



The regional transit authority for Lake County

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RFP#2508 DIGITAL REAL-TIME BUS STOP SIGNAGE

ADDENDUM #1

*Changes are in *red**

3.1 Technical Specifications

- Operate in the following environmental conditions:
 - temperatures between -20°F to 140°F;
 - Laketran is willing to consider a sign that can operate in temperatures between 4°F to 140°F. However, the solar panel provided must be able to have adequate power to charge the batteries during the long gray winter months in Northeast Ohio.



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RFP# 2508 Digital Real-Time Bus Stop Signage Questions & Answers

May 5, 2025

1) The submission requirements mention an email copy should be sent to aaaby@laketrans.com. Another section mentions lettermail of a hardcopy. Can Laketrans confirm that only an email submission of the response is required?

A1. Laketrans will accept proposals by email to aaaby@laketrans.com or via hardcopy mailed to Laketrans at 555 Lakeshore Blvd. Painesville Twp. OH 44077.

2) The RFP specifies a full color LCD display that can run off of solar or battery power. A full color LCD display (similar to a tv monitor) draws a significant amount of power and likely would not be viable in a solar or battery powered configuration. A monochrome LCD technology would be plausible to run on this electrical configuration. Would a monochrome LCD be acceptable?

A2. Minimum spec will be a TFT LCD display panel.

3) Operating temperature is specified as temperatures between -20°F to 140°F. This would preclude e-paper technology as below -4°F e-paper technology will exhibit ghosting and freezing. Can Laketrans confirm if e-paper is an acceptable alternative for this bid?

A3. See above Color LCD is the media requested in the bid document.

4) The RFP document mentions a 15-foot galvanized steel pole. Will Laketrans be providing the pole or is the supply of the pole included within the scope of this RFP? If the pole is to be included, how many should be included, as it sounds like some sites will be pole mounted and some sites will connect to existing infrastructure (poles / shelters).

A4. The pole and all associated mounting hardware for the sign should be included in the price proposal. Wall mounting hardware will need to be included for any sign that is not pole-mounted and the costs for both should be comparable.

5) The RFP mentions that the preferred mobile operator is T-Mobile. Many display solutions utilize a roaming SIM to reduce data costs, increase coverage (some locations may be stronger with one provider than another) and mitigate the effects of a network outage (displays can jump from one network to another in the event of an outage). Would Laketrans be open to a device with a roaming SIM rather than fixing the display to one carrier?

A5. As long as we get a single bill for ongoing connectivity charges for the sign to communicate this would be acceptable.



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6) The RFP mentions the warranty must cover the term of the contract (3 years), but also mentions the following: "At minimum, all equipment and hardware shall be rated for five (5) year minimum service life, with a preference for ten (10) year service life." Can Laketrans clarify whether the minimum warranty period is 3 years or 5 years?

A6. The sign and all associated installation hardware should be covered for a period of (3) years. Beyond the initial warranty period, the signs and all associated hardware should have a service life expectancy of an additional (2) to (5) years.

7) Can Laketrans provide an extension of the due date of at least 2 weeks to allow proposers additional time to prepare responses that reflect any changes from the addenda?

A7. Request is denied. Proposals are due on May 15, 2025 which we still believe to be an adequate amount of time to complete and submit proposals.

8) Does TripSpark Streets Infotainment's CAD/AVL system output live data feeds in the form of GTFS, GTFS-RT, etc.?

A8. STREETS outputs to Google via the GTFS service publishing standard output folders in real-time. Service Alerts, Trip Updates and Vehicle Positions.

9) Minimum Display Size: The proposal specifies a minimum size of 17 inches diagonally. Does this measurement refer to the total screen enclosure or the viewable display area? Would a 13-inch viewable area be considered acceptable?

A9. 17" is the minimum spec'd size. Can be greater but not less.

10) Display Type: The RFP indicates a full color display is required. Would a monochrome or greyscale display be acceptable or is full color a mandatory requirement?

A10. TFT LCD is the minimum allowed. Grayscale and monochrome is not acceptable.

11) Mounting Options: Could you clarify the available mounting options for the signage to ensure we determine proper mounting hardware? Are the stop locations standardized or do the shelters vary in design or installation requirements?

A11. The shelters will be standardized. The variable will be availability of A/C power or not. There should be a solar option and a street power option.

12) Installation Responsibility: It is our understanding that hardware installation is not included in the scope of this proposal. Can you confirm whether the local facility or supplying vendor will be responsible of the physical installation of the signage?



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A12. The supplying vendor will be responsible for the complete installation and configuration of the sign under the guidance of Laketrans.

13) Would Laketrans consider using outdoor rated 17" diagonal P1.25mm LED display that is more ruggedized for your environment, with an average lifespan of 100,000 operating hours?

A13. Is it in color? And how long will the sign run without the solar panel providing charging to the onboard battery. We have gray months with minimal solar exposure.

14) Even though "STREETS" outputs to Google, do they also require an API?

A14. The stop data is provided from STREETS via the "Infotainment Module" in STREETS, your sign should be able to communicate with this API at this level.

15) In addition to real-time bus information, would Laketrans be interested in providing additional passenger information such as service alerts, "see something, say something" PSA graphics or even high-resolution videos?

A15. Vendors are can exceed the minimum specifications. Be sure to identify how the product exceeds the minimum requirements in your proposal.

16) Since the RFP calls for "multi-page toggle, audible ADA callouts" is there specific ADA audio output specifications that must be met?

A16. The sign should be able to provide audio to match visual data presented on the sign at the request of the rider.

17) Does audio to support the "multi-page toggle, audible ADA callouts" need to be within the display enclosure or through external speakers?

A17. External audio would be preferred due to noisy environments where the sign may be placed.

18) Will audio be used for more then just the "multi-page toggle, audible ADA callouts"? For example graphic messages that have audio embedded into them?

A18. The main purpose for audio output is ADA callouts. Vendors can exceed the minimum specifications.

19) Are there specifications for the display enclosure?

A19. The enclosure should be highly weather (extreme hot & cold) and also extremely vandal resistant.



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20) Are the displays all single-sided or are there and double-sided as well (within the same display enclosure?

A20. Signs are expected to be single sided.

21) Are there any specifications for contrast ratio and refresh rate?

A21. Sign should be fully visible in direct sunlight.

22) Would content be displayed through a player? If so, is there a minimum specification for the player and where would it reside?

A22. These signs will be used for departure and arrival data only.

23) LCD screens technology: The LCD technology requires a lot of energy. We can comply with the functional specifications with a full color e-paper technology that will require 5 to 10 times less batteries. If we use LCD, the batteries will not be mounted on poles but will require a separate extra cabinet which will cost more and may not be easy to install in some locations. Will you consider e-paper full color technology instead of LCD?

A23. We are aware of the need for external batteries in the installation. The minimum spec will be color TFT LCD for the sign displays.

24. Specifications require that the system works between -20F and 140F. No battery can be charged below -4F (-20C). Therefore, if there is no sun the system will not be able to recharge the batteries. Will you consider a system that can recharge batteries only until -4F?

A24. Addendum #1 will be issued to address this answer. Yes, we would consider a -4F charging output. The solar panel provided must be able to have adequate power to charge the batteries during the gray Winter months in NE Ohio.