TxDOT 2022 Planning Conference Key Findings

5/2-5/5/2022

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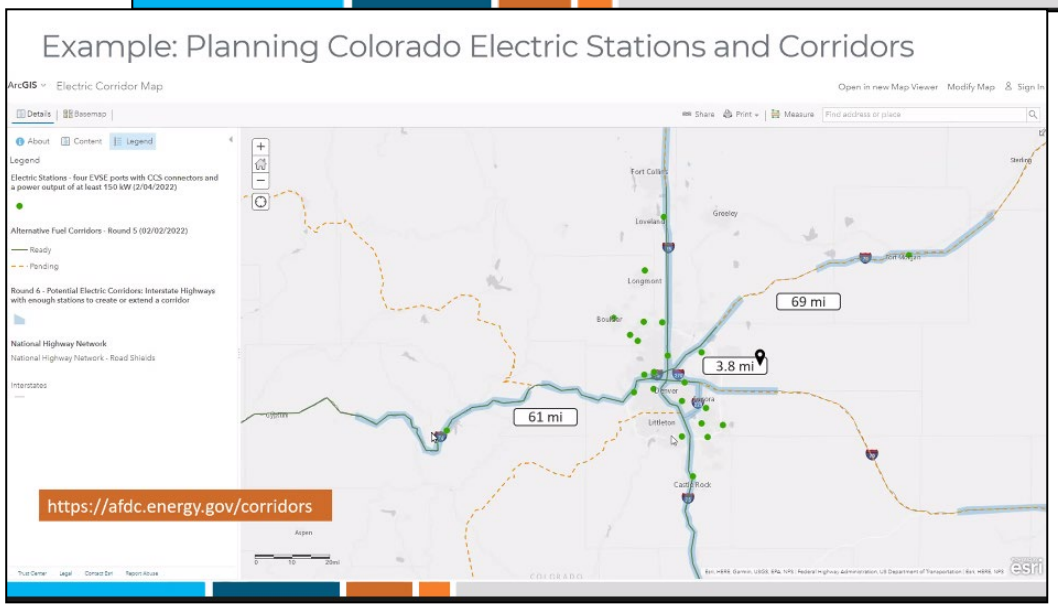
Key Findings from Webinar from National Renewable Laboratory and the National EV Infrastructure Program: 1st Two Months of Technical Assistance



1. Steve Lommele, Johana Levelle, Mike Scarpino, Diane Turchetta, and Lissa Myers are in charge of providing technical assistance for NEVI plan development at State DOTs.
2. Important NEVI Formula Program Dates to the left <<<<<<
3. Technical assistance team contact: doe-dot.jo.ta@nrel.gov / website: www.driveelectric.gov
4. The technical assistance team is seeking partner organizations (including MPOs) to inform technical assistance support provided to state DOTs.
5. NEVI funding will only distribute to state-designated alternate fuel corridors (containing or with plans for alternative fuel facilities) with 50 miles or less between stations and within 5 miles of the highway (1 mile of the Interstate).
6. Station Requirements:
    1. Use DCFC (CCS or CHAdeMO) or L2 style chargers
    2. Have minimum 4 CCS ports capable of simultaneously charging 4 electric vehicles.
    3. Have site power capability of no less than 600 kW (supporting at least 150 kW per port simultaneously across 4 ports)
    4. Minimum charge of 150 kW per DC port
7. 61-mile distance to next EV station on I-70 shows west of Denver is example of how the AFC is designated, but not connected per the 50-mile requirement until a station goes in somewhere along the path.
8. Exception requests are possible for site requirements. No build out certification has been completed and won't this year.

