North Carolina CMV Alerts

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Alerts for Trucks using Drivewyze

- Dynamic Alerts Using INRIX
- Static Alerts for Truck Restricted Routes
- Static Alerts for Work Zones
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Dynamic Alerts Using INRIX
Traditional Traffic Operations

- Find slowdowns and tell drivers
- But what if we could do it
  - more quickly (<5 min) and
  - at the point of need (>300 DMS)?
Traffic Operations with Drivewyze

INRIX + Drivewyze = real time in-cab alerts for slow downs and congestion
Traffic Alerts

**Slowdowns**
- Alert issued if speed drops 35 mph +
- 2 miles ahead
- Speed ahead vs current speed

**Congestion**
- Alert issued if delay is 3 minutes +
- 3 miles ahead
- Travel Time now vs historical (same season last year)

Audible beep accompanies visual alerts
Contract

- Procured Through Eastern Transportation Coalition Transportation Data Marketplace (TDM)
- Year One (9/2021 – 8/2022)
  - $250,000
  - 500 Rural Interstate Miles
- Year Two (9/2022 – 8/2023)
  - $255,000
  - All NC Freeways (could be up to 5,000 miles)
- Just renewed for another 4 years
CMV Traffic Alerting Summary

NCDOT-Defined Alert Corridors
Rural Interstates

Drivewyze Monitors INRIX for Events
• Sudden Slowdowns
• Congestion

Drivewyze Distributes Alerts
• Subscribed Fleets
• Subscribed Drivers
• Free to Drivers

Drivewyze Provides Analytics Results
• Alert Location
• Alert Frequency
• Alert Density
- Historical alert and event trends
- Near real-time
- Drill into time windows for specific event

123,000 alerts in 13 months
Crash: I-95 South, near Fayetteville
But Can We Quantify the Benefit?

- We have issued over 120,000 alerts to date....
- We saw it warn of I-95 crash queues...
- We “know” it is good to alert drivers in advance of slowdowns.....
- Looked at crash data for
  - I-95 in 2018 and 2019
  - I-85 in 2021
- Difficult to see reduction in
  - # of trucks
  - Truck crash rate

How else can we quantify benefits???
Preliminary results show that alerts positively impacts driver behavior relative to drivers not alerted.

70% of alerted drivers slow down ahead of an incident.

11 mph
Avg Speed Reduction
Sudden Slowdowns

8 mph
Avg Speed Reduction
Congestion Events

2 mph
Control Group

3 mph
Control Group

Study conducted for I-95 Southbound Work Zone near Fayetteville, for January 14, 2022 – March 4, 2022 based on 4220 visits.
Truck Navigation & Restricted Routes
Truck Navigation: same story every month

Our Division Engineer, Michael Poa, decided to talk to you about this location. I have talked to these residents for some time about this problem with trucks traveling down SR 1991 with no way to turn around without damaging property. These residents contacted our board member and thus was passed on to our Division Engineer. The residents gave the new information on the destination that they believe is Lowes Inc. warehouse on SR 2324 (Liberty Grove Rd/ River Rd). This now seems to be occurring about twice a month. Thoughts.
Truck Navigation in General

• Successful in communicating base map changes & sharing incident info with Waze, Apple & Google
• These apps are not meant for trucks
• Not sure how to affect where trucks are routed
• Our only influence is on Truck Restricted Routes
Agency Generated Safety Alerts

No Additional Cost
## Restricted Truck Alerts ~ Western North Carolina

- **July 5 - Sept 15 (10 weeks)**
- **16 locations**
- **8200 Alerts**
- **0 Risky Visits**

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Static Alerts for Work Zones
I-40 Work Zone in Western NC

- Interstate bridge replacement
- All traffic off and back on using diamond interchange ramps
- 5+ mile queues Fridays and Sundays
- Visible alternate routes are truck prohibited
- Best truck alt route is 40+ miles before work zone
Agency Generated Safety Alerts

- Work Zone Delays in NC
  Consider I-81 to I-26 to NC

- Work Zone at MM 7
  Delays
  Stay on I-40

- I-40 Delays before MM 7
  Consider I-26 to I-81 to TN
Next Steps
Next Steps

• Duration of contract extended to July 2026
• Expansion to non-interstate Freeways in November 2022
• Planned analysis or research...likely
North Carolina
CMV Alerts

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