COVID-19 INFRASTRUCTURE
#OOX PROGRAM: ROUND 3

SURFACE TRANSPORTATION TECHNICAL COMMITTEE

October 23, 2020
BACKGROUND

- Due to the recent COVID-19 outbreak, the economy has suffered large setbacks and there is an urgency to stimulate the economy.

- As was done in 2009, the idea is to inject much needed cash into the local and state economy using infrastructure investment.

- North Central Texas Council of Governments (NCTCOG) staff recommends funding a third round of projects that would benefit from expedited action.

- These projects meet one or more of the Regional Transportation Council (RTC) policies outlined in Mobility 2045 and/or assist in reaching the region’s federal performance targets.

- Most of these projects have been the subject of discussions between NCTCOG staff and regional partners over the past several years and this action seeks to bring them to a conclusion.

- An additional round of project selection is proposed to start in the Spring 2021.
BUTLER PLACE

- City of Fort Worth, Fort Worth Housing Solutions, and NCTCOG staff have coordinated about redevelopment of and accessibility to/from Butler Place in Fort Worth.
- Funding was approved by the RTC in April 2019 for engineering and land acquisition for this project.
- Additional funding is proposed for transportation connections to the site
- Limits: Bounded by IH 35W, IH 30, and US 287
- Scope: Improve accessibility to and from Butler Place
- Funding:
  - $10,000,000 Surface Transportation Block Grant (STBG) (matched with Transportation Development Credits (TDC))
  - Half of funding to be repaid to the RTC via Tax Increment Finance (TIF) revenues over time.
- RTC Policies/Federal Performance Measures Addressed: Accessibility, Infill Development
PEOPLE/GOODS MOVER SYSTEMS

- Staff has been working to advance the adoption of next-generation people/goods mover technologies in the region.
- Limits: Tarrant County near a State Highway and Dallas Midtown District (bounded by IH 635, Dallas North Tollway, Preston Road, and Spring Valley Road)
- Funding: $10,000,000 STBG for each system (matched with Regional TDCs)
- Scope: Engineering, testing, and construction of automated cargo and people mover systems
INVESTMENTS IN TRANSIT

• COVID-19 has had substantial impacts on transit ridership and operations. Staff proposes to make investments in various transit initiatives to address these impacts and advance transit in the region.
• Funding: $25,000,000 STBG (matched with Regional TDCs)
• Scope: Specific scopes to be determined, but will focus on these areas:
  • Response to COVID-19 impacts
  • Insurance for passenger rail integration onto freight lines
  • Engineering funds for passenger rail/roadway interfaces
  • Next generation high-intensity bus expansion
  • Review of bus stop amenities
  • Partnership(s) with Class 1 Railroads on passenger rail corridors
• RTC Policies/Federal Performance Measures Addressed: Transit, Air Quality, Freight
WORTH CREEK PARKWAY AT CHISHOLM TRAIL PARKWAY

- A new Tarleton State University campus has been constructed in South Fort Worth and NCTCOG has been working with local partners to implement an interchange to create better access to the school.
- Limits: Chisholm Trail Parkway at Worth Creek Parkway
- Scope: Construct interchange
- Funding: $20,000,000 STBG (matched with Regional TDCs)
- RTC Policies/Federal Performance Measures Addressed: Mobility
WEATHERFORD DOWNTOWN BYPASS LOOP

- NCTCOG, the City of Weatherford, and TxDOT Fort Worth have coordinated on a bypass loop around downtown Weatherford.
- The RTC previously funded the northern section of this bypass and funding is being proposed now for the southern section.
- Limits: Waco Street/West Columbia Street from US 180 to FM 51/FM 171
- Funding: $10,384,040 STBG (matched with State funds and Regional TDCs)
- Scope: Reconstruct and widen 2 lane roadway to 4 lane roadway, including intersection improvements at FM 51/West Columbia with bicycle lanes and sidewalks
- RTC Policies/Federal Performance Measures Addressed: Mobility, Safety, Complete Streets

Source: City of Weatherford
CITY OF DALLAS TRAFFIC SIGNALS

• In 2019, the City of Dallas sustained a significant amount of tornado damage to traffic signals. This project helps rebuild those signals and signals in two other corridors (Lancaster Rd and Hampton Rd).

• Scope: Design and construct 44 traffic signals, including signal re-timing

• Funding:
  • $220,000 Congestion Mitigation and Air Quality Improvement Program (CMAQ)
  • $14,080,000 STBG
  • $2,122,500 Local match
  • Dallas Policy Bundle TDCs to match the remaining funds

• RTC Policies/Federal Performance Measures Addressed: Air Quality, Maintenance, Reliability, Mobility, Environmental Justice

Source: City of Dallas
HICKORY CREEK ROAD

- The City of Denton and Denton County wish to partner with the RTC on a project in the City’s recently approved Bond program.
- Limits: Hickory Creek Road from FM 1830/Country Club Road to Riverpass Drive
- Scope: Reconstruct and widen from 2 to 4 lanes with sidewalks, and intersection improvements at Riverpass
- Funding: $10,000,000 STBG (matched with $2,500,000 of local cash)
- RTC Policies/Federal Performance Measures Addressed: Mobility, Safety

Source: City of Denton
SH 114 – DENTON COUNTY

• COVID-19 #00X Round 2 included a funding swap between Denton County and the RTC in which Denton County received federal funds in exchange for sending Regional Toll Revenue funds to the Western subregion.
• This project represents the second half of this exchange.
• Limits: SH 114 from US 377 to IH 35W (Segments 1 and 2 at right)
• Funding: $24,000,000 STBG (matched with $6,000,000 of State funds)
• Scope: Construct 0 to 6 main lanes; Reconstruct and widen 4 to 4/6 lane frontage roads
• RTC Policies/Federal Performance Measures Addressed: Mobility, Reliability

Source: TxDOT Dallas District
COLLIN COUNTY FUNDING EXCHANGE

• NCTCOG continues to work with TxDOT and local government partners on the development of the US 380 project in Collin County.

• Both the US 380 and the North/South Roadway projects are critical to the RTC’s implementation of the Regional 10 Year Plan in Collin County.

• This proposal seeks to address two impacts that the future US 380 and associated connections to it will have.

• The partnership would only be needed if US 380 is constructed as a freeway.
PROPOSED PANTHER CREEK PARKWAY FUNDING PARTNERSHIP

- In order to prevent a water line relocation that runs through Frisco, TxDOT has proposed an alignment change for US 380 that reduces developable land in Frisco.
- In exchange for agreeing to this alignment change, Frisco has requested $30M to fund an extension of Panther Creek Parkway from Preston Road to the Dallas North Tollway.
- Collin County would like to fund this improvement, but bond funds are not eligible for this project, and the County proposes the following:
  - Collin County has requested a funding exchange with the RTC
  - The RTC would fund the Panther Creek project with $30M of STBG funding.
  - In exchange, $30M of Category 2 funds would be taken off the US 380 project and would be replaced with $30M of Collin County Bond funds.
- Costs above and beyond this $30M on the Panther Creek Parkway project would be the responsibility of Frisco.
PROPOSED MCKINNEY AIRPORT FUNDING PARTNERSHIP

- McKinney has received a $15M TxDOT grant for a runway extension at McKinney National Airport, which was originally planned to be extended to the south.
- Extending the runway to the north would reduce impacts to neighboring cities and give more flexible alignment options for the future extension of Spur 399 to US 380.
- An extension to the north will cost more than to the south.
- Collin County is willing to cover this cost, but cannot utilize bond funding on the project, so another funding exchange is being proposed.
  - The RTC would use $30M of Regional Toll Revenue (RTR) funds to offset costs of the northern runway extension (as mitigation to the US 380 project)
  - In return, $30M of Category 2 funding will be removed from the US 380 project and be replaced with $30M of Collin County Bond funding.
ACTION REQUESTED

• Recommend RTC approval of:
  • The funded projects outlined in this presentation and the cost-revenue matrix in the mail out
  • The funding exchanges between the RTC, Collin County, and the cities of McKinney and Frisco
  • Administratively amending the Transportation Improvement Program (TIP)/Statewide Transportation Improvement Program (STIP) and other administrative/planning documents as needed.
QUESTIONS?

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Senior Transportation Planner
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OVERVIEW OF NEXT STEPS INVOLVING NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS’ TRAVEL DEMAND MANAGEMENT PROGRAM

Surface Transportation Technical Committee

Caryn Sanders, Transportation Planner
October 23, 2020
What is Travel Demand Management?

NCTCOG’s Travel Demand Management (TDM) Goal: Implementation of strategies that reduce the demand for Single Occupancy Vehicle (SOV) travel on roadways by offering alternatives to driving alone.

