



Ports-to-Plains Corridor Feasibility Study (HB 1079)

Segment #2, Committee Meeting #1

Big Spring, TX



Welcome

Roger Beall, Deputy Director, Transportation Planning and Programming Division, TxDOT

Caroline Mays, Director, Freight, Trade, and Connectivity, TxDOT

Honorable Dan Pope, Mayor, City of Lubbock, Ports-to-Plains Advisory Committee Chair

John Medina, Assistant City Manager, City of Big Spring



1 Opening Remarks

2 Overview of HB 1079 Ports-to-Plains Corridor Feasibility Study

3 Feasibility Study Purpose, Goals, Scope and Schedule

4 Break

5 Existing Segment #2 Conditions and Needs

6 Interstate Facility Design Features

7 Nominations and Election of Chair and Vice-Chair for the Segment #2 Committee

Agenda Review



8 Segment Committee Report and Chapters 1-3 Outline

9 Segment Committee Meeting #2 and Public Meetings

10 Open Discussion

11 Adjourn



Overview of HB 1079 Ports-to-Plains Corridor Feasibility Study

86th Legislature, 2019

Blake Calvert, Legislative Liaison, TxDOT

Ports-to-Plains Feasibility Study



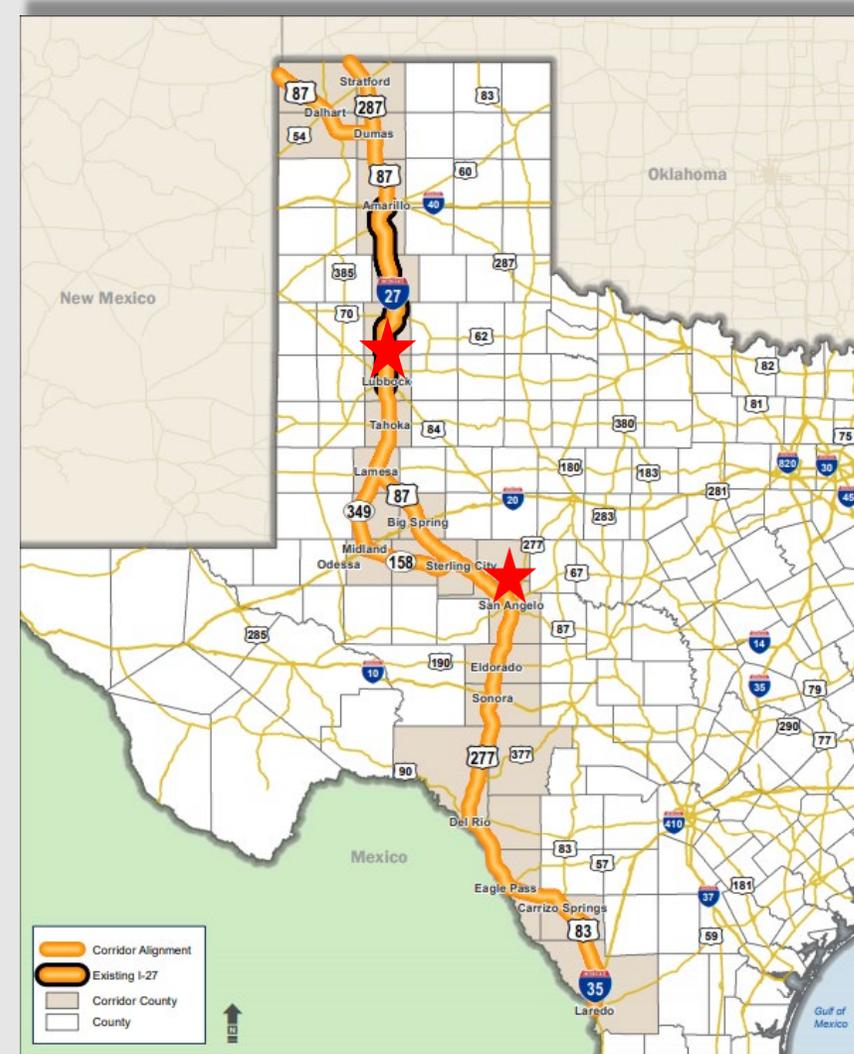
House Bill (HB) 1079 requires TxDOT to conduct a comprehensive feasibility study of the Ports-to-Plains (P2P) Corridor, as defined by Tex. Transp. Code 225.069.

- The study must evaluate the feasibility of, and costs and logistical matters associated with, improvements to the corridor that create a continuous-flow, four-lane divided highway that meets interstate standards to the extent possible.





- HB 1079 requires TxDOT to establish a P2P Advisory Committee (committee):
 - The committee is required to meet at least twice annually on a rotational basis in Lubbock and San Angelo.
 - Membership of the committee is limited to elected officials or their appointees specifically named in HB 1079.
 - The committee will review and compile reports from segment committees to form full advisory committee report.
 - TxDOT is required to incorporate reports submitted by the committee into the feasibility study.





- Each segment committee is responsible for submitting a report to the full advisory committee. Each report must include:
 - An examination of the ability of the energy industry to transport products to market;
 - An evaluation of the economic development impact of the corridor, including if the improvement or expansion of the corridor would create employment opportunities;
 - A determination whether improvements or expansion of the corridor would relieve traffic congestion in that respective segment;
 - An examination of freight movement along the corridor;
 - A determination and prioritization of improvements and expansion of the corridor that are warranted to promote safety and mobility;
 - A determination of the areas that are preferable and suitable for interstate designation;
 - An examination of project costs related to the improvement or expansion of the corridor; and
 - An assessment of federal, state, local, and private funding sources for a project improving or expanding the corridor.

Quarterly Public Meetings

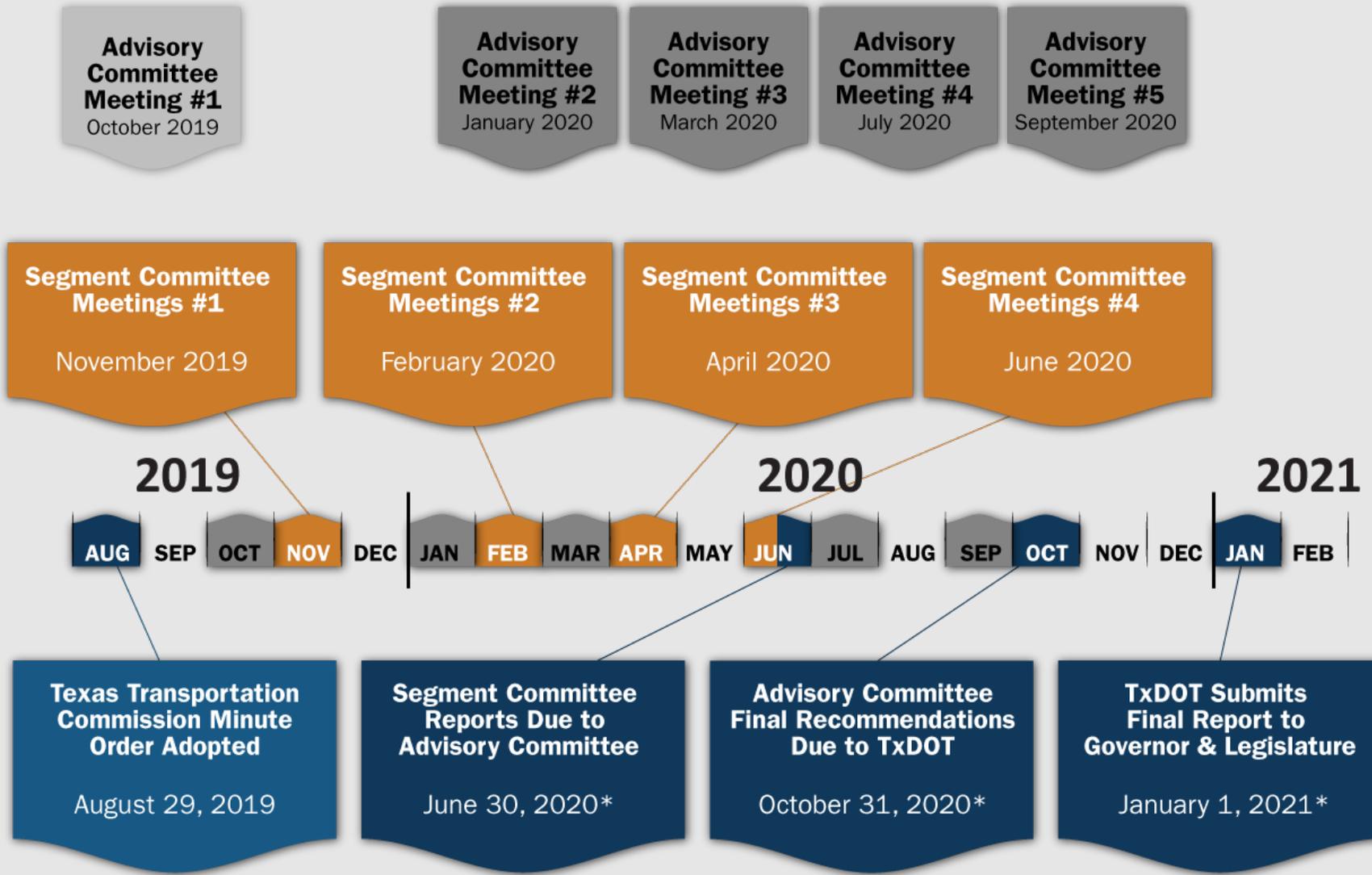
- TxDOT is required to hold quarterly public meetings on a rotational basis in Amarillo, Laredo, Lubbock, and San Angelo.
- These meetings will gather public feedback on potential improvements or expansions to the P2P Corridor.
- Occurs in conjunction with the study.

Preliminary Recommendation Feedback

- The advisory and segment committees are required to conduct extensive public involvement campaigns.
- The campaigns will solicit feedback on the preliminary recommendations made by the committee prior to report submission.
- Occurs once draft study has been assembled.



P2P Advisory and Segment Committee Important Dates

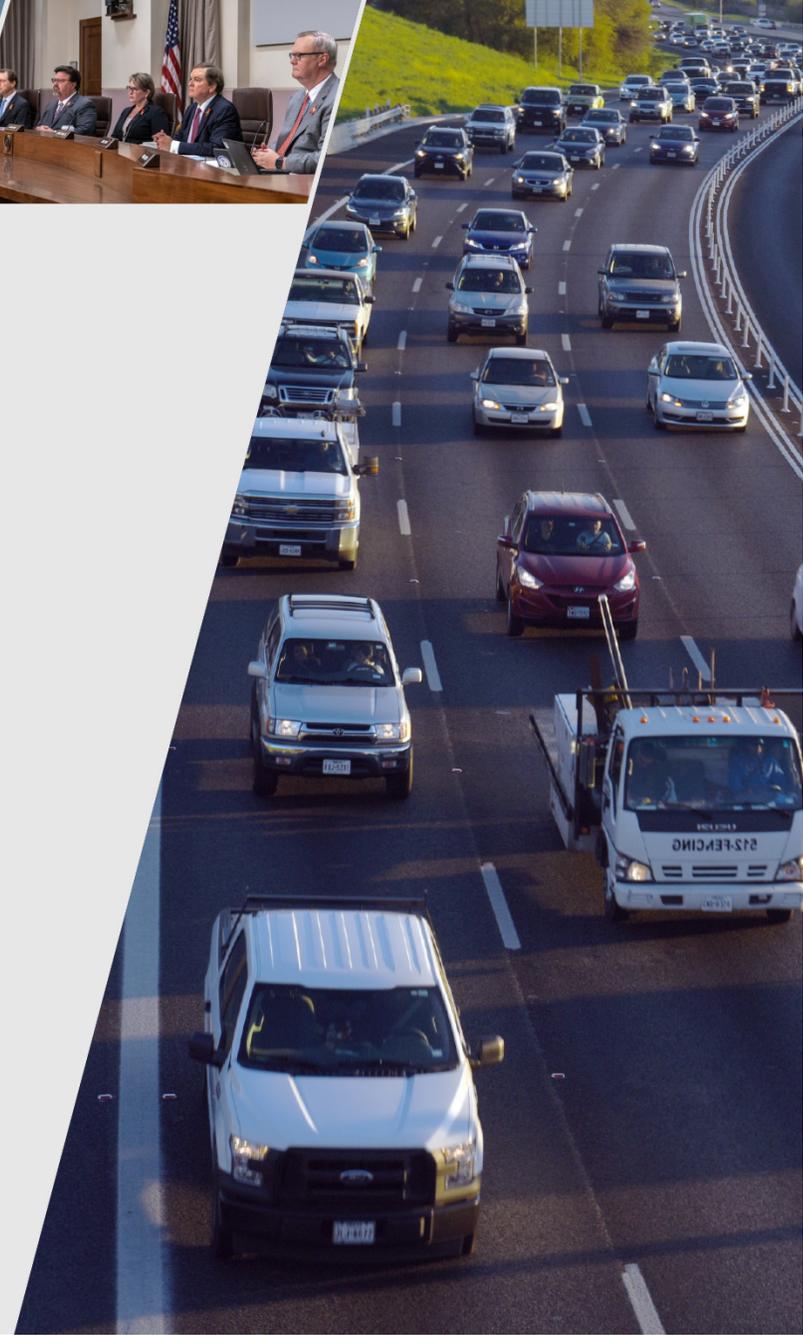


*Prescribed by HB 1079



Feasibility Study Purpose, Goals, Scope and Schedule

Caroline Mays, TxDOT
Consultant Team





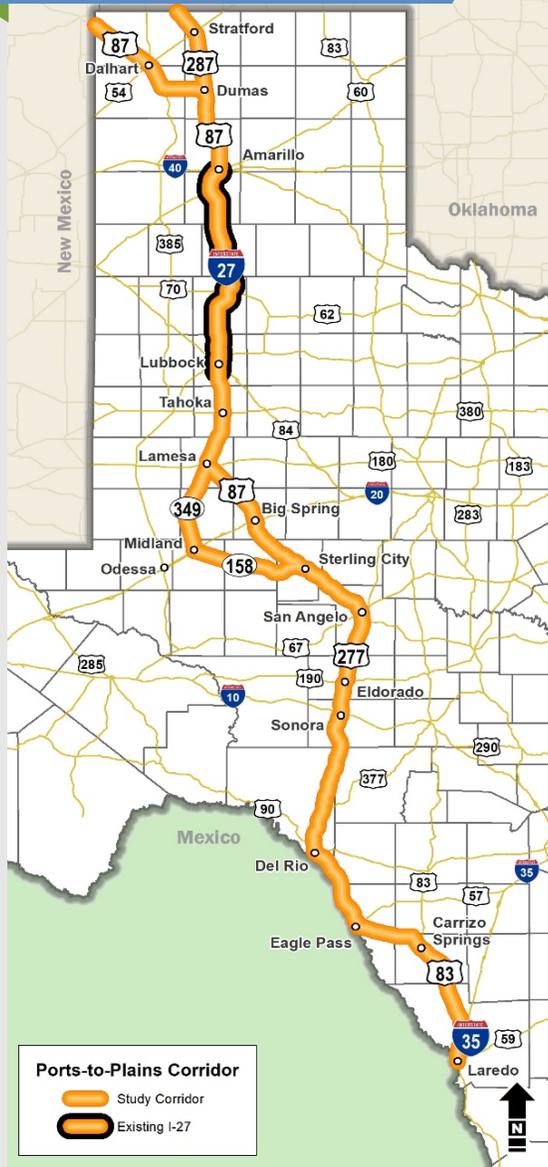
The Texas Department of Transportation shall conduct a **comprehensive study** of the Ports-to-Plains Corridor. The study must evaluate the **feasibility of**, and the costs and logistical matters associated with, **improvements** that create a **continuous flow, four-lane divided highway** that meets **interstate highway standards** to the extent possible, including **improvements that extend Interstate 27**.

Section 1(b) of House Bill 1079

Ports-to-Plains Corridor and Segments



Ports-to-Plains Corridor



Segment 1

New Mexico and Oklahoma borders to Hale/Lubbock County line

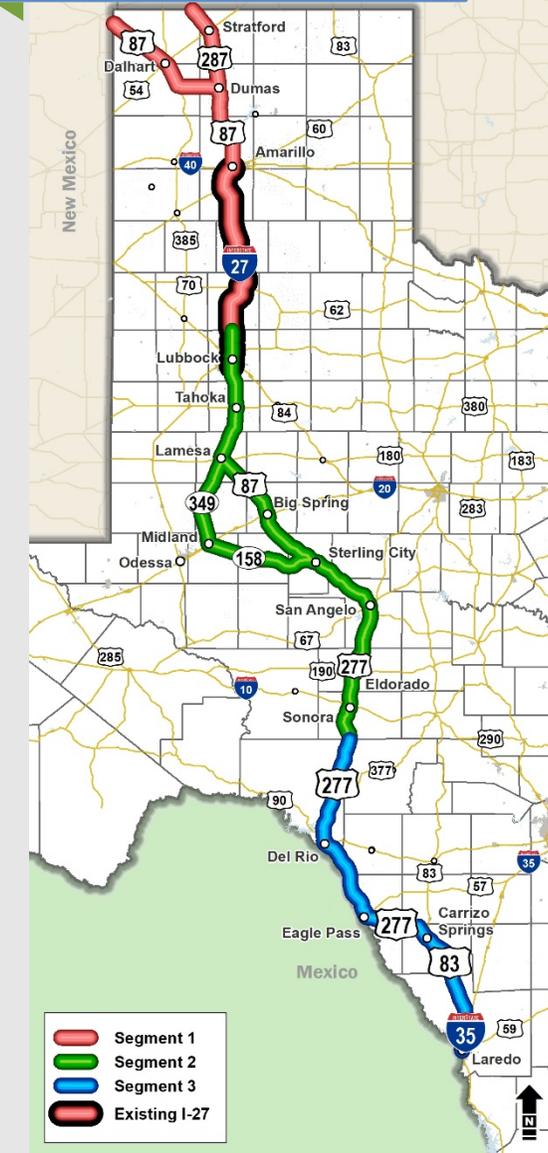
Segment 2

Hale/Lubbock County line to Sutton/Edwards County line

Segment 3

Sutton/Edwards County line to I-35/Juarez-Lincoln Bridge in Laredo

Corridor Segments





Verbatim HB 1079, Section 1, Subsection (h)



An examination of the ability of the energy industry to **transport products** to market



An evaluation of the economic development impacts of the Ports-to-Plains Corridor, including whether the improvement or expansion of the Ports-to-Plains Corridor would create **employment opportunities** in this state



A determination of whether improvements or expansion of the Ports-to-Plains Corridor would **relieve traffic congestion** in the segment

Ports-to-Plains Corridor Feasibility Study Goals



An examination of **freight movement** along the Ports-to-Plains Corridor



A determination and prioritization of improvements and expansion of the Ports-to-Plains Corridor that are warranted in order to promote safety and mobility, while **maximizing the use of existing highways** to the greatest extent possible and **striving to protect private property** as much as possible



A determination of the areas that are preferable and suitable for **interstate designation**



An examination of **project costs** related to the improvement or expansion of the Ports-to-Plains Corridor

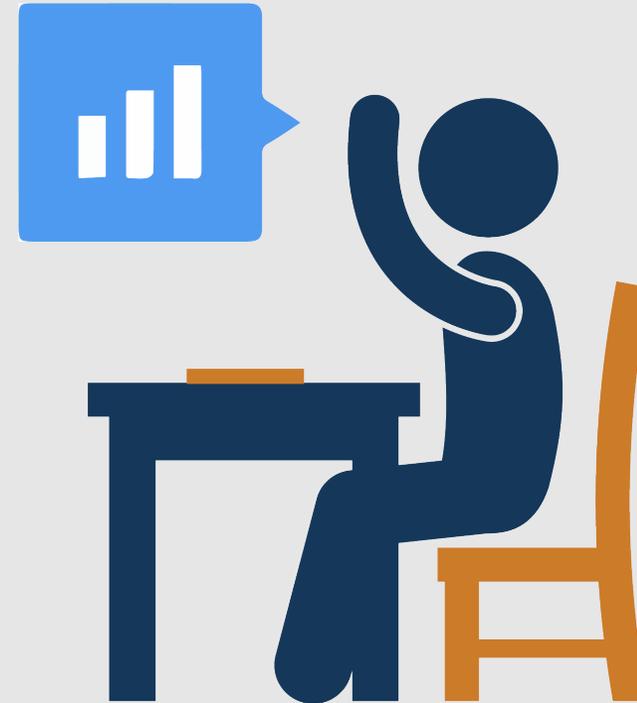


An assessment of federal, state, local, and private **funding sources** for a project improving or expanding the Ports-to-Plains Corridor

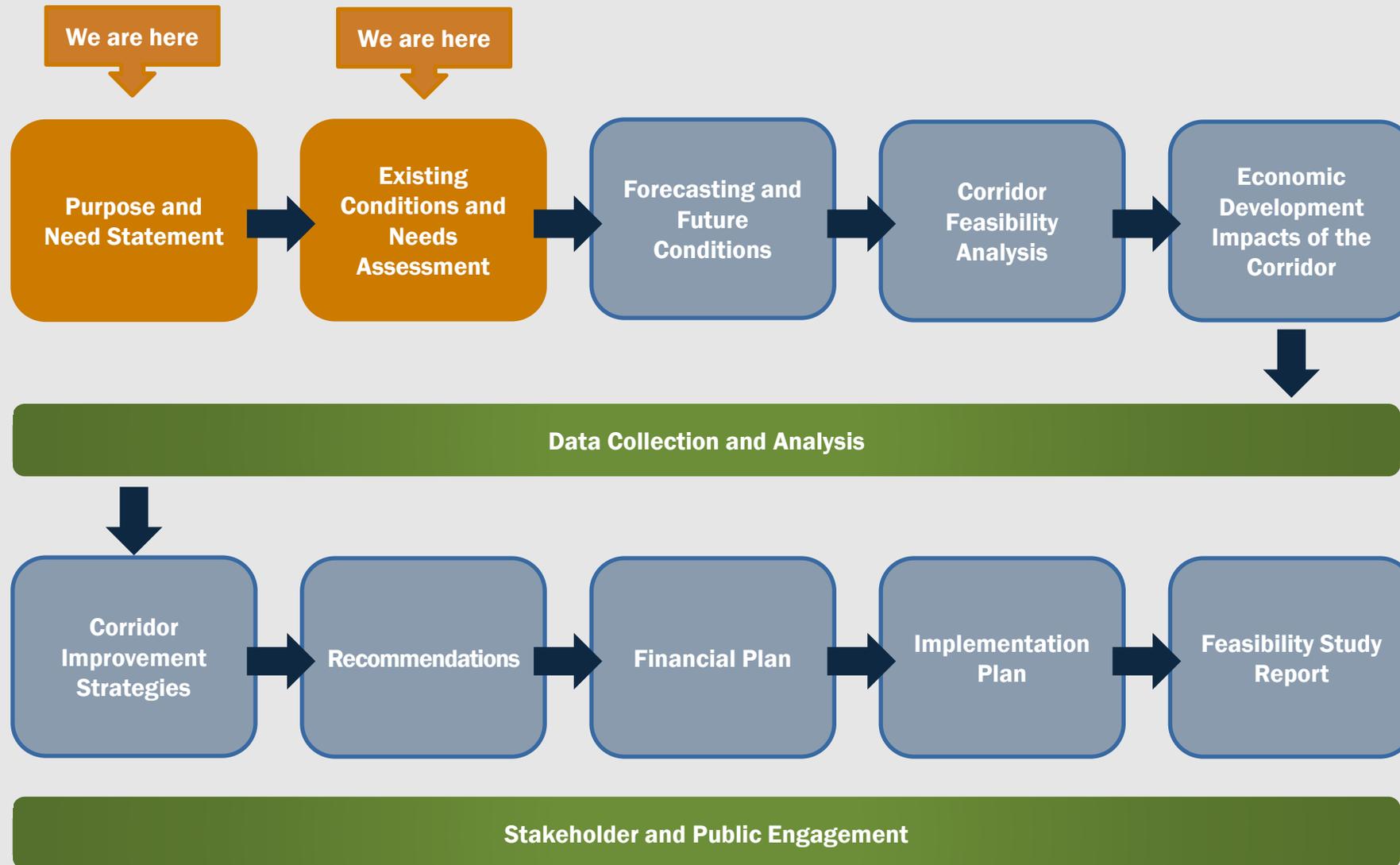


Committee Feedback

- Which goals of the corridor feasibility study are the most important to you?