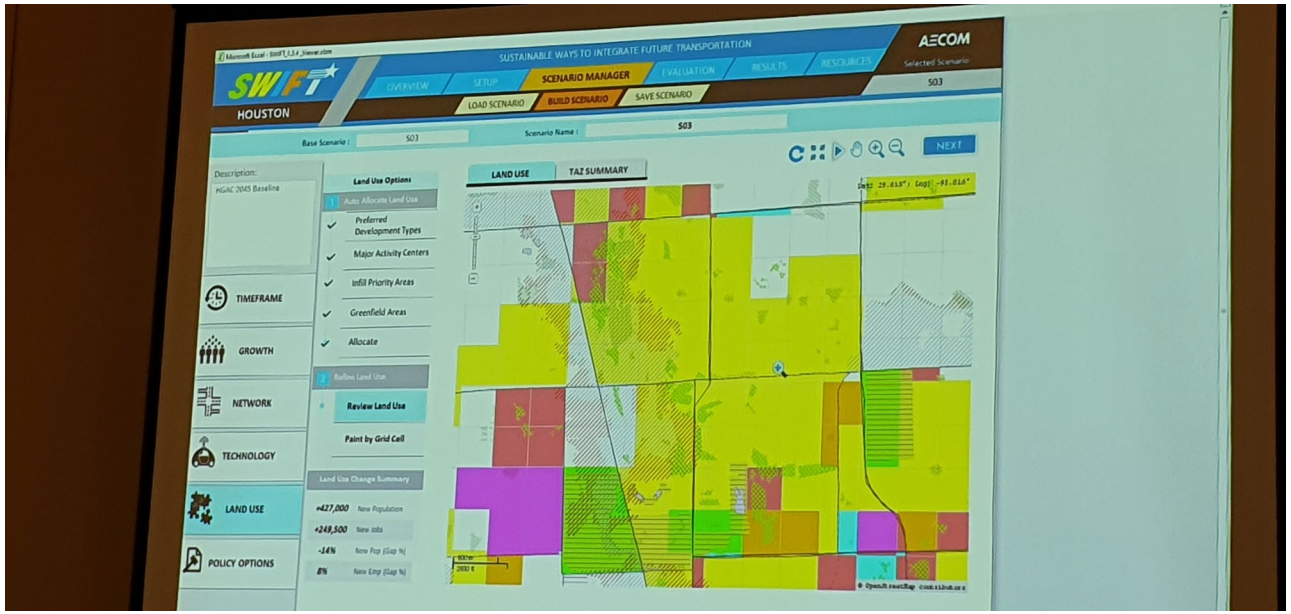
Key Findings: Tuesday, May 3rd TEMPO Meeting

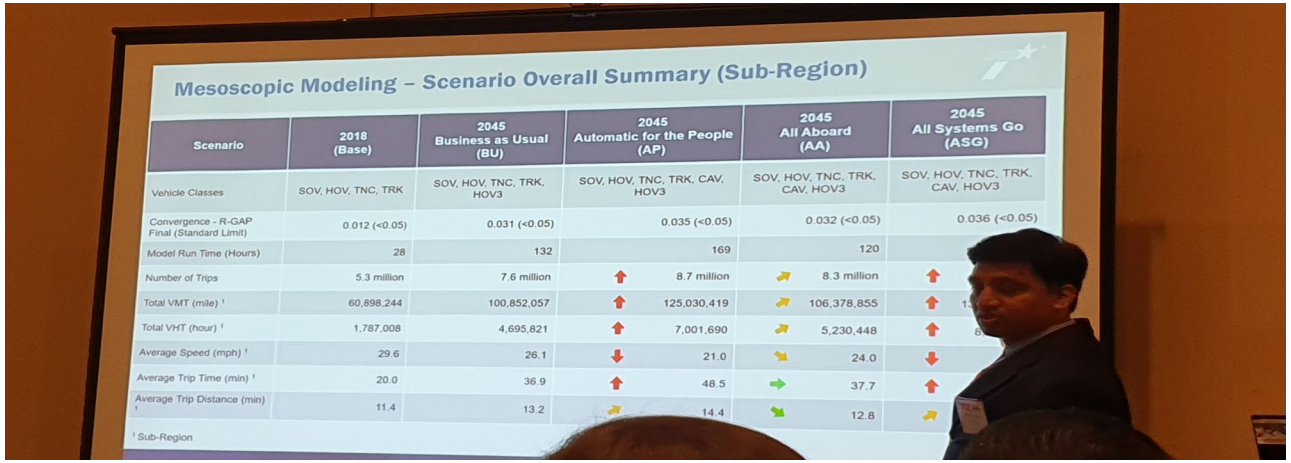
1. TEMPO Regular Scheduling survey held with following findings:
   - No clear winner on the preferred day of the month response questions.
   - 72% out of 15 prefer a quarterly TEMPO meeting.
2. Agenda Item Updates
   - Nominations and Election of Executive Director
     - **David Jones was elected executive director of TEMPO.**
   - Scheduling future TEMPO meetings
     - Live survey results inconclusive on the preferred day of the month.
     - 72% out of 15 directors prefer quarterly recurring TEMPO meeting.
     - Participants indicated desire to have rotating in-person and virtual, with a general length of 4-6 hours.
     - Need highlighted for MPO training or workshops attached to select in-person TEMPO meetings, such as MPO 101 or other training which would expand TEMPO to 1-1.5 days.
     - New TxDOT Austin campus has space to potentially host in-person TEMPO meetings and because it is centrally located is preferred in-person location. There may be a need to continue rotating locations in the summer month similar to what was done prior in Lubbock and in McAlllen, TX.
       - Wording should be added attaching TEMPO to the two-year TxDOT planning conference.
   - TEMPO By Laws (included)
     - A task force to update the bylaws was created, with **Cameron Walker nominated** to chair the task force with members, Dan Rudge, Uryan Nelson, Michael Howell, Bryan McBride, and Robert MacDonald.
     - Voting rights, membership, proxies, and associate member updates to include Universities (UT, Texas A&M, Texas State, Texas Tech, etc.)
     - There is currently no process outlined in the bylaws for forming subcommittees and task force and general rules governing their use.
     - There are no processes, and responsibilities in the bylaws for TEMPO website updates, who hosts, and data needs of TEMPO.
       - One recommendation was to establish a site for sharing RFPs through TEMPO so that other MPOs can see what goes into them and can coordinate with each other potentially on upcoming studies and planning products under development.
     - There should be clarification on private sector attendance and participation.
     - It was recommended that the title of executive director should be changed to chairman, and that the deputy executive director be changed to vice chairman.

