TECHNICAL MEMORANDUM

TxDOT IAC – Technical Support to the CAV Task Force

DATE: September 10, 2020

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: Data, Connectivity, Cyber Security, and Privacy Subcommittee
August 31, 2020 Meeting Notes

Attendees:

Anabel Chang	Waymo
Andrea Chacon	Texas A&M Transportation Institute
Andrea Chavez	Grace & McEwan
Ashely Myers	Grace & McEwan
Bobby Cottam	Burns and McDonnell
Brent Eastman	TxDOT IT Division
Brent Skorup	Mercatus
Brian Steiner	Cisco
Brittany Gick	Texas A&M Transportation Institute
Gary Wallace	SiriusXM
Glenn Havinoviski	WGI
Hannah Barron	Austin Transportation Smart Mobility Office
Jackie Erickson	Edge Case Research, Inc.

TTI | **System Reliability Division**
Transportation Operations Group

Jason JonMichael	City of Austin
Jeff	Autonomy Institute
Jeff Stewart	AT&T
Johanna Zmud	Texas A&M Transportation Institute
Jordan Payson (Alex)	City of Austin
Kellen Pucher	Panasonic
Leighton Yates	Alliance for Automotive Innovation
Liz Fishback	Argo AI
Monika Darwish	Embark
Rachelle Celebrezze	Cruise
Robert Brydia	Texas A&M Transportation Institute
Scott Carlson	Iteris
Sumeet Kishnani	Stantec
Thomas Bamonte	North Central Texas Council of Governments
Tom Black	Gartner
Tony Reinhart	Ford Motor Company
Zeke Reyna	Texas Department of Transportation

I. **Opening Comments/Roll Call – Zeke Reyna, TxDOT**
- Zeke welcomed the group.
- Took roll call of attendees.

II. **Chair Welcoming Statement – Brian Steiner, Cisco**
- Brian thanked everyone for attending. Amazing participation and communication last session. Talking through set up of white paper. Thank you to TxDOT and TTI for facilitating, allowing Bob to run structure of meeting.

III. **Review of Meeting Structure – Bob Brydia**
- TTI reviewed the agenda and discussed using MURAL to support commenting on the white paper outlines.
- White Paper Polling Results

IV. **White Paper Outline**
- Terminology
  - 5 new terms added
  - 2 references noted
    - SAE 3216
    - SAE J3016
  - 3 clarifications suggested
- Data – Outline: Roles of Agencies

- Introduction
  - Policy and Planning Roles of State and Local Agencies (in general)
    - Limit focus to CAV
    - Discuss interplay with other committees
    - Clarify primary audience: legislature, public and stakeholders
  - Interplay between Federal, State, and Local Agencies in CAV Policy and Planning
    - Keep in mind a separation (if needed) between CV and AV and infrastructure and connectivity from the data perspective
    - Key points to bring across:
      - Don't constrain the existing environment.
      - Encourage communication and refinement
    - Timeline: focus on what you have now (3 to 5 years)
    - Are data elements themselves important, or categories?
- Context
  - Current State of Texas Regulations
  - Current Trials and Operations of CAV services within Texas
  - Future Legislation impacting State and Local Agencies' Roles and Responsibilities
    - What kind of data should be collected by CAV that would support Federally mandated performance measures?
    - There is current federal funding available for "infrastructure-based ITS capital improvements"
      - NHPP
      - STBGP
      - Could be used for poles, conduit, fiber, buildout
    - Suggestion to remove "future legislation" references, as there isn't an ask from the task force and would be presumptive when legislature isn't' in session and filing bills yet
- Responsibility Areas for State Agencies
  - Areas of concern:
    - Need vs want
    - Protection of competitive data
    - What data do state agencies already collect?
    - What kind of data is useful for state and local agencies?
      - Same filter down to the data aspect as with other areas
    - Should we include the pint that currently there isn't a consensus of "safe" vs "unsafe?" Needs to be evidence based
    - TOW management / access for data-related real estate and infrastructure
    - Public agencies may have market power to affect / accelerate data-related technology
    - Weave in state and local agencies make investment decisioins (ie: concrete vs CAV ITS infrastructure)
    - Data Quality: standards for incomplete or accuracy of data