Ports-to-Plains Corridor Feasibility Study Scope





Existing Conditions and Needs Assessment

- Land Use Characteristics
- Population Characteristics
- Economic Characteristics
- Roadways and Bridges
- Traffic Conditions
- Truck Traffic and Freight Flow
- Safety Conditions
- Environmental Conditions



Forecasting and Future Conditions

- Projected Land Use
- Projected Population
- Projected Economic Development
- Future Programmed Roadway and Bridge Projects
- Future Traffic Conditions
- Future Truck Traffic and Freight Flow



Corridor Feasibility Analysis

- Define the preliminary alternatives feasibility analysis process
- Corridor Alternatives
 - Identify areas that are **suitable for four-lane divided highway improvement**
 - Identify areas that are **suitable for interstate highway development**
- Develop **potential evaluation criteria** (from HB 1079), including
 - The energy industry's ability to transport products to market
 - Economic development impacts, including creation of employment opportunities
 - Improvements that would relieve traffic congestion
 - Freight movement along the corridor
 - Improvements that promote safety and mobility, while maximizing existing highway and minimizing property impacts
 - Project costs related to improvements
 - Funding sources
- Prepare an evaluation matrix for comparisons



Economic Development Impacts of the Corridor

- An evaluation of the economic development impacts of the Ports-to-Plains Corridor, including whether the improvement or expansion of the Ports-to-Plains Corridor would **create employment opportunities** in this state



Corridor Improvement Strategies

- Analyzing transportation improvement strategies and **identifying potential improvements** – using the evaluation matrix
- Examination of **project costs**
- **Determination and Prioritization of Improvements**



Recommendations

- Recommendations will be based on technical analysis, **Segment Committee input**, Advisory Committee input, and public input



Financial Plan

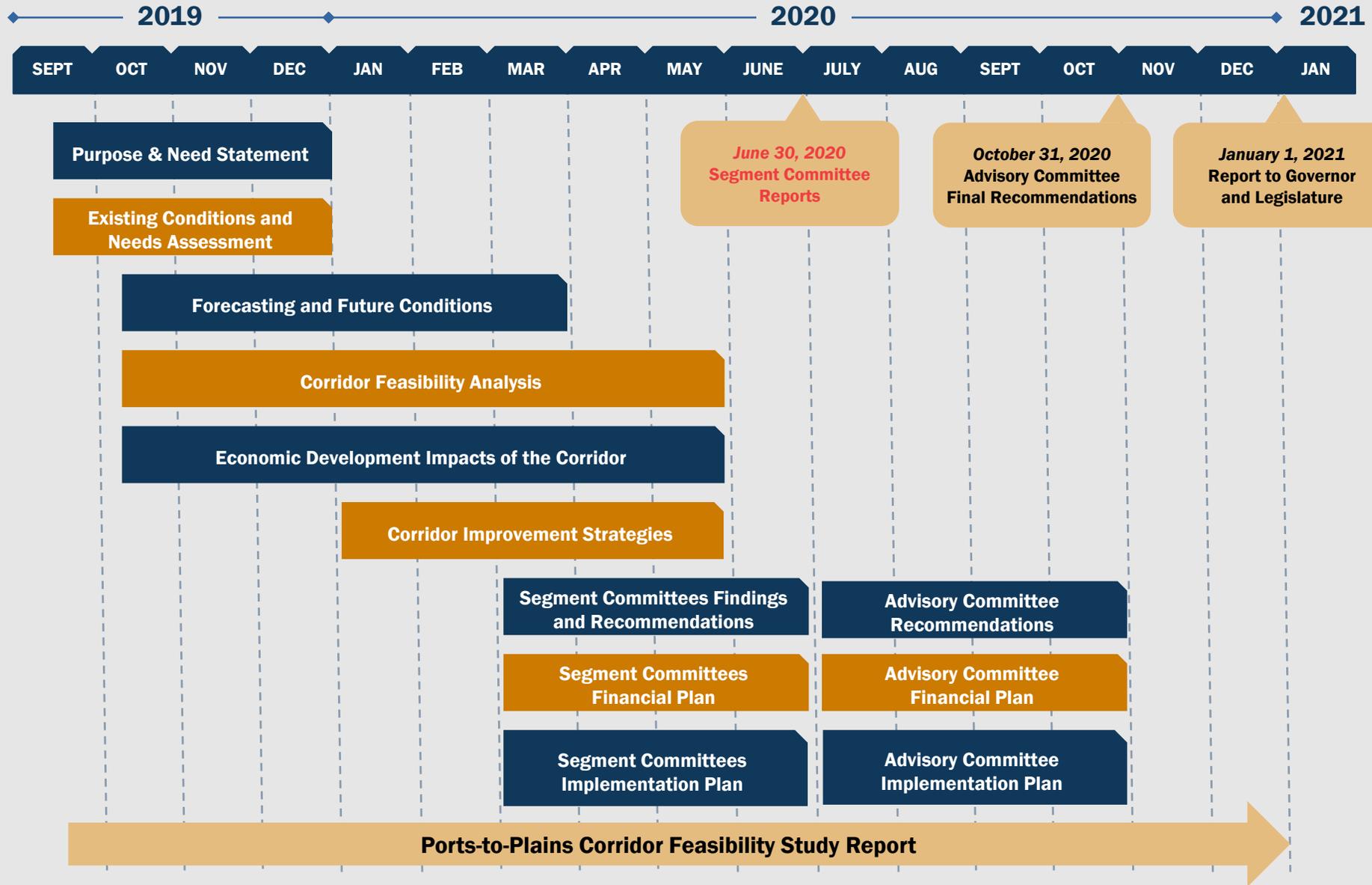
- Evaluating potential federal, state, local, and private **funding sources** for corridor improvements
- Advisory Committee and **Segment Committees** input on potential funding sources



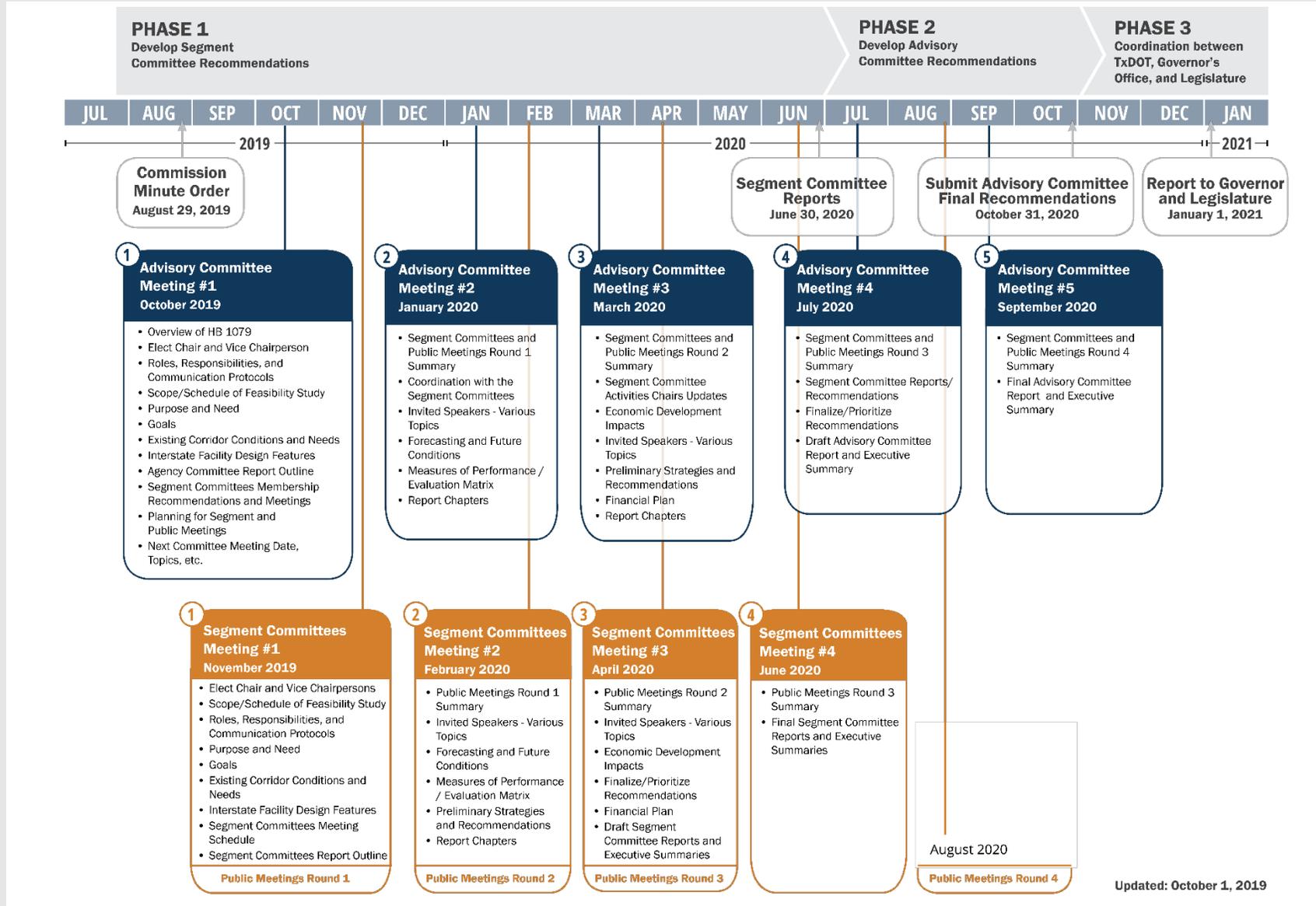
Implementation Plan

- Develop a plan of improvements and implementation timeline
 - Short-term: 0-5 years
 - Mid-term: 5-10 years
 - Long-term: 10+ years

Ports-to-Plains Corridor Feasibility Study Schedule



Ports-to-Plains Corridor Feasibility Study Milestones





Existing Segment #2 Conditions and Needs

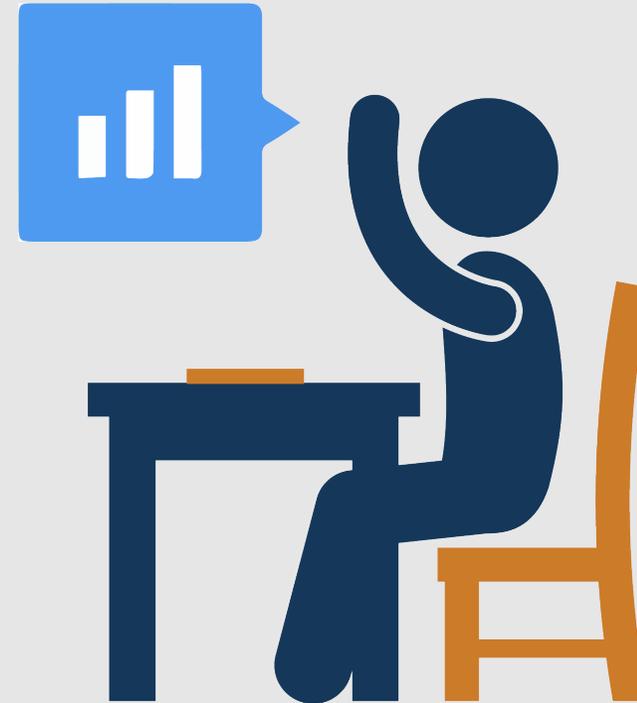
Akila Thamizharasan, Manager, Corridor
Planning Branch, TxDOT

Consultant Team



Committee Feedback

- What are the key needs and challenges in Segment #2?
- What are the potential opportunities in Segment #2?



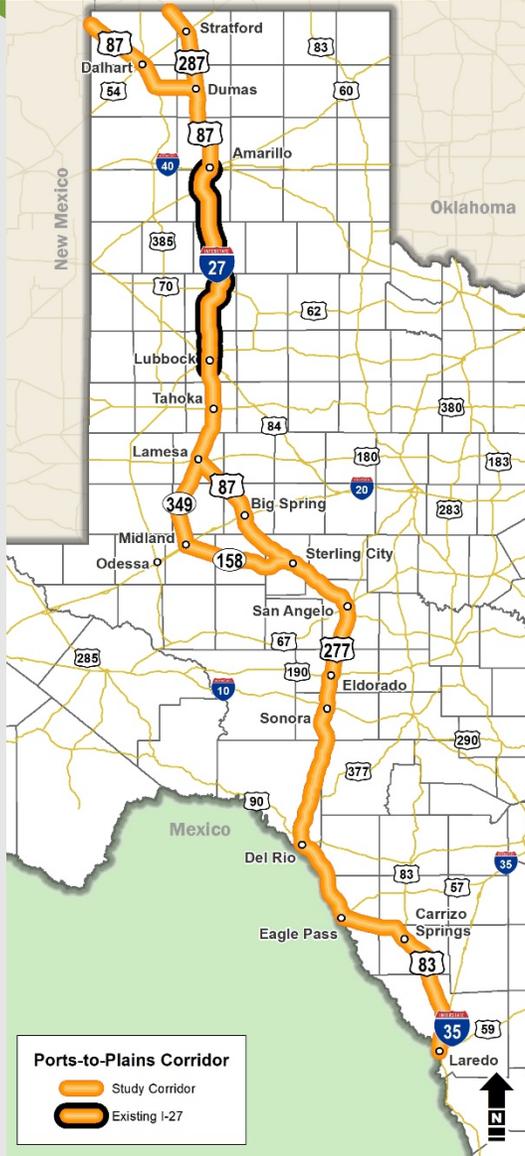


- 1 Overall Segment Characteristics
- 2 Traffic, Pavement, and Bridge Conditions
- 3 Safety
- 4 Population and Economic Characteristics
- 5 Freight Movement
- 6 Energy Sector and Agricultural Production

Current Corridor Characteristics



Ports-to-Plains Corridor



Other Modal Facilities



992 Corridor Miles
26 Counties
6 TxDOT Districts

Major Cities

Laredo, Del Rio, San Angelo, Big Spring, Midland, Lamesa, Lubbock, Amarillo, Dumas, Dalhart

Major Land Ports of Entry

Laredo, Del Rio, Eagle Pass

Current Corridor Characteristics



Existing Corridor Sections



Access Control Type



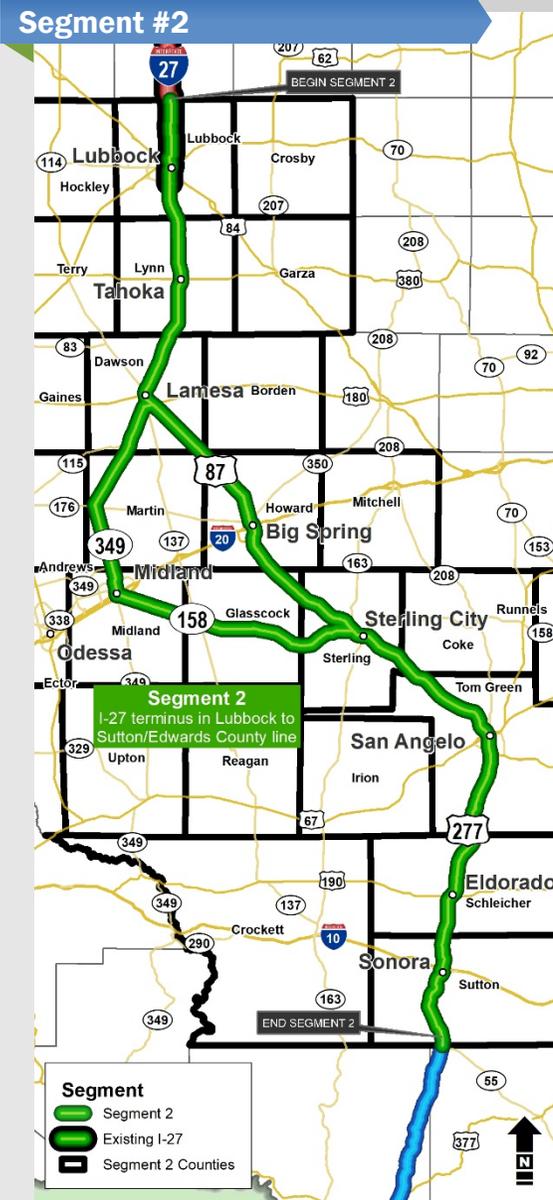
- **280** Miles 4-Lane Divided
- **212** Miles Super 2
- **172** Miles 2-Lane
- **128** Miles 4-Lane Controlled Access
- **94** Miles 4-Lane Undivided
- **66** Miles 5-Lane Urban
- **23** Miles 6-Lane Controlled Access
- **9** Miles 3-Lane Urban
- **6** Miles 8-Lane Controlled Access
- **5** Miles One-Way Pair

Access Control Type

- **798** Miles with **no** access control
- **157** Miles with **full** access control
- **37** Miles with **partial** access control

Source: Texas Roadway Inventory System - 2017

Current Segment #2 Characteristics



419 Segment Miles

12 Counties

4 TxDOT Districts

Abilene, San Angelo, Odessa, Lubbock

Major Cities and Towns

Sonora, Eldorado, San Angelo, Sterling City, Big Spring, Midland, Lamesa, Lubbock

Corridor Highways

- US-277 from Edwards County to Sterling City
- US-87/SH-158/SH-349 from Sterling City to Lamesa
- US-87 from Lamesa to Lubbock

Current Segment #2 Characteristics



- **173** Miles 4-Lane Divided
- **60** Miles Super 2
- **35** Miles 2-Lane
- **19** Miles 4-Lane Controlled Access
- **94** Miles 4-Lane Undivided
- **24** Miles 5-Lane Urban
- **5** Miles 6-Lane Controlled Access
- **3** Miles 3-Lane Urban
- **5** Miles 8-Lane Controlled Access
- **1** Miles One-Way Pair

Access Control Type

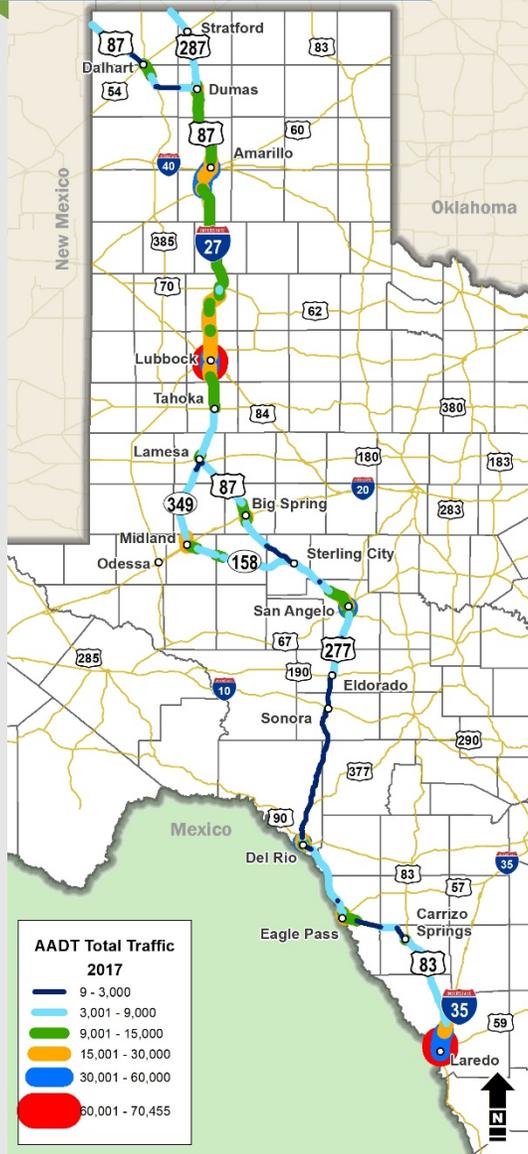
- **368** Miles with **no** access control
- **26** Miles with **full** access control
- **25** Miles with **partial** access control

Source: Texas Roadway Inventory System - 2017

Average Daily Traffic - 2017



Corridor Total Traffic 2017



Segment #2 Total Traffic 2017



Source: TxDOT TPP Roadway Inventory 2017

Range - Annual Average Daily Traffic

- <3,000 Per day from **Eldorado** to Del Rio
- 3,000-9,000 Per day on many rural US Highway segments
- 9,000-30,000 Per day on rural I-27, north of Amarillo, near **Big Spring**
- 30,000-70,000 Per day on Interstate Highways in **Laredo, Lubbock, and Amarillo**

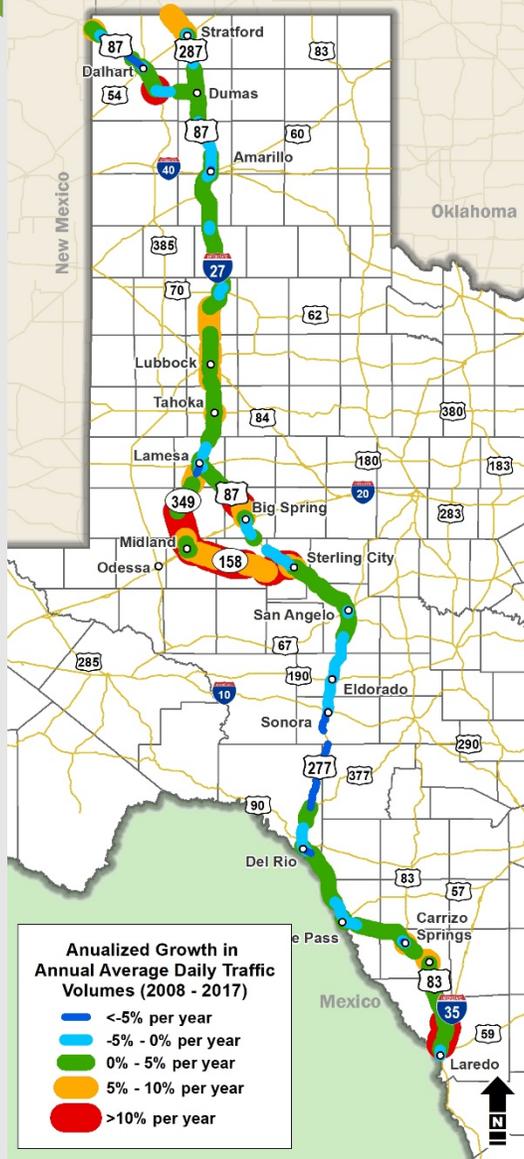
Key Takeaways

- Traffic volumes in the corridor and Segment #2 vary considerably.
- SH 349 in Midland and US 87 in San Angelo carry 25,000 to 30,000 vehicles per day

Growth in Traffic Volumes - 2008 to 2017



Corridor Growth - 10 Years



Segment #2 Growth - 10 years



Growth Trends

5-10% Per year in **Midland, Big Spring, Sterling City, & Laredo**

0-5% Per year in **Carrizo Springs, south of Del Rio, San Angelo, Lubbock, rural I-27, Dumas**

<0% Per year in **Sonora, Edwards/Val Verde County, Amarillo**

Key Takeaways

- Growth in the corridor and Segment #2 vary considerably.
- Segment #2 has largest concentration of growth areas in the corridor

Source: TxDOT TPP Roadway Inventory 2017

Corridor Average Daily Truck Traffic - 2017



Truck Traffic



Truck Percentage



- The heaviest truck volumes by far are on the I-35 segment from **Laredo**
- Relatively low truck volumes between **Eagle Pass** and **San Angelo**
- Higher truck volumes in **northern portion** of corridor
- Spike in truck volumes at **Midland**, perhaps reflecting Permian Basin traffic
- Truck percentages/freight intensity follow similar pattern to overall truck volumes
- Higher percentages at **southern** and **northern** portions of corridor

Source: TxDOT TPP Roadway Inventory 2017

Segment #2 Average Daily Truck Traffic - 2017



- **Midland and Lubbock** with significant truck volumes though moderate % of mix
- **Glasscock, Howard, and Sutton County** with large truck percentages larger than 30%
- Relatively low truck counts and percentage between **San Angelo and Sonora**

Source: TxDOT TPP Roadway Inventory 2017

Average Speeds - 2018



Corridor Average Speed



Segment #2 Average Speed



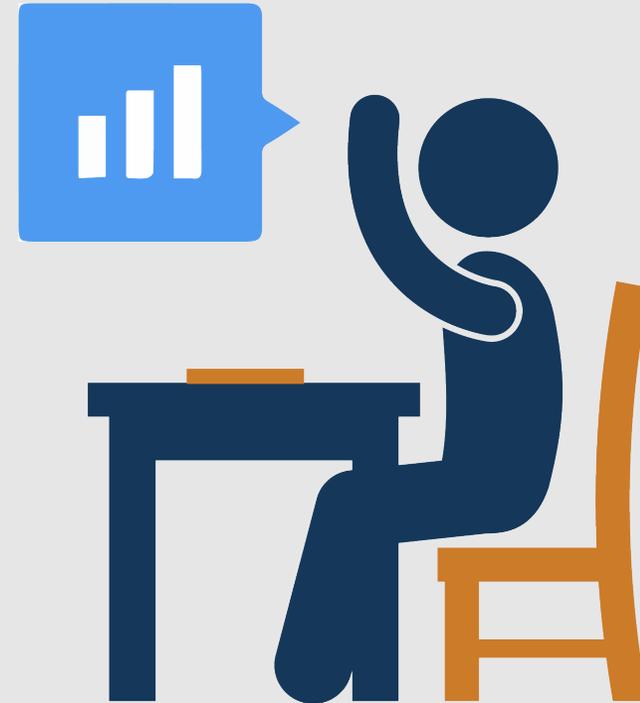
- Map shows **average speeds** along Ports-to-Plains routes
- Majority of corridor with travel speeds **60-70 mph**
- Rural segments **lower than 60 mph** (lack of passing lanes, topography, truck %)
 - North of Dumas, Stratford
 - Val Verde County, Dimmit County
- City segments are typically **lower than 30 mph** (due to traffic signals, driveways)
 - **Midland, San Angelo, Lamesa, Big Spring**
 - Eagle Pass, Dumas

Source: National Performance Management Research Data Set - FHWA



Committee Feedback

- Where are the bottlenecks for traffic in Segment #2 and what are the causes?
- What do you think will influence future traffic conditions in Segment #2?



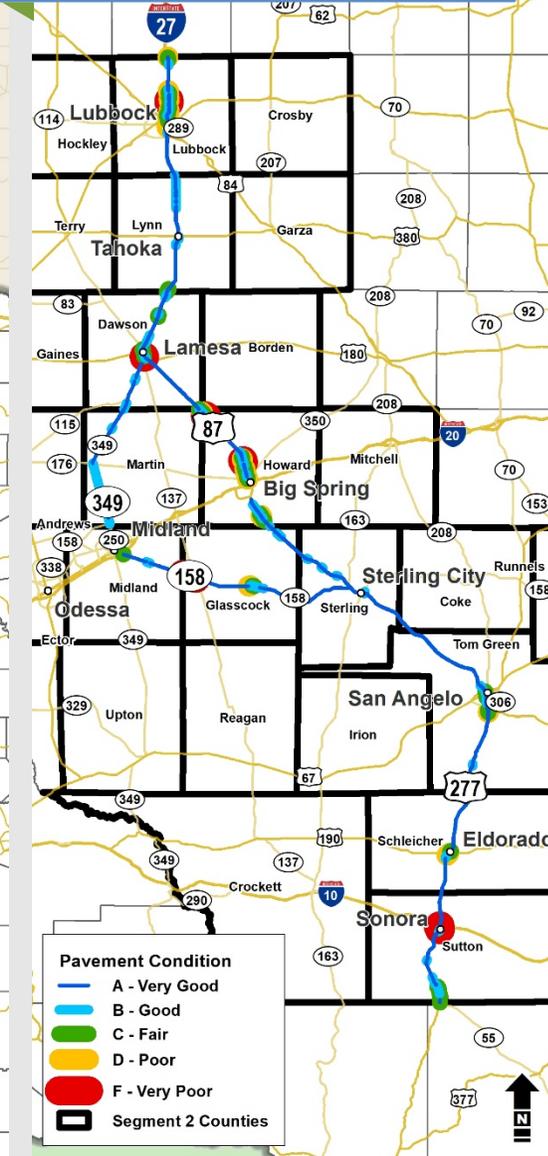
Pavement Condition



Pavement Condition - Corridor



Pavement Condition - Segment #2



Corridor Pavement*

- **1,064** Miles in **very good** condition (68%)
- **224** Miles in **good** condition (23%)
- **66** Miles in **fair** condition (6%)
- **23** Miles in **poor** condition (2%)
- **17** Miles in **very poor** condition (1%)

Segment #2 Pavement*

- **502** Miles in **very good** condition (84%)
- **66** Miles in **good** condition (11%)
- **16** Miles in **fair** condition (3%)
- **7** Miles in **poor** condition (1%)
- **7** Miles in **very poor** condition (1%)

*Pavement mileage includes multi-lane divided roadways

Source: TxDOT Pavement Management Information System - 2019

Bridge Characteristics



Bridge Condition - Corridor



Bridge Condition - Segment #2



Corridor Bridges

524 Total bridges

- **424** Bridges with a rating **greater than 80** (of these, 140 are culverts)
- **94** Bridges with a rating **50 - 79**
- **6** Bridges with a rating **less than 50**

Segment #2 Bridges

238 Total bridges

- **205** Bridges with a rating **greater than 80** (of these, 38 are culverts)
- **32** Bridges with a rating **50 - 79**
- **1** Bridge with a rating **less than 50**

Source: Texas Roadway Inventory System - 2017

Bridge Vertical Clearance



Corridor Bridge Clearance

205 Bridges

- 19 Bridges with clearance **less than 15'**
- 67 Bridges with clearance **15' - 16'5"**
- 94 Bridges with clearance **16'6" - 18'5"**
- 25 Bridges with clearance **greater than 18'5"** (New TxDOT Standard)

Segment #2 Bridge Clearance

87 Bridges

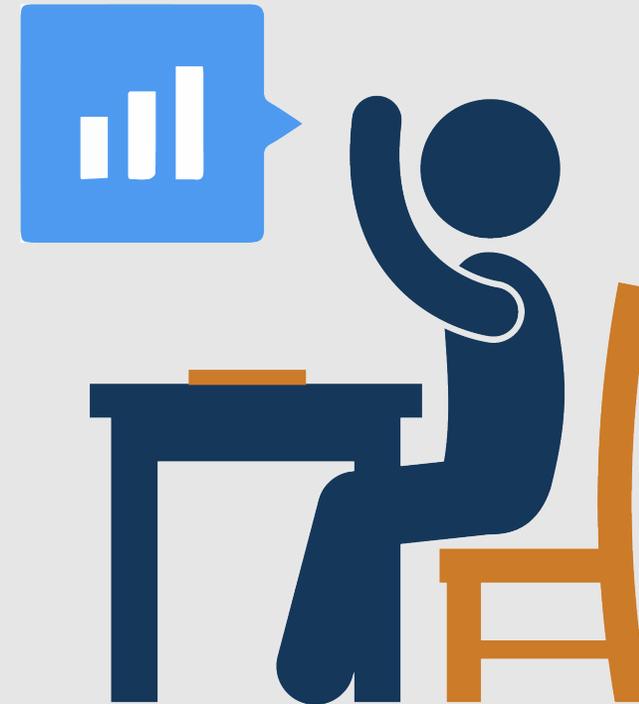
- 5 Bridges with clearance **less than 15'**
- 27 Bridges with clearance **15' - 16'5"**
- 43 Bridges with clearance **16'6" - 18'5"**
- 12 Bridges with clearance **greater than 18'5"** (New TxDOT Standard)

Source: Texas Roadway Inventory System - 2017



Committee Feedback

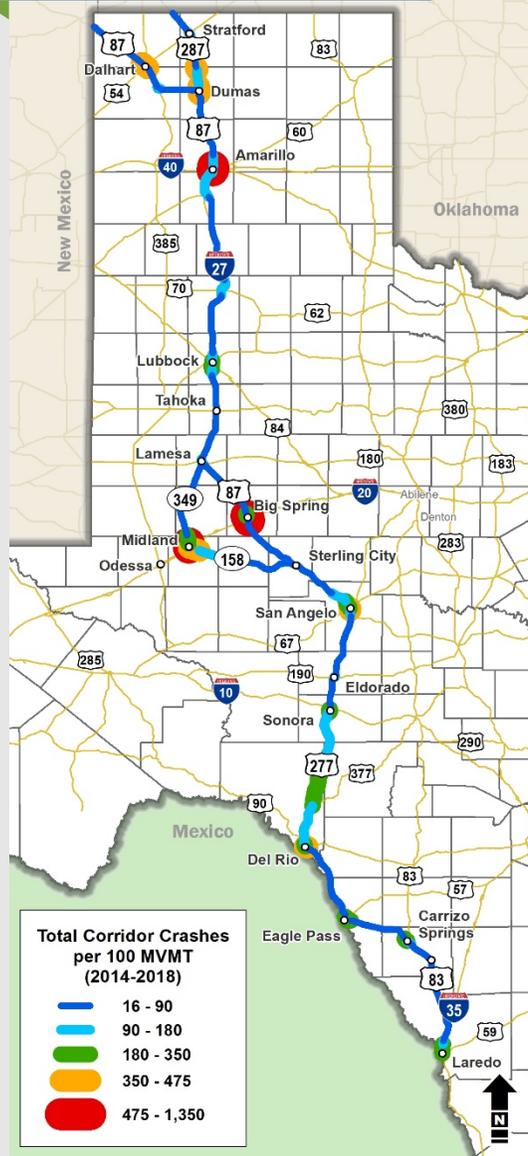
- What are the key pavement and bridge needs and challenges in Segment #2?



Total Crashes – 2014-2018



Corridor Total Crashes



Segment #2 Total Crashes



Key Corridor Takeaways

- 17,741 Total Crashes
- Highest rates in cities (Midland, Big Spring, Amarillo)
- Rural I-27 with relatively low rates

Key Segment #2 Takeaways

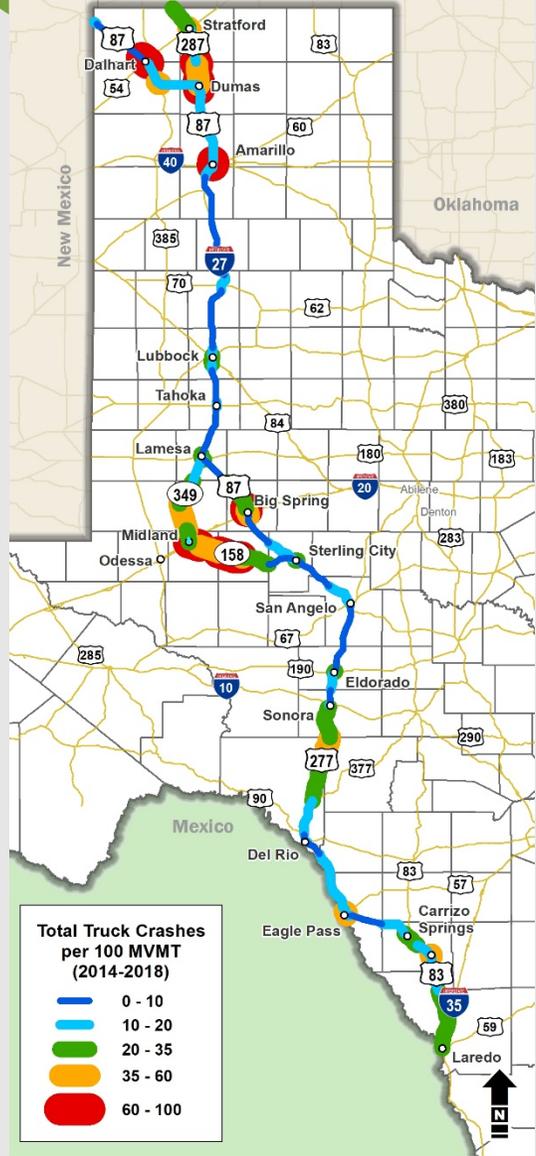
- 7,647 Total Crashes
- Highest crash rates in Midland and Big Spring
- Lower rates in rural areas as well as San Angelo and Lubbock

Source: TxDOT Crash Records Inventory

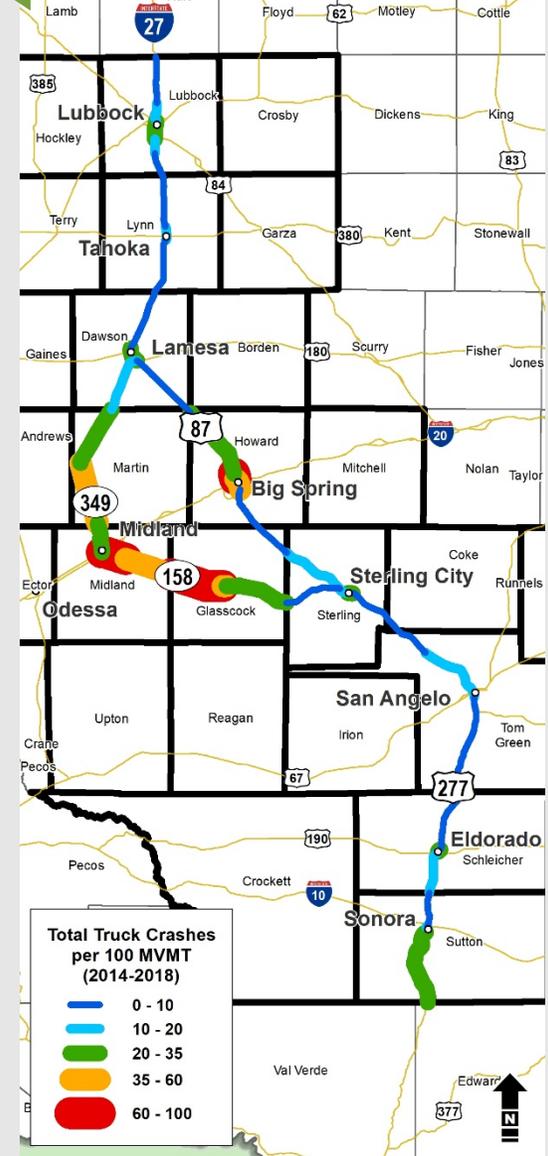
Truck Crashes – 2014-2018



Corridor Truck Crashes



Segment #2 Truck Crashes



Key Corridor Takeaways

- 2,593 total truck crashes
- High rates near northern limits (Dumas, Dalhart, Amarillo)
- Segments between Midland and Garden City have high rates

Key Segment #2 Takeaways

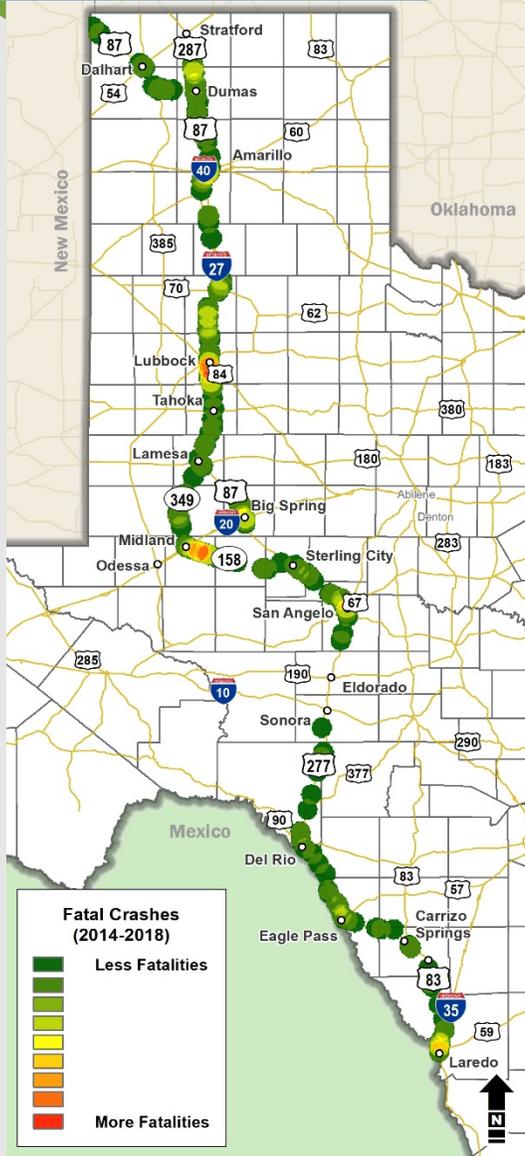
- 1,113 total truck crashes
- Highest rates North of Big Spring, Midland, Glasscock County
- Relatively low rates in San Angelo and Lubbock

Source: TxDOT Crash Records Inventory

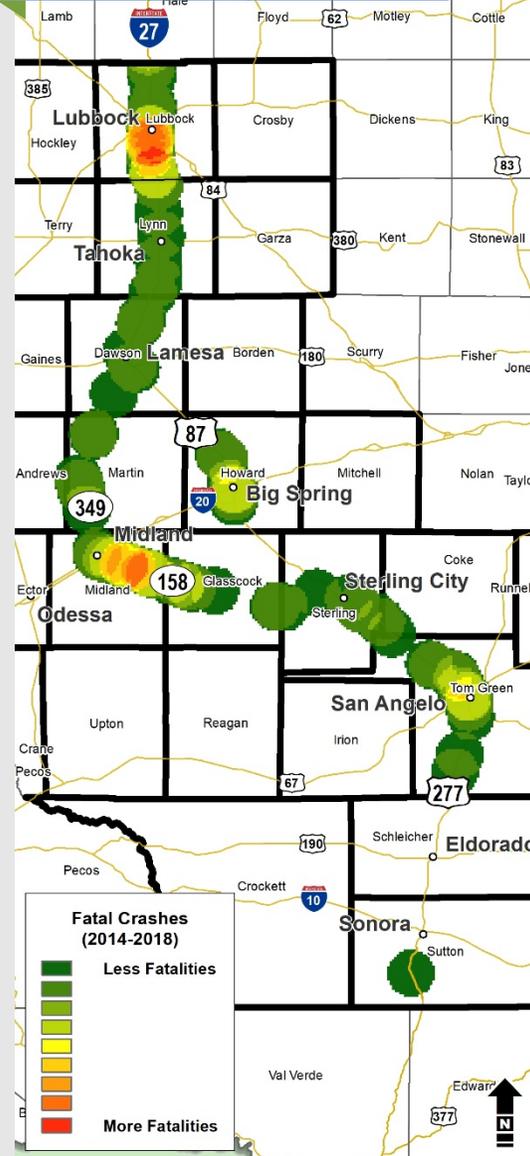
Fatal Crashes – 2014-2018



Corridor Fatal Crashes



Segment #2 Fatal Crashes



Key Corridor Takeaways

- 220 fatal crashes
- Amarillo, Lubbock and Midland exhibit highest number of crashes due to higher traffic volume
- Few fatalities on US 277 near Sonora and Eldorado

Key Segment #2 Takeaways

- 110 Fatal Crashes
- Highest concentrations in Lubbock and Midland
- Some rural segments without crashes

Source: TxDOT Crash Records Inventory



Corridor Wide

-  **27%**
Speeding
-  **25%**
Failure to Stop/Yield
-  **9%**
Impaired or
Distracted Driver
-  **9%**
Improper Use of Lanes

Segment #2

-  **28%**
Failure to Stop/Yield
-  **26%**
Speeding
-  **6%**
Impaired or
Distracted Driver
-  **6%**
Improper Use of Lanes

Speeding-Related Crashes – 2014-2018



Corridor Speed-Related Crashes



Segment #2 Speed-Related Crashes



Key Corridor Takeaways

- Highest rates in Laredo, Big Spring, Amarillo, Dumas
- Higher rates in Dalhart, Lubbock, Midland, Sonora
- Rural areas with generally low rates

Key Segment #2 Takeaways

- Highest rate in Big Spring
- Higher rates in Sonora, San Angelo, Lubbock
- Lower rates in the rural areas south of Big Spring

Source: TxDOT Crash Records Inventory

Failure to Yield/Stop Crashes – 2014-2018



Corridor Failure to Yield/Stop



Segment #2 Failure to Yield/Stop



Key Corridor Takeaways

- Highest rates in cities with intersection / access points: Amarillo, Del Rio, Midland
- High rates in Dalhart & Dumas
- Lower rates on Rural I-27, Sterling City to Del Rio

Key Segment #2 Takeaways

- Highest rates in Midland, Big Spring
- Higher rates in Central Lubbock
- Low rates in rural portions of segment

Source: TxDOT Crash Records Inventory

Adverse Weather Crashes – 2014-2018



Corridor Adverse Weather Crashes



Segment #2 Adverse Weather Crashes



Key Corridor Takeaways

- 11% of crashes occur in adverse weather
- Highest rates on US 277 south of I-10, north of Dumas, Midland and Amarillo

Key Segment #2 Takeaways

- 12% of crashes occur in adverse weather
- Highest rates south of Sonora, Midland, Big Spring
- Lower rates in Lubbock than in other cities

Source: TxDOT Crash Records Inventory

Intersection-Related Crashes – 2014-2018



Corridor Intersection Crashes



Segment #2 Intersection Crashes



Key Corridor Takeaways

- 50% of crashes are intersection-related
- City segments (Amarillo, Midland) have highest rates
- Rural segments with relatively low rates

Key Segment #2 Takeaways

- 56% of crashes are intersection-related
- Highest rates in Midland, Big Spring, southern San Angelo
- Relatively lower rates in Lubbock

Source: TxDOT Crash Records Inventory

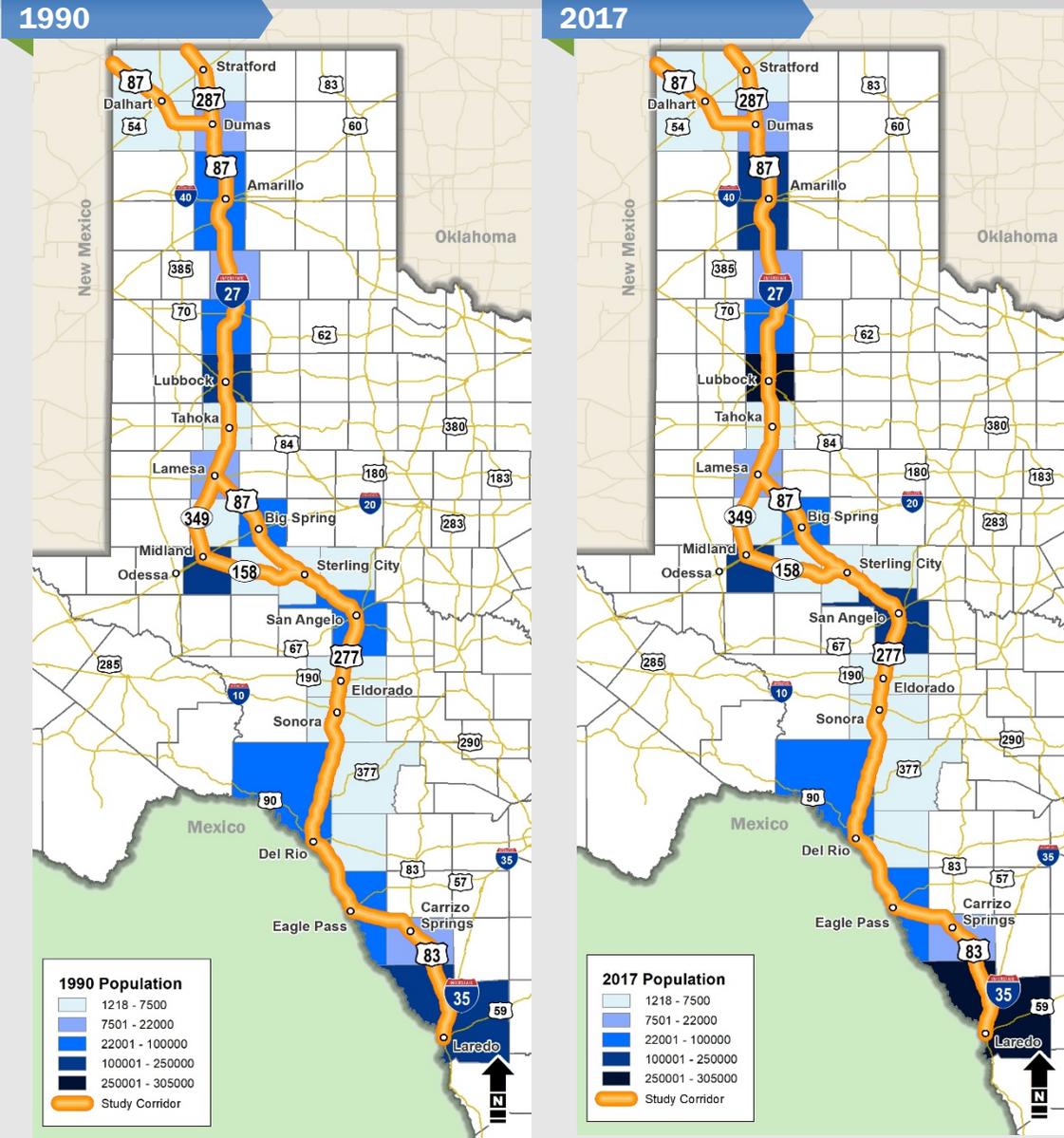


Committee Feedback

- What areas and issues contribute to safety needs and challenges in Segment #2?