Agenda Item Updates (ctd.)

- Category 2 Conversation – Current Formula
  - TxDOT advised that the 87 / 13 split will remain in place.
  - TPP Director Jessica Butler advised Dan Kessler she is interested in continuing the Cat 2 funding update process.
- TEMPO Subcommittees
  - Title VI/EJ subcommittee recommended.
  - UTP subcommittee recommended.
  - Mukesh Kumar volunteered to join the TDM subcommittee.
  - Robert MacDonald and Michael Howell volunteered to serve on the Legislative subcommittee.

Key Findings: Scenario Planning: Two-Layered Approach (SMART & SWIFT) to Analyze Potential Development Patterns in Land use and Transportation in Houston Texas - *Session*





1. TxDOT Houston District hired AECOM to develop a GIS-based scenario planning tool for use by planners, engineers, and policy makers: SWIFT-Sustainable Ways to Integrate Future Transportation
    1. The SWIFT tool uses 18 scenarios and takes less than 10 minutes to get to spatially and temporally mapped scenario outputs and performance measures associated with mobility impacts as well as technological, economic, environmental, and social based on tailored selections.
    2. The SWIFT tool combines the regional Travel Demand Model with land use assignment information, environmental information, and natural behavior model data obtained from Metropia application.
    3. **Next steps are to update land use inputs from archived or historic snapshots to batch updates that feed into SWIFT periodically for new scenario results based on changes to the region.**
2. TxDOT Houston District developed a SMART study of the southwest region of H-GAC from the central business district out to Rosenberg based on use of the SWIFT tool development project.
    1. Scenarios consider estimated population growth, connected automated vehicle impacts, shared mobility, micromobility, transit expansion, telecommuting, and e-commerce impacts.
    2. Incorporated a mesoscopic model to study specific impacts of land use growth patterns, technologies and transit investments around specific corridors such as I-69.
    3. Much of the growth in Houston occurs in the north and west regions as well as in redevelopment of the urban core.
    4. High automated vehicle market penetration into SOVs result in further sprawl patterns further west into Rosenberg and beyond and 30% increase in volume on I-69.
    5. With low automated vehicle market penetration, congestion management strategies result in transit expansion and return of people to the urban core around transit-oriented development patterns.
    6. EMAT model run by Cambridge Systematics to verify findings which were that: for every 10% increase in connected automated vehicle use, vehicle miles traveled increased 4% and that increase in telecommuting deteriorates transit ridership.

