



**VIRTUAL
TRANSPORTATION
SHORT COURSE**
NINETY FOURTH ANNUAL

E-Tickets for Materials in Construction

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E-Ticketing

- What is it?
- What does it do?
- How does it work?
- What potential benefits and drawbacks?
- What does the spec say?
- Who else is using it?
- When will it be approved?



What is it?

- An electronic version of a paper truck ticket...
- an outgrowth of Truck Management Systems developed for contractors...
- E-Ticketing options expedited due to Covid-19



A CSX COMPANY

Date: 4/8/2020 7:55:48PM
Location: 04283 - Terrell Plant
320 Iron Horse Drive Terrell, TX 75160
Customer: 211 Company 211 APAC Texas
Vehicle: 714 - - JOSEMG
Order: 382339.50.40 - IH-20 Kaufman (0095-14-029)
Dest.:
Product: 223115 - 9.5mm SMA Mod
Prime:

Thank you for your business!

48364143



Zone: HOURLY - HOURLY
Pay: Account
Job: ████████
P.O.: ████████
Disp.: 18409

	Pounds	Tons
Gross	80000	40.00
Tare	33700	16.85
Net	46300	23.15

Quant: 23.15 Ton

	Today	Order Totals
IH-20 Kaufman		
IH-20 Kaufman		
Loads:	2	732
Ordered:	600.00	41,265.00
Received:	46.13	15,461.90
Remaining:	553.87	25,803.10

Received: *[Signature]*

OFFICE COPY

Weighmaster: TERRELL LOADOUT

IT IS THE RESPONSIBILITY OF EACH CUSTOMER, AND EACH DRIVER, TO COMPLY WITH HIGHWAY LOAD LIMIT LAWS. I AGREE TO THE TERMS AND CONDITIONS ON THE BACK OF THE TICKET.



E-Ticketing: What does it do?

- Interfaces with truck scale ticket information
- Associates that information digitally to the truck
- Tracks truck movements (GPS or time based)
- Verifies load delivered the project – proof of delivery.
- Provides daily summary of truck tickets and travel information.
- Note: Different systems have additional options.



E-Ticketing: Potential Benefits

- Eliminates paper tickets, handling, sorting, distribution – no lost tickets!
- Allows field data entry (Temps, location, etc.)
- Eliminates data entry of paper truck tickets.
- Reduces number transposition
- Faster turnaround of daily quantities
- It's new, It's different, It's virtual!



E-Ticketing: Potential Drawbacks

- It's new, It's different, It's virtual.
- Cell service and Internet service not available everywhere.
- Some systems require trucks to be equipped with special GPS units. A bigger challenge with 3rd party trucks.
- Potential data overload.
- Missing forest for the trees.

TEXAS BIT
A CEM COMPANY

Date: 4/8/2020 7:55:48PM

Location: 04283 - Terrell Plant

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211 Company 211 APAC Texas

Vehicle: 714 - - JOSEMG

Order: 382339.50.40 - IH-20 Kaufman (0095-14-029)

Dest:

Product: 223115 - 9.5mm SMA Mod

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Pay: Account

Job: ██████████

P.O.: ██████████

Disp.: 18409

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	Today	Order Totals
IH-20 Kaufman	Loads: 2	Loads: 732
IH-20 Kaufman	Ordered: 600.00	Ordered: 41,265.00
	Received: 46.13	Received: 15,461.90
	Remaining: 553.87	Remaining: 25,803.10

Received: _____ OFFICE COPY Weighmaster: TERRELL LOADOUT

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Proposed Spec – Modification to 520

Special Provision to Item 520 Weighing and Measuring Equipment



Item 520, "Weighing and Measuring Equipment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section Article 520.2., "Equipment." The third paragraph is voided and replaced by the following. Calibrate truck scales using weights certified by the Texas Department of Agriculture (TDA) or an equivalent agency as approved. Provide a written calibration report from a scale mechanic for truck scale calibrations. Cease plant operations during the checking operation. Do not use inaccurate or inadequate scales. Bring performance errors as close to zero as practicable when adjusting equipment.

