Freight Advisory Committee  
February 2, 2022, 8 a.m.  
In-Person at 125 E. 11th St., Austin, Texas 78701  
Virtual via Microsoft Teams

ATTENDEES

<table>
<thead>
<tr>
<th>Committee Members</th>
<th>Organization</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed Emmett, Chair</td>
<td>Rice University</td>
<td>Present</td>
</tr>
<tr>
<td>Adriana Cruz</td>
<td>Office of the Governor</td>
<td>Not Present</td>
</tr>
<tr>
<td>Carson Landsgard</td>
<td>H-E-B</td>
<td>Not Present</td>
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<tr>
<td>Charlie Leal</td>
<td>Texas Farm Bureau</td>
<td>Present</td>
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<tr>
<td>Clark Greer</td>
<td>Coca Cola</td>
<td>Not Present</td>
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<tr>
<td>Clint Schelbitzki</td>
<td>Union Pacific Railroad</td>
<td>Present</td>
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<tr>
<td>Drew Crutcher</td>
<td>Landgraf, Crutcher &amp; Associates</td>
<td>Not Present</td>
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<tr>
<td>Gerry Schwebel</td>
<td>IBC Bank</td>
<td>Present (virtual)</td>
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<tr>
<td>John Esparza</td>
<td>Texas Trucking Association</td>
<td>Present (virtual)</td>
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<tr>
<td>Keith Patridge</td>
<td>McAllen Economic Development Corp.</td>
<td>Present</td>
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<tr>
<td>Matt Woodruff</td>
<td>Kirby Corporation</td>
<td>Present</td>
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<tr>
<td>Megan Shea</td>
<td>BNSF</td>
<td>Present</td>
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<tr>
<td>Michael Dyll</td>
<td>Texas International Freight LLC</td>
<td>Not Present</td>
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<tr>
<td>Paul Treangen</td>
<td>TNW Corporation</td>
<td>Not Present</td>
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<tr>
<td>Randy Brogoitti</td>
<td>Brogoitti Construction</td>
<td>Not Present</td>
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<tr>
<td>Roger Guenther</td>
<td>Port Houston</td>
<td>Present</td>
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<tr>
<td>Rolando Ortiz</td>
<td>Killam Development, Ltd.</td>
<td>Present</td>
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<tr>
<td>Ron Beeson</td>
<td>The Lubrizol Corp.</td>
<td>Present (virtual)</td>
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<tr>
<td>Sean Strawbridge</td>
<td>Port of Corpus Christi Authority</td>
<td>Present (virtual)</td>
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<tr>
<td>Tiffany Melvin</td>
<td>North American Strategy for Competitiveness</td>
<td>Not Present</td>
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</tbody>
</table>
Committee Members | Organization | Attendance
---|---|---
Todd Stewart | Gulf Winds International | Not Present
VJ Smith | Marathon Petroleum Company | Present (virtual)
VACANT | AllianceTexas | N/A
VACANT | TEMPO | N/A

Ex-Officio Members | Organization | Attendance
---|---|---
Hon. Armando “Mando” Martinez | Texas House of Representatives | Not Present
Mayor Brenda Gunter | City of San Angelo | Not Present
Danny Smith | UPS | Not Present
John LaRue | United Corpus Christi Chamber | Present (virtual)
Mayor Pete Saenz | City of Laredo | Not Present
Hon. Sergio Munoz | Texas House of Representatives | Not Present

Count of Ex-Officio Members Present: 1  
Total Count of Committee and Ex-Officio Members Present: 14

Texas Transportation Commission
Commissioner Alvin New  
Commissioner Laura Ryan

TxDOT
Aisa Showery | Border and International Trade Branch Manager, TxDOT
Caroline Mays, AICP | Director of Freight, Trade and Connectivity Section, TxDOT
Cary Karnstadt | TxDOT
Curtis Jones | TxDOT
Jessica Butler, P.E. | Director, TPP Division, TxDOT
John R. Speed, P.E. | TxDOT
Kale Driemeier | TxDOT
Marty Boyd | TxDOT
Paul Truban | TxDOT
Pedro Alvarez, P.E. | TxDOT
Robert Ramirez | TxDOT
Roger Beall, P.E. | Deputy Director, TPP Division, TxDOT
Sherry Pifer | Freight Systems Branch Manager, Freight, Trade, and Connectivity Section, TxDOT
Sondra Johnson | TxDOT
Stacey Strittmatter | TxDOT
### Texas A&M Transportation Institute (TTI)

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Allan Rutter</td>
<td>TTI</td>
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<tr>
<td>Curtis Morgan</td>
<td>TTI</td>
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<tr>
<td>Dan Middleton</td>
<td>TTI</td>
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<tr>
<td>Jeff Warner</td>
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<td>Jolanda Prozzi</td>
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### Cambridge Systematics Consulting Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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<tr>
<td>Adam Danczyk</td>
<td>Cambridge Systematics</td>
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<tr>
<td>Daniel Wong</td>
<td>Cambridge Systematics</td>
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<tr>
<td>Daniela Waltersdorfer</td>
<td>Cambridge Systematics</td>
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<tr>
<td>Elizabeth Welch</td>
<td>Cambridge Systematics</td>
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<tr>
<td>Guilherme Leao</td>
<td>Cambridge Systematics</td>
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<tr>
<td>Isabel Victoria-Jaramillo</td>
<td>Cambridge Systematics</td>
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<tr>
<td>Michael Williamson</td>
<td>Cambridge Systematics</td>
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<tr>
<td>Paula Dowell, Ph.D.</td>
<td>Cambridge Systematics</td>
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<tr>
<td>Sam Van Hecke</td>
<td>Cambridge Systematics</td>
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<tr>
<td>Scott Boone</td>
<td>Cambridge Systematics</td>
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<tr>
<td>David Milner</td>
<td>AIG</td>
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<tr>
<td>Janna Rosenthal</td>
<td>Atkins</td>
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<tr>
<td>Vicky Carrasco</td>
<td>Kleinman Consultants</td>
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<tr>
<td>Jackie Lopez</td>
<td>Poznecki-Camarillo</td>
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<tr>
<td>John Tiemann</td>
<td>Poznecki-Camarillo</td>
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<tr>
<td>Sarah Clark</td>
<td>TranSystems</td>
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<tr>
<td>Joe Bryan</td>
<td>WSP</td>
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<tr>
<td>Alan Meyers</td>
<td>WSP</td>
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<tr>
<td>Virginia Lingham</td>
<td>WSP</td>
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### Other Attendees