Key Findings: *Opening Session*: H-GAC Presentation by MPO Director Craig Raborn

Project Selection and Programming

- "Call for Projects"
- Significant policy and process updates
- Incorporate recommendations of TPC Workgroup

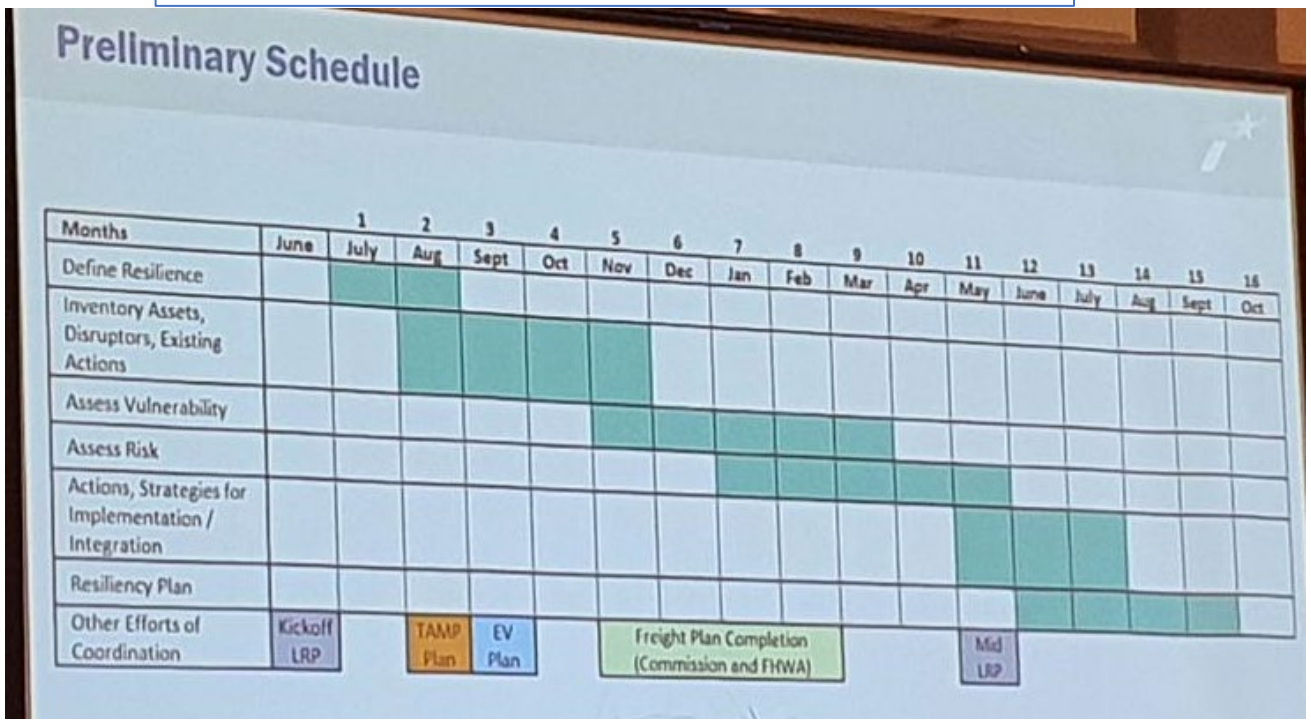
	Previous Process	New Process
Timing	Every 3 years	Tied to TIP and RTP development
Applications	All types of projects at one time	Applications by investment category
Readiness	Not considered	Critical factor
Selection/Ranking Criteria	Planning factors and benefit-cost analysis; limited variation	Planning factors and benefit-cost analysis; scaled assessments
Scoring	Quantitative	Adding qualitative
Available Funding	Unprogrammed 10-year balance	Determined by TPC to focus on investment categories; unprogrammed balance is cap

	Fatalities	Serious Injuries	Fatalities per 100M VMT	Ser. Injuries per 100M VMT	Nonmotorized Fatal & Serious
TxDOT Target Trend	-20.7	-109.0	-0.029	-0.154	-23.2
5-year average	+29.8	+151.8	+0.055	+0.353	+42.3
Deviation (actual)	+50.5	+260.8	+0.084	+0.507	+65.5
Deviation (percent)	244%	239%	290%	329%	282%

1. H-GAC has a problem with projects that don't get let on schedule, creating carry over balances and resulting in the loss of over $60 million in CMAQ funds.
2. The strategy to address is multifaceted and includes:
   - Hired a new principal planner to clear the log jam of projects.
   - Claw back provision has been removed for projects where funds were spent on PS&E without being let in 10 years which will ramp up use of CMAQ funds for PS&E.
   - Changing project selection to elevate projects ready to construct within 4 years.
   - Greater alignment for project selection process is being established to ensure collaboration between technical activities committee and various subcommittees so that the final ranked list accounts for projects that are validated for CMAQ eligibility, like pedestrian and bicycle projects with good utilization scores.
   - Maintain a deep well of projects in the formal unfunded list so that CMAQ funds can be scaled up for use with new funding programs and opportunities
   - New metric on expected fatality count reduction so that projects get elevated that contribute to expected reductions in annual fatalities.