Article 520.2., "Equipment." The fourth paragraph is amended to include the following:

At the Contractor's option, an electronic ticket delivery system (e-ticketing) may be used ~~instead~~ ~~lieu~~ of printed tickets. The use of e-ticketing will require written approval of the Engineer. At a minimum, the approved system will:

- Provide electronic, real-time e-tickets meeting the requirements of the applicable bid items;
- Automatically generate e-tickets using software and hardware fully integrated with the automated scale system used to weigh the material, and be designed in such a way that data input cannot be altered by the Contractor or the Engineer;
- Provide the Engineer access to the e-ticketing data in real-time with a web-based or app-based system compatible with iOS;
- Provide offline capabilities to prevent data loss ~~if in the event of power or connectivity is lost; loss or loss of connectivity.~~
- Require both the Contractor and the Engineer ~~to~~ accept or reject the e-ticket and provide the ability to record the information required by the ~~application applicable~~ bid items, as well as any comments. ~~Record the time of the approval/rejection and include it in the summary spreadsheet described below.~~ Provide each party the capability to edit their respective actions and any entered information. ~~Provide the summary spreadsheet described below.~~

The Contractor may discontinue use of the e-ticket system and provide printed tickets as needed ~~to~~ meet the requirements of the applicable bid items.



What does the Spec say? (current version)

At the Contractors option, an electronic ticket delivery system (e-ticketing) may be used instead of printed tickets. The use of e-ticketing will require written approval of the Engineer.

1. Provide electronic, real-time e-tickets meeting the requirements of the applicable bid items;
2. Automatically generate e-tickets using software and hardware fully integrated with the automated scale system used to weigh the material, and be designed in such a way that data input cannot be altered by the Contractor or the Engineer;

What does the Spec say? (current version)

3. Provide the Engineer access to the e-ticketing data in real-time with a web-based or app-based system compatible with iOS;
4. Provide offline capabilities to prevent data loss if power or connectivity is lost;

What does the Spec say? (current version)

5. Require both the Contractor and the Engineer to accept or reject the e-ticket and provide the ability to record the information required by the applicable bid items, as well as any comments. Record the time of the approval/rejection and include it in the summary spreadsheet described below. Provide each party the capability to edit their respective actions and any entered information.

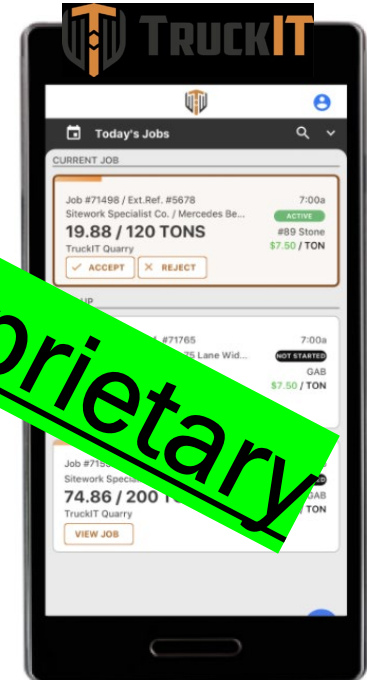
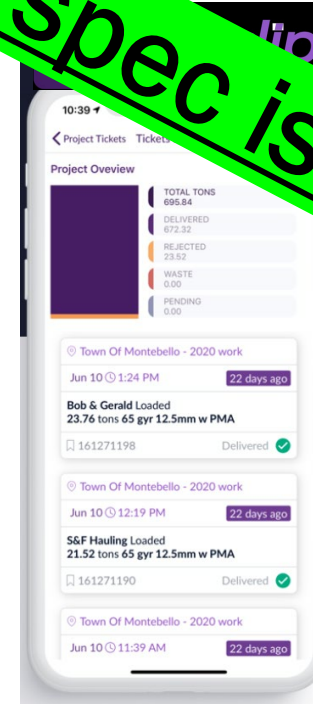
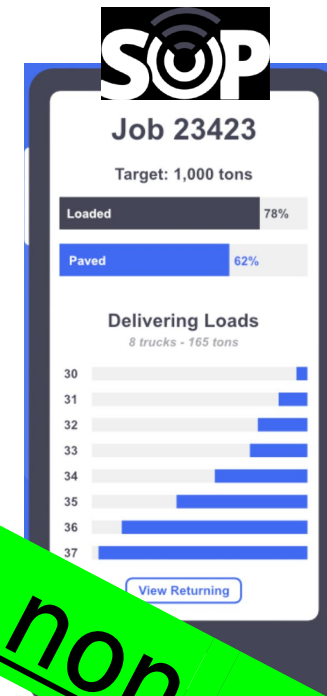
What does the Spec say? (current version)