- Ridesharing: Carpooling and Vanpooling
- Transit: Bus and Rail
- Active Transportation: Biking and Walking
- Telecommuting: Work from Home
- Compressed Work Weeks: 4/40 and 9/80 Schedules
- Flexible Work Hour Schedules: Staggered Shifts
Impacts of COVID-19 on TDM

2020 Try Parking It Commuter Tracking During COVID-19

- Carpool
- Vanpool
- Transit
- Telecommute
- Walk
- Bike

January February March April May June July August September
Impacts of COVID-19 on Air Quality

Regional Nitrogen Dioxide (NO₂) Tracking
Impacts of COVID-19 on Travel Behavior

**TRANSIT IMPACTS**

Weekday Ridership

Transit Passenger Decrease: 2019 vs 2020

<table>
<thead>
<tr>
<th>Month</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
<th>Jul</th>
<th>Aug</th>
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<td>-27%</td>
<td>-59%</td>
<td>-55%</td>
<td>-54%</td>
<td>-55%</td>
<td>-57%</td>
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</table>

**BICYCLE AND PEDESTRIAN IMPACTS**

Trail Counts

Increase in Full Week Trail Usage: 2019 vs 2020

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<thead>
<tr>
<th>Month</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
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<tr>
<td></td>
<td>19%</td>
<td>50%</td>
<td>71%</td>
<td>78%</td>
<td>54%</td>
<td>22%</td>
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</table>
Impacts of COVID-19 on Travel Behavior

ROADWAY IMPACTS
Average Weekday Freeway Volumes

Traffic Decrease vs 2019

<table>
<thead>
<tr>
<th>Month</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
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</thead>
<tbody>
<tr>
<td>Traffic Decrease vs 2019</td>
<td>-10%</td>
<td>-28%</td>
<td>-19%</td>
<td>-12%</td>
<td>-10%</td>
<td>-9%</td>
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</table>

TOLLROAD IMPACTS
NTTA Transactions, Including SH 360

Change in Tollway Transactions: 2019 vs 2020

<table>
<thead>
<tr>
<th>Month</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Change vs 2019</td>
<td>5%</td>
<td>19%</td>
<td>-15%</td>
<td>-38%</td>
<td>-22%</td>
<td>-6%</td>
</tr>
<tr>
<td>-29%</td>
<td>-27%</td>
<td>-26%</td>
<td>-57%</td>
<td>-41%</td>
<td>-22%</td>
<td>-6%</td>
</tr>
</tbody>
</table>
The Public Sector’s Perspective

- Capital Area Metropolitan Planning Organization (Austin, TX) – 20 percent reduction by 2020
- Capital District Transportation Committee (Albany, NY) – 40 percent reduction by 2030
- Chicago Metropolitan Agency for Planning (Chicago, IL) – 80 percent reduction by 2050
- City of Seattle (Seattle, WA) – 28.8 percent reduction by 2023
- Metropolitan Transportation Commission (San Francisco, CA) – 60 percent reduction by 2050 (Carbon Reduction Effort)
- North Central Texas Council of Governments – 20 percent reduction goal as part of NCTCOG Employer Trip Reduction Program
The Private Sector’s Perspective

- Microsoft Corporation – Remote working up to 50 percent of work week or permanently work remotely
- Infosys – 33 percent of employees to work from home permanently
- Facebook – 50 percent of employees to work remotely in the next 5-10 years
- Using technology to impact the bottom line (e.g. less required parking, less office space needed, etc.)
- May be more focused on reducing carbon footprint and climate change
Future of TDM vs. the Urban Lifestyle

High Priority Items / Areas of Focus

- How can we maintain the benefits of decreased SOV travel without harming the economy and the urban lifestyle?
- Urban Lifestyle vs. Air Quality - critical factor to consider when proposing changes to commuter habits.
- Are there acceptable tradeoffs associated with implementing TDM strategies?
- What are public and private sector agency concerns?
- Focus on changes achieved in the short-term with hopes for long-term benefits.
- Share your feedback.
NCTCOG TDM Program Contact Info

Share Your Feedback

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Agenda

Project Purpose
Potential Technologies
Potential Alignments/Corridors
Project Schedule
Stay Informed
Corridor-specific alignment, design, and operational characteristics for the intercity passenger, regional passenger, and freight rail systems will be determined through capacity evaluation and ongoing project development. Refined rail forecasts are necessary to determine technology and alignment in future rail corridors.
Evaluate high-speed transportation alternatives (both alignments and technology) to:

- Connect Dallas-Fort Worth to other proposed high-performance passenger systems in the state
- Enhance and connect the Dallas-Fort Worth regional transportation system

Obtain federal environmental approval of the viable alternative
The study area traverses:
• Dallas and Tarrant counties
• Dallas, Irving, Cockrell Hill, Grand Prairie, Arlington, Pantego, Dalworthington Gardens, Hurst, Euless, Bedford, Richland Hills, North Richland Hills, Haltom City, and Fort Worth
• Over 230 square miles
Phased Approach

Phase 1 – Alternative Development

- Public and Agency Engagement
- Alternative Development
- Alternative Screening

Goal for Phase 1
Identify technology and alignments to be carried into Phase 2

Phase 2 – Engineering & Environmental

- Conceptual Engineering
- National Environmental Policy Act Documentation and Approval
- Preliminary Engineering
- Financial and Project Management Plans

Goal for Phase 2
Federal environmental approval the alignment & technology

April 2021

April 2023
Connect downtown Dallas and downtown Fort Worth with high-speed intercity passenger rail service or an advanced high-speed ground transportation technology to:

• Provide an alternative to existing ground transportation travel options
• Advance the state high-performance rail transportation network
• Support economic development opportunities
• Enhance connectivity
Types of Passenger Rail/Advanced Guideway Technology

- Conventional
- Higher-Speed
- High-Speed
- Maglev
- Hyperloop
- Other?
# Types of Passenger Rail

<table>
<thead>
<tr>
<th>Top Speed</th>
<th>Exclusive Guideway</th>
<th>Peak Headways</th>
<th>Operating Style</th>
<th>Cargo</th>
<th>Technology Readiness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONVENTIONAL</strong></td>
<td>TRE, TEXRail, A-Train</td>
<td>80 mph</td>
<td>No</td>
<td>20-30 Minutes</td>
<td>Fixed Schedule</td>
</tr>
<tr>
<td><strong>HIGHER-SPEED</strong></td>
<td>Amtrak, Acela Express</td>
<td>125 mph</td>
<td>No</td>
<td>20-30 Minutes</td>
<td>Fixed Schedule</td>
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<tr>
<td><strong>HIGH-SPEED</strong></td>
<td>Asia &amp; Europe, Under Construction in California</td>
<td>250 mph</td>
<td>Yes</td>
<td>3-30 Minutes</td>
<td>Fixed Schedule</td>
</tr>
</tbody>
</table>
Types of Advanced Guideways

**MACLEV**
- Top Speed: 300+ mph
- Exclusive Guideway: Yes
- Peak Headways: 15-20 Minutes
- Operating Style: Fixed Schedule
- Cargo: No
- Technology Readiness: Operational

- Locations: China, Germany, Japan, South Korea, Under Environmental Study (DC to Baltimore)

**HYPERLOOP**
- Top Speed: 650+ mph
- Exclusive Guideway: Yes
- Peak Headways: ~2 Minutes
- Operating Style: On-demand (Smart Elevator)
- Cargo: Yes
- Technology Readiness: Prototypes Undergoing Testing

Graphic by HNTB
Technology Comparison

**Similarities**
- Operates on fixed guideway or rails
- High speeds (100+ mph) require a dedicated guideway with no at-grade crossings with other railways or roadways
- The amount of right-of-way needed for the guideway
- Need for stations and maintenance facilities

**Differences**
- Propulsion system (locomotive, overhead catenary, maglev)
- Number of stations
- Operating schedule - fixed vs on-demand
- Potential cargo component
Potential Alignments/Corridors

• Initial alignments/corridor developed based on previous studies
• Trying to use existing transportation corridors
• All connect proposed Dallas high-speed rail station and the Fort Worth Central Station

43 end-to-end (Dallas to Fort Worth) alignments/corridors have been identified
Potential Alignments and Corridors
## Proposed Evaluation Methodology

### DFW HIGH-SPEED TRANSPORTATION CONNECTIONS STUDY

<table>
<thead>
<tr>
<th>Initial Alternatives</th>
<th>Evaluation of Alternatives</th>
<th>Alternatives Carried Forward</th>
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</thead>
<tbody>
<tr>
<td><strong>We Are Here</strong></td>
<td>Level 1 (Purpose &amp; Need)</td>
<td>Draft Environmental Document</td>
</tr>
<tr>
<td>Identify &amp; Develop</td>
<td>Evaluate adherence to</td>
<td>Limited number of</td>
</tr>
<tr>
<td>Initial Alternatives</td>
<td>Purpose &amp; Need for each</td>
<td>technologies and</td>
</tr>
<tr>
<td></td>
<td>alternative</td>
<td>alignments carried forward</td>
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<tr>
<td></td>
<td>Level 2 (Fatal Flaw &amp; Ranking)</td>
<td>into Environmental</td>
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<tr>
<td></td>
<td>Evaluate alternatives for</td>
<td>Document</td>
</tr>
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<td></td>
<td>fatal flaws and rank</td>
<td></td>
</tr>
<tr>
<td></td>
<td>remaining alternatives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Level 3 (Detailed Evaluation)</td>
<td>Detailed evaluation of</td>
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<tr>
<td></td>
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<td>top three alternative</td>
</tr>
</tbody>
</table>

Ongoing Public, Stakeholder, and Agency Engagement
# Proposed Screening Criteria Levels

## Level 1 (Ability to Meet Purpose and Need)

**Primary**
- Serves Downtown Dallas and Downtown Fort Worth Stations (fatal flaw)
- Opportunity to serve City of Arlington (fatal flaw)

**Secondary**
- Safe
- Reliable
- Convenient
- Linkages to Other High-Performance Systems in Texas
- Connect to Existing Regional/Light Rail in Dallas-Fort Worth
- Improved Access to Major Activity Centers

## Level 2 (Fatal Flaws and Ranking)

- Proximity to Sensitive Social, Biological, or Cultural Areas
- Potential Community Impacts
- Technology Maturity, Design Criteria, Regulatory Approval
- Capacity, Travel Time, Compatibility with Existing Infrastructure
- Operational Considerations

## Level 3 (Detailed Evaluation)

- Costs
- Potential Impacts to Sensitive Social, Biological, or Cultural Areas
- Potential Community Impacts
- Constructability/Operability
Phase 1 Schedule – 12 Months

- **May 2020**: Review technology & design criteria
  - Review of previous studies
  - Define purpose & needs
- **June 2020**: Develop alternatives (route & technology)
- **July 2020**: Level 1 screening
- **August 2020**: Public Meetings (Series 1)
- **September 2020**: Public Meetings (Series 2)
- **October 2020**: Public Meetings (Series 3)
- **November 2020**: Level 2 screening
- **December 2020**: Develop conceptual options (5% design)
- **January 2021**: Level 3 screening
- **February 2021**: Technology & alignment recommendation Final Phase 1 report
- **March 2021**: April 2021
Previous Meetings

Elected Officials Briefing Meeting
  July 17

Public Meetings
  September 23
  September 24

Technical Work Group Meetings
  July 21
  August 21
  October 16
Information Options

• Technology Forum – Early December
• Upcoming Public Meetings*
  ▪ January 2021
  ▪ Spring 2021
• Elected Officials Briefing – January 15, 2021
• Project Website:
  www.nctcog.org/dfw-hstcs
• Request a presentation and/or briefing*
  NCTCOG Speaker Request Form at:
  nctcog.org/trans/about/educate/request-a-speaker

* Public meetings, presentations, and briefings may be held virtually. If public meetings are held in person, each series will include three meetings presenting the same information at three different dates and locations (Dallas, Fort Worth, and mid-cities).
Discussion

www.nctcog.org/dfw-hstcs

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Federal Highway Administration: Pavement/Bridge Condition (PM2) Target Reaffirmation or Revisions

Presented by:
Jeffrey C. Neal – Senior Program Manager
Streamlined Project Delivery & Data Management

October 23, 2020
Surface Transportation Technical Committee (STTC) – Information Item
**NCTCOG Performance Measurement Activities**

**FAST Act – Performance Measures and Target Setting**

<table>
<thead>
<tr>
<th>Complete</th>
<th>Rulemaking</th>
<th>Number of Measures</th>
<th>DOT/Provider Target Setting Deadline</th>
<th>MPO Target Setting Deadline</th>
<th>Reporting Period</th>
<th>Reporting Schedule</th>
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<td>✗</td>
<td>Safety (PM1)</td>
<td>5</td>
<td>8/31/2020</td>
<td>2/27/2021</td>
<td>Annually</td>
<td>Annually</td>
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<tr>
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<td>Pavement/Bridge Condition (PM2)</td>
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<td>10/01/2020</td>
<td>3/30/2021</td>
<td>Four-Year Performance Periods (starting 2018-2022)</td>
<td>Biennially (beginning, middle, &amp; end of performance periods)</td>
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<td>✓</td>
<td>System Performance (PM3)</td>
<td>7</td>
<td>10/01/2020</td>
<td>10/01/2020</td>
<td>Four-Year Performance Periods (starting 2018-2022)</td>
<td>Biennially (beginning, middle, &amp; end of performance periods)</td>
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<td>✗</td>
<td>Public Transportation Safety Plan (PTASP)</td>
<td>7</td>
<td>12/31/2020</td>
<td>6/29/2021</td>
<td>Annually</td>
<td>Annually</td>
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<tr>
<td>✗</td>
<td>Transit Asset Management (TAM)</td>
<td>4</td>
<td>1/01/2021</td>
<td>6/30/2021</td>
<td>Annually</td>
<td>Annually</td>
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PM2 (Pavement/Bridge Condition) Performance Period Schedule

First Performance Period began November 8, 2018: RTC affirms TxDOT statewide PM2 targets for 2020 and 2022

Mid-Performance Period Report due October 1, 2020

If TxDOT adjusts PM2 statewide targets (2022), MPOs have 180 days to either reaffirm support for adjusted targets, or set new regional targets

First Performance Period ends

Second Performance Period begins

MPOs adopt new targets (statewide or regional) for 2024 and 2026
In accordance with 23 CFR Part 490, pavement/bridge conditions are reported for National Highway System (NHS) facilities.

State DOTs are required to establish PM2 targets representing the full NHS extent, regardless of ownership.

Total NHS (NCTCOG) = 12,437 lane-miles
- Interstate Highways = 3,215 lane-miles (25.9%)
- Non-Interstate Freeways = 1,667 lane-miles (13.4%)
- On-System Arterials = 3,769 lane-miles (30.3%)
- Off-System Toll Roads = 827 lane-miles (6.7%)
- Off-System Arterials = 2,959 lane-miles (23.7%)

NHS comprises 14.1% of region’s total roadway lane-miles (2018), but accommodate 63.2% of total vehicle-miles of travel (VMT).
## PM2 Analysis – Statewide vs. Regional Data

### Breakdown of NHS Pavement Good Condition Targets

<table>
<thead>
<tr>
<th>NHS ROADWAY CATEGORIES</th>
<th>DESIRED IMPROVEMENT TREND</th>
<th>2018 BASELINE</th>
<th>2020 CONDITION (NEW)</th>
<th>2022 TARGET (ORIGINAL)</th>
<th>2022 TARGET (UPDATED)</th>
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<td><strong>State of Texas</strong></td>
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<tr>
<td>GOOD PAVEMENT CONDITION</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Interstate National Highway System (NHS)</td>
<td>✅</td>
<td>66.8% *</td>
<td>66.6% *</td>
<td>66.4% *</td>
<td>66.5% *</td>
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<tr>
<td>Non-Interstate National Highway System (NHS)</td>
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<td>54.4% *</td>
<td>55.2% *</td>
<td>52.3% *</td>
<td>54.1% *</td>
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<tr>
<td><strong>North Central Texas (NCTCOG) Region</strong></td>
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<tr>
<td>GOOD PAVEMENT CONDITION</td>
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<tr>
<td>Interstate NHS (TxDOT)</td>
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<td>50.1% **</td>
<td>34.9% *</td>
<td>52.7% **</td>
<td>19.8% *</td>
</tr>
<tr>
<td>Non-Interstate NHS: On-System Freeways (TxDOT)</td>
<td>✅</td>
<td>48.8% *</td>
<td>43.3% *</td>
<td>36.2% **</td>
<td>54.4% *</td>
</tr>
<tr>
<td>Non-Interstate NHS: On-System Arterials (TxDOT)</td>
<td>✅</td>
<td>26.9% **</td>
<td>26.9% **</td>
<td>1.1% *</td>
<td>1.0% *</td>
</tr>
<tr>
<td>Non-Interstate NHS: Off-System Toll Roads (NTTA)</td>
<td>✅</td>
<td>47.6% *</td>
<td>47.6% *</td>
<td>52.3% *</td>
<td>52.3% *</td>
</tr>
<tr>
<td>Non-Interstate NHS: Off-System Arterials (Local)</td>
<td>✅</td>
<td>1.1% *</td>
<td>1.1% *</td>
<td>1.0% *</td>
<td>1.0% *</td>
</tr>
</tbody>
</table>

* Highway Performance Monitoring System (HPMS) data; new regional target estimates based on 3-year (2017-19) HPMS moving average (assumes IRI ratings only for non-Interstate NHS; assumes IRI, cracking, rutting, and faulting metrics for Interstate NHS)

** TxDOT Pavement Management Information System (PMIS) data; estimation/reporting of original regional target based on 5-year (2013-17) moving average for all non-Interstate NHS roadways combined (good condition only)
Breakdown of NHS Pavement Poor Condition Targets

<table>
<thead>
<tr>
<th>NHS ROADWAY CATEGORIES</th>
<th>DESIRED IMPROVEMENT TREND</th>
<th>2018 BASELINE</th>
<th>2020 CONDITION (NEW)</th>
<th>2022 TARGET (ORIGINAL)</th>
<th>2022 TARGET (UPDATED)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State of Texas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Pavement Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interstate National Highway System (NHS)</td>
<td>⇣</td>
<td>0.3% *</td>
<td>0.2% *</td>
<td>0.3% *</td>
<td>0.2% *</td>
</tr>
<tr>
<td>Non-Interstate National Highway System (NHS)</td>
<td>⇣</td>
<td>13.8% *</td>
<td>14.2% *</td>
<td>14.3% *</td>
<td>14.2% *</td>
</tr>
<tr>
<td><strong>North Central Texas (NCTCOG) Region</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Pavement Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interstate NHS (TxDOT)</td>
<td>⇣</td>
<td>5.8% **</td>
<td>0.7% *</td>
<td>8.0% **</td>
<td>1.3% *</td>
</tr>
<tr>
<td>Non-Interstate NHS: On-System Freeways (TxDOT)</td>
<td>⇣</td>
<td>6.8% **</td>
<td>6.8% *</td>
<td>8.9% **</td>
<td>7.2% *</td>
</tr>
<tr>
<td>Non-Interstate NHS: On-System Arterials (TxDOT)</td>
<td>⇣</td>
<td>18.5% **</td>
<td>20.4% *</td>
<td>18.4% **</td>
<td>22.1% *</td>
</tr>
<tr>
<td>Non-Interstate NHS: Off-System Toll Roads (NTTA)</td>
<td>⇣</td>
<td>8.4% **</td>
<td>3.2% *</td>
<td>9.3% **</td>
<td>2.8% *</td>
</tr>
<tr>
<td>Non-Interstate NHS: Off-System Arterials (Local)</td>
<td>⇣</td>
<td>73.7% **</td>
<td>74.3% *</td>
<td>69.8% **</td>
<td>74.1% *</td>
</tr>
</tbody>
</table>

* Highway Performance Monitoring System (HPMS) data; new regional target estimates based on 3-year (2017-19) HPMS moving average (assumes IRI ratings only for non-Interstate NHS; assumes IRI, cracking, rutting, and faulting metrics for Interstate NHS)

** TxDOT Pavement Management Information System (PMIS) data; estimation/reporting of original regional targets in 2018 based on 5-year (2013-17) moving average (poor condition only)
HPMS vs. PMIS

- **Highway Performance Monitoring System (HPMS)** is a national-level information system with data on the extent, condition, performance, use, and operation of the nation’s highways (ride and distresses reported on one lane per roadway).

- **Pavement Management Information System (PMIS)** is TxDOT’s automated system for storing, retrieving, analyzing, and reporting pavement condition (ride and distresses recorded on one lane per direction).

- Project-specific pavement management plans by each TxDOT district conducted via PMIS, not HPMS.

- Data segment length = 1/10 mile.

- **International Roughness Index (IRI)** and full distresses (cracking, rutting, and faulting) used as performance measures for Interstate NHS.

- IRI only used for non-Interstate NHS during first Performance Period (2018-22).

---

**PM2 Pavement Metric Thresholds**

<table>
<thead>
<tr>
<th>RATING</th>
<th>GOOD</th>
<th>FAIR</th>
<th>POOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRI (inches/mile)</td>
<td>&lt; 95</td>
<td>95 – 170</td>
<td>&gt; 170</td>
</tr>
<tr>
<td>PSR* (0.0 – 5.0 value)</td>
<td>≥ 4.0</td>
<td>2.0 – 4.0</td>
<td>&lt; 2.0</td>
</tr>
<tr>
<td>Cracking** (%)</td>
<td>&lt; 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rutting (inches)</td>
<td>&lt; 0.20</td>
<td>0.20 – 0.40</td>
<td>&gt; 0.40</td>
</tr>
<tr>
<td>Faulting (inches)</td>
<td>&lt; 0.10</td>
<td>0.10 – 0.15</td>
<td>&gt; 0.15</td>
</tr>
</tbody>
</table>

---

* Present Serviceability Rating (PSR) may be used only on routes with posted speed limit < 40 MPH

** Continuously Reinforced Concrete Pavement (CRCP); Jointed Plain Concrete Pavement (JPCP); Jointed Reinforced Concrete Pavement (JRCP)
Extent/Condition of Regional Off-System NHS Arterial Pavements

- Jurisdictions w/ Off-system NHS arterials:
  - Addison
  - Arlington
  - Balch Springs
  - Bedford
  - Carrollton
  - Cedar Hill
  - Corinth
  - Dallas
  - Desoto
  - Duncanville
  - Euless
  - Farmers Branch
  - Fort Worth
  - Frisco
  - Garland
  - Grand Prairie
  - Grapevine
  - Haltom City
  - Hurst
  - Irving
  - Lancaster
  - Little Elm
  - Mansfield
  - Mesquite
  - North Richland Hills
  - Plano
  - Richardson
  - Richland Hills
  - Westworth Village
  - Wilmer
<table>
<thead>
<tr>
<th>NHS ROADWAY CATEGORIES</th>
<th>DESIRED IMPROVEMENT TREND</th>
<th>2018 BASELINE</th>
<th>2020 CONDITION (NEW)</th>
<th>2022 TARGET (ORIGINAL)</th>
<th>2022 TARGET (UPDATED)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State of Texas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good Bridge Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All NHS Facilities *</td>
<td>✓</td>
<td>50.7%</td>
<td>50.7%</td>
<td>50.4%</td>
<td>50.4%</td>
</tr>
<tr>
<td>Poor Bridge Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All NHS Facilities*</td>
<td>✓</td>
<td>0.9%</td>
<td>1.3%</td>
<td>0.8%</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>North Central Texas (NCTCOG) Region</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good Bridge Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All NHS Facilities*</td>
<td>✓</td>
<td>55.3%</td>
<td>56.0%</td>
<td>58.4% **</td>
<td>57.9% ***</td>
</tr>
<tr>
<td>Poor Bridge Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All NHS Facilities*</td>
<td>✓</td>
<td>1.9%</td>
<td>2.3%</td>
<td>1.5% **</td>
<td>2.0% ***</td>
</tr>
</tbody>
</table>

* All percentages based on total deck area
** Estimation/reporting of original regional targets in 2018 based on 6-year (2012-18) linear trend analysis; condition data reporting in 2-year increments
*** Estimation/reporting of new regional targets based on 8-year (2012-20) linear trend analysis; condition data reporting in 2-year increments
Bridges are defined as **structurally deficient** with any component condition rating $\leq 4$.

Applicable bridges:
- Bridges carrying NHS facilities
- Bridges carrying entrance/exit ramps (including direct connectors) and cross-streets connecting to NHS facilities

State DOTs must submit their most current National Bridge Inventory (NBI) data on NHS bridges no later than March 15th of each year.

PM2 bridge data distributed to MPOs every two years for determination of progress in achieving adopted performance targets and identifying potential adjustments (optional).

### PM2 Bridge Metric Thresholds

<table>
<thead>
<tr>
<th>NBI RATING SCALE *</th>
<th>Bridge Deck</th>
<th>Superstructure</th>
<th>Substructure</th>
<th>Culvert</th>
</tr>
</thead>
<tbody>
<tr>
<td>(from 0 – 9)</td>
<td>$\geq 7$</td>
<td>$\geq 7$</td>
<td>$\geq 7$</td>
<td>$\geq 7$</td>
</tr>
<tr>
<td>GOOD</td>
<td>9</td>
<td>5 or 6</td>
<td>5 or 6</td>
<td>5 or 6</td>
</tr>
<tr>
<td>FAIR</td>
<td>8</td>
<td></td>
<td>5 or 6</td>
<td></td>
</tr>
<tr>
<td>POOR</td>
<td>7</td>
<td></td>
<td>5 or 6</td>
<td>4</td>
</tr>
</tbody>
</table>

* National Bridge Inventory (NBI)
PM2 Analysis – Statewide vs. Regional Data (cont.)

Extent of Regional “Poor”/”Near-Poor” Condition NHS Bridges

NCTCOG Region – Bridge Performance Status

<table>
<thead>
<tr>
<th>BRIDGE PERFORMANCE</th>
<th>2018</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Poor Condition” NHS Bridges</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>Funded – 2018 (UTP –or– TIP/STIP)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Repeat Listings</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Funded – 2020 (UTP –or– TIP/STIP)</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>Not Addressed (&lt; 10 Years)</td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

NCTCOG Region – “Poor Condition” Bridges Not Addressed (2020)

<table>
<thead>
<tr>
<th>FACILITY CARRIED</th>
<th>FEATURE(S) CROSSED</th>
<th>COUNTY</th>
<th>NHS CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>IH 20 EB Connector D</td>
<td>IH 20/US 175 Interchange</td>
<td>Dallas</td>
<td>Interstate</td>
</tr>
<tr>
<td>IH 20 WB Connector C</td>
<td>IH 20/US 175 Interchange</td>
<td>Dallas</td>
<td>Interstate</td>
</tr>
<tr>
<td>Belt Line Rd</td>
<td>Goff Branch</td>
<td>Dallas</td>
<td>Off-System Arterial</td>
</tr>
<tr>
<td>Belt Line Rd</td>
<td>Keller Branch</td>
<td>Dallas</td>
<td>Off-System Arterial</td>
</tr>
<tr>
<td>SH 190 WB Entrance Ramp</td>
<td>Furneaux Creek Tributary</td>
<td>Denton</td>
<td>Off-System Toll Road</td>
</tr>
<tr>
<td>US 67 EB</td>
<td>Ward Branch</td>
<td>Ellis</td>
<td>Non-IH Freeway</td>
</tr>
<tr>
<td>US 80 EB</td>
<td>Buffalo Creek Relief</td>
<td>Kaufman</td>
<td>Non-IH Freeway</td>
</tr>
<tr>
<td>US 80 WB</td>
<td>Buffalo Creek Relief</td>
<td>Kaufman</td>
<td>Non-IH Freeway</td>
</tr>
<tr>
<td>US 80 EB</td>
<td>Bachelor Creek</td>
<td>Kaufman</td>
<td>Non-IH Freeway</td>
</tr>
<tr>
<td>SH 121 WB</td>
<td>IH 35W SB</td>
<td>Tarrant</td>
<td>Non-IH Freeway</td>
</tr>
</tbody>
</table>
Considerations for PM2 Target Decision-Making

Current Regional Transportation Council (RTC) Action – 2018

- **NCTCOG supported TxDOT statewide 2022 “Good Condition” NHS pavement and bridge targets**
- Analysis of TxDOT data for NCTCOG region indicated general compatibility across all NHS roadway categories

- **NCTCOG supported TxDOT statewide 2022 “Poor Condition” NHS pavement and bridge targets**
- Collaboration to plan / program projects contributing toward accomplishment of pavement and bridge goals also included the following actions:
  - NCTCOG will work with local governments to expedite improvements for NHS Off-System Arterials in “Poor Condition”
  - NCTCOG will work with TxDOT and local governments to expedite improvements for NHS Bridges in “Poor Condition”
Considerations for PM2 Target Decision-Making (cont.)

Other Issues/Actions Learned Since 2018

- Influence of NHS off-system facilities:
  - NCTCOG region has 47.8% of the state's total extent of NHS off-system facilities
  - Nationwide, Texas ranks 3rd in off-system NHS mileage, but 15th in percentage of total NHS mileage (California ranks 1st by far in both categories)

- In 2018, all Texas MPOs agreed to support TxDOT’s statewide PM2 targets, and it is unknown if any nationwide set their own targets due to the following:
  - First performance period (2018-22)
  - Changing non-Interstate NHS pavement metric
  - DOT/MPO/Local coordination and data sharing
  - Challenges to directly link planning, performance, and programming both within and across agencies
  - DOT/Local maintenance rarely flow through MPOs
  - Few dedicated revenue sources

![NHS Ownership (2018) – Top 25 States by Off-System Centerline Miles (%)](image-url)
PM2 Target Reaffirmation or Revisions

Schedule

**October 1, 2020**  
TxDOT Submits Mid Performance Period (MPP) Progress Report to FHWA  
(adjustments to 5 out of 6 PM2 targets restarts 180-day MPO review)

**October 23, 2020**  
STTC Information

**November 9, 2020**  
Online Public Input Opportunity (comment period ends December 8, 2020)

**November 12, 2020**  
RTC Information

**December 4, 2020**  
STTC Action

**December 10, 2020**  
RTC Action

**March 30, 2021**  
Deadline for MPOs to Report to State DOTs Whether They Will Either:
  (i.) Agree to plan/program projects contributing to adjusted State targets; or,
  (ii.) Commit to new quantifiable targets for the Metropolitan Planning Area (MPA)
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October 23, 2020  
Surface Transportation Technical Committee (STTC) – Information Item
Background

Are TODs influencing travel behavior, demographics, and location choice preferences?

Three populations
- Residents
- Businesses
- Employees

Report and data online:
www.nctcog.org/TOD (FTA Pilot)
Part of Federal Transit Administration TOD Planning Pilot Grant

Transit-Oriented Development (TOD)

Higher density with a mix of uses designed for convenient walk and bike access from a high-frequency transit station.
Study Area

28 DART Stations on Red and Blue Lines (FTA TOD Planning Pilot Grant)

Cities of Dallas, Richardson, Garland, and Plano

One-mile radius around stations

Data collected August 2019 – February 2020
### Sampling and Response

<table>
<thead>
<tr>
<th></th>
<th>Random Sampling</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residents</strong></td>
<td>Source: 146,196 addresses from USPS database&lt;br&gt;Sample: 15,198 mailed packets (online option) and 51,877 calls</td>
<td>1,540 complete</td>
</tr>
<tr>
<td><strong>Businesses</strong></td>
<td>Source: 16,596 addresses InfoUSA database&lt;br&gt;Sample: 12,853 Mailed packets (online option) and called 10,231 w/ valid phone numbers</td>
<td>1,039 complete</td>
</tr>
<tr>
<td><strong>Employees</strong></td>
<td>Source: Subset of business data&lt;br&gt;Sample: 389 businesses distributed to employees by email or paper</td>
<td>550 completed</td>
</tr>
</tbody>
</table>
Survey Content

Today’s focus:

- Travel and Transit Use
- Location Impacts
- TOD Challenges and Opportunities

Survey Topics

- Travel patterns and behaviors
- Travel preferences and hypothetical improvements
- Location preferences
- Housing characteristics
- Demographics
- Parking perceptions and availability
- Travel Demand Management programs
- Business characteristics
TOD Residents’ Transit Use

TOD residents are more likely than most DFW residents to commute via transit

13% of TOD residents used for their commute in the week prior to the survey. Compared to only 2.8% of all residents in Dallas County

(Census ACS 2018 5-year Estimates – Selected Economic Characteristics)

Non-work trip DART use slightly higher than commuting for some trips

23% use for restaurant, bars, coffee shops, 20% for retail
Lower for a few like social services 9% and child-care 12%
TOD Residents’ Transit Use

Respondents who live closer to DART rail stations are more likely to commute by transit

Percent who commute using a train or bus

7% 17% 23%

0.25 mile 0.5 mile from station 1 mile
Resident Travel Mode Split

Thinking about last week, how did you get to and from work or school each day?

<table>
<thead>
<tr>
<th>Mode</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving alone</td>
<td>81.4%</td>
</tr>
<tr>
<td>Train/light rail</td>
<td>9.4%</td>
</tr>
<tr>
<td>Walking</td>
<td>6.8%</td>
</tr>
<tr>
<td>Car/vanpooling</td>
<td>5.8%</td>
</tr>
<tr>
<td>Bus</td>
<td>4.4%</td>
</tr>
<tr>
<td>Teleworking</td>
<td>3.0%</td>
</tr>
<tr>
<td>Biking</td>
<td>2.6%</td>
</tr>
<tr>
<td>Taxi/Uber/Lyft</td>
<td>2.6%</td>
</tr>
<tr>
<td>Motorbike/scooter</td>
<td>0.6%</td>
</tr>
<tr>
<td>Drove Alone</td>
<td>80.8%</td>
</tr>
<tr>
<td>Carpooled</td>
<td>9.5%</td>
</tr>
<tr>
<td>Public Transit</td>
<td>1.3%</td>
</tr>
<tr>
<td>Walked</td>
<td>1.3%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0.1%</td>
</tr>
<tr>
<td>Taxicab, Motorcycle, other</td>
<td>1.2%</td>
</tr>
<tr>
<td>Worked at home</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

DFW Metro Area (Census ACS 2018 5-yr)
Locations for Active Transportation

Employers within a half-mile of DART stations are more likely to report customer foot traffic as an influence on their location decision.

16% of high-density station areas (57-305 people per acre) residents report commuting by walking or bicycling while only 6% report the same at lower densities.

Likelihood of a walk or bicycle commute by housing type:

- 12% for majority multi-family housing areas
- 9% for mixed housing areas
- 4% for majority single-family housing areas
Factors in Home Choice

What were the factors most important to you when you were looking for a home?

*15 out of 36 factors shown

<table>
<thead>
<tr>
<th>Factor</th>
<th>Essential</th>
<th>Somewhat important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of housing</td>
<td>82%</td>
<td>16%</td>
</tr>
<tr>
<td>Low crime rate within neighborhood</td>
<td>78%</td>
<td>18%</td>
</tr>
<tr>
<td>Sidewalks throughout the neighborhood</td>
<td>57%</td>
<td>36%</td>
</tr>
<tr>
<td>Quiet neighborhood</td>
<td>51%</td>
<td>38%</td>
</tr>
<tr>
<td>Parks and open spaces nearby</td>
<td>48%</td>
<td>41%</td>
</tr>
<tr>
<td>Easy access to the freeway</td>
<td>46%</td>
<td>40%</td>
</tr>
<tr>
<td>Low level of car traffic on neighborhood streets</td>
<td>42%</td>
<td>43%</td>
</tr>
<tr>
<td>Restaurants, etc. w/ i walking distance</td>
<td>39%</td>
<td>43%</td>
</tr>
<tr>
<td>Nearby theaters, libraries, music venues etc.</td>
<td>35%</td>
<td>47%</td>
</tr>
<tr>
<td>Close to workplace</td>
<td>44%</td>
<td>37%</td>
</tr>
<tr>
<td>Food/grocery shopping within walking distance</td>
<td>46%</td>
<td>33%</td>
</tr>
<tr>
<td>Neighborhood character and architecture</td>
<td>37%</td>
<td>41%</td>
</tr>
<tr>
<td>More living space</td>
<td>37%</td>
<td>39%</td>
</tr>
<tr>
<td>Lots of parking</td>
<td>36%</td>
<td>39%</td>
</tr>
<tr>
<td>Easy access to DART service</td>
<td>39%</td>
<td>35%</td>
</tr>
</tbody>
</table>

North Central Texas Council of Governments
Transit Business Location Influence

How much of an influence was each item in choosing this location? (showing 8 of 13)

- The availability of parking for customers and employees: 42% Strong influence, 28% Somewhat of an influence, 28% No influence
- Having easy access by car for customers or employees: 49% Strong influence, 20% Somewhat of an influence, 31% No influence
- Having nearby restaurants, coffee shops, or bars viewed as a benefit by your employees: 24% Strong influence, 29% Somewhat of an influence, 53% No influence
- High visibility of business to cars passing by: 28% Strong influence, 16% Somewhat of an influence, 44% No influence
- Your employees seeing a DART commute option as a benefit: 12% Strong influence, 22% Somewhat of an influence, 34% No influence
- Customer foot traffic from employees at nearby businesses: 13% Strong influence, 13% Somewhat of an influence, 74% No influence
- Having access to a larger workforce through DART: 9% Strong influence, 15% Somewhat of an influence, 24% No influence
- Customer foot traffic from a rail station: 8% Strong influence, 12% Somewhat of an influence, 20% No influence
TOD Challenges

TOD residents still use cars more than transit

- 81% of residents commute by driving alone
- 23% of residents stated their place of employment was within walking distance but only 6% reported a walk commute

Residents cite need for frequent stops, long trips, too many transfers, as barriers to transit use

Business and Employees see transit as less influential

- 70% of businesses said easy parking and access by car was a strong or somewhat strong influence in location versus only 34% saying the same for DART access
Employees Unlikely to Change Commute

If you usually drive to work now, what might lead you to switch your commute to DART?

3% wrote in that their job makes DART use unlikely
TOD Opportunities

Understanding of demographic impacts

- 27% of residents age 18-34 report typically walking or biking to restaurants/bars/coffee shops whereas only 18% of older groups report the same.

Residents prefer walkability and being close to daily activities

- 93% see sidewalks as important to neighborhood, would prefer to walk or bike to many destinations.

Businesses have capacity to be smarter about parking

- 87% said they have enough or more than enough parking.
How to increase walking or biking?

What street improvements in your neighborhood might better encourage or enable you to walk or bike more?

- Better lighting at night: 61%
- More/better sidewalks: 47%
- Reduced speed/volume of traffic: 41%
- More bike lanes/separate bike roads: 40%
- More safe road crossings: 40%
- More shade/street trees: 37%
- None: 8%
- Street quality*: 2%
- Safety/security*: 1%
- Other*: 12%

* Classified from “other” write-in responses
Summary

• Better understanding of challenges and opportunities for TOD in the region
• Insight on general topics of walking, biking, and relationship to land use
• Detailed data set: future analysis in interest areas

Full report online: www.nctcog.org/TOD (FTA Pilot)
Contact

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CHANGING MOBILITY

DATA, INSIGHTS, AND DELIVERING INNOVATIVE PROJECTS DURING COVID RECOVERY

Surface Transportation Technical Committee
October 2020

Michael Morris, PE
Director of Transportation
POLICY METRICS: CHANGING MOBILITY

METRIC 1: Travel behavior response to COVID-19

METRIC 2: Financial implications to traditional revenue sources

METRIC 3: Benefits of travel behavior responses to areas of RTC responsibility

METRIC 4: Prioritization of infrastructure improvements that offset unemployment increases
Metric 1: TRAVEL BEHAVIOR RESPONSE TO COVID-19
TRAVEL BEHAVIOR BY MODE

+  
Bicycle/Pedestrian (+36%, September)

0  
Freeway Volumes (-8%, September)
Toll Road (-26%, July)
Airport Passengers (-53%, August)
Transit Ridership (-57%, August)

-
ROADWAY TRENDS

Average Weekday Freeway Volumes

Source: TxDOT Dallas/TxDOT Fort Worth Radar Traffic Counters
ROADWAY TRENDS
Regional Average Freeway Speeds

Average Weekday Speeds, Weighted by Traffic Volumes

Source: TxDOT Sidefire Devices
TRANSIT IMPACTS

Weekday Ridership

Passenger Decrease: 2019 vs 2020

<table>
<thead>
<tr>
<th>Month</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
<th>Jul</th>
<th>Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-3%</td>
<td>-27%</td>
<td>-59%</td>
<td>-55%</td>
<td>-54%</td>
<td>-55%</td>
<td>-57%</td>
</tr>
</tbody>
</table>

Source: DART, DCTA, and Trinity Metro
BICYCLE AND PEDESTRIAN IMPACTS

Trail Counts

Increase in Full Week Trail Usage: 2019 vs 2020

- February: 19%
- March: 50%
- April: 71%
- May: 78%
- June: 54%
- July: 22%
- August: 40%
- September: 36%

Source: NCTCOG - collected at 8 sites located in Plano, North Richland Hills, Denton, Dallas, Fort Worth, and Allen.
Note: No adjustments for weather were applied.
AIRPORT TRENDS

Change in Airport Passengers - 2019 vs 2020

February: Love Field - 1%, DFW - 8%
March: Love Field - 52%, DFW - 45%
April: Love Field - 95%, DFW - 92%
May: Love Field - 82%, DFW - 79%
June: Love Field - 62%, DFW - 68%
July: Love Field - 66%, DFW - 61%
August: Love Field - 55%, DFW - 52%

Source: Dallas Love Field and DFWIA Websites
Metric 2: FINANCIAL IMPLICATIONS TO TRADITIONAL TRANSPORTATION REVENUE
FUNDING IMPACT

Transit - Sales Tax Allocations

Sales Taxes Allocated For Transit: 2019 vs 2020

Source: DART, DCTA, and Trinity Metro
FUNDING IMPACT

Sales Tax (Component of Proposition 7¹)

Source: Texas Comptroller of Public Accounts
¹ Proposition 7 includes General State Sales Tax and Motor Vehicle Sales Tax
Month reflects reporting date, not collection date
FUNDING IMPACT

Motor Vehicle Sales and Rental Tax (Component of Proposition 7\(^1\))

Source: Texas Comptroller of Public Accounts

\(^1\) Proposition 7 includes General State Sales Tax and Motor Vehicle Sales Tax.

Month reflects reporting date, not collection date.
Proposition 1 (Oil & Gas Severance Tax)
Transfers to the State Highway Fund, Millions

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimate (in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>734</td>
</tr>
<tr>
<td>2019</td>
<td>1,380</td>
</tr>
<tr>
<td>2020</td>
<td>1,660</td>
</tr>
<tr>
<td>2021</td>
<td>1,100</td>
</tr>
<tr>
<td>2022</td>
<td>620</td>
</tr>
</tbody>
</table>

Projected in July 2020 Revised Comptroller Certification Revenue Estimate

Source: Texas Comptroller of Public Accounts
FUNDING IMPACT

NTTA Transactions, Including SH 360

Change in Tollway Transactions:
2019 vs 2020

February  March  April  May  June  July
NTTA  5%  -29%  19%  -38%  -57%  -26%
360 Tollway -15% -41% -22% -27% -6% -7%

Source: NTTA
Note: Change for NTTA includes 360 Tollway
Additional Note: Despite decline in transactions, the revenues are sufficient to meet debt service for SH 360. No current impact to RTC backstop expected.
FUNDING IMPACT

I-35E TEXpress Lane Transactions

Change in Transactions: 2019 vs 2020

February: 15%

March: -31%
April: -74%
May: -60%
June: -41%
July: -38%

Source: TxDOT
Note: TIFIA loan not impacted at this time as interest only payment period does not begin until May 2022.
Metric 3: Benefits of Travel Behavior Responses to Areas of RTC Responsibility
8-HOUR OZONE NAAQS HISTORICAL TRENDS

Exceedance Days Per Year by Category

Source: Texas Commission on Environmental Quality

Exceedance Level indicates daily maximum eight-hour average ozone concentration as of August 18, 2020.