Key Findings: Statewide Planning - *Session*

Statewide Resilience Plan Schedule



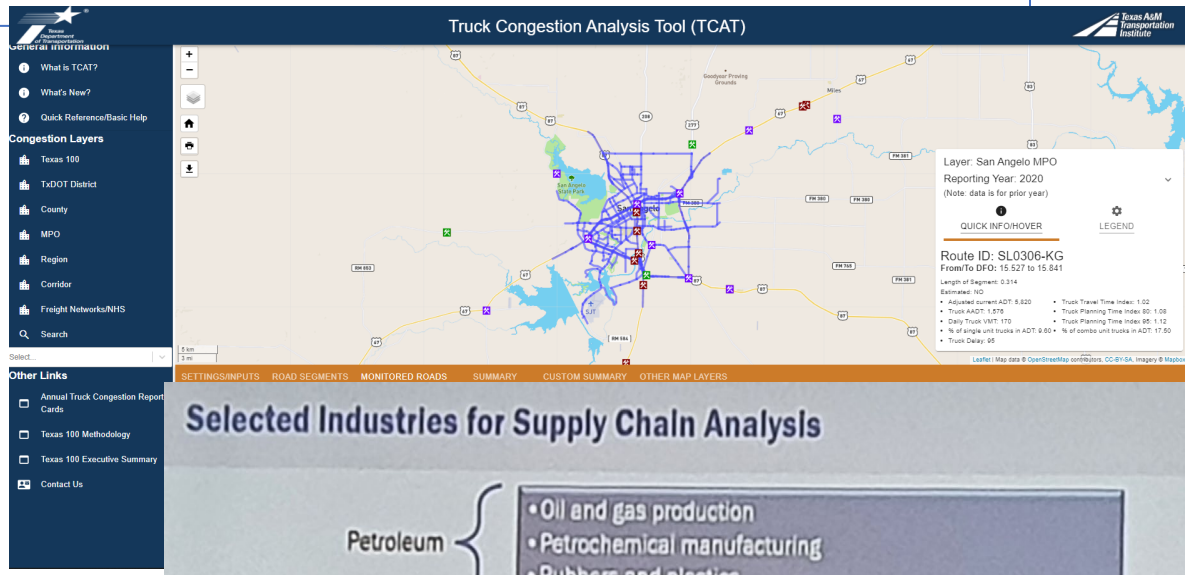
1. State Long Range Transportation Plan: Estimated Delivery date: June 2024
    1. The next TxDOT statewide plan is being developed on a busy 2-year schedule that includes the UTP, statewide bicycle plan, resilience, freight, asset management, EV infrastructure, and strategic plan.
    2. The consultant with AECOM plans to incorporate all these plans to identify long-term multimodal needs, revenues and funding gaps and evaluate through use of risk-based investment scenario planning tools similar to those presented in Houston.
        - Looking at 5 scenarios with low, medium, and high funding for transportation.
        - Can integrate resilience into the scenarios with varying degrees of risk from hazards and extreme weather.
    3. The plan rely on ETC to develop a statistically valid representative sample of the population of Texas.
    4. The plan will be oriented around high-performing corridors to ensure they remain high-performing, AND it will contain a look-back mechanism to see how investments have performed.
2. Carlos Calle at TxDOT is the project lead on the Statewide Resilience Plan under contract with John Song at AECOM.
    - The development time frame for the project is 18 months with a July 2022 start and finalizing in September 2023.
    - A steering committee of divisions, districts, and outside stakeholders run the project.
    - A critical focus of the resilience plan is to connect freight plans, asset management plans, border plans, rail strategic plans which are all under development at the same time.
    - TxDOT will inventory both natural and manmade disruptions to determine what could impact in the future.
    - The goal is to have a list of prioritized projects in the statewide resilience plan with a resilience metric in the project selection process and listed in the LRTP to ensure the 10% FHWA match reduction is obtained.
    - **Looking to MPO resilience plan frameworks for possible inclusion in the statewide resilience plan**

