	PER NO. 01/28
3	02/27/15	PER NO. 01/30
4	07/27/15	PER NO. 01/37

**08-04-CMGC-000**

**TRANSBAY TRANSIT CENTER PROGRAM**  
**TRANSBAY TRANSIT CENTER**  
**SAN FRANCISCO, CA**

**ROOF PARK LEVEL**  
**ZONE 06 FLOOR PLAN**



APPROVED	PRINCIPAL ARCHITECT	G. METZGER
APPROVED	PROJECT MANAGER	S. ROTT
APPROVED	PROJECT MANAGER	E. DEL ANGEL
DESIGNED BY	DESIGNED BY	W.R. BRADLEY
DRAWN BY	DRAWN BY	J. LYSKOVA
DATE	DATE	07/31/2015
SCALE	SCALE	1/8" = 1'-0"
SHEET NUMBER	SHEET NUMBER	3
SEQUENCE NUMBER	SEQUENCE NUMBER	140

**A1-2606** of