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<tr>
<th>Name</th>
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<tr>
<td>Benjamin Abeto</td>
<td>– SH 130 Concession Company</td>
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<tr>
<td>Bruce Mann</td>
<td>Port Houston</td>
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<tr>
<td>Cameron Walker</td>
<td>Permian Basin MPO</td>
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<tr>
<td>Clay Barnett</td>
<td>Sherman-Denison MPO</td>
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<tr>
<td>Craig Raborn</td>
<td>Houston-Galveston Area Council</td>
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<tr>
<td>David Coronado</td>
<td>City of El Paso</td>
</tr>
<tr>
<td>Name</td>
<td>Affiliation</td>
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<tr>
<td>Debra Richmond</td>
<td>Richmond Advisory</td>
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<tr>
<td>Don Rodman</td>
<td>The Rodman Company</td>
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<tr>
<td>Doug Wilson</td>
<td>Unknown</td>
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<tr>
<td>Dylan Hernandez</td>
<td>NCTOG</td>
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<tr>
<td>Eduardo Calvo</td>
<td>El Paso MPO</td>
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<tr>
<td>Eva Garcia</td>
<td>RGVMPO</td>
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<td>Genevieve Bales</td>
<td>FHWA</td>
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<td>Gretchen Ivy</td>
<td>HNTB</td>
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<td>Inas Awaeidah</td>
<td>DCCM</td>
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<td>James Garland</td>
<td>Houston-Galveston Area Council</td>
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<td>James Lovett</td>
<td>SH 130 Concession Company</td>
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<td>Jason Skarda</td>
<td>H-E-B</td>
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<td>Jefferson Grimes</td>
<td>CDM Smith</td>
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<td>Leslie Ruta</td>
<td>Port of Corpus Christi Authority</td>
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<td>Lindsay Mullins</td>
<td>BNSF</td>
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<td>Lisa Weston</td>
<td>University of North Texas</td>
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<td>Luis Diaz</td>
<td>RGVMPO</td>
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<tr>
<td>Mark Berndt</td>
<td>Quetica, LLC</td>
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<td>Melany Rodriguez</td>
<td>RGVMPO</td>
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<td>Michael Bomba</td>
<td>University of North Texas</td>
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<tr>
<td>Morgan Tavallaee</td>
<td>North Central Texas Council of Governments</td>
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<td>Peter LeCody</td>
<td>Texas Rail Advocates</td>
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<td>Phyllis Saathoff</td>
<td>RGVMPO</td>
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<td>Ross Lane</td>
<td>G&amp;W</td>
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<tr>
<td>Russell Laughlin</td>
<td>Hillwood Properties</td>
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<tr>
<td>Ryan McClure</td>
<td>Unknown</td>
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<tr>
<td>Sean Stibich</td>
<td>Port of Victoria</td>
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<tr>
<td>Susan Atherton</td>
<td>Freight Insights, LLC</td>
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<tr>
<td>Veronica Waller</td>
<td>Unknown</td>
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<tr>
<td>Yvette Limon-Bridge</td>
<td>City of Laredo</td>
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1. Welcome and Introductions

Chair Ed Emmett began the Texas Freight Advisory Committee (TxFAC) meeting at 8:10 a.m. First, he thanked everyone for being at the meeting in person or online via Microsoft Teams.

Chair Emmett introduced Commissioner Laura Ryan, Texas Transportation Commission, Commissioner Alvin New, Texas Transportation Commission, and thanked committee members for their work in developing the 2023 Texas Freight Mobility Plan (TFMP 2023), and called upon Sherry Pifer, Freight Systems Branch Manager, Freight, Trade, and Connectivity Section, TxDOT to provide an overview of the meeting.

2. Overview of Today’s Meeting, Recap of Nov. 10, 2021 TxFAC Meeting, and Overview of Ongoing Freight Planning Activities

Ms. Pifer provided a safety moment that highlighted safe driving habits and practices for vehicles sharing the road with large trucks. Then, she provided a recap of the Nov. 10, 2021 TxFAC meeting, an overview of the current meeting, and ongoing freight planning activities. Ms. Pifer also introduced the new branding for the Texas Freight Mobility Plan, “Texas Delivers 2050”. She then called upon Kale Driemeier, Freight Planner with TxDOT, to provide an overview of the Texas Multimodal Freight Network.

3. Texas Multimodal Freight Network

Mr. Driemeier described updates to the multimodal freight maps, emphasizing the Dallas/Fort Worth and Houston areas where there is a high concentration of freight infrastructure. He then covered the multimodal components of the freight network, including designated highway freight network, freight railroads and pipelines, commercial international border crossings, selected ports, the Gulf Intracoastal Waterway, and select air cargo airports.