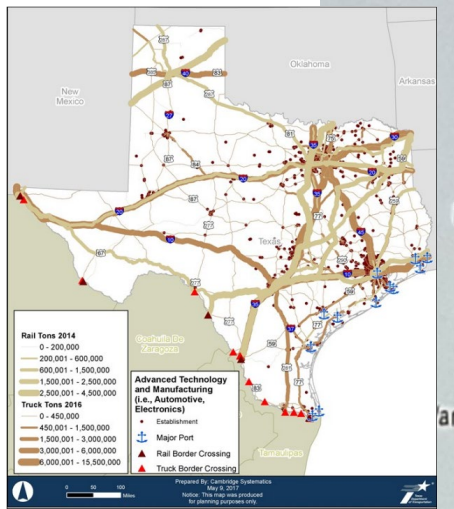
Key Findings: Texas Delivers 2050: The Role of the Supply Chain and How Data Informs Freight Planning - *Session*

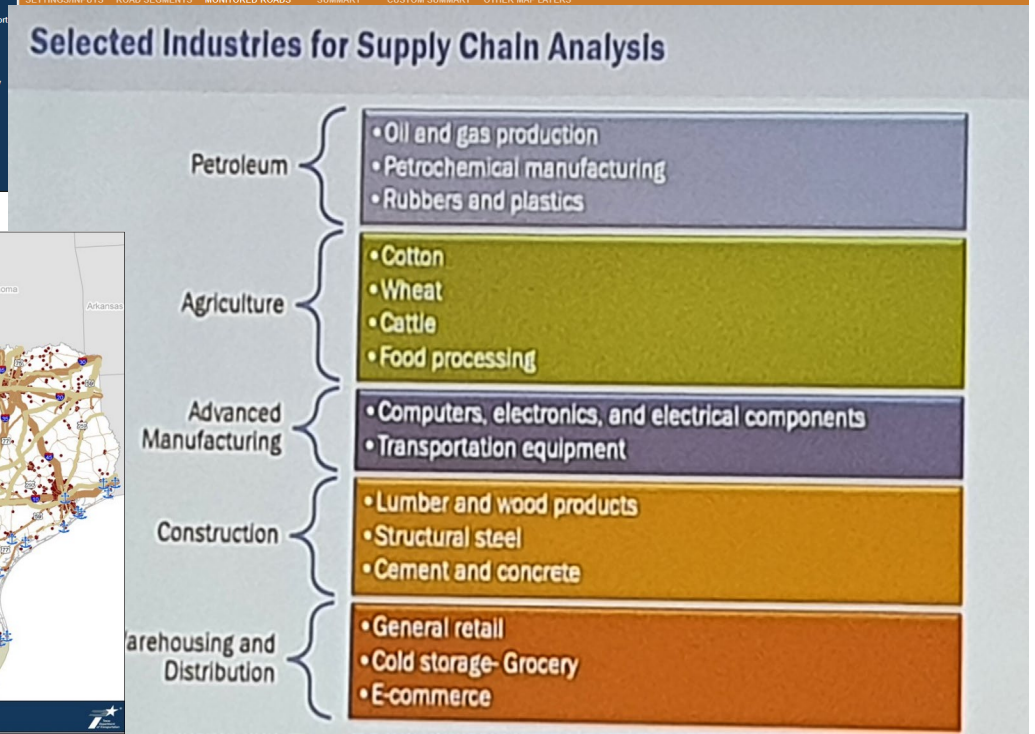
1. TTI, LD White presented on the Truck Congestion Analysis Tool (https://tcatwebprod.z14.web.core.windows.net/)
   - Trucking congestion statistics webtool including data years for 2016-2020
   - MPO can see how they are performing on truck congestion across these years.
   - Can use Texas 100 top congested roads and various other lenses to view truck congestion in the region.

2. Lisa Hailey with NACERO Inc.
   - Detailed a 2,600-acre natural gas conversion facility *to be located* on FM 866 west of Odessa, TX in Penwell, TX.
   - Converting natural gas into sulfur-free gasoline.
   - Conducting feasibility and route analysis to plan for the shipment of multiple 500k-pound methanol reactors to the Penwell, TX site from the Port of Corpus Christi.