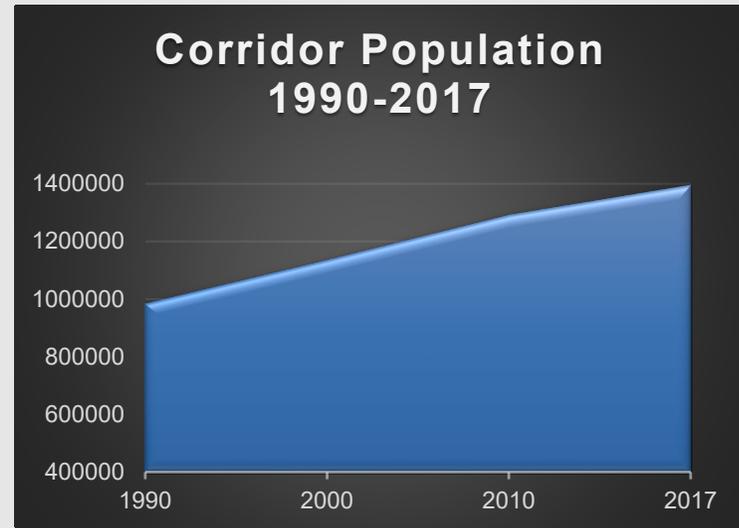


Corridor Population Growth 1990-2017



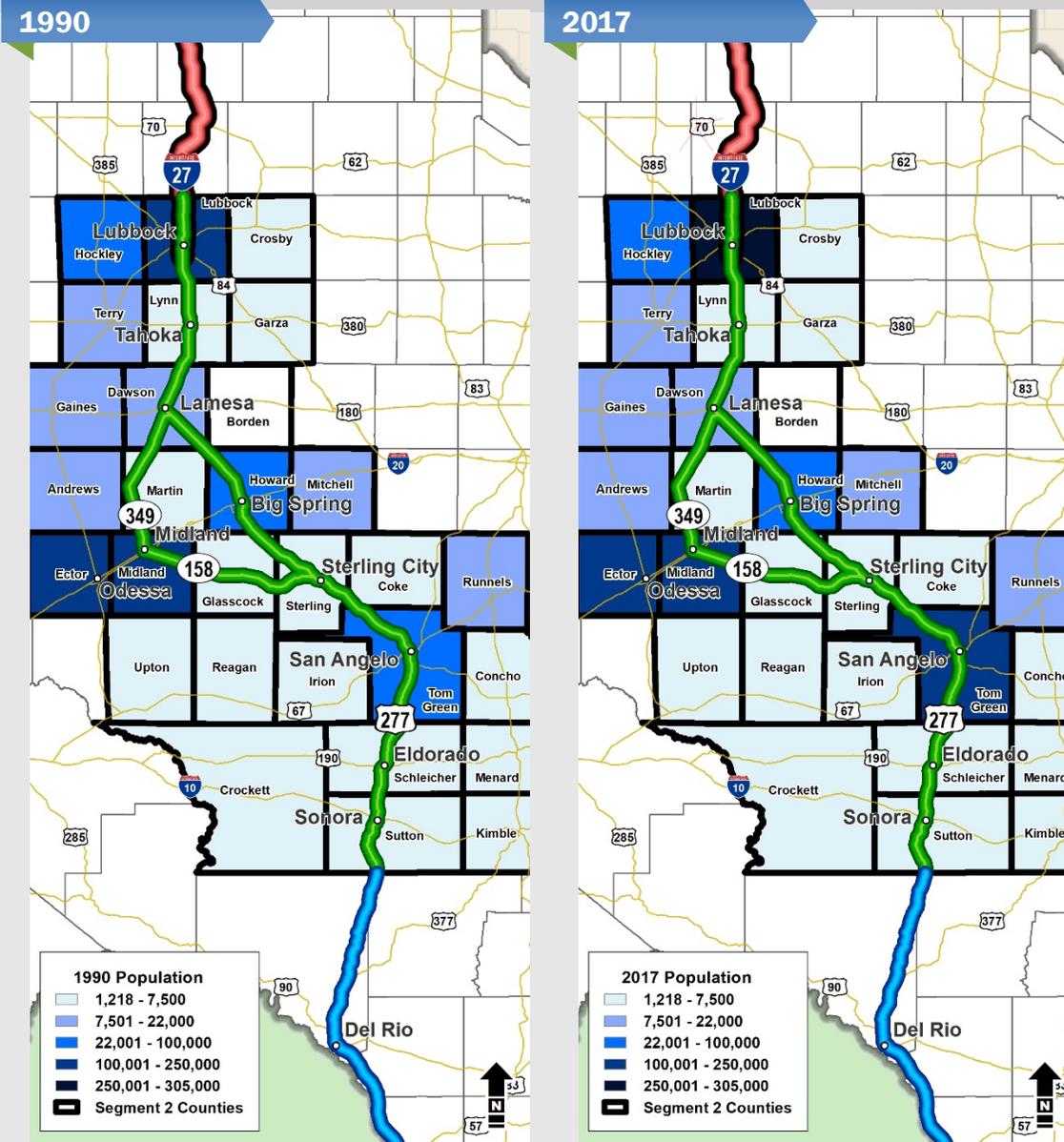
983,870 **1,395,130**
 (1990) (2017)

- Corridor total population **increased by 411,260 persons**
- Overall corridor population **grew by 42%**



Source: Texas Demographic Center, U.S. Census

Segment #2 Population Growth 1990-2017

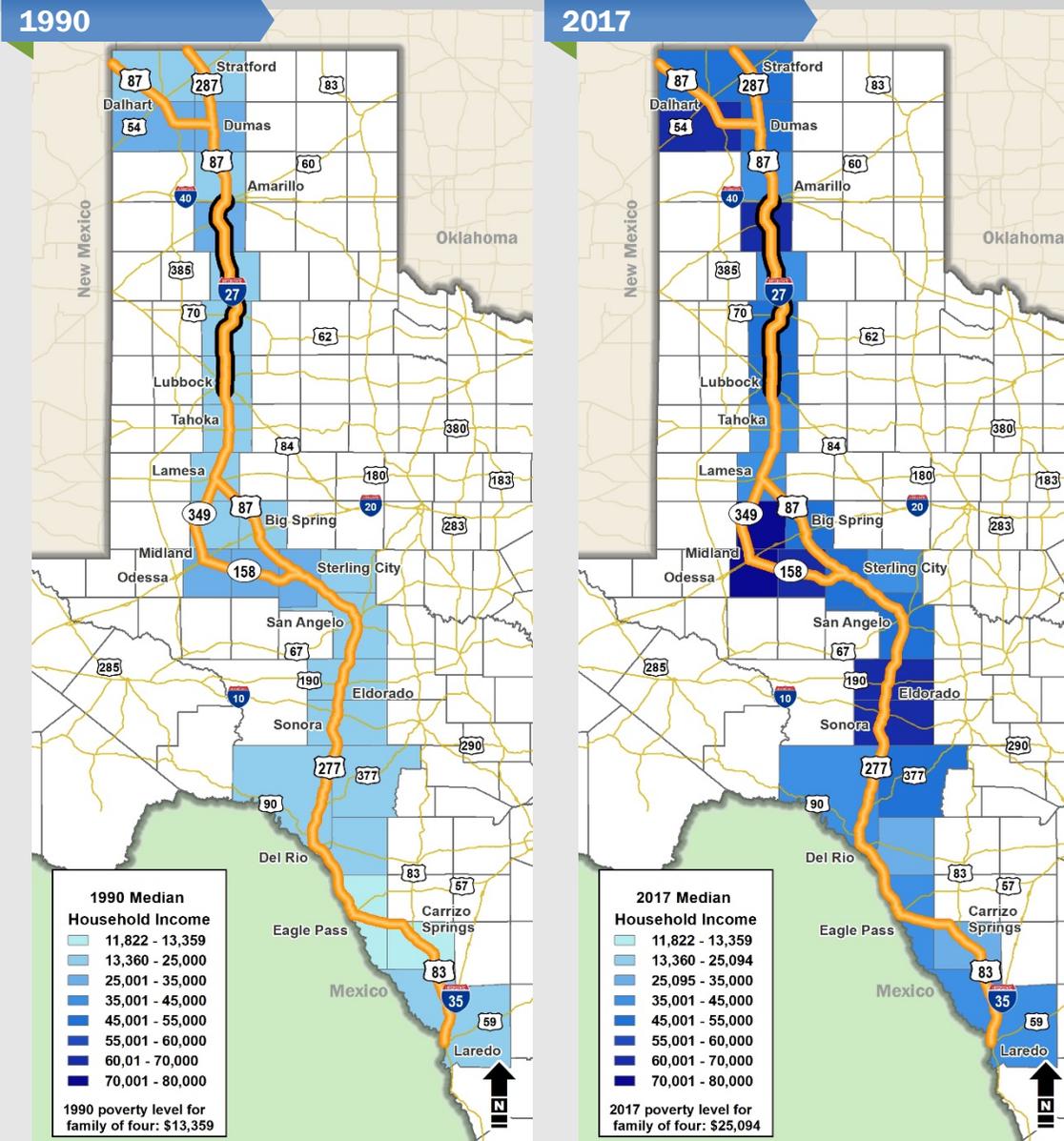


740,999 (1990) **954,316** (2017)

- Total population **increased by 213,317** persons
- Overall segment population **grew by 29%**
- **Midland County** (59%) and **Gaines County** (41%) had the highest population growth
- **Borden County** (-25%) and **Upton County** (-20%) had the largest population declines

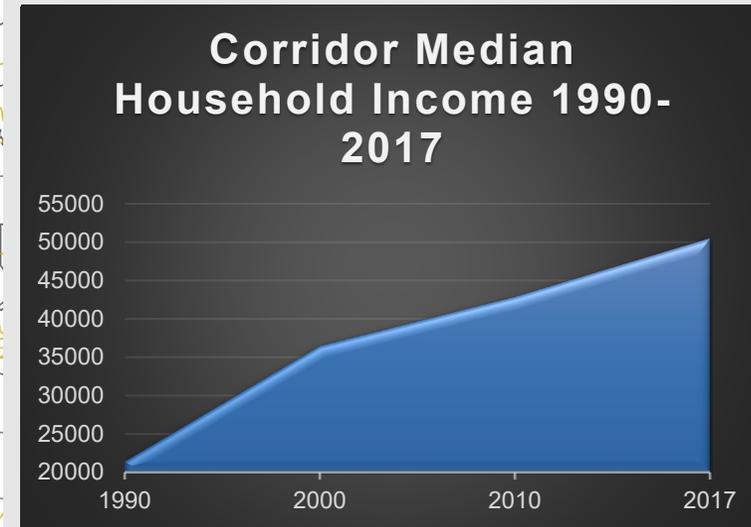
Source: Texas Demographic Center, U.S. Census

Corridor Median Household Incomes 1990-2017



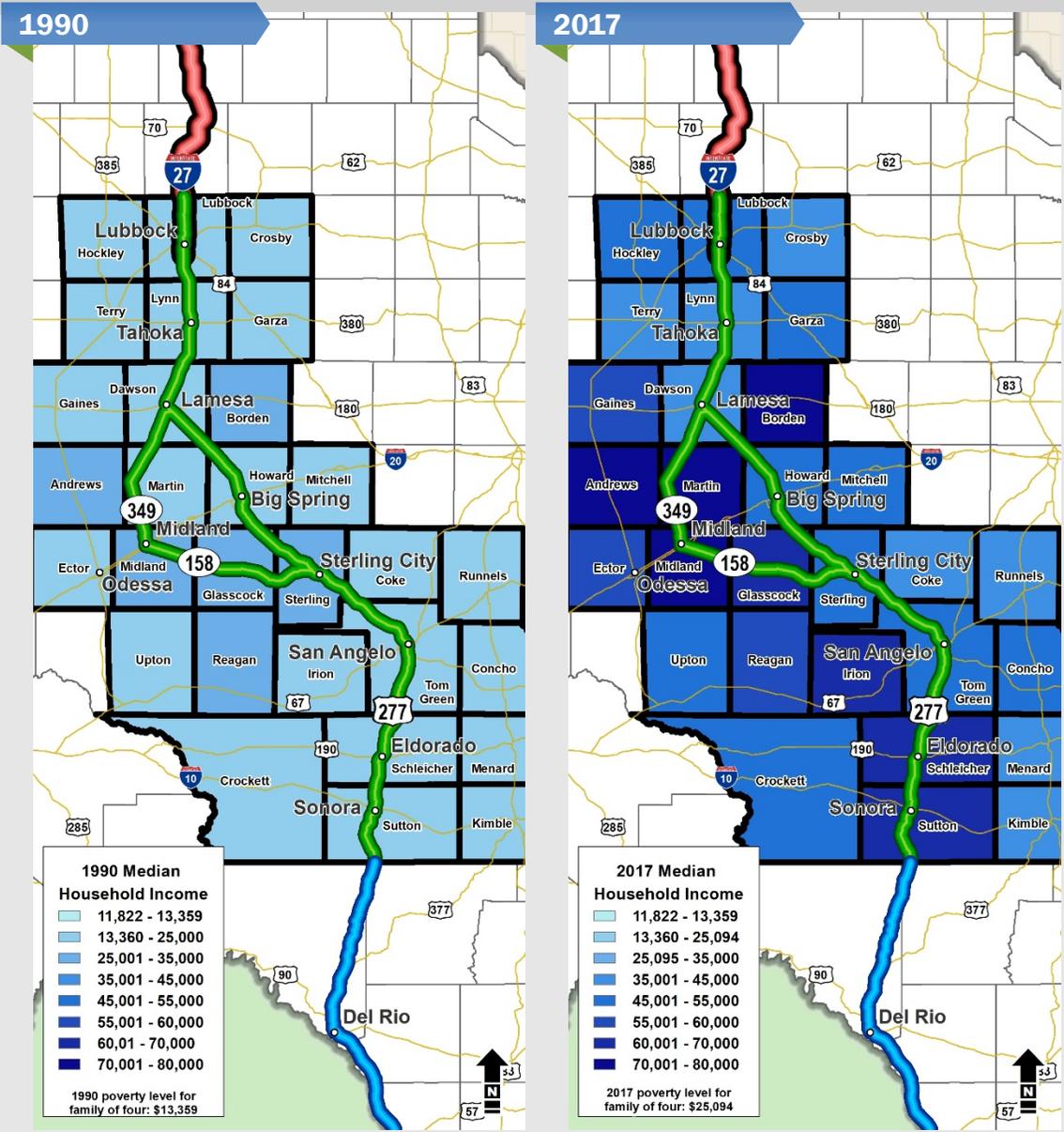
\$21,517 (1990) **\$50,491** (2017)

- Corridor total median household income **increased by \$28,974**
- Overall corridor median household income **grew by 135%**



Source: U.S. Census, American Community Survey

Segment #2 Median Household Incomes 1990-2017

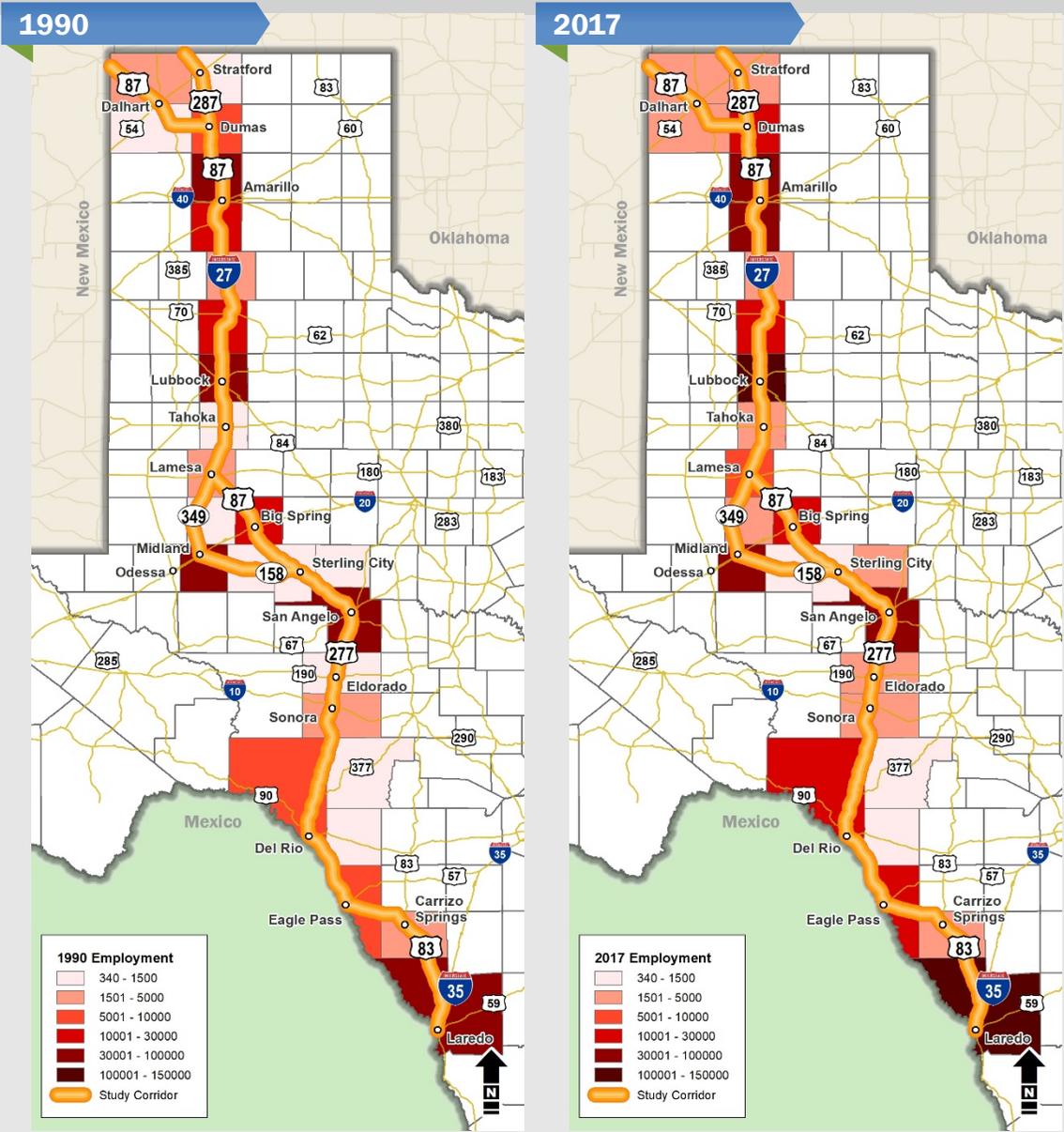


\$22,135 (1990) **\$53,921** (2017)

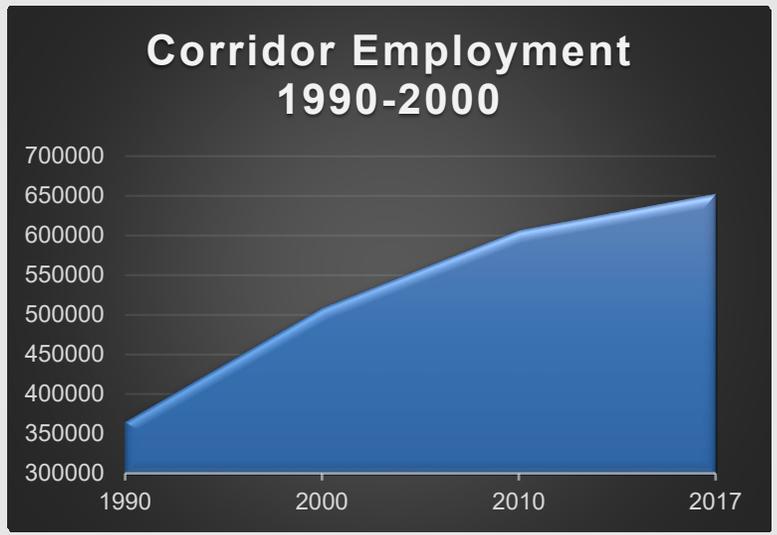
- Total income **increased by \$31,787**
- Overall **segment** income **grew by 144%**
- **Martin County (245%) and Mitchell County (197%)** had the highest increases in income
- No counties saw declines in household income
- No counties had median incomes below the poverty line in 1990 or 2017

Source: U.S. Census, American Community Survey

Corridor Total Employment 1990-2017

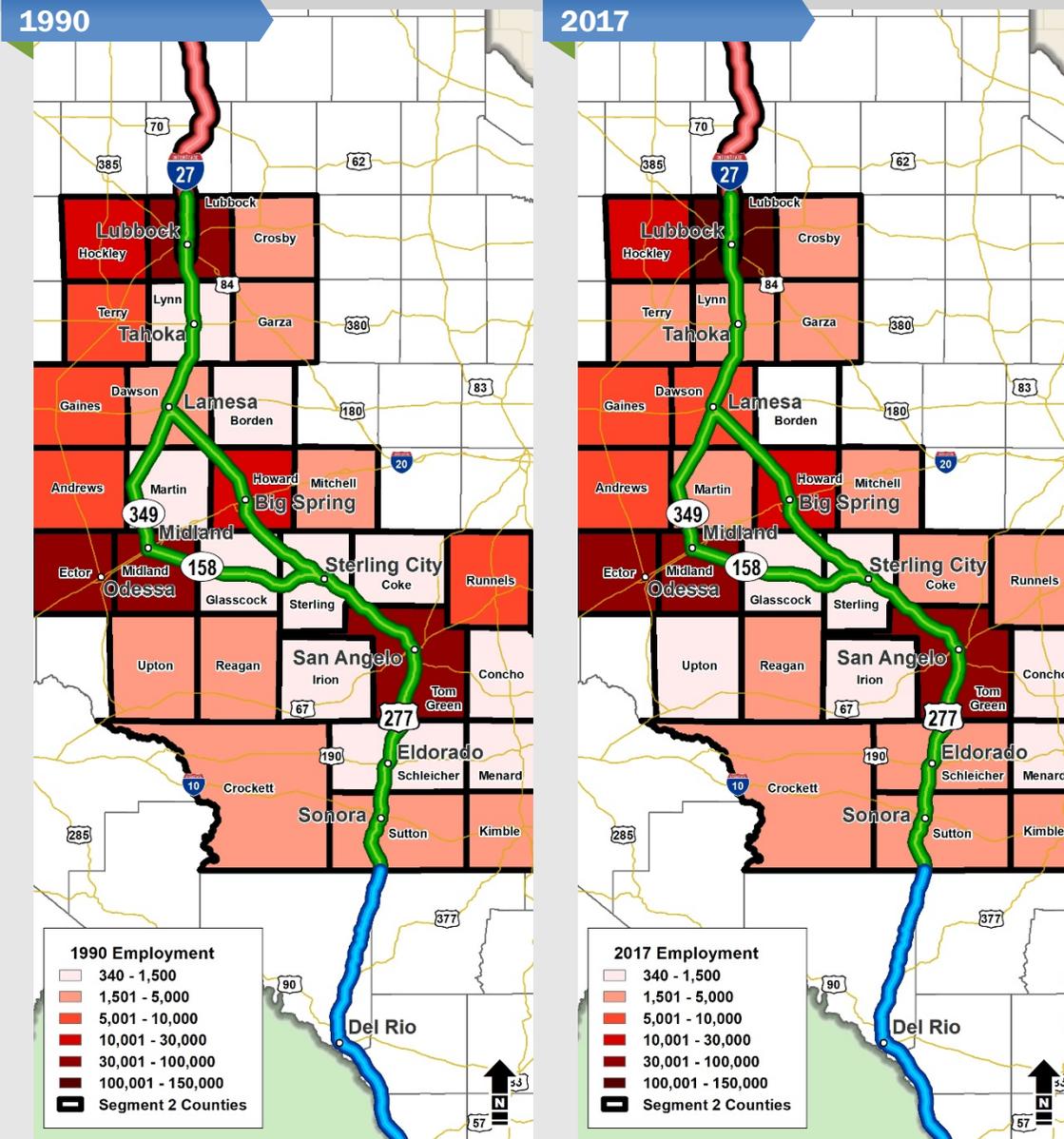


- Corridor total employment **increased by 286,329**
- Overall corridor employment **grew by 78%**



Source: U.S. Census, American Community Survey

Segment #2 Total Employment 1990-2017



348,804 (1990) **461,143** (2017)

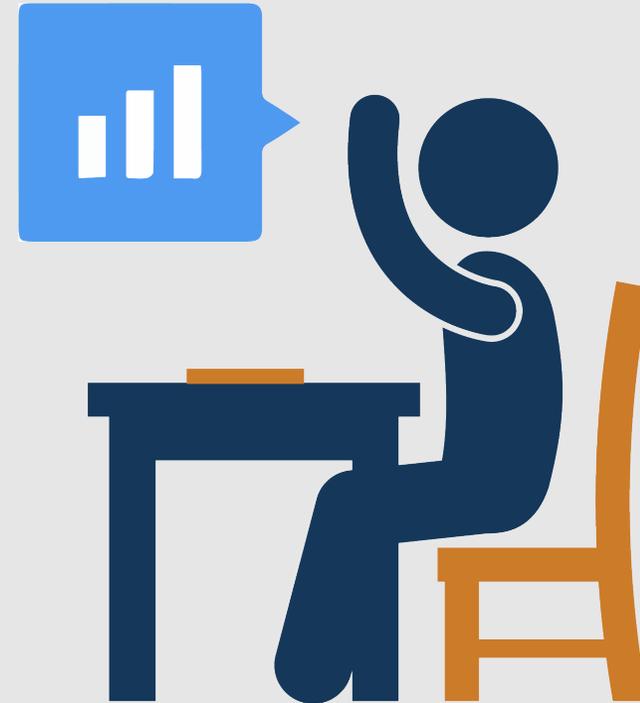
- Total employed population **increased by 112,339** persons
- Overall segment employment **grew by 31%**
- **Midland County** (53%) and **Gaines County** (46%) had the highest growth in employment
- **Borden County** (-36%) and **Upton County** (-33%) had the largest declines in employment

Source: U.S. Census, American Community Survey

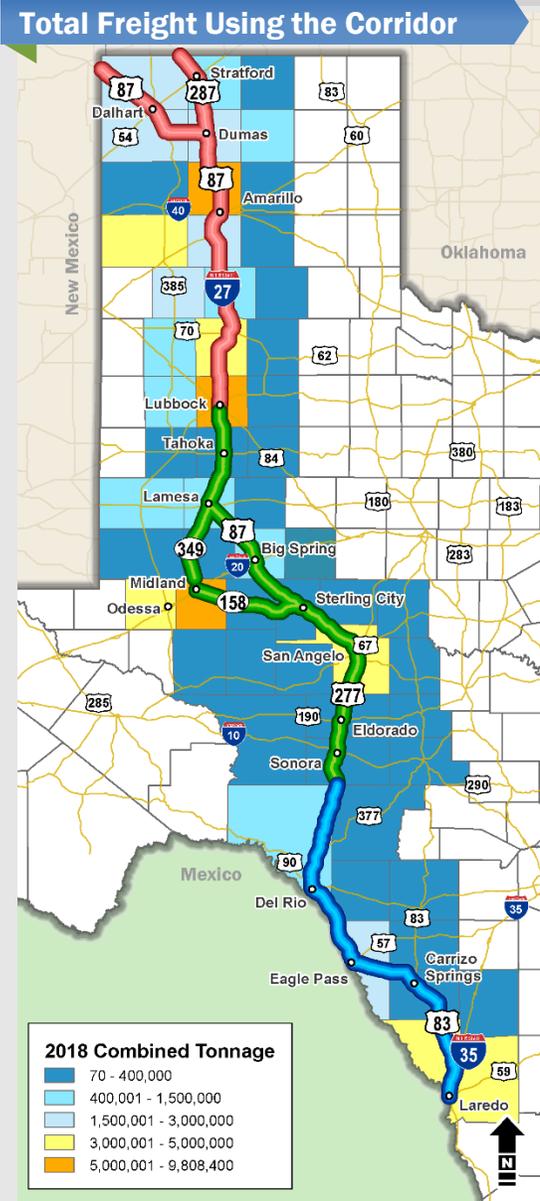


Committee Feedback

- What factors do you think will influence population, income, and employment in Segment #2 over the next 30 years?



Corridor Total Freight by County - 2018



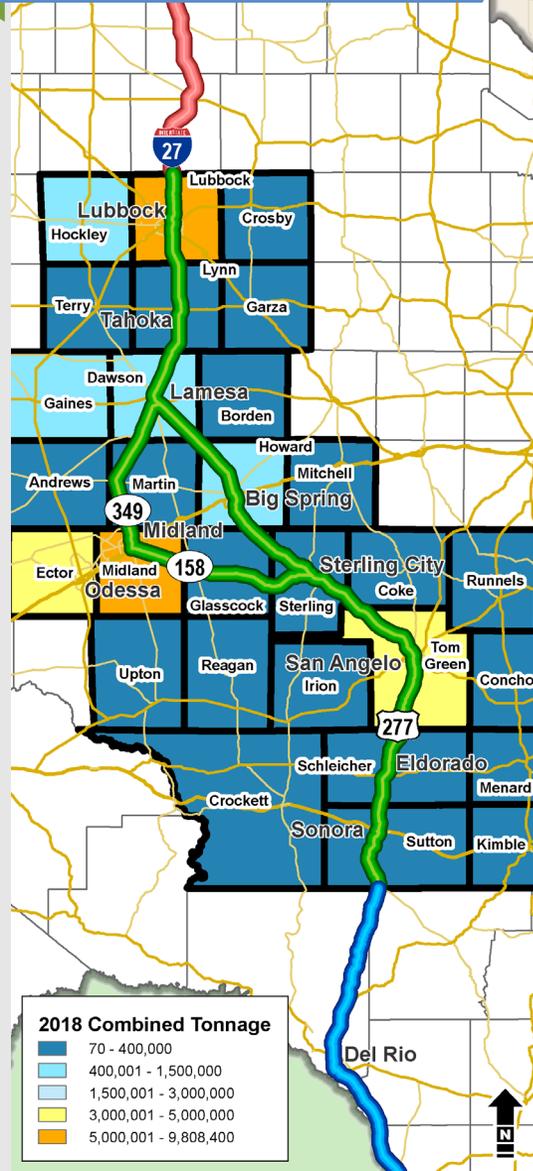
- Map shows the freight traffic from adjacent counties that is **using the Ports-to-Plains Corridor**
- Principal points for truck freight on the segment are at
 - Amarillo** (Potter County)
 - Lubbock** (Lubbock County)
 - Midland** (Midland County)
 - Laredo** (Webb County)
- Also existing I-27, Odessa, and San Angelo, northern Panhandle
- Corridor crosses **large rural areas** with light – but locally meaningful – freight volumes
- Corridor provides **more access to markets** for many nearby counties

Source: TxDOT SAM and TRANSEARCH database

Segment #2 Total Freight by County - 2018



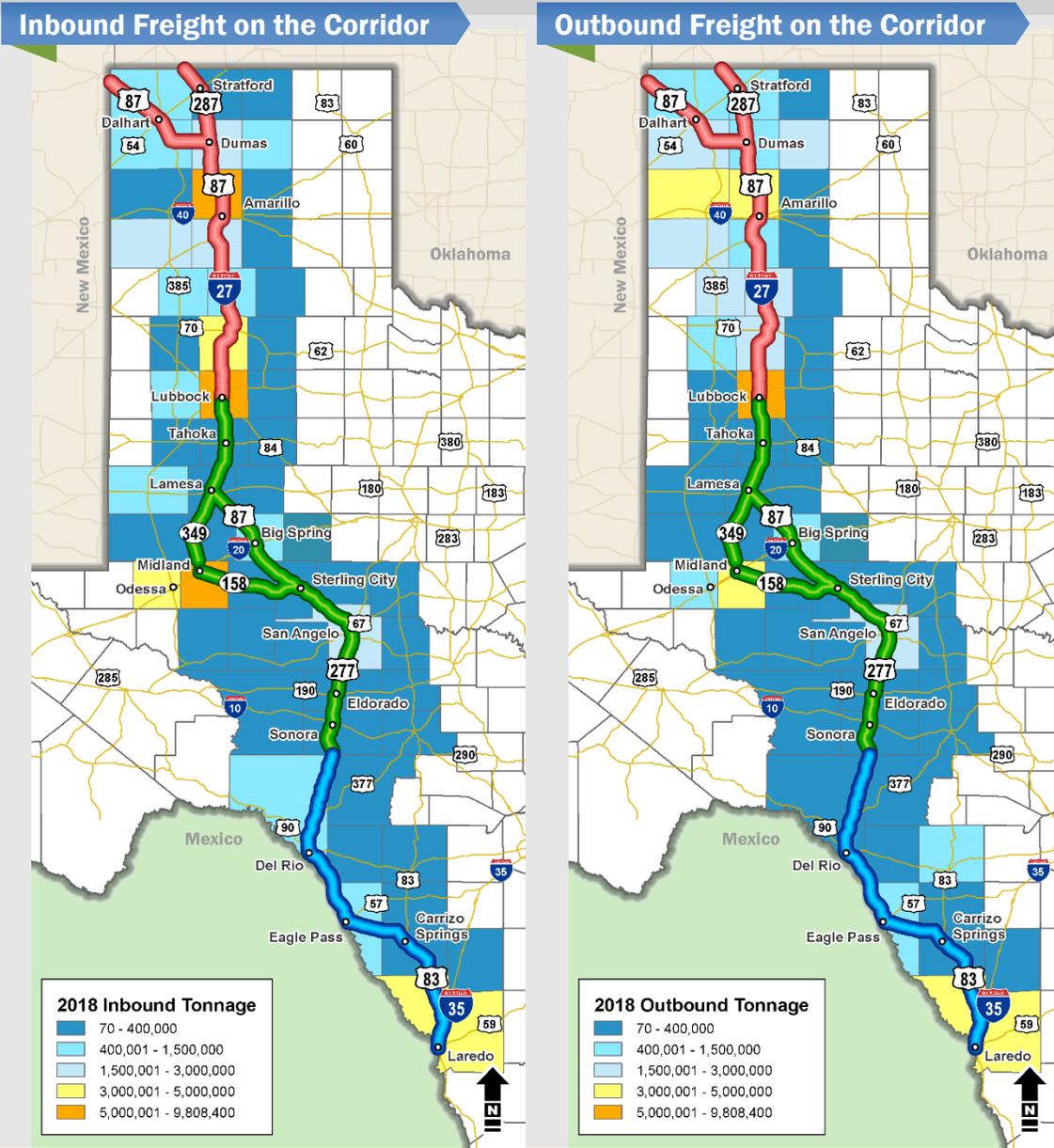
Total Freight Using the Segment



- Map shows the freight traffic from adjacent counties that is **using Segment #2**
- Principal points for truck freight on the segment are in the largest **production and population centers**
 - **Lubbock** (Lubbock County)
 - **Midland/Odessa** (Midland/Ector Counties)
 - **San Angelo** (Tom Green County)
- Segment #2 crosses **large rural areas** with locally generated freight volumes
- Segment #2 provides **more access to markets** for many nearby counties

Source: TXDOT SAM and TRANSEARCH database

Inbound and Outbound Freight on the Corridor by County - 2018



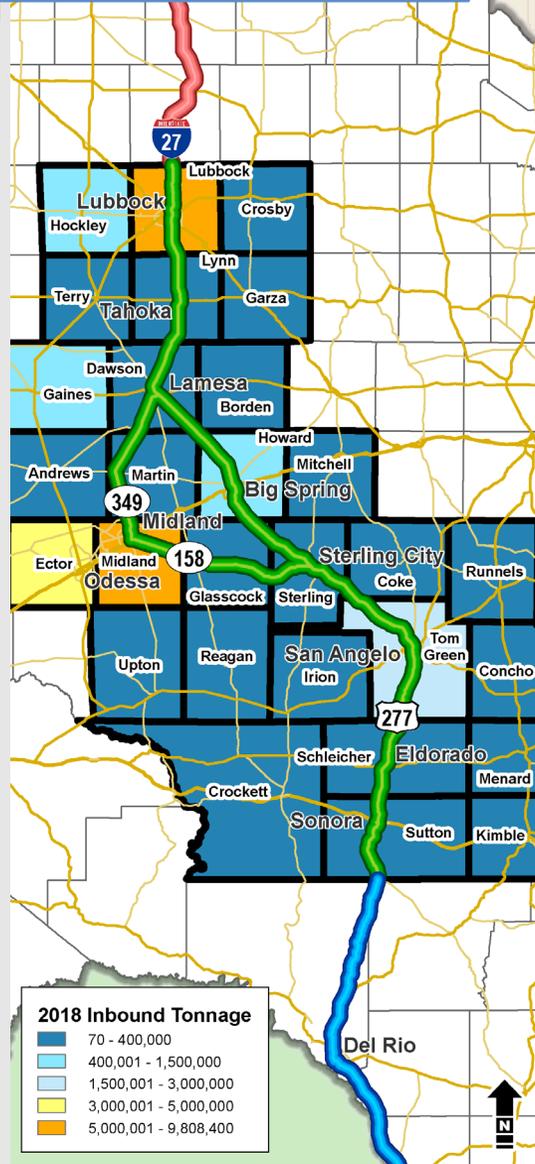
- **Panhandle** ships more freight than it receives, except:
 - **Amarillo** receives more freight than it ships out
- **Midland/Odessa** receives more freight than it ships out, due to:
 - **Outbound freight traveling by other modes**
 - **Inbound freight supplies industry**
- Port of Entry at **Laredo** is busy in both directions

Source: TxDOT SAM and TRANSEARCH database

Inbound and Outbound Freight Using Segment #2 by County - 2018



Inbound Freight on the Segment



Outbound Freight on the Segment



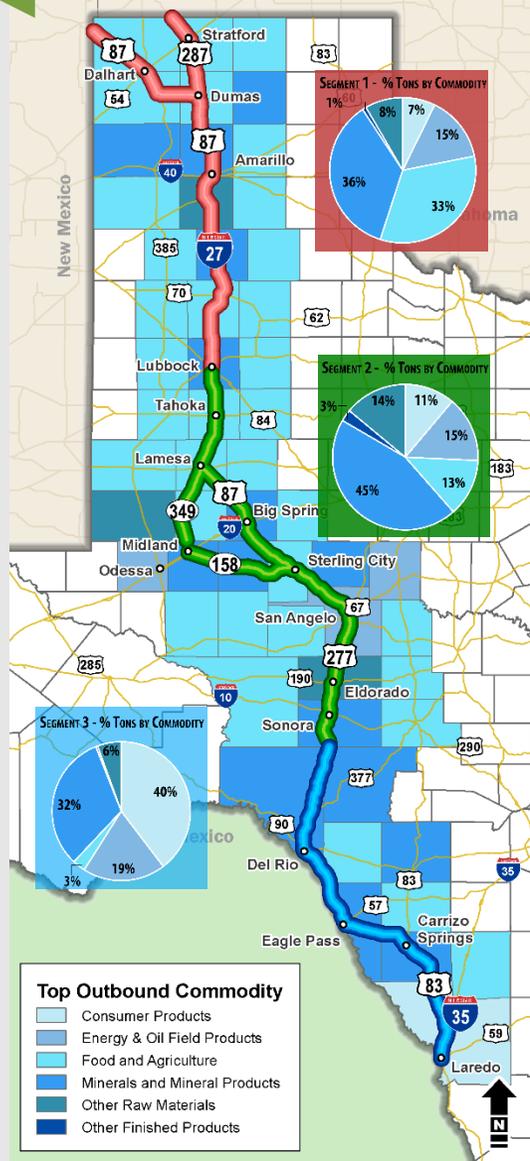
- Freight coming in and going out of Segment #2 is **generally balanced** (in tonnage)
- Midland/Odessa** receives more freight than it ships
 - Freight coming in supplies the **energy sector** and local transient population
 - Energy freight going out uses **other modes** (e.g. pipelines)
- Lubbock, Tom Green, and Howard Counties** are busy in both directions

Source: TxDOT SAM and TRANSEARCH database

Corridor Freight Commodities Outbound by County - 2018



Outbound Commodities on the Corridor



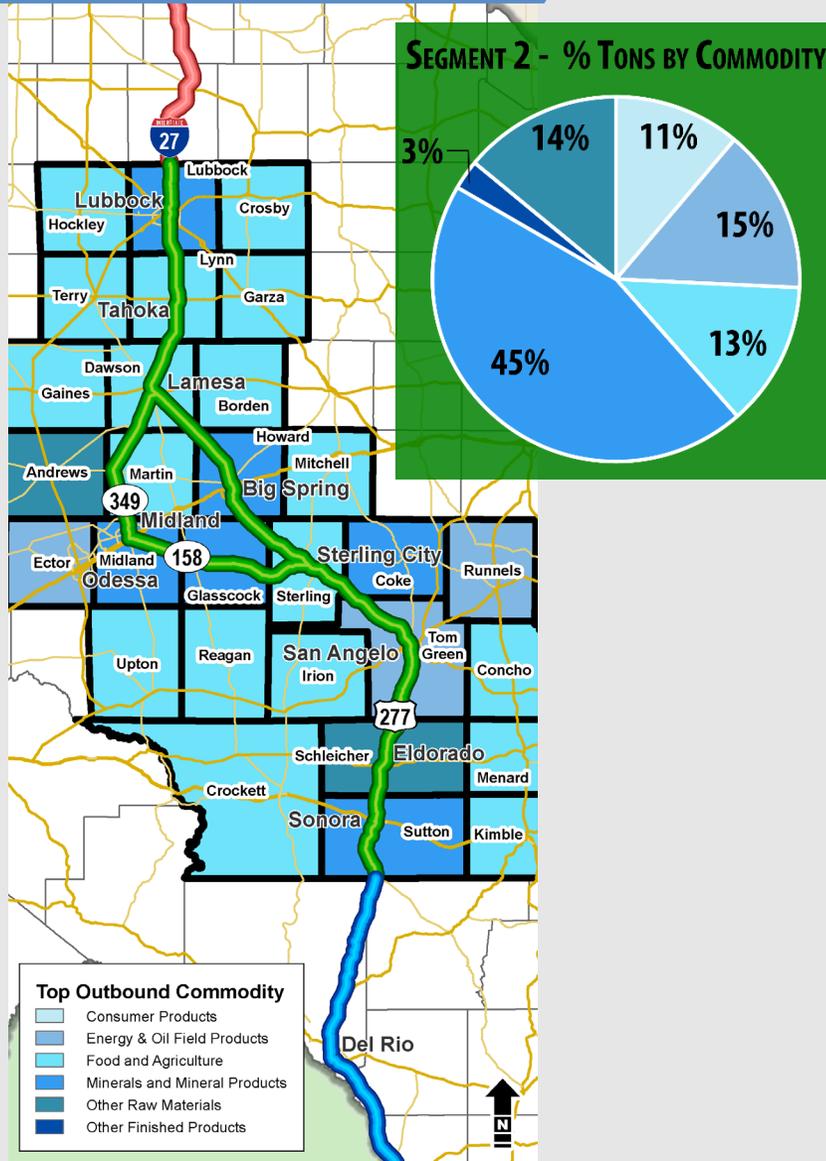
- The mix of **outbound commodities** by truck differs along the corridor:
 - **Food and agriculture** is most prominent in the Panhandle
 - **Mineral products** - including frac sand - are more than half the volume in the Permian Basin
 - **Consumer products** are most prominent further south because of the Laredo gateway
- **Minerals and raw materials** are most often the top commodity in counties on the corridor
- **Food and agriculture** tends to be the top commodity in counties adjacent to the corridor
- **Energy and oil field products** are important across the corridor
 - But truck tonnage is smaller than minerals
 - And other modes also handle outbound shipping

Source: TxDOT SAM and TRANSEARCH database

Segment #2 Freight Commodities: Outbound by County - 2018



Outbound Commodities on the Segment



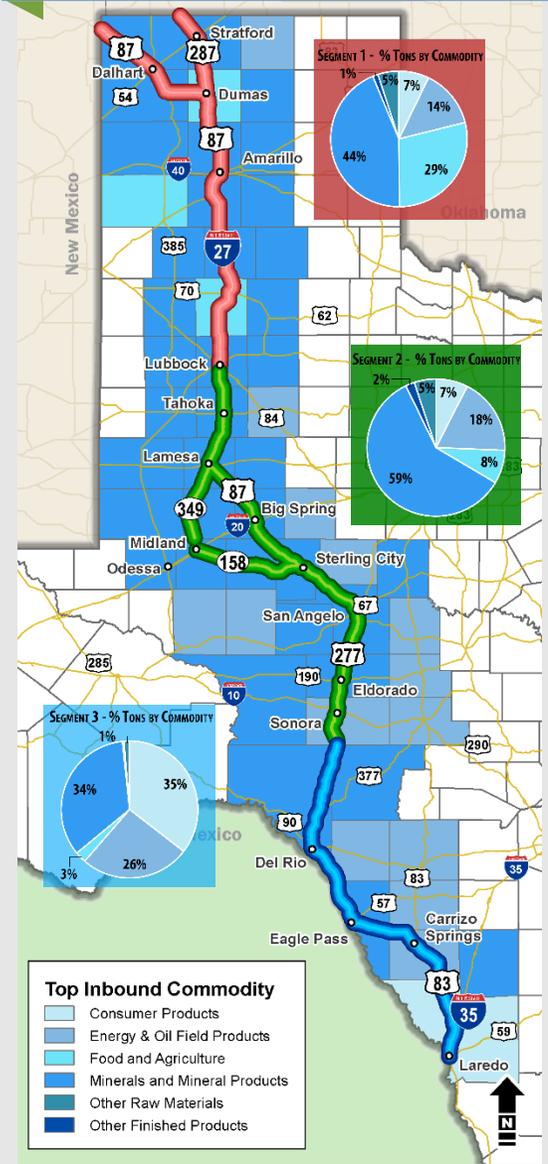
- Highest tonnage of outbound freight on Segment #2
 - **Mineral/Mineral Products (45%)**
 - **Energy and Oil Field Products (15%)**
 - **Other Raw Materials (14%)**
- Outbound commodities is led by **Minerals/Mineral Products** (including frac sand), but is otherwise diverse
- **Energy, raw materials, food/agriculture, and consumer products** are comparable in tonnage
- By county, **Food/Agricultural Products** are often the top commodity – region is a major producer of cotton and grain
- **Energy and oil field products** are important across the segment - other modes also handle outbound shipping of energy products
- **Raw Materials** are important in Schleicher and Andrews Counties

Source: TxDOT SAM and TRANSEARCH database

Distribution of Freight Commodities Inbound by County - 2018



Inbound Commodities on the Corridor



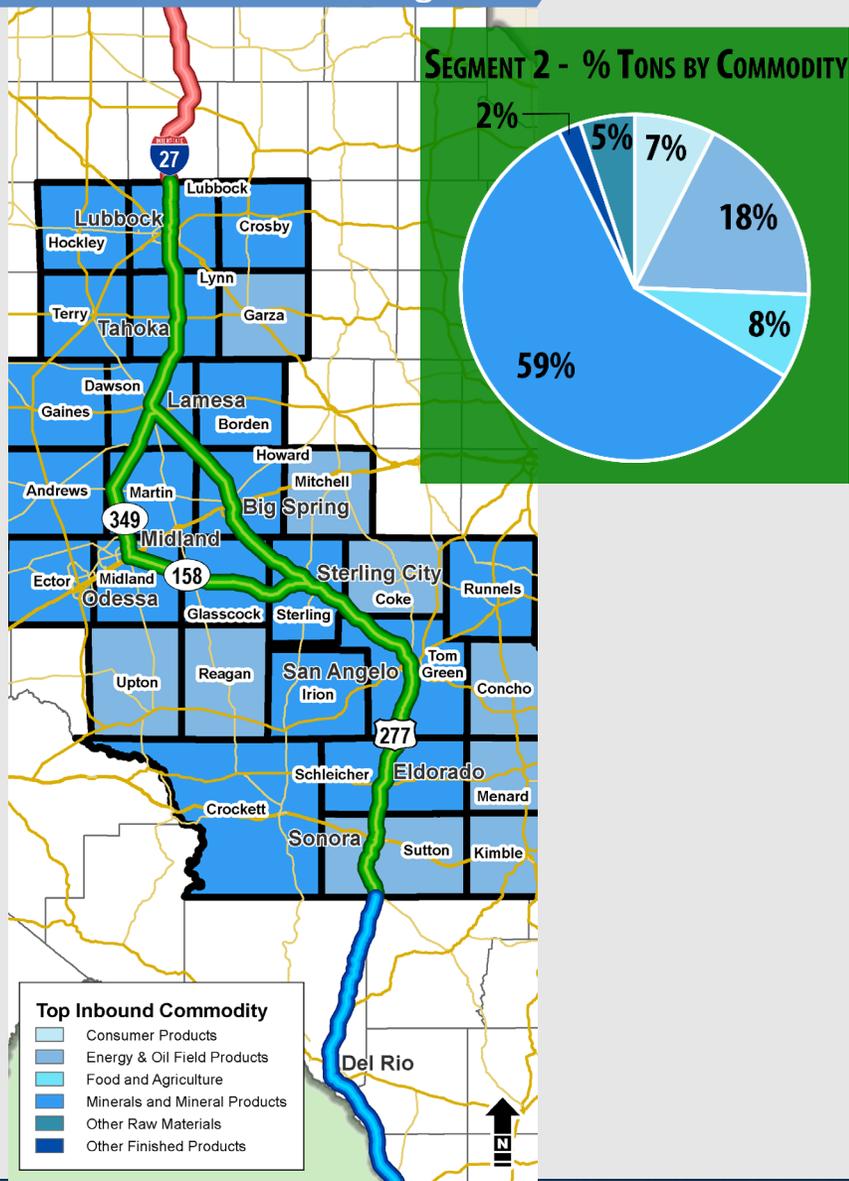
- Inbound commodities** is similar to outbound at the corridor level:
 - Food and agriculture** is most prominent in the Panhandle
 - Mineral products** - including frac sand - are more than half the volume in the Permian Basin
 - Consumer products** are most prominent further south because of the Laredo gateway
- The top inbound commodities by county show **less variation** than outbound:
 - The top commodity is either **mineral products** or **energy and oil field products**
 - The biggest exception is **consumer products** at Laredo, mainly concerned with foreign trade

Source: TxDOT SAM and TRANSEARCH database

Segment #2 Freight Commodities: Inbound by County - 2018



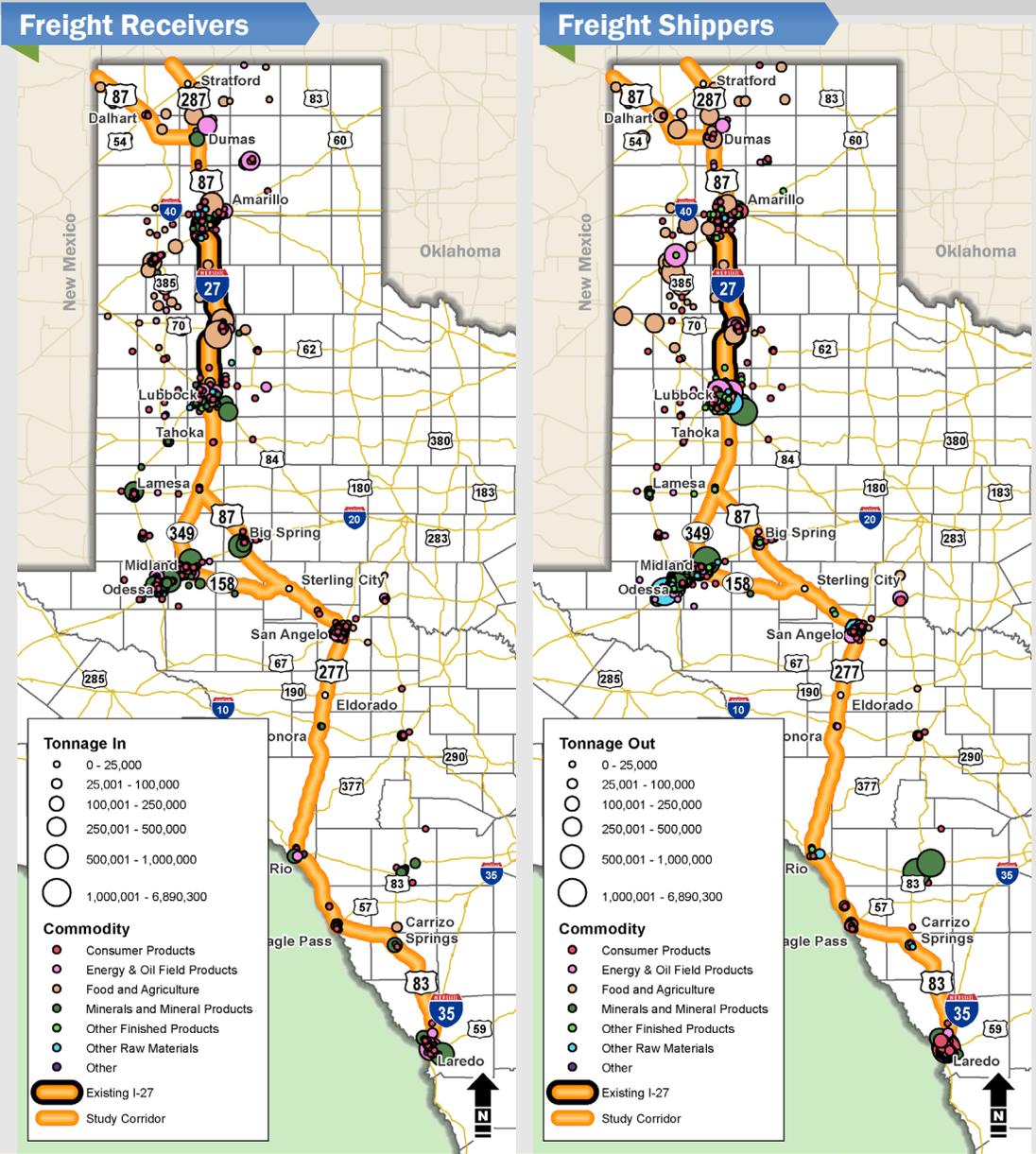
Inbound Commodities on the Segment



- The top 2 highest tonnage of inbound freight products on Segment #2 comprise **77% of total freight coming in** (far more concentrated than inbound):
 - **Mineral/Mineral Products (59%)**
 - **Energy and Oil Field Products (18%)**
- **Minerals and energy products** account for the top commodity in every county
- Minerals include commodities important to production across the region
 - **Frac sand** for the energy sector
 - **Fertilizer** for agriculture
 - **Aggregates** for construction

Source: TXDOT SAM and TRANSEARCH database

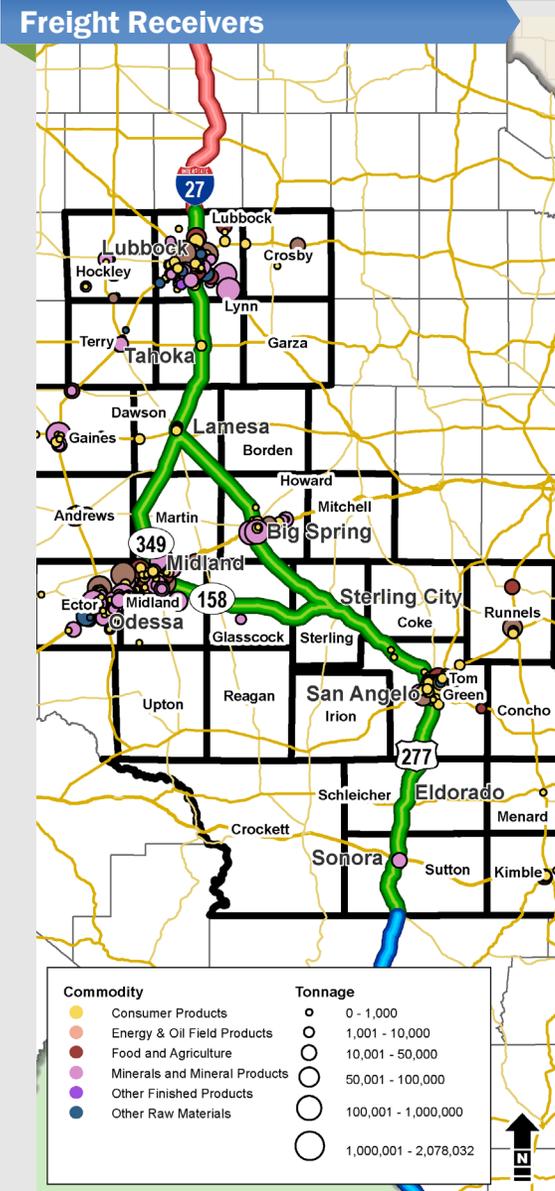
Corridor Businesses Receiving and Shipping Freight - 2018



- Freight generating businesses are concentrated around **population centers**: Amarillo, Lubbock, Midland/Odessa, Laredo
 - Many are smaller and handle diverse commodities
- Large businesses shipping and receiving **food and agricultural products** are in the Panhandle:
 - On and alongside **existing I-27** between Lubbock and Amarillo
 - Further north around Dumas
- Businesses shipping and receiving **mineral products** are prominent further south
- Laredo is a major location for shippers handling **consumer products**, largely in foreign trade

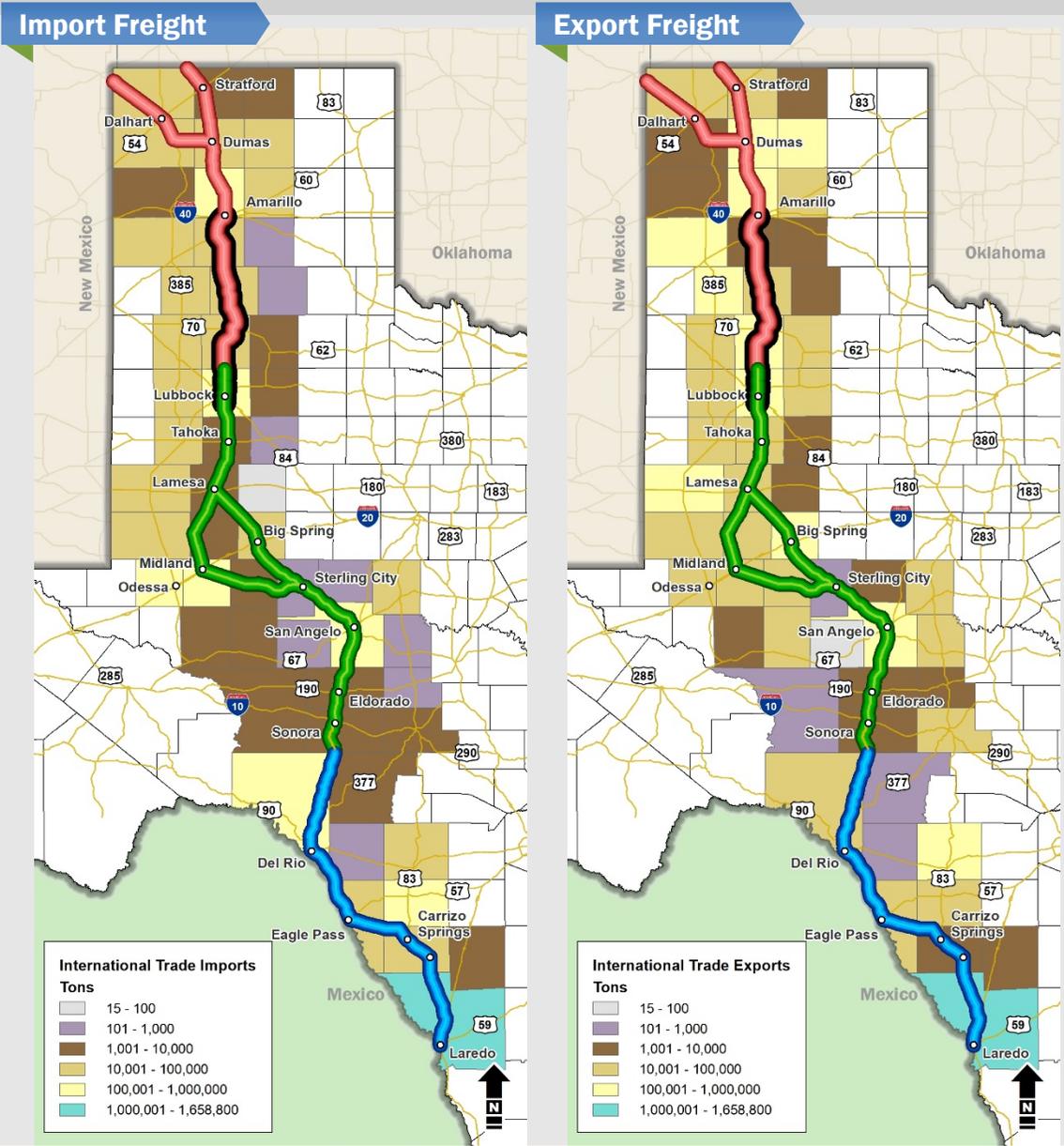
Source: IHS Markit Freight Finder database

Segment #2 Businesses Receiving and Shipping Freight - 2018



- Freight generating businesses are located in production and population centers:
 - Lubbock
 - Midland/Odessa
 - San Angelo
 - Food product receivers are in these locations
 - Major agricultural shippers are in Lubbock, San Angelo and elsewhere
 - Mineral product companies (including frac sand) are in Lubbock, Midland/Odessa, Big Spring, and other adjacent counties
 - Energy sector shippers are clustered in Midland/Odessa but spread across Permian Basin
- Source: IHS Markit Freight Finder database

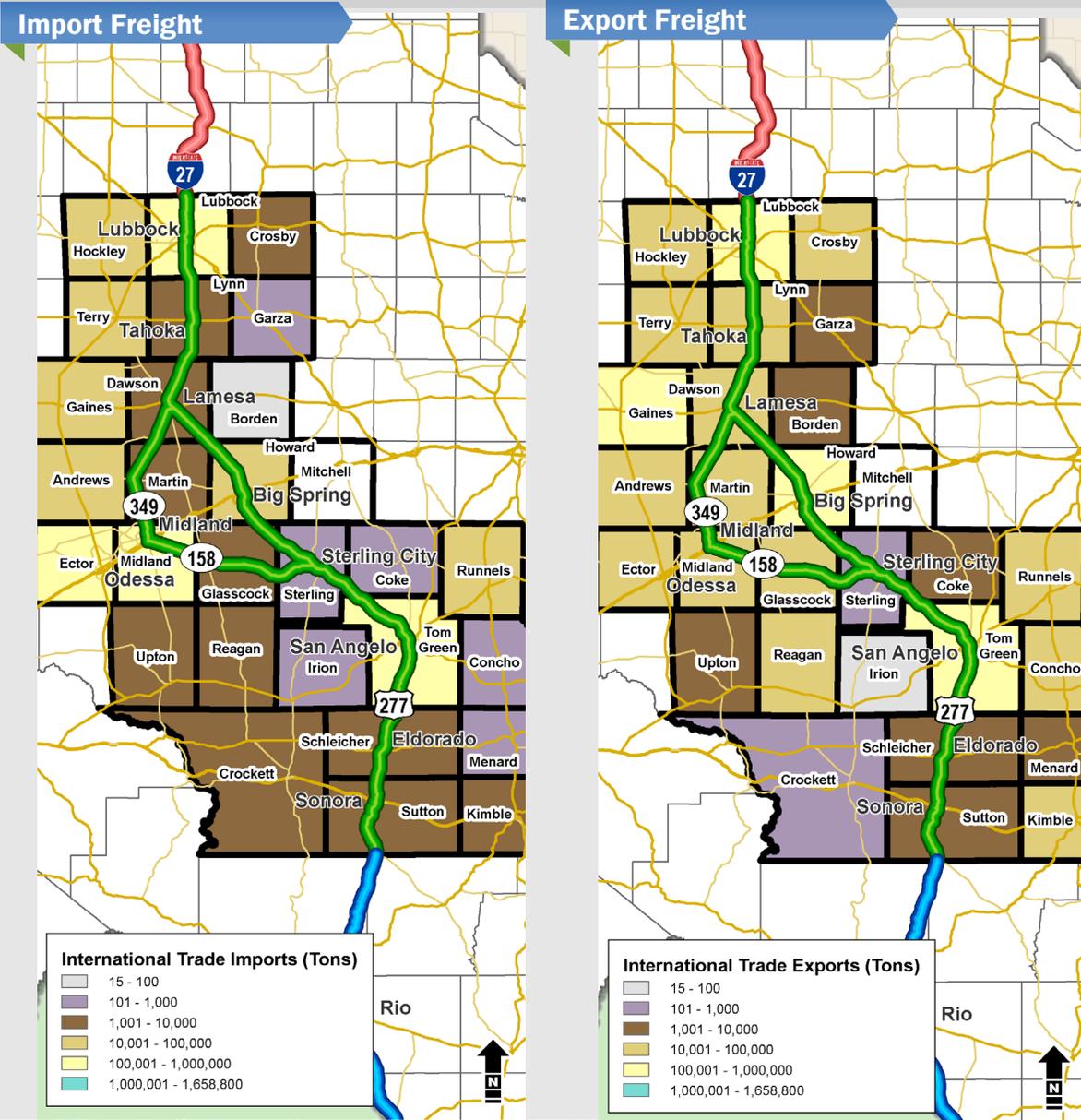
Foreign Truck Trade Across the Corridor by County - 2018



- Foreign trade is chiefly **cross-border trade with Mexico**
 - Also includes Canadian and overseas traffic
- While **Laredo is the top location** for imports and exports, foreign trade appears throughout the corridor
 - Exports from agricultural areas in the **Panhandle** and elsewhere
 - Imports and exports in the **metropolitan** areas
 - Cross-border trucking at **Del Rio and Eagle Pass**
- **Midland/Odessa** receives imports of industrial and consumer supplies
 - Exports also involve other modes

Source: TRANSEARCH database

Segment #2 Foreign Truck Trade by County - 2018



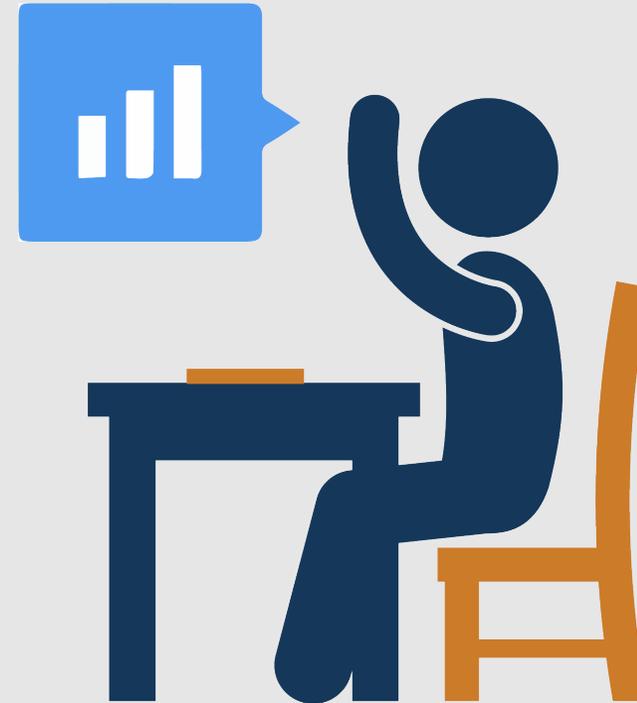
- Foreign trade chiefly **cross-border trade with Mexico**, with some Canadian and overseas traffic
- Foreign trade appears throughout the segment
- Exports** are stronger than imports, particularly in agricultural areas
- Midland/Odessa** imports supplies for the **energy sector**, exports rely on other modes
- All counties have some level of involvement in foreign trade

Source: TRANSEARCH database



Committee Feedback

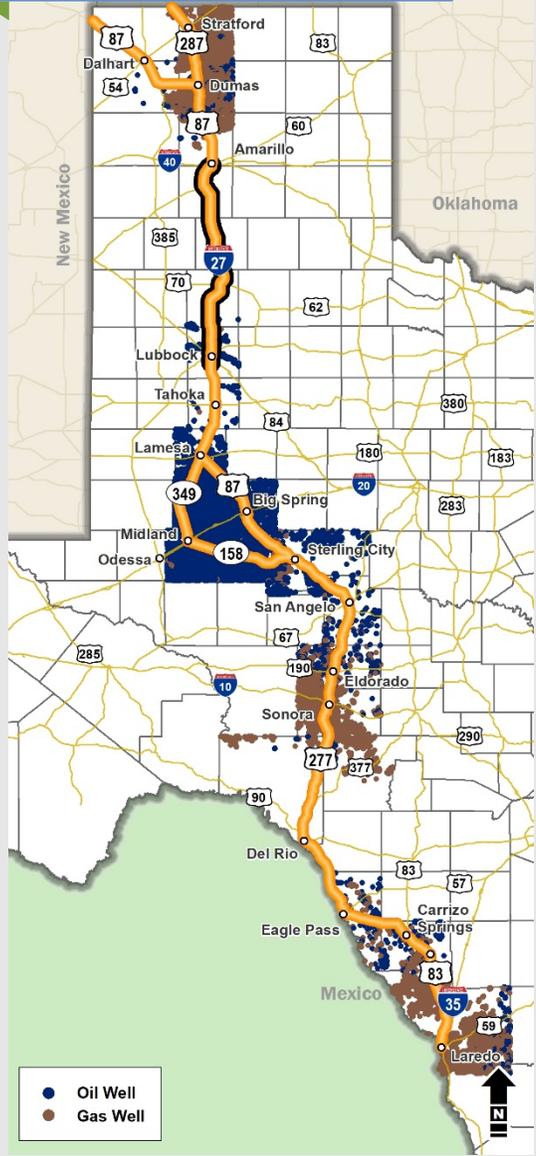
- What are the key needs and challenges for moving people and freight in Segment #2?
- What factors do you think will influence future freight movement in Segment #2?



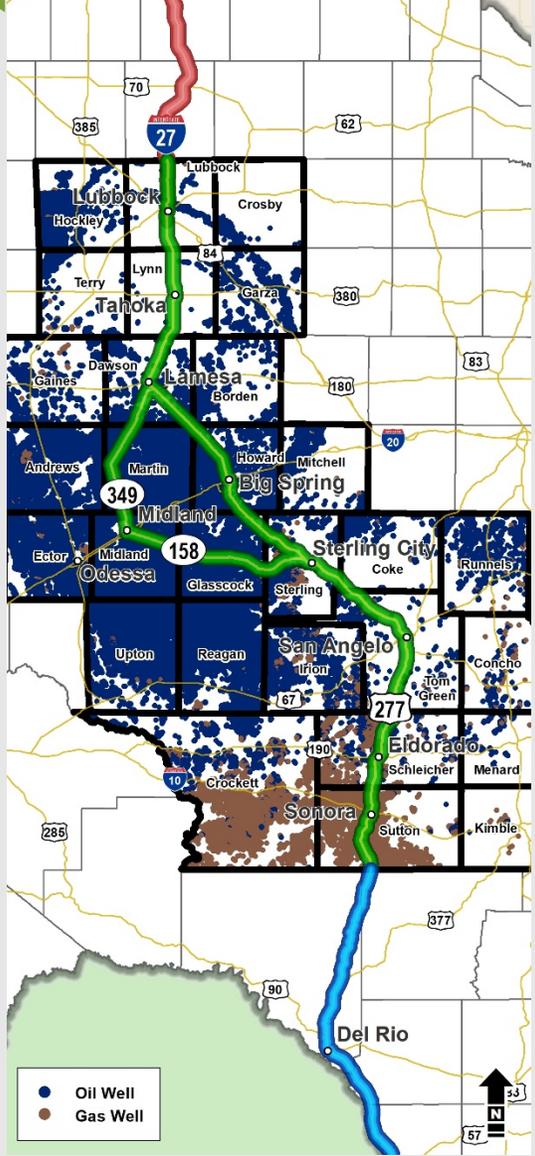
Oil & Gas Wells - 2019



Corridor Well Locations



Segment #2 Well Locations



Corridor Wells

31,971 Oil Wells **15,894** Natural Gas Wells

Segment #2 Wells

84,392 Oil Wells **14,029** Natural Gas Wells

■ **Counties with largest number of oil wells:**

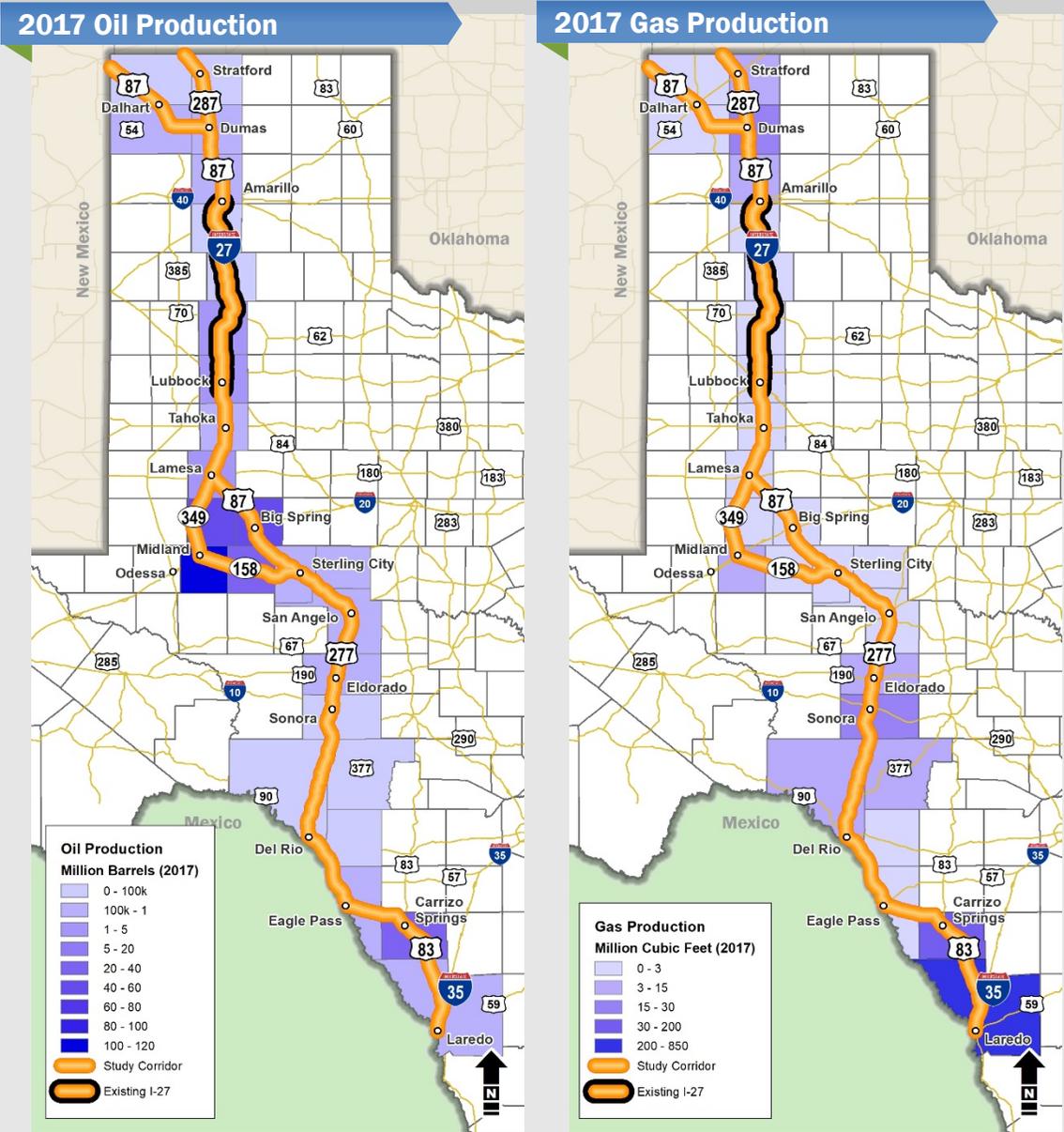
- Andrews County - 11,679 wells
- Ector County - 9,979 wells
- Upton County - 6,307 wells

■ **Counties with largest number of natural gas wells:**

- Sutton County - 6,364 wells
- Crockett County - 5,586 wells

Source: Railroad Commission of Texas - 2019

Corridor Oil & Gas Production by County - 2017



403,174,397

Barrels (BBL)
produced in
2017

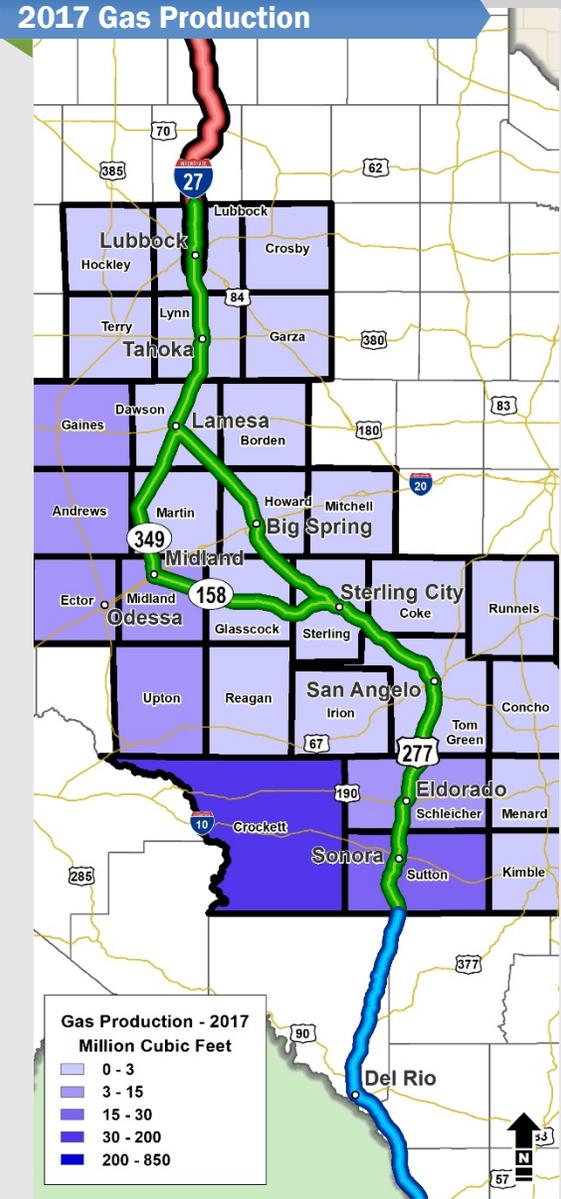
1,076,983,968

Million cubic feet
(MCF) produced in
2017

- **Counties with largest oil production (BBL) in 2017:**
 - Midland County - 109,358,956
 - Martin County - 59,237,942
 - Howard County - 40,405,663
- **Counties with largest gas production (MCF) in 2017:**
 - Webb County - 823,475,132
 - Dimmit County - 196,377,528
 - Sutton County - 25,972,779

Source: Railroad Commission of Texas - 2017

Segment #2 Oil & Gas Production by County - 2017



465,941,314

Barrels (BBL)
produced in
2017

119,639,567

Million cubic
feet (MCF)
produced in
2017

- **Counties with largest oil production (BBL) in 2017:**
 - **Midland County** - 109,358,956
 - **Martin County** - 59,237,942
 - **Upton County** - 53,046,577

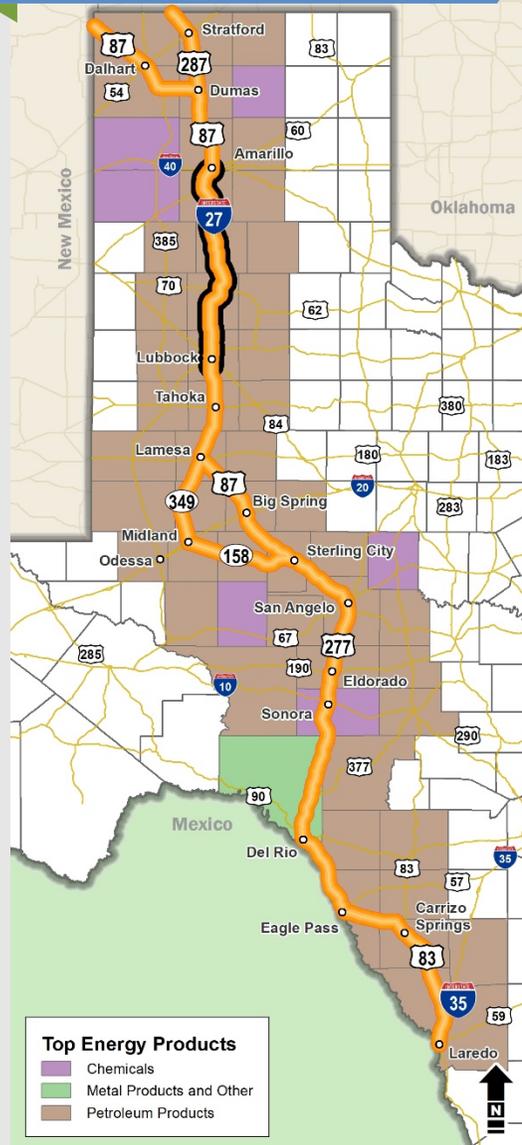
- **Counties with largest gas production (MCF) in 2017:**
 - **Crockett County** - 48,709,617
 - **Sutton County** - 25,972,779
 - **Upton County** - 13,250,324

Source: Railroad Commission of Texas - 2017

Energy/Oil Field Total Tonnage by County - 2018



Corridor Energy Commodities



Segment #2 Energy Commodities



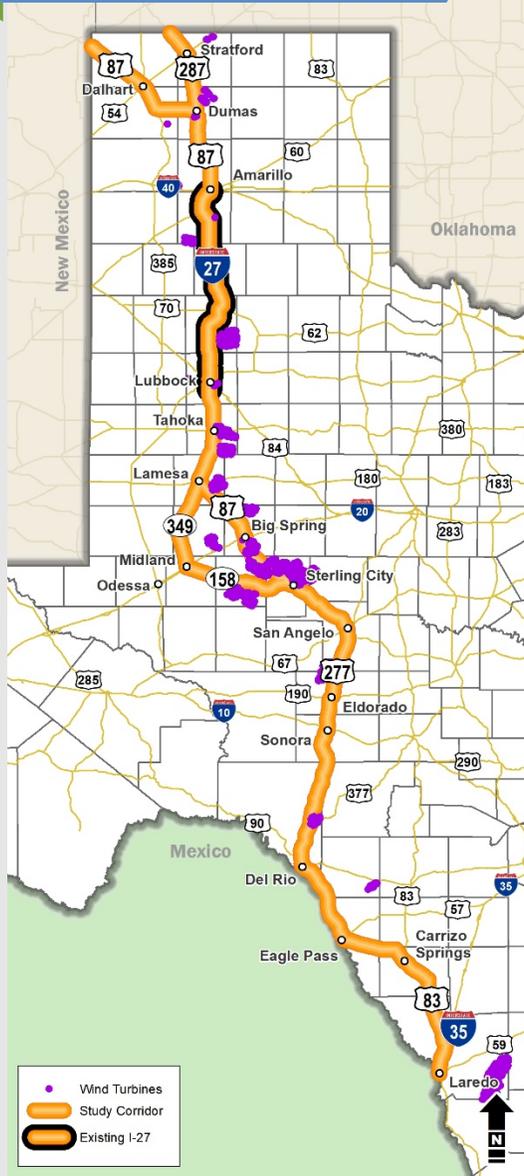
- Freight tonnage of energy commodities is dominated by **petroleum products** corridor-wide.
- Segment #2 is the heart of the Permian Basin, and **energy commodities** appear **throughout** the region.
- Petroleum products account for the **highest tonnage of energy freight** shipped on Segment #2 in and out of most counties,
 - **Chemicals** are the top commodity in Runnels County

Source: TRANSEARCH database

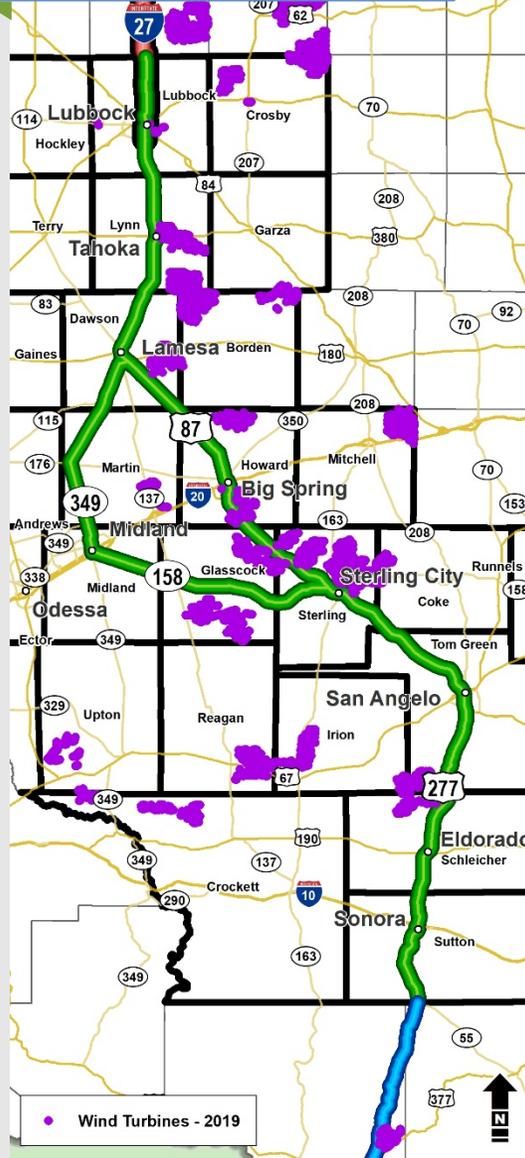
Wind Energy Production - 2019



Wind Turbines - Corridor



Wind Turbines - Segment #2



**Corridor Wind Turbines
6,706**

**Segment #2 Wind Turbines
3,209**

■ **Counties with largest numbers of wind turbines:**

- Sterling County - 598
- Glasscock County - 346
- Lynn County - 239

■ **Counties with highest output (megawatts)**

- Sterling County - 990
- Glasscock County - 678
- Lynn County - 543

Source: Railroad Commission of Texas, Federal Aviation Administration, American Wind Energy Association, U.S. Energy Information Administration, USGS - 2019

Total Agricultural Sales by County - 2017



Total Agricultural Sales - Corridor



Total Agricultural Sales - Segment #2



\$11,106,429,000

Total Corridor Sales of Agricultural Products

- Highest sales are in the Panhandle

\$285,262,000

Total **Segment #2** Sales of Agricultural Products

- **Counties with the highest agricultural sales:**
 - Howard County – \$219.5 million
 - Gaines County – \$188.8 million
 - Terry County – \$136.9 million
- **Counties with the lowest agricultural sales:**
 - Ector County – \$3.4 million
 - Tom Green County – \$7.7 million
 - Midland County – \$7.8 million

Source: USDA 2017 Census of Agriculture

Corridor Crop and Livestock Production by County - 2017



Highest Crop Acreage



Highest Livestock Inventory



Top Crops

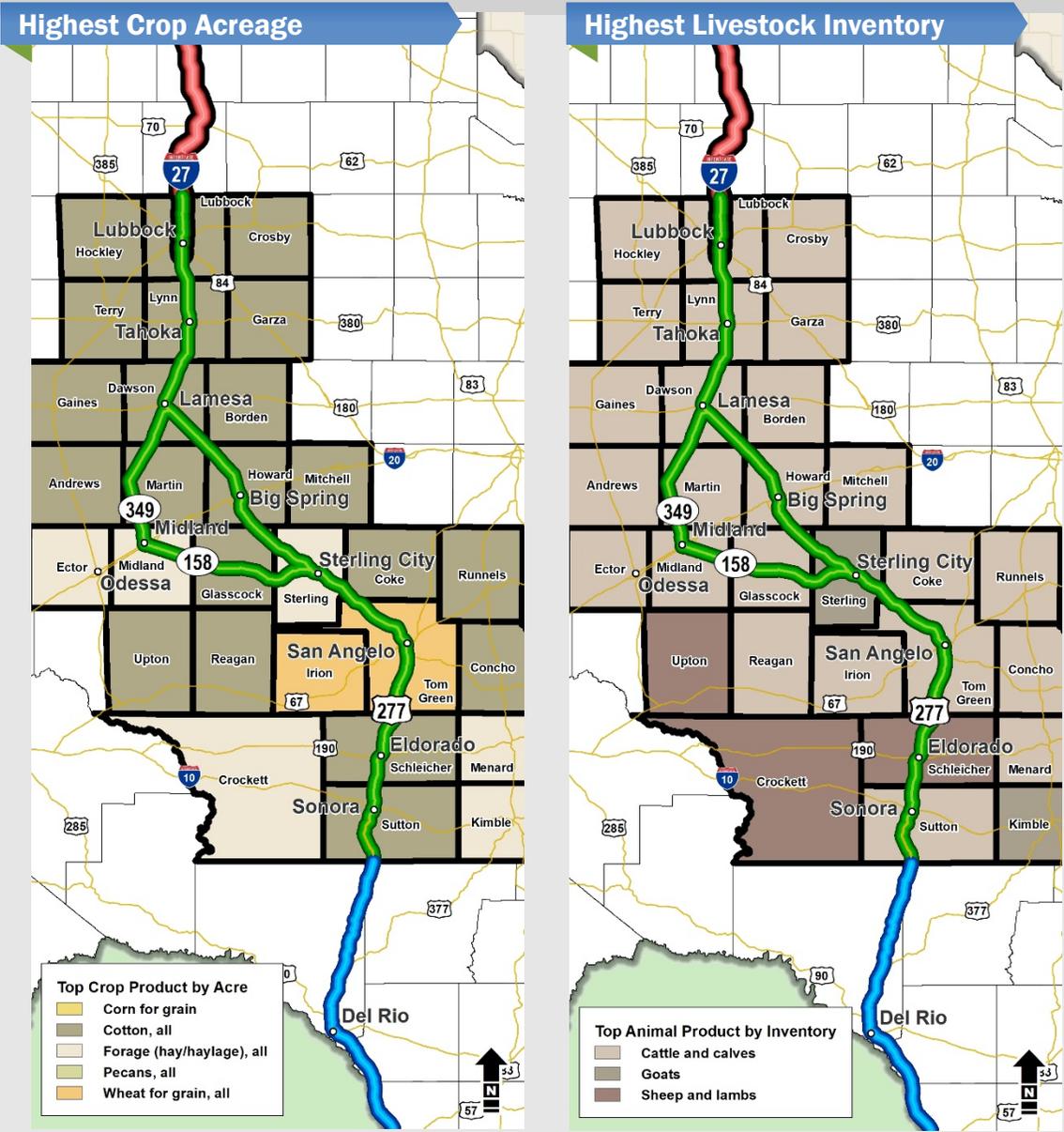
- **Cotton** - 29 of 56 counties (52%)
- **Forage** - 12 of 56 counties (21%)
- **Wheat** - 12 of 56 counties (21%)
- **Corn for grain** - 5 of 56 counties (9%)
- **Pecans** - 1 of 56 counties (2%)

Top Livestock

- **Cattle and calves** - 48 of 56 counties (86%)
- **Goats** - 5 of 56 counties (9%)
- **Sheep and lambs** - 3 of 56 counties (5%)

Source: USDA 2017 Census of Agriculture

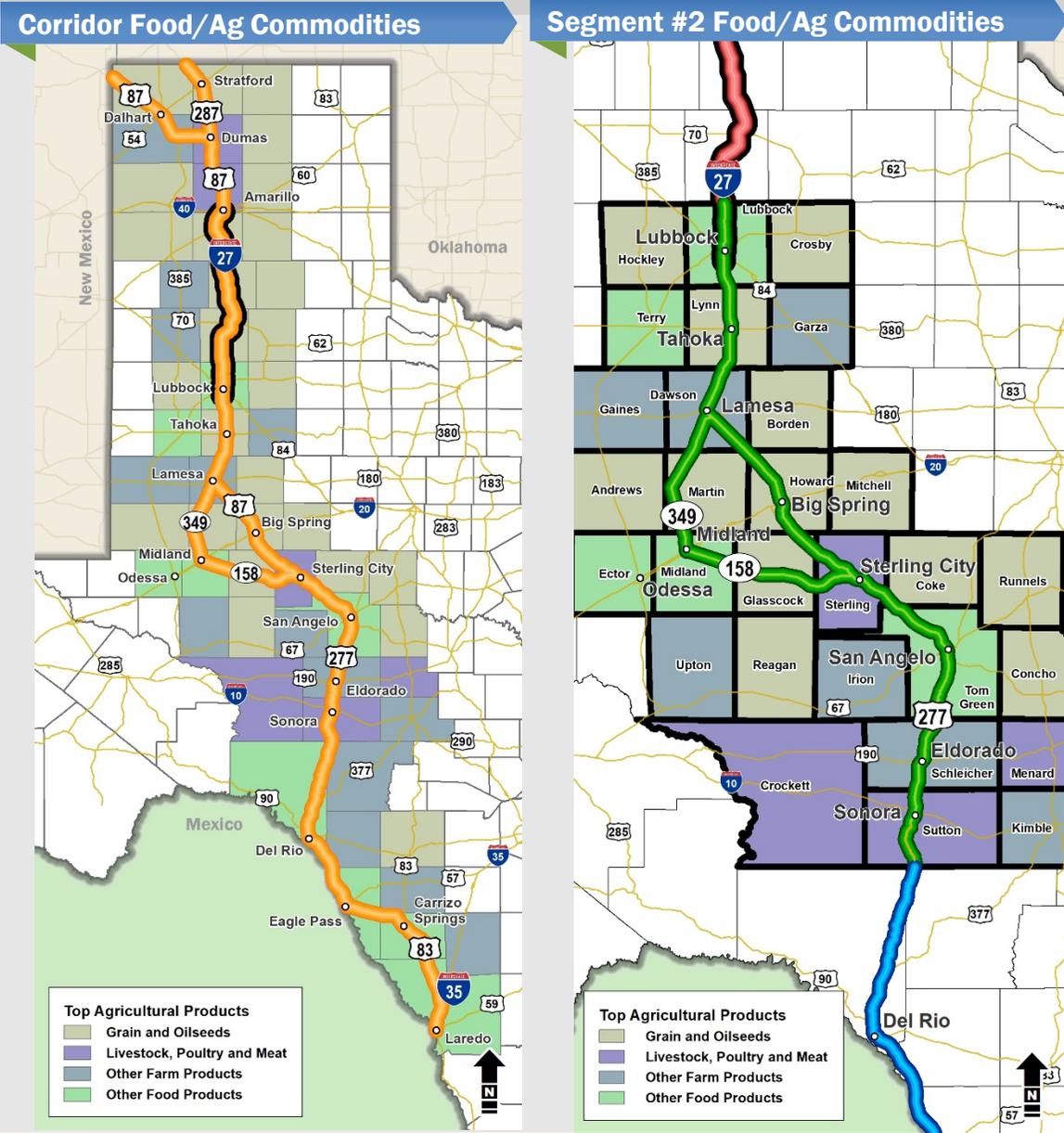
Segment #2 Crop and Livestock Production by County - 2017



- **Cotton** is the top crop by acre in 21 of the 29 Counties in Segment #2
- Other important crops include **forage and wheat**
- **Corn** less important in Segment #2
- **Cattle and calves** are the top livestock products in 24 of the 29 counties in Segment #2
- **Goats and sheep and lambs** are the top livestock product in some of the southern segment counties

Source: USDA 2017 Census of Agriculture, data for Tom Green County unavailable

Food/Agriculture Total Freight by County - 2018



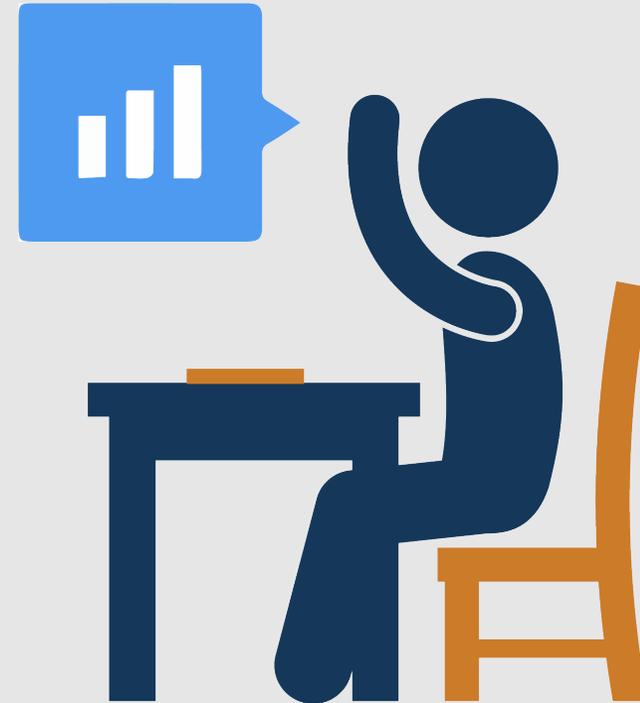
- Freight tonnage of food and agricultural commodities on the corridor is **diverse** and the **leading types change** from north to south
- Segment #2 is cotton country. “Other” farm products – including **cotton** - are **widespread** in the region.
- Grain and oilseeds** are the top tonnage in many counties that also grow other crops.
- Livestock** is significant in the southern end of Segment #2.

Source: TRANSEARCH database



Committee Feedback

- How does energy production influence the transportation needs in Segment #2?
- How does agricultural production influence the transportation needs in Segment #2?





Interstate Facility Design Features

Akila Thamizharasan, TxDOT



The Texas Department of Transportation shall conduct a **comprehensive study** of the Ports-to-Plains Corridor. The study must evaluate the **feasibility of**, and the costs and logistical matters associated with, **improvements** that create a **continuous flow, four-lane divided highway** that meets **interstate highway standards** to the extent possible, including improvements that extend Interstate 27.

Section 1(b) of House Bill 1079

Current Segment #2 Characteristics



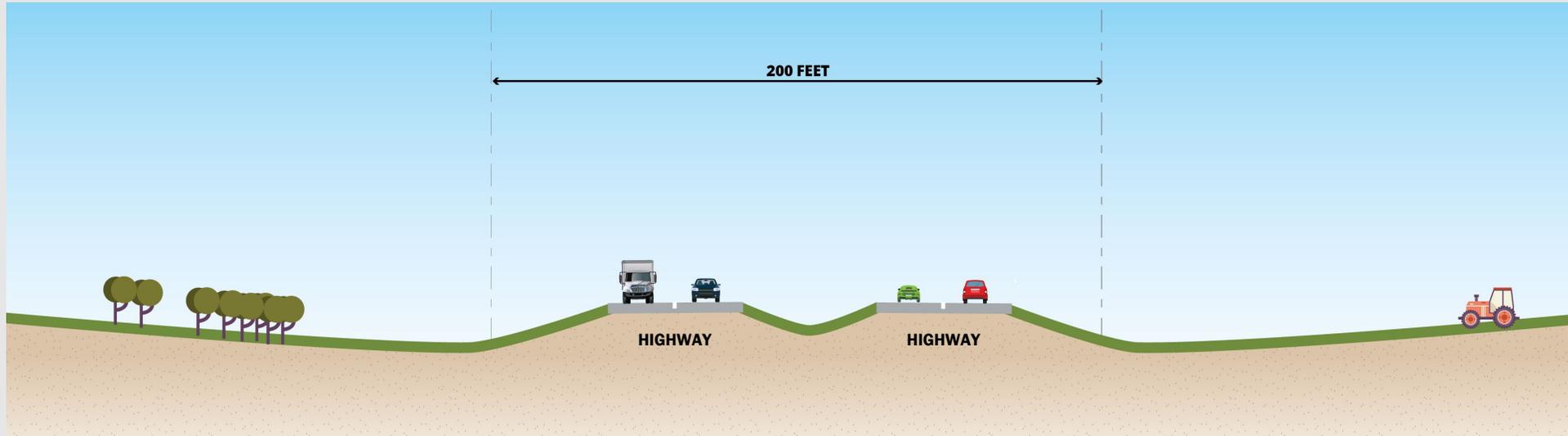
- **173** Miles 4-Lane Divided
- **60** Miles Super 2
- **35** Miles 2-Lane
- **19** Miles 4-Lane Controlled Access
- **94** Miles 4-Lane Undivided
- **24** Miles 5-Lane Urban
- **5** Miles 6-Lane Controlled Access
- **3** Miles 3-Lane Urban
- **5** Miles 8-Lane Controlled Access
- **1** Miles One-Way Pair

Access Control Type

- **368** Miles with **no** access control
- **26** Miles with **full** access control
- **25** Miles with **partial** access control

Source: Texas Roadway Inventory System - 2017

Four-Lane Divided Highway Cross Section



Driveway access to local businesses and residences



Lower design speeds



Smaller right-of-way widths

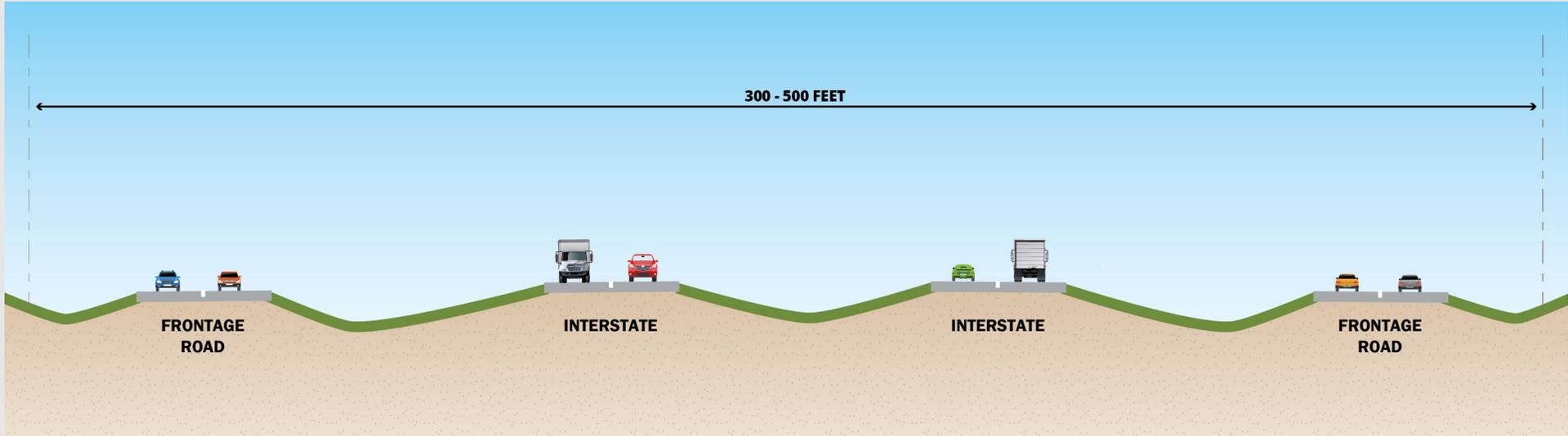


At-grade intersections with other roadways

Segment #2 At-Grade Intersection Example (Near San Angelo)



Interstate with Frontage Roads Cross Section



No driveways connecting to main lanes.



No stop signs or traffic signals on main lanes.



Higher design speeds

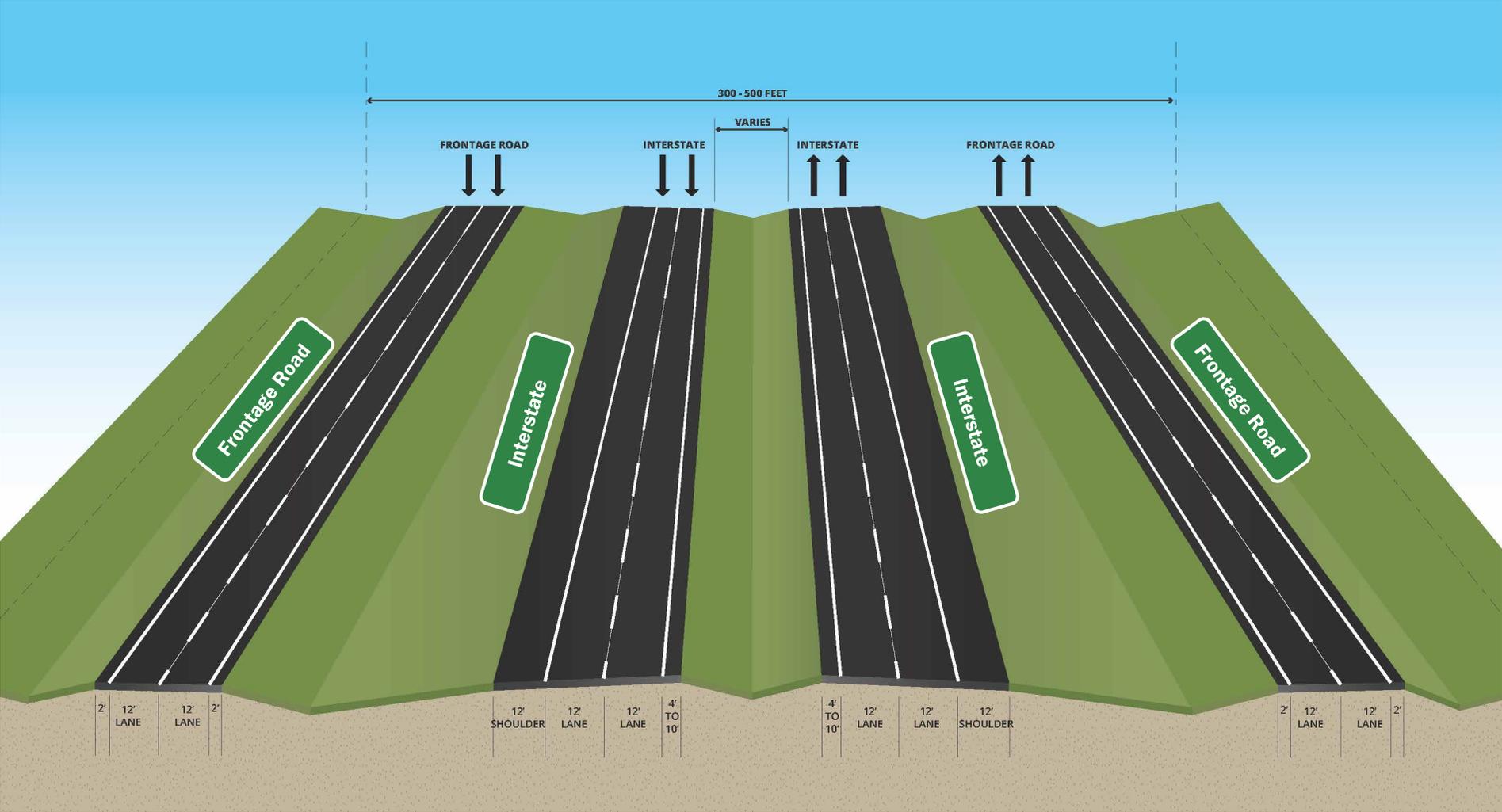


Traffic will flow uninterrupted from one end of the facility to the other. To accomplish this, **overpasses are necessary.**



Larger right-of-way **widths**

Interstate with Frontage Roads Cross Section



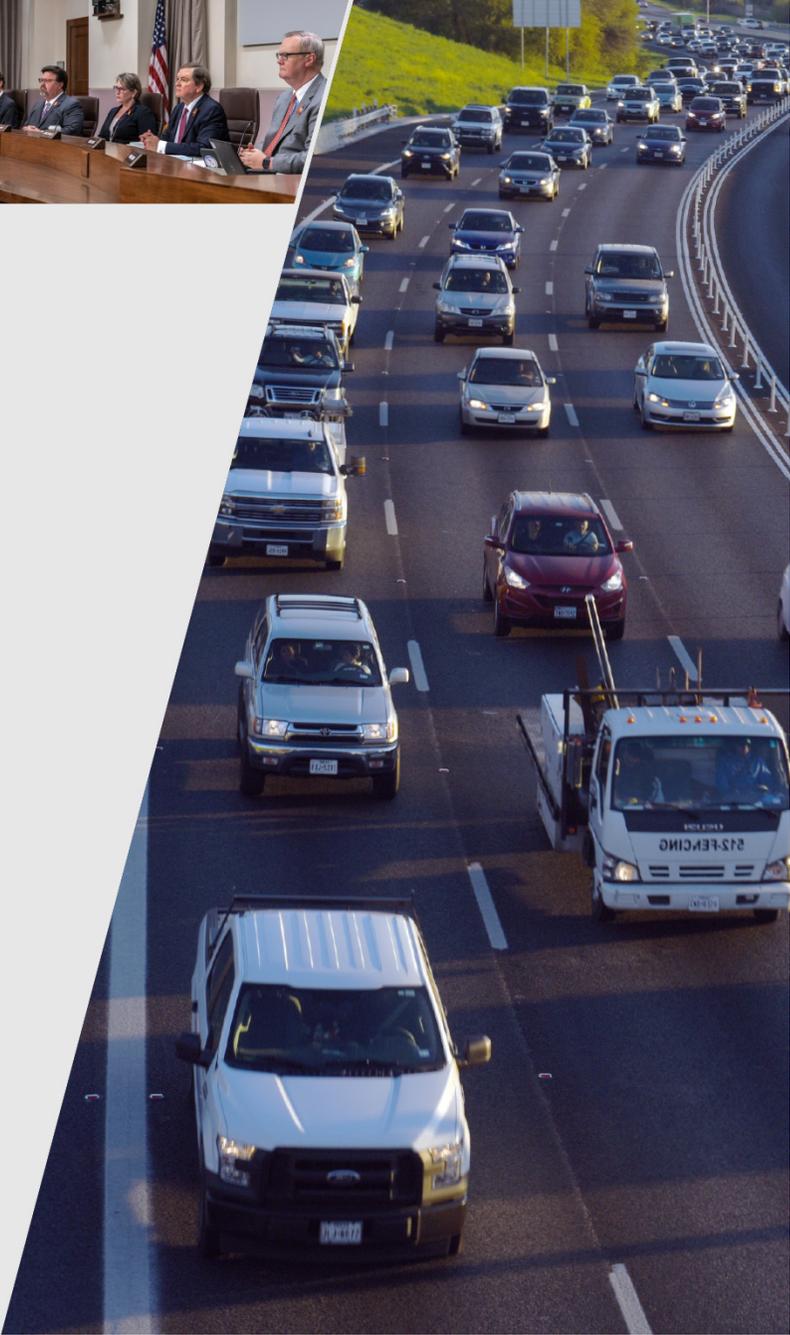
Segment #2 Interchange Example (Near Big Spring)





Nominations and Election of Chair and Vice Chair for the Segment #2 Committee

Dan Pope, Ports-to-Plains Advisory Committee Chair
Blake Calvert, TxDOT



Segment Committees Roles and Responsibilities



Elect

Segment Committees elect chairs and vice-chairs to assist in developing meeting materials



Discuss

Chairs attend pre- and post-Segment Committee Meetings



Participate

Attend Segment Committee Meetings



Comment

Provide feedback on issues and questions presented by TxDOT

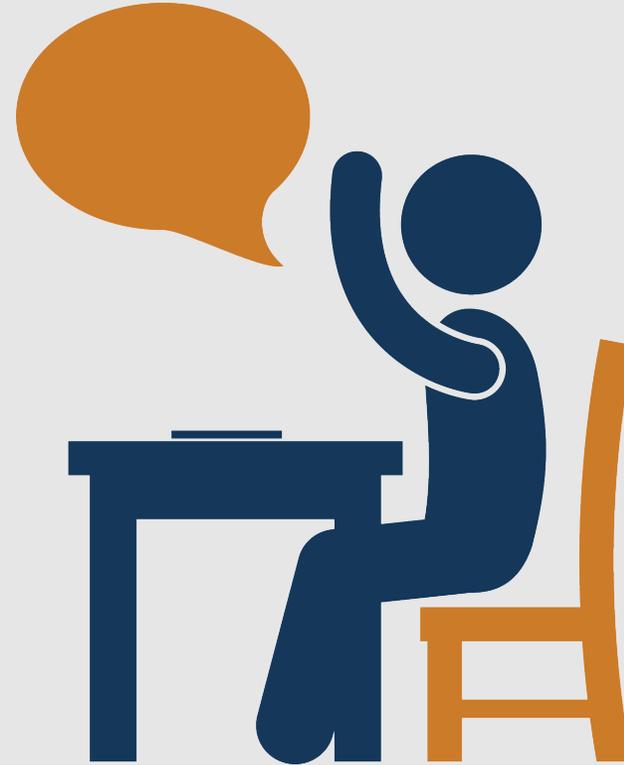


Recommend

Provide segment-specific study recommendations for consideration by the Advisory Committee



Election of Chair and Vice Chair





Segment Committee Report and Chapters 1-3 Outline

Caroline Mays, TxDOT



- Executive Summary
- Letter from the Segment Committee Chair
- 1. Introduction
- 2. Public Involvement and Stakeholder Engagement
- 3. Existing Conditions and Needs Assessment
- 4. Forecasting and Future Conditions
- 5. Segment Feasibility Analysis
- 6. Economic Development Impacts of the Segment
- 7. