PLEASE MUTE YOUR MICROPHONE

unless you are speaking

Use the chat box to type your questions or raise your hand if you would like to speak.
Agenda

• Welcome/Introductions __________________________ Michael Morris, NCTCOG
• Study Purpose/Background ________________________ Kevin Feldt, NCTCOG
• Technology Review _______________________________ Kevin Feldt, NCTCOG
• Study Overview ____________________________________ Ian Bryant, HNTB
• Questions/Comments _______________________________ Michael Morris, NCTCOG
Study Purpose

• Evaluate high-speed transportation alternatives (both alignments & technology) to modernize & enhance mobility between Dallas & Fort Worth
• Identify a viable alternative that enhances the regional transportation system & connects Dallas-Fort Worth to other proposed high-performance passenger systems in the state
• Obtain federal environmental approval of the viable alternative
High-Speed System Vision
Project Background
DFW High-Speed Rail Projects

Source: North Central Texas Council of Governments

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.
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# Previous Alignment/Technology Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Agency</th>
<th>Technology Studied</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Texas-Oklahoma Passenger Rail Study (TOPRS) Service-Level Evaluation (2012 to 2017)</strong></td>
<td>FRA &amp; TxDOT</td>
<td>✓ ✓ ✓</td>
</tr>
<tr>
<td><strong>Trinity Railway Express Higher-Speed Rail Support (2014)</strong></td>
<td>DART</td>
<td>✓ ✓</td>
</tr>
<tr>
<td><strong>Dallas-Fort Worth Core Express Study (2015 to 2017)</strong></td>
<td>FRA &amp; TxDOT</td>
<td>✓ ✓ ✓</td>
</tr>
<tr>
<td><strong>Supplemental Alternative Alignment Analysis for Dallas-Fort Worth High-Speed Rail Core Express Service (2015 to 2017)</strong></td>
<td>NCTCOG</td>
<td>✓ ✓ ✓</td>
</tr>
<tr>
<td><strong>Dallas to Houston High-Speed Rail (2014 to 2020)</strong></td>
<td>FRA &amp; TCR</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Fort Worth/Waco/Temple-Killeen/Austin/San Antonio/Laredo High-Speed Transportation Study (2019 to 2020)</strong></td>
<td>NCTCOG</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
</tbody>
</table>
Previous Alignments Studied

Texas-Oklahoma Passenger Rail Study

Source: Excerpt from Figure 2-3, TOPRS Draft Environmental Impact Statement, July 2016

Dallas-Fort Worth Core Express Service

Source: Figure 3-2, Dallas-Fort Worth Core Express Service Alternatives Analysis Final Report, June 2017
Previous Alignments Studied

Supplemental Alternative Alignment Analysis for Dallas-Fort Worth High-Speed Rail Core Express Service

Source: Supplemental Alternative Alignment Analysis for Dallas-Fort Worth High-Speed Rail Core Express Service, October 2017
Technology Review
Types of Passenger Rail Technology

- Conventional
- Higher-Speed
- High-Speed
- Maglev
- Hyperloop
- Other?
Maximum Speeds

- Conventional (up to 80 mph)
- Higher-speed (up to 125 mph)
- High-speed (up to 250 mph)
- Magnetic levitation (maglev) (up to 300+ mph)
- Next generation maglev (i.e., hyperloop) (up to 650+ mph)
Similarities

• Operates on fixed guideway or rails
• High-speeds require a dedicated guideway with no at-grade crossings with other railways or roadways
• Required right-of-way width for guideway
• Need for stations & maintenance facilities
Differences

• Propulsion system (locomotive, overhead catenary, maglev)
• Freight component
• Number of stations
• Operating schedule - fixed vs on-demand
Hyperloop (up to 650+ mph)

New mode of transportation consisting of moving passenger & cargo through a near-vacuum tube
## Summary

<table>
<thead>
<tr>
<th>Technology</th>
<th>Top Speed</th>
<th>Exclusive Guideway</th>
<th>Peak Headways</th>
<th>Operating Style</th>
<th>Cargo</th>
<th>Technology Readiness</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional</td>
<td>80 mph</td>
<td>No</td>
<td>20 to 30 minutes</td>
<td>Fixed schedule</td>
<td>No</td>
<td>Operational</td>
<td>TRE, TEXRail, A-Train</td>
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<tr>
<td>Higher-Speed</td>
<td>125 mph</td>
<td>No</td>
<td>20 to 30 minutes</td>
<td>Fixed schedule</td>
<td>No</td>
<td>Operational</td>
<td>Amtrak Acela Express</td>
</tr>
<tr>
<td>High-Speed</td>
<td>250 mph</td>
<td>Yes</td>
<td>3 to 30 minutes</td>
<td>Fixed schedule</td>
<td>No</td>
<td>Operational</td>
<td>Asia &amp; Europe Under construction in California</td>
</tr>
<tr>
<td>Maglev</td>
<td>300+ mph</td>
<td>Yes</td>
<td>15 to 20 minutes</td>
<td>Fixed schedule</td>
<td>No</td>
<td>Operational</td>
<td>China, Germany, Japan, South Korea Under environmental study from Baltimore to Washington</td>
</tr>
<tr>
<td>Hyperloop</td>
<td>650+ mph</td>
<td>Yes</td>
<td>~2 minutes</td>
<td>On-demand (smart elevator)</td>
<td>Yes</td>
<td>Prototypes undergoing testing</td>
<td>Test track operational in Nevada Test tracks under development in France &amp; Saudi Arabia</td>
</tr>
</tbody>
</table>
Study Overview
Study Area
Phased Approach

Phase 1 – Alternative Development

• Public & Agency Engagement
• Alternative Development
• Alternative Screening

Includes a technology forum
Includes alignments & technology

Phase 2 – Engineering & Environmental

• Conceptual Engineering
• National Environmental Policy Act Documentation & Approval
• Preliminary Engineering
• Financial & Project Management Plans
Phase 1 – Alternative Analysis (12 months)
Develop & evaluate both potential technology & alignments/corridors

Goals:
• Identify technology by end of Phase 1
• Identify no more than two alignments to be carried into Phase 2
Study Phases

Phase 2 – Preliminary Engineering and Environmental (24 months)
• 15% design of alternative(s) recommended in Phase 1
• Documentation following the National Environmental Policy Act (NEPA) process
• 30% design of the preferred alternative

Goal:
• Federal environmental approval
Schedule – Phase 1

May 2020
- Review technology & design criteria
- Review of previous studies
- Define purpose & needs
- Develop alternatives (route & technology)

June 2020
- Level 1 & Level 2 screening

July 2020
- Public Meetings (Series 1)

August 2020
- Public Meetings (Series 2)

September 2020
- Public Meetings (Series 3)

October 2020
- Technology & alignment recommendation
- Final Phase 1 report

November 2020
- Develop conceptual options (5% design)

December 2020
- Level 3 screening
Public & Agency Engagement Elements

• Public meetings*
  o September 2020
  o Fall 2020
  o Spring 2021
  o Summer 2021
• Public Hearings – Summer 2022
• Project website
• Inclusion of project in NCTCOG publications

• Social media
• Videos
• Presentations & briefings
• Stakeholder interviews
• Local coordination meetings
• Technical work group
• Resource agency meetings

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

http://nctcog.org/dfw-hstcs
Questions/Comments
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