Exceedance Levels are based on Air Quality Index (AQI) thresholds established by the EPA for the revised ozone standard of 70 ppb.
Metric 4:
Prioritization of infrastructure improvements that offset unemployment increases
Transportation impact on the economy

$1 billion in transportation investment = 12,000-15,000 jobs

No conclusive evidence of different types of construction projects generating more/fewer jobs

For a long-term unemployment event, need near-term and long-term transportation investment for maximum benefit

Sources: Federal Highway Administration, McKinsey & Company
CANDIDATE PROJECTS

High Speed Rail: Dallas to Houston
High Speed Rail: Dallas to Fort Worth
Autonomous Transit (Tarrant, Midtown)
Technology (Freeway Induction Loops)
State Highway 183 (Section 2E+)
Y Connector (IH820/IH20)
COVID-19 #00X Program: Round 3
FINAL REPORT ON
DFW CONNECTOR PILOT PROGRAM

Surface Transportation Technical Committee
October 23, 2020

Ken Kirkpatrick, Counsel for Transportation
Mindy Mize, Program Manager, Transportation Outreach & Education
Amanda Wilson, AICP, Program Manager, Public Involvement
BACKGROUND ON THE COLLECTION RISK

TxDOT Concession CDAs (NTE, LBJ)
   Developer Entitled to Toll Transactions, Less Fees*

TxDOT/NTTA Tolling Services Agreement
   NTTA Provides Toll Collection Services
   NTTA Remits Tolls Collected, Less Fees* to TxDOT
   Uncollected Tolls = Collection Risk

Developer is Entitled to Uncollected Tolls

Pay by Mail/ZipCash: Higher Collection Costs/Lower Collection Rates
TollTag: Lower Collection Costs/Higher Collection Rates

* Transaction Fees
<table>
<thead>
<tr>
<th>FACILITY</th>
<th>COLLECTION RISK</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTE (IH 35W)</td>
<td>TxDOT</td>
</tr>
<tr>
<td>NTE (IH 820, SH 183)</td>
<td>NTTA</td>
</tr>
<tr>
<td>LBJ (IH 35E to US 75)</td>
<td>NTTA</td>
</tr>
<tr>
<td>Other Managed Lane Facilities</td>
<td>Public Sector</td>
</tr>
</tbody>
</table>
DFW CONNECTOR PILOT PROGRAM

TxDOT Requested RTC to Pay for Uncollected Tolls for IH 35W

RTC Approved Pilot Program in DFW Connector Corridor

Phase 1: Increase Surcharge to 90% to Increase TollTag Usage

Phase 2: Market Driven Approaches to Increase TollTag Usage
OBSERVATIONS FROM PHASE 1: INCREASE SURCHARGE

Overall Traffic is Increasing
(TollTag and Pay By Mail Transactions)

Pay By Mail Surcharge is at 90%

Transaction Split Has Leveled out at ~70%/30%
(TollTag - 70%; Pay By Mail - 30%)

NTE: ~65%/35%
LBJ: ~65%/35%
NTTA System: ~80%/20%

Need To Implement Market-Driven Approach To Increase TollTag Penetration Rate
PHASE 2 DETAILS

$300,000 to Implement DFW Connector TollTag Marketing Efforts

Source of Funds: Regional Toll Revenues (Regional Pool)

Entered into an Agreement with North Texas Tollway Authority to Implement the Marketing Efforts
APPROVED MARKETING EFFORTS FOR
DFW CONNECTOR PILOT PROGRAM

TollPerks for New TollTag Customers

Prize Giveaways

Preloaded TollTags to Targeted Areas

TollTag Sales at Inspection Stations in Targeted Areas

TollTag Sales at Car Dealerships in Targeted Areas
TOLLPERKS FOR NEW TOLLTAG CUSTOMERS

Concept

TollPerks Points can be Redeemed for Exclusive Rewards from Dallas-Fort Worth area Merchants

Additional TollPerks are Given to New TollTag Customers

TollTag Must be Tied to a Credit Card/Bank Account

Market in Concert with Prize Giveaway

Estimated Cost

See Prize Giveaway Information
PRIZE GIVEAWAYS

Concept

One or More Grand Prizes for a Vacation Destination or North Texas Area Sporting Team Given Away

New TollTag Customers are Entered into Drawing

TollTag Must be Tied to a Credit Card/Bank Account

Use Advertising Such as Billboards Along DFW Connector and Online/Digital Ads

Estimated Cost

Prize Pool: $5,000
Marketing: $40,000
TOLLPERKS & PRIZE GIVEAWAYS RESULTS

Implementation

Advertising of Promotion Along Corridor, Full Budget Utilized

New TollTag Customers Used Promo Code in TollPerks Program

8 New TollTag Accounts Tied to a Credit Card/Bank Account Redeemed Code (All From Prize Giveaway)
  – Overall Increase of 9,485 TollTag Accounts During Promotion
  – 1 Redemption From High ZipCash Transaction Zip Code

Recommendation

These Promotions Were Not Successful, Do Not Recommend in Future

Ongoing, Frequent Education Needed On Benefits Of TollTags to ZipCash Customers
PRELOADED TOLLTAGS TO TARGETED AREAS

Concept

Preloaded TollTags are Offered to High Use ZipCash Customers in Average to Low Income Zip Codes Using the DFW Connector

$20 Credit is Offered, but TollTag Must be Tied to a Credit Card/Bank Account

Use Direct Mail Piece to Advertise to Target Group of ZipCash Users on DFW Connector

Target 10,000 Users

Estimated Costs

- Incentives up to $200,000
- Staff/Marketing up to $30,000
PRELOADED TOLLTAGS RESULTS

Implementation

NTTA Tested Direct Mail and ZipCash Bill Inserts To Targeted Zip Codes (Total of 18,000 Sent) in English and Spanish

27 New TollTag Accounts Using Promo Code (Received $20 Incentive)

Additional 475 TollTag Accounts Created by Promo Recipients, Without Redeeming Code

Full Budget Not Utilized; Funds To Be Returned to RTR Regional Pool

ZipCash Insert Had More New Accounts Than Direct Mail, Regardless if Promo Code Was Redeemed
Implementation, Continued

Retention Rate (Account Still Active At One Year Mark):
Redeemed Promo Code: 26%
Did Not Redeem: 98%

Recommendation
This Promotion Was Not Successful, Do Not Recommend In Future

Regular Messaging on Benefits of TollTags May Be More Successful
TOLLTAG SALES AT INSPECTION STATIONS IN TARGETED AREAS

Concept

TollTag Package are Offered to Customers Going Through Annual Inspection Process

TollTag Must be Tied to a Credit Card/Bank Account

Target Inspection Stations Where Highest Concentration of Users of the DFW Connector Live

Participating Inspection Stations Will Receive $5 per TollTag Sold Through NTTA

Joint RTC/NTTA Staff Communication/Coordination Effort

Estimated Cost

$10,000
TOLLTAG SALES AT CAR DEALERSHIPS IN TARGETED AREAS

Concept

TollTag Package is Offered to Purchasers of Vehicles as a Part of Dealer Benefits Package (e.g. Free Oil Changes)

TollTag Must be Tied to a Credit Card/Bank Account

Target Dealerships Around Highest Concentration of DFW Connector Users

Dealership Will Receive Incentive for Participating ($5 per tag Through NTTA)

Joint RTC/NTTA Staff Communication/Coordination Effort

Estimated Cost

$10,000
INSPECTION STATIONS/CAR DEALERSHIP RESULTS

Implementation
Since RTC Action, NTTA Started Regional Toll Partners Program

Several Large Car Dealers Now Sell TollTags

Inspection Stations That Had Been AirCheckTexas Partners Provided to NTTA

RTC Funding Was Not Used Due to New NTTA Program; Will Be Returned to RTR Regional Pool

Recommendation
Effort to Continue Through NTTA Regional Toll Partners Program
IMPLICATIONS FOR IH 35W

TollTag Penetration on DFW Connector Has Increased Over Time
- Project Initiation ~70%
- Peak Rate ~90%
- Current Rate ~85%

Increased Rate NotAttributed to Pay-By-Mail Surcharge or Marketing Efforts; Not Recommended for Other Corridors

Increased and Regular Outreach and Education on Benefits of TollTags in High Pay-By-Mail Zip Codes is Recommended
CONTACT INFORMATION

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FISCAL YEAR 2021 PROJECT TRACKING

Surface Transportation Technical Committee
October 23, 2020
Over the years, many projects in the region have experienced significant implementation delays.

These delays have led to implementation of the MPO Milestone Policy to identify projects that have not advanced to construction after 10 or more years.

In addition, the region is carrying a large “carryover balance” of Congestion Mitigation and Air Quality Improvement Program (CMAQ), Surface Transportation Block Grant (STBG), and Transportation Alternatives (TA) Set Aside funds.

These funds are receiving scrutiny from the State and federal governments and must obligate soon.

Staff currently follows up with implementing agencies on project schedules periodically and at least every other year when developing a new Transportation Improvement Program (TIP).
NEW PROJECT TRACKING EFFORT

- Going forward, staff proposes to conduct a more robust project tracking effort in order to highlight and prevent these delays.

- At the beginning of each fiscal year, staff will provide the Committee and the Regional Transportation Council (RTC) with a list of projects by phase scheduled to advance during the coming year.

- Agencies will be asked to report project status on a more frequent basis.

- The status of projects scheduled for the year will be presented at STTC and RTC on a quarterly or bi-annual basis.