Mr. Driemeier went over the Freight Highway Network terminology and attributes. He shared that the Texas Highway Freight Network (THFN) is designated by TxDOT, is based on stakeholder input, and has no mileage limitations or direct funding eligibility implications. Alternatively, the National Highway Freight Network (NHFN) is designated by the Federal Highway Administration (FHWA). It is multilayered, including the primary highway freight system (PHFS), non-PHFS interstates, and Department of Transportation (DOT)/Metropolitan Planning Organization (MPO) designated critical urban/rural freight corridors. Being listed on the NHFN directly affects funding eligibility.

Mr. Driemeier explained updates that have been made to the THFN, including the addition of over 1,700 miles of primarily state highways and the removal of one segment. Additional segments were added based on data analysis and stakeholder analysis.
Mr. Driemeier shared his coordination with MPOs to help identify freight corridor designations for consideration. Mr. Driemeier noted that every corridor that is part of the NHFN is eligible for funding from the FHWA.

Mr. Driemeier shared that potential freight corridor designations for consideration were discussed at the Nov. 10, 2021 TxFAC meeting. Some of these are included on the exhibits shown today for inclusion in the draft network, but those not yet opened to traffic have been noted for future consideration once the roadways are open.

**Discussion:**
Chair Emmett asked for clarification regarding funding eligibility for Texas versus the national freight networks. Mr. Driemeier noted that only corridors on the national freight network are eligible for the National Highway Freight Program (NHFP) funding.

Chair Emmett asked if interstate highways are included on the THFN. Mr. Driemeier responded that they are although interstate segments not part of the Primary Highway Freight System are not eligible for NHFP funding in high mileage states, such as Texas.

Mr. Driemeier shared that MPOs with a population size greater than 500,000 have been requested to submit recommendations for designations for the critical urban freight corridors (CUFCs) by March 15, 2022.

**4. Critical Rural Freight Corridors**

Elizabeth Welch, with Cambridge Systematics, covered the funding eligibility for critical rural freight corridors (CRFCs) and CUFCs. She introduced the corridors and the implications for the different levels of freight planning.

Ms. Welch presented the FHWA’s definition for CRFCs and CUFCs, which “are important freight corridors that provide critical connectivity to the NHFN. By designating these important corridors, states can strategically direct resources toward improved system performance and efficient movement of freight on the NHFN.” TxDOT shares this definition, and Paula Dowell, with Cambridge Systematics, covered the distinction of the state and national freight network, the policy tools, and funding available to each network – namely grants from the USDOT – as well as the tools available for the state network to establish freight priorities.

CRFCs for the THFN are designated by TxDOT and are limited to 745.55 miles outside urbanized areas. No additional mileage was added for the THFN from the Infrastructure Investment and Jobs Act (IIJA). To be designated as a CRFC, a corridor must meet one or more of the following seven criteria:

1. Principal arterial with trucks comprising at least 25 percent of traffic.
2. Provides access to energy exploration or production.
3. Connects PHFS and interstate system to major facilities.
4. Provides access to grain, agriculture, mining, forestry, or intermodal.
5. Connects to an international port of entry.
6. Provides access to significant air, rail, water, or other freight facilities.
7. Determined by the state to be vital to efficient freight movement.

Ms. Welch explained the CRFC candidate identification process, which includes identifying the THFN corridors to be scored (i.e., primary arterials located outside of urbanized areas), ranking those scored corridors by how many federal criteria are met, and designating the corridors, either partially or entirely, as part of the maximum designation limit of 745.55 miles.

Ms. Welch provided a review of the 2018 Texas Freight Mobility Plan. She shared the scoring criteria associated with the corridors in 2018 and explained that 600 miles were scored as a rural arterial as part of the THFN. Ms. Welch then compared the 2018 federal freight criteria to the 2022 federal freight criteria.

**Figure 1** illustrates the candidate CRFCs identified for consideration by the TxFAC. The identified corridors meet at least three of the federal criteria and connect to logical termini. Ms. Welch reminded the committee that they could designate a maximum of 745.55 miles.

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### Candidate Critical Rural Freight Corridors

- Approximately 3,200 miles of candidates identified for TxFAC consideration
  - 3+ criteria met
  - Connect to logical termini

- About 50 segments throughout state on U.S., state, and F.M. highways

- [Link to web map to review candidates](arCGIS.com)

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**Discussion:**

Chair Emmett asked if the corridors that met fewer than three criteria could still be designated. Ms. Welch responded that corridors meeting less than three criteria could still be considered if desired by the TxFAC. The 3,200 miles identified are not set in stone.

Committee Member VJ Smith said he was happy to see the three additional West Texas corridors included on the list. Chair Emmett responded that all three of those segments would take up a lot of miles. He stated that the challenge the TxFAC faces is paring down...
the 3,200 miles to 745.55 miles while ensuring all the miles are not concentrated in a particular region of the state.

Ms. Dowell reminded the TxFAC that the identified corridors are already part of the THFN but not yet on the NHFN. She stated that the national designation should be considered for a critical rural corridor if funding is necessary to implement a project.

Committee Member Roger Guenther and Chair Emmett asked if more weight should be given to corridors that meet more than three criteria. Ms. Welch said the project team initially considered identifying corridors that met four or five criteria, but the result was very short corridors. Therefore, the team identified those that met three or more criteria, but it is up to the discretion of TxDOT and the TxFAC to determine which corridors are designated.

Commissioner New said projects that are already partially funded but lack complete funding would be good to designate for the NHFN, such as US 281. He then stated projects that are already heavily funded and/or near completion might not be critical to include, such as I-69/US 175.

