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## TECHNICAL MEMORANDUM

### TxDOT IAC – Technical Support to the CAV Task Force

**DATE:** December 7, 2022

**TO:** Zeke Reyna, TxDOT  
Strategic Research Analyst, CAV

**COPY TO:** TTI\_Reports@tti.tamu.edu  
Tim Hein, Research Development Office, TTI  
Ed Seymour, Executive Associate Agency Director, TTI  
Robert Brydia, Senior Research Scientist, TTI

**FROM:** Beverly Kuhn Research Supervisor  
Senior Research Engineer, Texas A&M Transportation Institute

**RE:** Freight and Delivery Subcommittee  
November 3, 2022, Meeting Notes

**Attendees:**

Aidan Ali-Sullivan	Waymo
Andrea Chavez	Grace & McEwan Consulting, LLC
Andrea Gold	University of Texas Center for Transportation Research
Anna McAuley	University of Texas Center for Transportation Research
Bart Teeter	Texas Department of Public Safety
Beverly West	Texas Department of Transportation
Blake Calvert	Office of the Texas Governor
Bobby Cottam	Burns McDonald
Brenda Flores Dollar	Texas Department of Transportation
Brenna Lyles	Texas Department of Transportation
Brent Skorup	Mercatus
Brian Moen	City of Frisco
Daniel Corey	AECOM

Daniel Goff	Kodiak
Darran Anderson	Texas Department of Transportation
Don Lefevé	Robotic Research
Ed Seymour	Texas A&M Transportation Institute
Erika Kemp	Texas Department of Transportation
Jason JonMichael	City of Austin
Jeff DeCoux	ATRIUS Industries, Inc.
Jeremiah Kuntz	Aurora
Jimmy Archer	Texas Department of Motor Vehicles
Katie Stephens	Nuro
Kristie Chin	University of Texas Center for Transportation Research
Lauren Freriks	Texas Department of Transportation
Nicole Katsikides	Texas A&M Transportation Institute
Paul Truban	Texas Department of Transportation
Robert Brydia	Texas A&M Transportation Institute
Tom Bamonte	North Central Texas Council of Governments
Zeke Reyna	Texas Department of Transportation

**I. Opening Comments/Roll Call – Zeke Reyna**

- Welcome and roll call of attendance

**II. Mural Board Discussion – TTI Team**

- Introduction
  - Initial focus was what's on the horizon
  - Figures may need to be updated to more current conditions in the industry and Texas
  - Update with current technologies and deployments in Texas
  - Background information on current conditions can be added to enhance the intro and set the stage for future opportunities discussion.
- Background
- State of Autonomous Trucking and Operations
  - JJM from Austin (bike lane use)
  - Hub / Drayage / circuit / focuses come after middle mile
  - Reach out to Katie at Nuro for more info on last mile diversity and challenges and opportunities
  - Deployments expected to impact middle mile very rapidly
  - Pre-inspections is a topic that came up
  - Real-time data and monitoring.
  - Teleoperations
  - Freight automation in specific settings such as hubs, ports, city areas.

- Clarify differences in middle miles (Gatik as an example)
- Latest Considerations for Freight CAV and Operations Activities - Add in more Safety and pepper it throughout
  - Transfer Hubs and Right of Way for CAV
    - Contextualize the opportunity for public and private sector - Ryder, Pilot, TxDOT, etc.
    - Public private partnerships may be needed. Lane usage along the routes may impact capability of developing infrastructure.
    - Park My Fleet - 50 facilities, some in Texas
    - Other facilities may have impact such as EV charging facilities and land use
    - Current transfer hubs are private sector based - not public agency
    - Leadership of Texas should be encouraged to support the transfer of these technologies to economic opportunities for commerce
    - Implications for Operations
  - Business Route Optimization - Route optimization needs (may need to be fluid)
    - Implications for Operations
    - Potential Research or Planning Activities
      - Identify properties or ROW for transfer hubs / what type of property is needed, access, conflicts, etc. How do we identify the right places?
  - Drayage and Circuits
    - Implications for Operations
    - Potential Research or Planning Activities
  - Freight Ecosystem
    - Implications for Operations
      - Continuing to develop the infrastructure. Not just physical. Big data, governance, data ecosystems, policies, etc.
    - Potential Research or Planning Activities
  - Additional Findings
    - Public Acceptance
      - Getting people to understand what this is and what needs to be done
    - Automated Trucks and Border Crossing Transfer Hubs
      - Border and SB 1308 issues and findings can be incorporated.
- Framework for Research or Planning Activities to Support DOT Operations
  - Assessment of resources
- Conclusion
  - Develop and clearly state recommendations (opportunities) from all the assembled information
  - May need recommendations for specific audiences.

### III. Next Steps

- If everyone would take some time to review the White Paper and send any further questions, comments, and/or recommendations to TxDOT or the TTI team

- As we move forward in development of a Final Draft, we will send it out to follow our voting process prior to assembling the Annual Report

**IV. Closing Remarks – Zeke Reyna, Daniel Goff and Kristie Chin**

- We believe freight to be sch an important sector that has become a driving force in the automation space and are grateful for everyone’s participation
- Thanks to all for a great conversation and we look forward to seeing where we go from here.