6. The Contractor may discontinue use of the e-ticket system and provide printed tickets as needed to meet the requirements of the applicable bid items.



Providers

- Fleetwatcher/Earthwave
- Haul Hub/DOTSlip
- Spot On Performance
- Truck-It
- More vendors and growing
- In-house systems



TXDOT spec is non-proprietary

Who is using it? SAPA Survey – Sept 20

No: AR, CA, CT, HI, KS, MI, MO, NJ, OK, SC, UT (11)

Sorta: MA, WV, OH (3)

Contactless Versions: IN, KY, MD, WA (4)

Working on it: GA, NY, NC, TX, VA (5)

Yes: IA, IL, PA, AL, FL (5) - some require approval



27 responses out of 38 SAPA members

Who is using it? TXAPA Survey – Sept 20

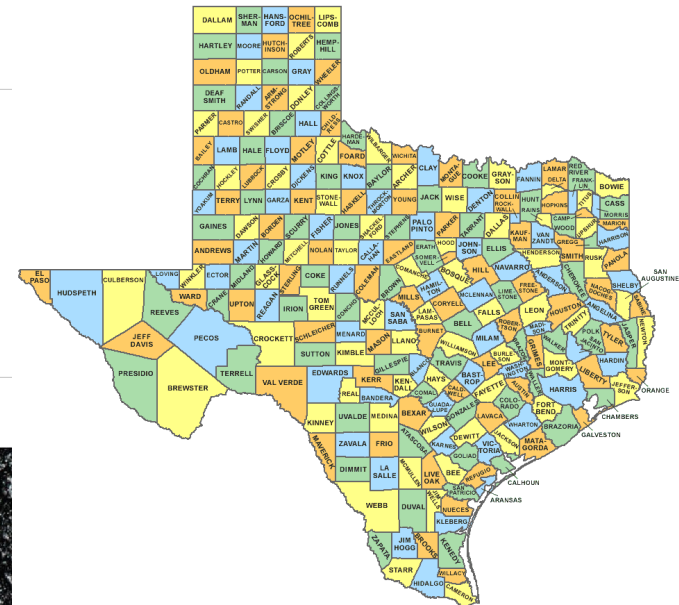
Are you currently using an electronic ticketing/truck management program?

Yes-12 No-32

Do you anticipate adopting an electronic ticketing system in the next 6 months?

Yes-23 No-21

Note: Some companies may have responded more than once.



Specification Status

- First Industry expedited review, Industry Comments
- FHWA Review and Comments
- 2nd expedited review, Industry Comments
- 3rd expedited review, Industry Comments
 - Current Status
- Final Adoption date??? Soon!

UPDATE:
Approved for January 2021



Checklist

- 👍 Optional
- 👍 Electronic version of printed ticket
- 👍 Web/App accessibility
- 👍 Proof of Delivery
- 👍 Add Field notes
- 👍 Summary of truck loads
- 👍 Non - Proprietary



Summing it up.

E-Ticketing is...

- a natural extension of technological innovations.
- an opportunity for time & cost savings, and improved efficiencies.
- something to consider?
- ***Yep!***





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