Commissioner New stated completing West Texas corridors may benefit freight movements in Texas. He suggested roadways from the New Mexico border to I-10, referenced roadways from Lubbock to Midland, and recommended that some of these roadways be considered for funding. Lastly, he mentioned US 285 in West Texas as a critical corridor because it located within a highly productive portion of the Permian Basin.

Committee Member Rolando Ortiz asked if all the corridors being considered are existing roadways that need expanding, or if future roads that could alleviate traffic are also being considered. Ms. Welch responded that only existing corridors are eligible for the NHFN.

Russell Laughlin, with AllianceTexas, said the US 287 corridor in northwest Tarrant County and the US 380 corridor in Wise County are important segments that should be considered.

Commissioner Ryan asked if it would be worth ranking the corridors to help determine which should be designated as critical corridors. Ms. Welch responded that the corridors were ranked by their freight system designation scores. On the online map that was displayed, the darker the line of the corridor, the higher it ranked.

Chair Emmett stated that the TxFAC will need to decide which corridors to prioritize. He said this should be driven more by the future of freight in Texas rather than how many criteria were met. He posed questions to be considered by the TxFAC, including:

- Is moving freight out of Port Houston more or less important than moving agricultural freight in North Texas?
- Will the Permian Basin continue to be a freight hub after energy production diminishes?
- Are the border crossings more or less critical than existing freight corridors?

Commissioner New stated that it is essential that the TxFAC not operate in a silo but rather remain cognizant of what other agencies/plans are being done in order to make the best
decisions based on an overall plan. Chair Emmett agreed that if a project is already being implemented, the TxFAC should not consider that corridor.

Mr. Ortiz stated that I-35 from San Antonio to Laredo is a major thoroughfare. There is an existing two-lane section of US 59 from Laredo to Goliad. If US 59 were widened, it could create an alternate route for truckers and help alleviate traffic on I-10.

Chair Emmett noted that the highest-ranked corridor on the list is US 59 from El Campo to Rosenberg. He stated that he believes that section may already be near completion. However, the portion of US 59 from Laredo to Goliad may not have funding or is not underway, making it more appropriate to receive a freight designation.

Mr. Ortiz asked if the section of US 59 from Rosenberg to El Campo is fully funded and if this portion were removed from consideration if it could still qualify in the future. Ms. Dowell clarified that the NHFN funding is not a significant amount of money, but it is set-aside funding that can only be used on the NHFN. If a project is not already programmed, it should not be designated. The NHFN will be updated every four years.

Chair Emmett asked how the designation of US 59 as the new Interstate Highway 69 affects decisions. Ms. Dowell noted that because Texas is designated as a high mileage state, interstate miles are not automatically on the PHFS in Texas. At the Nov. 10, 2021 TxFAC meeting, Ms. Pifer sent out an FHWA memo asking for input on the redesignation of the PHFS and how to reallocate miles. TxDOT submitted the TxFAC’s input to FHWA and is waiting for a decision on how these miles will be considered.

Ms. Welch noted that she marked US 59 from Rosenberg to El Campo as a corridor that should not be considered since funding is already identified.

Commissioner New noted there are projects already being advanced towards implementation. TxDOT should advise the Texas Delivers 2050 Team as to which projects already have funding identified. Ms. Dowell stated that funded and partially funded projects would be mapped and distributed to TxFAC members after the meeting.

Ms. Pifer noted that some of the UTP-funded projects are already using NHFP apportionment and that those corridors should not be removed until the projects are let or obligated.

Chair Emmett stated that some of the projects identified today might be more important than those identified in 2018. For example, US 59 towards Goliad is a much greater needed corridor than some of the other projects identified. Chair Emmett requested that each TxFAC member study the identified corridors, especially those in areas they are familiar with.

Clay Barnet, with Sherman-Denison MPO, shared that US 75 south of Collin County is complete and can be removed from consideration. Also, US 75 from the Collin-Grayson county line to FM 902 is funded for Fiscal Year 2024.

Mr. Smith stated that of the West Texas corridors, he would like to prioritize US 62/180 from El Paso to Ft. Carlsbad due to several economic drivers, such as its use as part of the repatriation of the offshore industry to the borderplex region. Although funding is available for some short-term improvements, Mr. Smith believes US 62/180 should be a priority. Committee Member Clint Schelbitzki said he is interested in seeing density and growth in the corridor areas, including growth trends such as if freight density has increased or decreased
in the area. Ms. Dowell responded that each corridor was given a score based on approximately 20 different criteria, including goods movement, based on truck volumes and percentages and commodity tonnage. She said that freight-intensive employment, critical supply chains, and connectivity to gateways (e.g., ports, border crossings, air cargo facilities) were all considered. This score essentially represents the density measurement.

Mr. Guenther shared that I-69 traffic consists of many container trucks but questioned if this would be the case in the future. He asked if multimodal opportunities would be considered and asked where freight is anticipated to grow.

Committee Member Keith Patridge said he agrees with Commissioner New that it is crucial to know which projects need just a little more funding to be implemented. He said without this information, it is difficult for him to make any decisions. Commissioner Ryan agreed and asked if the information could be presented by geographic quadrant with key criteria and funding status identified.

Committee Member John Esparza asked if funding was already identified for Texas or if the state is competing with other states? Ms. Welch noted that the funding has already been allocated for Texas, with the state having discretion on how to use the funds for the freight network.

Chair Emmett recapped the additional information needs the TxFAC would like to see to help make decisions, including:

1. Which of the corridors do not need funding because they are either already funded or constructed?
2. Are there corridors we want to replace with other corridors given the data?

Ms. Dowell stated that the Texas Delivers 2050 Team will provide additional requested information in a white paper for TxFAC to review.

Mr. Ortiz shared that the Laredo-Webb County area moves a lot of freight from their port, but they struggle to find funding due to their population size. He thinks this should be a consideration also.

Ms. Pifer asked Committee Member Charlie Leal if any corridors should be considered from an agricultural perspective. Mr. Leal noted that TxFAC needs additional information as noted by Chair Emmett to make that decision.

Chair Emmett stated that the TxFAC will not start from scratch but will use information from 2018 and what is provided from TxDOT to make decisions.

Table 1 below were comments made via chat on Microsoft Teams, and were read, but not addressed during the meeting due to time constraints.
Table 1. Microsoft Teams Chat Statements and Questions.

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<tr>
<th>Participant</th>
<th>Comment</th>
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<tbody>
<tr>
<td>Debra Richmond</td>
<td>Very happy to see additional dark blue corridors in West Texas/Permian Basin. The Permian Strategic Partnership appreciates all of the stakeholder outreach that went into including the full scope of the Permian that was missing in the 2018 version.</td>
</tr>
<tr>
<td>Gerald Schwebel</td>
<td>What about future I-27?</td>
</tr>
<tr>
<td>Cameron Walker</td>
<td>SH 302 west of Odessa to NM line is critical, so are SH 158 SE of Midland, SH 176 from NM line to Big Spring.</td>
</tr>
<tr>
<td>Pedro Alvarez</td>
<td>1. Adding/maintaining US 83 from Roma to La Joya will connect the 2 ports of entry in Roma and Rio Grande City to the existing network.</td>
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<tr>
<td></td>
<td>2. Connecting Ports of Entry is Key.</td>
</tr>
<tr>
<td>John Speed</td>
<td>The portion of US 285 south of Ft. Stockton/I-10 changes dramatically in function and freight volume. Recommend evaluating whether the section south of I-10 is needed at this time. Those miles are far more important within the energy production zones immediately to the north.</td>
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5. Critical Urban Freight Corridors

Ms. Welch provided an overview of the process for designating CUFCs, which is similar to the CRFC process, as summarized below:

- The process is led by MPOs when the area population exceeds 500,000.
- TxDOT leads the process in smaller, urbanized areas with a population size of 50,000 to 499,999.
- CUFCs are limited to 372.78 miles (no change from the previous 2018 update).
- CUFCs must meet one or more of the following four criteria:
  - Connects an intermodal facility to a PHFS, interstate, or intermodal facility.
  - Provides an alternative route along the PHFS.
  - Serves a major freight generator, logistic center, or manufacturing and warehouse/industrial land.
  - Determined to be important to freight movement by the MPO or state.

Ms. Welch reminded the attendees that in 2018, TxDOT chose to begin with 288 miles in large urban areas and 84 miles in small urban areas. Ms. Welch then covered the next steps for the TFMP 2023, which include:

- Integrate TxFAC input on TMFN.
- Finalize DOT-designated critical freight corridors.
- Obtain MPO-designated CUFCs.
- FHWA Certification.

Discussion:
Chair Emmett asked if TxDOT can intervene if an MPO decides it does not want any funds and does not want to promote freight corridors. Commissioner Ryan responded that if a corridor is part of the state system and is designated as a freight corridor in the Texas
Freight Mobility Plan, an MPO or other local government cannot determine where freight goes. Funds would not be allocated based on the path of least resistance but rather where it is needed based on data.

Ms. Dowell asked Mr. Driemeier if during his discussions with the MPOs if any MPOs have indicated that they will not use their mileage. Mr. Driemeier stated that none of the MPOs have indicated this but noted that some might request a revision to their freight corridor designations or mileage allocation.

Cameron Walker, with the Permian Basin MPO, shared that he does not believe that an MPO would have the authority to reject highway investments. Genevieve Bailes, with FHWA, stated that if a corridor needs to go in the Transportation Improvement Program (TIP), the MPO absolutely can control what is programmed. Eduardo Cavo, with the El Paso MPO, shared that the El Paso MPO will not turn away any freight dollars.

Commissioner New stated there are often minute orders that are very specific in designating actions as part of the Texas Transportation Commission.

### 6. Supply Chains Overview

Ms. Dowell provided an overview of the industries that were selected for the supply chain analysis based on an initial analysis, economic basis, freight intensity, and stakeholder input. See Table 2 below for the five supply chain industries that were selected.

<table>
<thead>
<tr>
<th>Supply Chain Category</th>
<th>Specific Industry Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>• Oil and gas production.</td>
</tr>
<tr>
<td></td>
<td>• Petrochemical manufacturing.</td>
</tr>
<tr>
<td></td>
<td>• Rubbers and plastics.</td>
</tr>
<tr>
<td>Agriculture</td>
<td>• Cotton.</td>
</tr>
<tr>
<td></td>
<td>• Wheat.</td>
</tr>
<tr>
<td></td>
<td>• Cattle.</td>
</tr>
<tr>
<td></td>
<td>• Food processing.</td>
</tr>
<tr>
<td>Advanced Manufacturing</td>
<td>• Computers, electronics, and electrical components.</td>
</tr>
<tr>
<td></td>
<td>• Transportation equipment.</td>
</tr>
<tr>
<td>Construction</td>
<td>• Lumber and wood products.</td>
</tr>
<tr>
<td></td>
<td>• Structural steel.</td>
</tr>
<tr>
<td></td>
<td>• Cement and concrete.</td>
</tr>
<tr>
<td>Warehousing and Distribution</td>
<td>• General retail.</td>
</tr>
<tr>
<td></td>
<td>• Cold-storage grocery.</td>
</tr>
<tr>
<td></td>
<td>• E-commerce.</td>
</tr>
</tbody>
</table>

Ms. Dowell shared that TxDOT is holding a Supply Chain Working Group meeting following the TxFAC meeting. After input from the working group has been received, TxDOT will share the feedback with the TxFAC for comment.
Ms. Dowell covered the structural flows, as seen in Figure 2, for the supply chains, examining the sourcing, production, distribution, and reverse logistics. Ms. Dowell then advised the group that commodity flow data for these sectors is still pending but is expected by the end of February and will include 2019-2020 TRANSEARCH data. Once this data is received, TxDOT will compare and supplement the TransSearch data with energy data from the Permian Basin and stakeholder input.

Ms. Dowell used cotton as an example to demonstrate a supply chain process, which includes different freight modes. She emphasized that the supply chain process that is depicted should reflect what is happening with the movement of goods. As part of the review and feedback by TxFAC members of the supply chain graphics, she asked that TxFAC keep their review at a high level, and focus on capturing trends, implications, commodity flows, and modal usage. Ms. Dowell then asked the group if any other key moves or steps for Texas had been overlooked and if the modal depictions were correct.

**Discussion:**
Chair Emmett asked if the marine mode includes barge, and Ms. Dowell responded that it does, noting that marine and barge need to be independent modes.

Commissioner Ryan asked for an example of how commodity flows are differentiated from the multimodal data. Ms. Dowell explained that there are some modes that cannot be dissected to that level of analysis, such as “intermodal,” which could be a rail/highway/truck combination. The multimodal category captures intermodal moves that may not be otherwise captured.
Committee Member Gerry Schwebel said he was glad to see that reverse logistics was brought up, primarily related to the fashion/retail industry, which presents an opportunity to place weight on the processes and what you see happening in specific sectors. Ms. Dowell stated that many communities see reverse logistics as an economic development opportunity.

7. Resiliency Case Studies

Ms. Dowell began this section of the presentation by providing various definitions of what freight resiliency is, including:

- The ability of the transport network to withstand the impacts of disruptions, to operate in the face of such disruption, and to recover promptly from its effects – City Region Economic and Development Institute (City-REDI).
- The ability for the system to absorb the consequences of disruptions, to reduce the impacts of disruptions, and maintain freight mobility – TxDOT, 2011.
- Individual, community & national resilience is the ability to: prepare and plan for, absorb, respond to, recover from, and adapt to adverse events – National Academy of Sciences (NAS).
- A system’s ability to continue to function at an acceptable level of efficiency in the face of disruptive or unexpected conditions.

Ms. Dowell then shared that the core components of freight resiliency are to:

- Absorb/withstand
- Operate/maintain
- Recover/adapt

These definitions and key concepts were then applied to the following real-world scenarios to help understand how the freight system has responded in the past and how it might respond in the future. Ms. Dowell noted that certain parts of the state might be more vulnerable than others. The scenarios shared with the TxFAC were:

- Winter Storm 2021 (Statewide).
- Farmers’ Protest (Border Region).
- 2011 Drought and Wildfires (Texas Triangle).
- Pipeline Cyber Attack (Energy Regions).
- COVID-19 (Statewide).
- Hurricane Harvey (Gulf Coast).

Scenarios were selected to identify potential short-, mid-, and long-term effects that could potentially disrupt the freight network, geographic coverage, data availability, and input received from the TxFAC and stakeholders.
**Statewide: Winter Storm, 2021**

Jana Rosenthal, with Atkins, described the Winter Storm of 2021, which was at its worst from February 13-17, 2021. The storm resulted in extremely cold temperatures, posing dangerous roadway conditions that halted transit for goods. One accident occurred in the southbound managed lanes of I-35W in Fort Worth and involved 133 vehicles and six fatalities. In addition, the storm resulted in several airport closures (e.g., George Bush, Austin Bergstrom, Dallas-Fort Worth) and the closure of many terminals and warehouses. As a result, long-haul deliveries dropped 36 percent. The storm also wreaked havoc on the power grid, resulting in many power outages. Ms. Rosenthal asked the group how freight movements for their businesses/organizations were impacted and if there were any notable multimodal impacts.

**Discussion:**

Mr. Schelbitzki stated that Union Pacific is pretty self-reliant with its network and infrastructure, but its main challenge was getting people to work. They looked to charter planes and helicopters to get crew and goods across the state. Another challenge was the power outages. Every railroad crossing/signal requires electricity, so Union Pacific prepositioned hundreds of generators near crossings and continually refueled to maintain power. Another issue was downed power lines; Union Pacific contracted with a niche electrical company to clear power lines.

Committee Member Matt Woodruff shared that Kirby Corporation was affected more by the wind, not the cold. Storms often bring a strong north wind, which tends to lower water levels and could present draft issues in waterways becoming too shallow, making it difficult to cross the open bay. Mr. Woodruff shared that his group voluntarily suspends operations to protect fish in a cold snap, which is required per Texas Parks and Wildlife Department mandates.

Mr. Guenther stated that getting employees on-site was the biggest challenge due to road conditions.

Russell Laughlin, with AllianceTexas, stated that icy roads shut down their operations or slowed them down and that the duration of the inclement weather was the major problem, noting that diesel fuel for critical areas was hard to find. He went on to say that water distribution systems were freezing and that to prepare for energy losses in the future, AllianceTexas assessed local distribution around their switch substations to map out a series of distributed energy platforms (battery storage) that provide a solution for extended outages. He went on to say that on the airport side, AllianceTexas worked runways frequently. Mr. Laughlin noted that AllianceTexas shut down due to roadway conditions and damage to the buildings. He shared that the top priority is having reliable energy and gap analysis of keeping the buildings operable and having fuel sources.

Leslie Ruta, with Port of Corpus Christi Authority, shared that refineries in the areas took up to a month to begin operating at full capacity. She noted that weatherization preparations are needed to protect these refineries.
Border Region: Farmers’ Protest
Ms. Rosenthal then covered the Farmers’ Protest in the Border Region, which occurred from June 7-10, 2020. The protest created a blockade that prevented passengers and vehicular traffic from crossing the Rio Grande bridge and forced freight traffic to reroute. Ms. Rosenthal asked the group how freight movements for their businesses/organizations were impacted and if there were any notable multimodal impacts.

Discussion:
Mr. Smith said he is happy to see this presented as a case study, as it is essential to know how to deal with this situation.

Mr. Patridge stated that the protest immediately resulted in many chartered air freight movements out of the area. The protest resulted in manufacturing plants shutting down, which backed up production, especially for the automotive sector. He shared that most ports do not operate 24 hours a day; if a port shuts down, the build-up continues to escalate, which is a significant issue for production and reliability in the supply chain.

Mr. Schwebel stated that working with governments (e.g., the Department of Homeland Security and the U.S. Chamber of Commerce) is critical to establishing standard operating procedures to prepare for this type of event in the future.

Mr. Ortiz noted that sometimes computers shut down, which also shuts down the border for a period.

David Coronado, with the City of El Paso, stated he sees protests like this frequently with farmers, and that good dialogue could help get ahead of potential protests. Ms. Pifer responded that she would follow up with Mr. Coronado.

Texas Triangle: 2011 Drought and Wildfires
Next, Ms. Rosenthal discussed the drought and wildfires of 2011, where $32.4 million were expended by TxDOT to repair pavement, directly attributed to the drought. Ms. Rosenthal noted that this case study is different because freight was not impacted by road closures, but alternatively due to impacts on the transportation infrastructure. Droughts can lead to pavement and pipeline cracking and can significantly impact the agricultural industry in terms of moving goods. Ms. Rosenthal asked the group how freight movements for their businesses/organizations were impacted and if there were any notable multimodal impacts.

Discussion:
Mr. Leal shared that wildfires are an ongoing problem. The wildfires of 2011 were of the worst, with upwards of $8 billion in losses. He stated that moving in hay, water, and supplemental equipment was necessary to keep livestock alive. Crops were destroyed. He indicated that they depended on the rest of the U.S. to ship hay to Texas.

Mr. Schelbitzki stated that inspections increase whenever there are extreme temperatures (hot or cold). He noted that they received multiple requests to move supplies to the affected areas.
Energy Producing Regions: Pipeline Cyber Attack, May 2021
Ms. Dowell then covered the consequences of the Colonial Pipeline shutdown, which resulted in panic buying and a shortage of fuel in local communities. She asked how those impacts on the east coast could be used to inform how or what could happen in Texas, how freight movements for their businesses/organizations were impacted, and if there were any notable multimodal impacts.

Discussion:
Mr. Woodruff stated that panic buying was the big issue during this time. As a result, there was almost an immediate movement of refined product by barge and a lot of activity to charter vessels.

Chair Emmett stated that cyber-attacks that shut down crude pipelines or refineries would have a considerable impact.

Lindsey Mullins, with BNSF Railway, shared that there have been conversations at the federal level to define critical infrastructure and those that would interfere with it.

Statewide- COVID-19
Ms. Dowell covered the wide-ranging disruptions for freight due to the COVID-19 pandemic, including impacts on the delivery of goods, services, and medical supplies. She asked how freight movements for businesses/organizations were impacted and what the long-term consequences were.

Mr. Woodruff shared that quarantine requirements associated with travel limited the ability to implement crew changes.

Mr. Guenther stated that responding to people wanting items instantly and the workforce keeping up is a challenge. He noted that analysis of the last-mile delivery of goods would be helpful.

Chair Emmett shared that the TxFAC needs to recognize that COVID had external impacts on freight beyond Texas. He cited an example in Los Angeles, where freight movement was stuck at ports for extended periods.

Mr. Schwebel shared that farmlands are the most promising opportunity, sharing that he sees an opportunity for growth in farming, personal protection equipment, and semiconductors along the border.

Gulf Coast: Hurricane Harvey
As a result of Hurricane Harvey, over 60 inches of rain caused 10 percent of all U.S. trucking to be affected and $125 billion in damages occurred. Ms. Dowell asked TxFAC members how freight movements for their businesses/organizations were impacted and what must be included in a case study regarding freight movements.

Discussion:
Commissioner Ryan asked if the team would be looking at solutions that already may have been identified. Ms. Dowell replied that the team will look at initial impacts and what has been implemented due to Hurricane Harvey. She went on to say that feedback would be
helpful if TxDOT could capture what was disrupted, the duration of the disruption, what gaps exist today, and if this is an issue in other parts of the state. She stated that TxDOT would identify the risks, what potential impacts could happen, start to monetize the impact of recovery time, what can be done to mitigate risks, and create recommendations to make the freight network more resilient.

Chair Emmett stated that freight should be broken into two categories: intrastate and interstate, noting that interstate needs to have alternative routes that are designated, clear, and do not flood. He also shared that other areas of the state could be subject to similar weather events.

Mr. Ortiz stated that fueling vehicles was a challenge due to a lack of available gasoline. He agreed with Chair Emmett that alternative routes are needed, especially for fueling trucks.

Ms. Dowell then covered the next steps that will lead to the Texas Multimodal Freight Network resiliencies, risks, needs, and indices. She reviewed the project schedule, sharing that the anticipated next TxFAC update would be April 2022.

8. Senate Bill 1308

Aisa Showery, with TxDOT, introduced the Senate Bill 1308 enacted legislation to the TxFAC. She then called upon Michael Williamson, with Cambridge Systematics, to provide an overview of the bill, its requirements, and study progress. See Figure 3 below for details on Senate Bill 1308.

![What Is Senate Bill 1308](Figure 3. Slide 40 from the TxFAC Meeting #31 Presentation.)

Chair Emmett asked who authored the legislation. Ms. Showery shared that State Senator Cesar Blanco (D-29) was the bill’s author.
Mr. Williamson shared the scope of Senate Bill 1308, noting its focus along the border, the benefits of automated driving systems (ADS), and connected driving systems (CDS), and the impacts of these technologies on safety, transportation industry workforce, and the broader Texas economy. He noted that TxDOT, the Department of Public Safety (DPS), and Texas A&M Transportation Institute (TTI) are the agencies involved with the study. Mr. Williamson then defined key terminology:

- Automated driving systems (ADS) as defined in Texas Transportation Code §545.451: hardware and software that, when installed on a motor vehicle and engaged, are collectively capable of performing without any intervention or supervision by a human operator.
- Connected Driving Systems (CDS) hardware and software that, when installed on a motor vehicle, enables vehicles to receive and share mobility and safety information between vehicles, people, other roadway users, and transportation management systems.
- Other Emerging Technologies are defined as transportation-related applications that will potentially have direct interaction with ADS/CDS and the ability to shape ADS/CDS impacts.

Mr. Williamson noted where the Senate Bill 1308 Study Team is today, sharing that the team is establishing the baseline to determine how ADS/CDS and other emerging technologies influence border crossings, the transportation workforce, and safety. For the study approach and where the Senate Bill Study Team is today, see Figure 4.

![Study Approach - Where are We Today?](image)

Figure 4. Slide 43 from the TxFAC Meeting #31 Presentation.
Mr. Williamson recapped the feedback received at the first working group meeting, which included the following potential barriers to successful implementation:

- Regulations.
- Funding and infrastructure.
- Coordination with Mexico.
- Harmonization of technology.
- Lack of education.
- Concerns of reliability.

- Communication.
- Adequate access to power.
- Federal regulations.
- Convincing users to adopt the technology.

Mr. Williamson shared that the identified transportation workforce opportunities from the working group included:

- Higher wages.
- New skilled labor categories.
- Hardware/software developers.
- New jobs that do not exist today.

- Telecommunications.
- Field technicians.
- Remote teleoperators.
- Safety and security.

Mr. Williamson then shared feedback received from the working group, including the following challenges:

- Lack of resources.
- Training and retraining workforce.
- Trust.
- Fear of job loss.
- Lack of certifications.

- Lack of government acceptance.
- System reliability.
- Safety and privacy concerns.
- Cybersecurity and hacking.
- Bi-national harmonization.

The working group members shared safety challenges for ADS/CDS deployment, including:

- Liability.
- Public perception.
- Rushing case studies and trials.
- Public education and awareness of benefits.

- Ability to reach full population.
- Hackers.
- Electronic Interference.

Mr. Williamson stated that when answering the legislative intent of Senate Bill 1308, the study team looks at defining the use cases, establishing the scenarios and baseline, then modeling the scenarios and measuring the results.
He shared the ADS/CDS use cases identified to alleviate congestion at the border crossings, as shown below in Figure 5:

**Figure 5. Slide 48 from the TxFAC Meeting #31 Presentation.**

Mr. Williamson reviewed the scenarios for border crossings and the associated factors with each scenario, as shown below in Figure 6.

**Figure 6. Slide 51 from the TxFAC Meeting #31 Presentation.**
Mr. Williamson asked for feedback regarding the framework, including the TxFAC’s reaction to ADS/CDS capabilities, infrastructure, system readiness, and ADS/CDS usage.

**Discussion:**

Mr. Schwebel asked if Mexico is involved in the stakeholder conversation. Mr. Williamson responded yes; they will be involved in the stakeholder engagement process.

Chair Emmett asked if the Senate Bill 1308 Study Team has considered incorporating a rail crossing or rail system that is automated. Mr. Williamson responded that it is not directly associated with the intent of the legislation and would have to be covered elsewhere.

Mr. Schwebel stated he wants to make sure that stakeholders are included from both sides of the border for both northbound and southbound traffic. He recommended that border communities leverage their points of contact for engagement.

Mr. Laughlin asked how far the driverless vehicles would go and from where to where. Mr. Williamson responded that this differs for different segments, and both short- and long-haul trucking is being considered.

Chair Emmett suggested leveraging autonomous technology similar to what one sees at airports. He then asked if the scope was specifically about trucks. Mr. Williamson responded yes.

Mr. Smith asked if the ADS truck crossing the border is being focused on for the efficient movement of goods.

Mr. Williamson then asked for feedback on the Transportation Workforce Scenario Framework, as shown in **Figure 7**.

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**Figure 7.** Slide 54 from the TxFAC Meeting #31 Presentation.
Discussion:
Ms. Mullins recommended that the Senate Bill 1308 Study Team coordinate with the Border Master Plan and Trade Advisory Committee as a lot of this information could be found there. Mr. Williamson noted the comment.

Mr. Williamson noted that the transportation workforce, effects on employment by sector, and demographics are all components that will be considered.

Mr. Williamson then covered the Public Safety Scenario Framework, as shown in Figure 8.

![Public Safety Scenario Framework](image)

Mr. Williamson asked if it makes sense to use the same criteria for the workforce as it does for safety. He noted potential affects that ADS and CDS can have on crashes.

Mr. Williamson concluded with the next steps for the study, including the baseline assessment and documentation of findings.

9. Adjourn

The meeting adjourned at 12:00 p.m.