- This will provide opportunities for sponsors to raise issues that may be hindering a project’s progress and help ensure that funds are being obligated in a more timely manner.
## SUMMARY OF TIP FY 2021

### PROJECT FUNDING - CMAQ

<table>
<thead>
<tr>
<th></th>
<th>OCTOBER 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Funding Allocated in FY 2021</td>
<td>$73,963,059</td>
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<tr>
<td>Estimated Federal Carryover Funds (FY 2020 to FY 2021)</td>
<td>+$58,400,000</td>
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<tr>
<td>Total Available Federal Funding in FY 2021</td>
<td>$132,363,059</td>
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<tr>
<td>Total Federal Funding Programmed</td>
<td>$121,295,638</td>
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<tr>
<td>Federal Funding Obligated</td>
<td>$11,303,022</td>
</tr>
<tr>
<td>FY 2021 Project Phases</td>
<td>61</td>
</tr>
<tr>
<td>Project Phases Obligated to Date</td>
<td>14</td>
</tr>
<tr>
<td>Project Phases Past Their Original Estimated Start Date</td>
<td>16</td>
</tr>
</tbody>
</table>

**Notes:**
- Obligations based on the federal fiscal year, which runs from October to September.
- FY 2021 of the TIP includes projects that obligated in FY 2020, but were listed in FY 2021 in case of delay.
## SUMMARY OF TIP FY 2021 PROJECT FUNDING - STBG

### OCTOBER 2020

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Funding Allocated in FY 2021</td>
<td>$116,230,858</td>
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<td>Estimated Federal Carryover Funds (FY 2020 to FY 2021)</td>
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<tr>
<td>Total Available Federal Funding in FY 2021</td>
<td>$284,230,858</td>
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<td>Total Federal Funding Programmed</td>
<td>$154,318,314</td>
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<td>Federal Funding Obligated</td>
<td>$23,440,882</td>
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<td>FY 2021 Project Phases</td>
<td>52</td>
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<tr>
<td>Project Phases Obligated</td>
<td>9</td>
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<tr>
<td>Project Phases Past Their Original Estimated Start Date</td>
<td>10</td>
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</tbody>
</table>

### Notes:
- Obligations based on the federal fiscal year, which runs from October to September.
- FY 2021 of the TIP includes projects that obligated in FY 2020, but were listed in FY 2021 in case of delay.
# SUMMARY OF TIP FY 2021

## PROJECT FUNDING - TA SET ASIDE

<table>
<thead>
<tr>
<th></th>
<th>October 2020</th>
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<tbody>
<tr>
<td>Federal Funding Allocated in FY 2021</td>
<td>$7,948,734</td>
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<tr>
<td>Total Available Federal Funding in FY 2021</td>
<td>$22,862,677</td>
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<tr>
<td>Total Federal Funding Programmed</td>
<td>$21,269,291</td>
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<tr>
<td>Federal Funding Obligated</td>
<td>$5,900,134</td>
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<tr>
<td>FY 2021 Project Phases</td>
<td>29</td>
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<tr>
<td>Project Phases Obligated</td>
<td>7</td>
</tr>
<tr>
<td>Project Phases Past Their Original Estimated Start Date</td>
<td>12</td>
</tr>
</tbody>
</table>

Notes:
- Obligations based on the federal fiscal year, which runs from October to September.
- FY 2021 of the TIP includes projects that obligated in FY 2020, but were listed in FY 2021 in case of delay.
ADDITIONAL STEPS TO ADDRESS THE ISSUE

- Continue implementing the MPO Milestone Policy Rounds 1 and 2 to address projects that have experienced 10+ year delays.

- Work with project sponsors and TxDOT to resolve issues that may be causing delays in project implementation.

- Conduct a workshop to provide training on project implementation and drafting realistic project schedules.

- Look at other ways to address project implementation delays, such as in future project selection initiatives
  - Do STTC members have ideas?
QUESTIONS?

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Automated Vehicles 2.0

Briefing on AV2.2, AV2.3 Funding Availability

Thomas Bamonte, Senior Program Manager
Automated Vehicles Program

Surface Transportation Technical Committee
October 23, 2020
Automated Vehicles Program 2.0 Background

October 2018: Regional Transportation Council approves “AV 2.0”
  • AV2.1: Regional planning exercise for future mobility technology ($1.5m)
  • AV2.2: AV deployment support for local partners ($10m)
  • AV2.3: Strategic investments in AV services ($20m)

Summer 2020: AV2.1 procurement

Fall 2020: Kick-off AV2.2 – AV2.3 project proposal process
AV 2.0 Policies

1. North Texas will build on its history of transportation innovation to be a leader in the deployment of automated vehicles (AVs) to help achieve the region’s mobility goals.

2. All North Texas communities should have the resources necessary to plan for AV deployments and to build effective partnerships with AV developers when they deploy AVs in a community.

3. The region will make strategic investments in AV services to explore use cases and AV deployments in communities overlooked by AV developers.

4. The AV 2.0 Program will be administered to advance these policies.
AV 2.0 Timeline

Plan (AV 2.1):
- Consultant selection
- Planning process
- Deployment guide
- Final report

Implement (AV2.2/2.3):
- Project proposals and evaluation
- Mix of AV2.2/2.3 funding
- Implementation
- Evaluation

2020-2021
- Start
- Through

2021-2022
- Start
- Through

2022-2026
AV 2.2/2.3 Project Proposals

1. Minimum request: $500K
2. Specify AV2.2 or AV2.3 funding or both
3. Proposing agency = grant recipient
4. Use cases and benefits/costs detailed
5. Private sector and agency contributions listed
6. Project evaluation process included
7. Commitment to share lessons learned with the region
Evaluation Criteria

1. Substantial AV deployment

2. Advance regional goals
   • Improved access to jobs and other destinations
   • Environmental protection/resiliency
   • Economic development
   • Equity
   • Technology innovation leadership

3. Contributions from private/public sectors

4. Community involvement/support for deployment
Process

1. Staff evaluates proposals
2. Projects meeting criteria included in TIP updates
3. STTC monitoring
   • Information item – award >$1M
   • Director’s report – award <$1M
4. Awardees report project lessons learned to STTC
RTA AV 2.0 PROGRAM – NATIONAL FIRST

PLANNING, LOCAL SUPPORT & AV USE CASES
Vehicle Technologies

AUTOMATION, ELECTRIFICATION & DIVERSIFICATION

Source: Bell
"Implementing connected vehicle technology to enable safe and efficient goods movement through key freight corridors in the Texas Triangle."
Crowdsourced Waze data for accident detection
Building The Crowdsourced Vehicle Data Infrastructure

- **OEM/AV** supplies data on roadway conditions to **DOT**
- **DOT** supplies data on roadway conditions to **OEM**
- **DOT** improves roadway operations with **OEM** data
- **OEM** improves vehicle operations with **DOT** data
- Improved roads/vehicles help economy, travel experience
- Better travel = more public support for transportation investment

Improved roads/vehicles help economy, travel experience

Better travel = more public support for transportation investment
Questions | Contact Information

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Clint Hail, NCTCOG
Transportation Planner, Automated Vehicles
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Unmanned Aircraft Systems Draft Resolution

Surface Transportation Technical Advisory Committee

October 23, 2020

Ernest Huffman
Aviation Program Manager
Drones in a metro area
Public Acceptance is Far from Guaranteed

• Decision makers and the public need credible, transparent and unbiased information so they can be empowered to make good decisions.

• Politicians care about what constituents complain about.

• If communities do not invest in public education (UAS technology), it will be hard to recover from negative perceptions.
Metropolitan Area must Consider before Integration

- Policy
- Safety Impacts
- Equity and Public Engagement
- Land Use Regulation
- Vehicle Impacts
- Economic Impact
- Urban Transportation System Integration
- Privacy and Security
Barriers to Integration

**Policy**
- Local Levers

**Safety Impacts**
- Vehicle Safety
- Operational Airspace
- Vertiports
- Weather

**Equity and Public Engagement**
- Educate a Diverse Cross Section of Community
- Calm Fears
- Reduce Noise
Barriers to Integration

**Land-Use Regulation**
- Local Regulations
- Zoning
- Land Use
- Public Benefits

**Vehicle Impacts**
- Mitigate Adverse Impacts
- Visual and Noise
- Benefits versus Cost

**Economic Impact**
- Contribute to Economy
- Balance Socio-Economic Impacts
- Equity
Barriers to Integration

Urban Transportation System Integration

Complement Existing Transportation System
Efficient Integration

Privacy and Security

Privacy
Cyber Security
Proposed Deal Points

• Utilize transportation planning process (continuous, comprehensive, and cooperative)

• Support safe and responsible UAS activity

• Encourage agencies to support their public safety services use of UAS systems

• Adopt “pilot” programs to demonstrate the technologies properly operated in and around a metropolitan area

• Provide UAS-oriented educational offerings to prepare workforce development of UAS aircraft pilot certification standards

• Participate in the “North Texas UAS Safety and Integration Task Force Community Integration Working Group”
Community Best Practices Forum

- Characterize community concerns
- Inventory available applications
- Inventory funding mechanisms
- Inventory available training
- Supplement existing transportation methods
- Prepare for natural disasters and other emergencies
Schedule

1. October STTC – Asking for feedback
2. November UAS Task Force – Asking for feedback
3. November RTC – Asking for feedback
4. January STTC – Update
5. January UAS Task Force – Update
6. February RTC – Update
Contact Information

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