- o What level of confidence to we have in the data before it's used?
  - Statutory Definitions
  - Licensing and Registration
  - Commercial Motor Vehicles operations and licensing
  - Cybersecurity Standards and Protocols
  - Linkages with Advanced Communication Networks
  - Insurance Regulations
  - Public Safety and Law Enforcement
- o Responsibility Areas for Local Agencies
  - Suggestions:
    - ◇ Goal is to understand how we collectively manage and share data
    - ◇ Streamlining data only (data sharing and associate data topics)
      - Add in the role of obtaining and/or disseminating data and discuss needs
    - ◇ Traffic signals/intersection tech is critical CAV component.
    - ◇ Delineate specific responsibilities for dat stewardship and ownership for data
    - ◇ Most in the industry want to see technology regulated from the federal side to have consistency across all 50 states
  - Operator Requirements
  - Land Use, Zoning, and Parking Policy
  - Street Design Guidelines
    - ◇ Locals control physical assets used for data-related tech. Note currently legal landscape (e.g. small cell preemption)
    - ◇ Think more broadly than just street design
    - ◇ Locals control ROW. Something positive to highlight. Locals/private sector work on thee issues together (not legislative solution)
  - Public Transit Operations
    - ◇ More than just transit operations (e.g. micromobility, delivery bots, bike/peds)
- o State and Local Combined Roles
  - Suggestions:
    - ◇ To what extent should CAV data be used for revenue/user fees/road pricing?
    - ◇ Should highlight the increasing need to balance CAV ITS investments against build out of congestion legacy solutions
    - ◇ Highlight that state/locals may impose:
      - Data sharing or
      - CAV tech requirements
      - "Only Level 4 vehicles welcome here"
  - Vehicle Testing and Deployment Programs
    - ◇ May have some references to newly announced Michigan test bed

- ✧ Florida developing statewide V@X integrated data exchange platform
- ✧ NCTCOG kicking off freight movement optimization project using CV tech
    - ▪ Infrastructure Readiness for CAV
    - ▪ Privacy, Data Use, and Data Management Issues
    - ▪ Workforce Training and Public Education
- o Role of Private Sector
    - ▪ Suggestions
        - ✧ How about encouraging private sector to work together on setting data-sharing standards that work for them and work for public-sector (e.g. a GTFS for AV data, OEMs share AV disengagement / crash data with each other)
        - ✧ Focus on anonymous data
        - ✧ Consider highlighting data importance of public-private collaboration
            - ▪ Examples, real or hoped for
            - ▪ OEM customer experience enhanced by connectivity
            - ▪ OEM's can enhance connectivity by sharing pertinent data with DOT's
        - ✧ Important to communicate with public sector what are data/infrastructure needs for effective Cav operation
        - ✧ Big plus for Texas is focusing on where game is now – no guarantees for where tech going
        - ✧ Landscape that allows innovations to take place and communicate with them, work with public sector to test, be safe and grow as tis arena grows
        - ✧ Privacy concerns to be top issue in next legislative session – stress important role of private sector in protecting privacy
            - ▪ Would like to see this addressed at federal level so don't see each state with it's own law – CA already has law.
    - ▪ What is working well?
        - ✧ Where are we not looking for legislation / regulation?
        - ✧ Foster public / private relationship
        - ✧ Public sector wants level playing field – Texas doing good job of this
    - ▪ Developing and Commercializing Automation Technologies
    - ▪ Demonstrating Safety
    - ▪ Public Education Campaigns
- o Conclusion – the Road Ahead
    - ▪ Don't go overboard on privacy fears, invest in innovation, treat tata/ITS on par with traditional transportation issues.
    - ▪ Focus on anonymous data

V. Next Steps: Brian Steiner / Zeke Reyna

- Zeke thanked everyone for participation and great comments
- Will take all comments and input, will refine the outline and start writing
    - Next two weeks refine draft WP, put bones on it
    - Next meeting toward end of September, draft to members of committee prior for review, prepared to discuss
    - Goal for Mid-October final WP

VI.   Closing Remarks – Zeke Reyna
- Look for email regarding next meeting
- Email Bob, Bryan or Zeke with comments as think about this after meeting
- Thanks to all who participated and to TTI team who facilitated