

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

SPECIAL PROVISION

Section 110 – Electronic Delivery Management System (e-Ticketing)

110.1 General Description

This work shall consist of incorporating an Automated Electronic Ticketing (e-Ticketing) System for asphalt, concrete and aggregate delivered to the project in order to monitor, track status, report location at material source and project delivery site and report loads of material during the construction processes from the point of measurement and load-out to the point of incorporation to the project.

110.2 Construction Requirements

No fewer than 30 days prior to delivery or placement activities, the Contractor shall submit to the Engineer for approval an Automated Electronic Ticketing (e-Ticketing) System supplier that can provide a qualified representative for on-site technical assistance and training during the initial setup, pre-construction verifications, and data management and processing as needed during the Project.

110.2.01 Equipment

Contractor shall provide operator settings, user manuals, and required viewing/export software for review, and ensure the equipment will meet the following:

- A. The Automated Electronic Ticketing (e-Ticketing) System shall include a device that is capable of tracking vehicles and installed on all dump trucks, belly dumps, side-load dumps, pavers, materials transfer vehicles, or any other equipment used, for placement or delivery of weighted material on the project. A device will be required for all delivery vehicles and one material receiving equipment for each placement operation. Department personnel shall have the ability to access load information through the use of a state-furnished mobile device such as a tablet, smartphone, etc.
- B. The Automated Electronic Ticketing (e-Ticketing) system shall be fully integrated with the Contractor's Load Read-Out scale system at the material source site.
- C. The Automated Electronic Ticketing (e-Ticketing) System shall have the ability to provide location of vehicles and their contents at the material source and at the project delivery site. The system shall have offline capabilities to store load information due to loss of power or GPS connectivity.

Material source and delivery location sites shall have a reliable, stable internet connection. If possible, contractor may provide a local internet connection device in project areas with poor or no cell service. If an internet connection is not available, the Engineer may request that a paper tickets be supplied for validation of material delivered. The Engineer shall give one (1) day notice to receive paper tickets. All other submittals as described in Section 110.2.02 A and C are still required. The electronic ticket will be used for payment and the calculation of material quantities delivered, and the paper ticket will serve as an on-site validation of material delivered to the site.

Contractor shall install and operate equipment in accordance with the manufacturer's specifications. Contractor shall also verify the GPS is working within the requirements of this Specification.

110.2.02 Submittals

Contractor shall provide to the Engineer a means in which to gather report summaries by way of iOS App, Android app, and web pages. The Engineer may request data at any time during operations.

A. Delivery Load Information

1. Provide the Engineer summary information on each delivery load for each truck:
 - a. Name of Contractor and material producer
 - b. Certified Weigher Number
 - c. Project Number and County

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- d. Truck Number
- e. Description of material
- f. Net Weight of material being transported (to the nearest 0.01 ton)
- g. Running Daily Total of Net Weight of material being transported (to the nearest 0.01 ton)
2. Provide individual fields for field input of the following:
 - a. Material Temperature
 - b. Material waste – material waste shall be shown in summary and subtracted from total quantity delivered
 - c. Comments

B. Real-Time Continuous Data Items Truck Status

Provide the Engineer the following information in real-time with a web-based system compatible with iOS and windows environments.

1. At Source – include scale location
2. At Destination – include:
 - a. Project location
 - b. Point of Delivery (i.e. paver, material transfer vehicle, etc.)
3. In Route
4. Time of last status change

C. Daily Summary

The following summary of information shall be provided to the Engineer electronically in spreadsheet format and PDF by 12:00 p.m. the next working day following delivery of the material.

1. For each Material
 - a. List of Individual Loads
 - b. Contractor Name and material producer
 - c. Description of material
 - d. Project Number and County
 - e. Truck Number
 - f. Net Weight for Payment (nearest 0.01 tons)
 - g. Date Placed
 - h. Time Loaded
 - i. Time accepted
 - j. Delivery Location (Latitude/Longitude within 25 foot of actual placement)
2. For each Item
 - a. Total Quantity Wasted (nearest 0.01 tons)
 - b. Total Quantity for Payment (nearest 0.01 tons)

110.3 Measurement

The following section details measurement for payment for the work described in this Section:

- A. Except as provided herein, there will be no measurement for payment for the work covered by this Section.
- B. Where required by the Plans, Automated Electronic Ticketing (e-Ticketing) System will be used.

110.4 Payment

Except as provided for herein, the Department will not make separate payment for Automated Electronic Ticketing (e-Ticketing) System. The cost is included in the contract price for the weighted material specified in the contract.

Payment for Electronic Delivery Management System will be full compensation for all costs related to providing the Automated Electronic Ticketing (e-Ticketing) System, equipped plants, pavers, and transfer vehicles, and any other equipment

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required for the construction and reporting process. All quality control procedures including the Automated Electronic Ticketing (e-Ticketing) Systems representative's technical support and on-site training shall be included in the cost.

Delays due to GPS satellite reception of signals to operate equipment will not be considered justification for any adjustment to the "Basis of Payment" for any construction items or to Contract Time.

When shown in the Schedule of Items in the Proposal, the following item will be paid for separately for the material specified.

Payment will be made under:

Item No. 110	Electronic Delivery Management System	Per lump sum
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