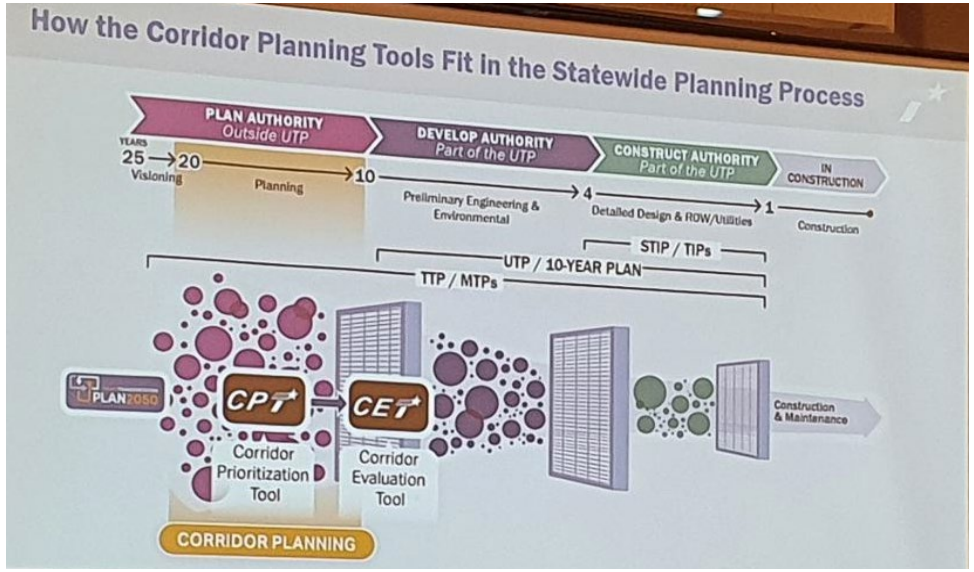
3. Paula Dowell with Cambridge Systematics presented on the development of the Texas Freight Mobility Plan 2050.
   - A freight plan provides Texas access to federal freight funds.
   - The freight plan will be oriented around five-selected supply chains vital to the economic vitality of the state listed on the photo to the right >>>>>>>>>
   - The Texas Freight Advisory Committee will serve as the steering committee.
   - TxDOT has already mapped critical supply chains in the state of Texas in the 2017 Freight Plan. >>>>>>

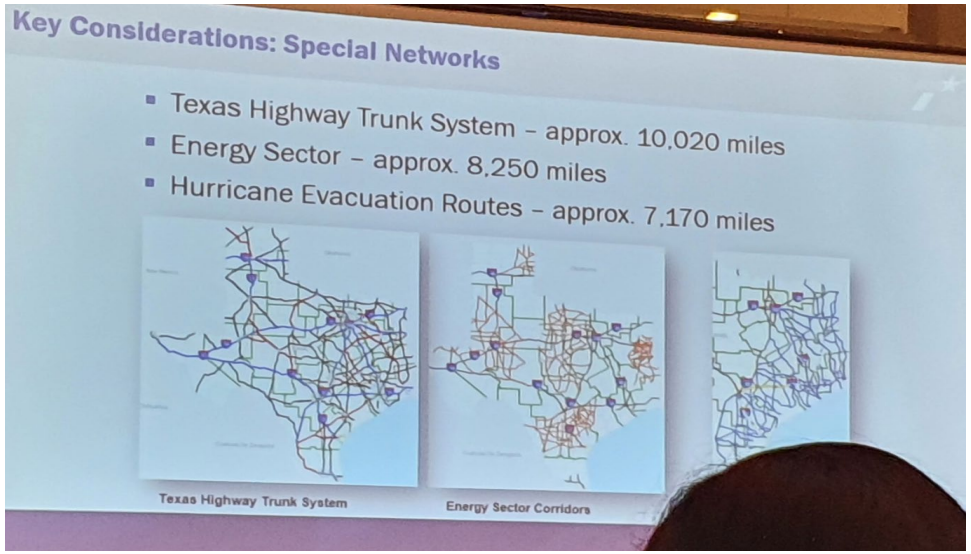






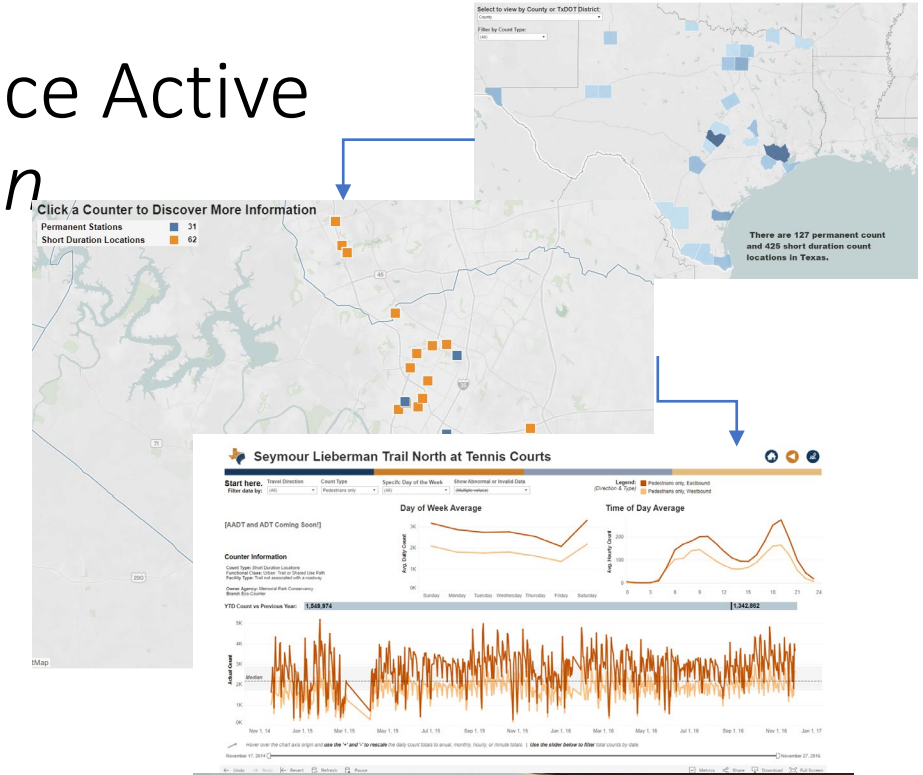
Key Findings: Corridor Planning - *Session*





1. Lorena Echeverria de Misi, Curtis Jones, Ana Ramirez Huerta, and Catherine McCreight presented on needs identification through use of corridor prioritization and corridor evaluation tools.
   - The TxDOT Corridor Prioritization Tool (CPT) is used to prioritize corridors typically around 100 miles in length to identify projects that are located in the 10-20 year timeline in the statewide planning process, beyond the UTP.
   - THe TxDOT Corridor Evaluation Tool (CET) proceeds after the CPT and aims for corridors that are typically around 10 miles in length containing 25 different scoring metrics that serve to rank the corridor based on:
     - **Pavement**- 11.1% weight (metrics are pavement condition, % pavement with pavement score less than 60)
     - **Bridge**- 11.1% weight (metrics are bridge sufficiency score, % deck area on bridges with sufficient rating less than 60)
     - **Safety-** 27.8% weight (metrics are K&A crash rate for entire corridor, total crash rate for entire corridor)
     - **Congestion**- 22.2% weight (metrics are % count stations with existing v/c greater than .80, % count stations with future f/v greater than .80, TTI hot spot congestion list for all, TTI hot spot congestion list for trucks)
     - **Economic**- 11.1% weight (metrics are daily freight volumes, commodity flow, existing employment, existing population, projected annual traffic growth rate, % of privately held land)
     - **Connectivity** – 16.7% weight (metrics are provides access to existing multi-modal facilities or major traffic generators, part of hurricane evacuation route, part of national freight network or TxDOT primary freight network)
   - To Get the CET for your region contact Lorena Echeverria de Misi and she will work with the contractor to get a CET version scaled to your region.

Key Findings: Map-based Tools to Advance Active Transportation Planning in Texas - *Session*



1. New TxDOT Web tools were presented which serve to document active transportation plans in Texas, and source for bicycle and pedestrian count data.
    - Texas Bicycle and Pedestrian Count Exchange (BP|CX): https://mobility.tamu.edu/bikepeddata/
        - 30 permanent pedestrian and bike counters being installed across the state, with 15 in place so far.
        - This data gets connected to the bike and pedestrian count exchange for visualization charts on use.
        - Currently there are 127 permanent sites across the state, with 407 short term sites all which report out data on trail and bike/ped network use.
        - The focus was to also ensure geographic balance and equity for low income and racial minorities to avoid just putting counters on million-dollar trails- so counters are placed on trails and sidewalks.
        - There is a pedestrian and bicycle counter loan program- contact Bonnie Sherman (bonnie.Sherman@txdot.gov) for more details
    - Texas Active Transportation Plan Inventory: https://apps.highstreet.work/Plans/
        - Developed for use in TxDOT project development process.
        - Enables user to filter active transportation plan inventory by mode, entity, size, area, and to draw boundaries around corridors where projects are planned to see which active transportation plans are connected to the area.
        - Enables MPOs to submit to TxDOT for validation active transportation plans along with GIS shape file as well.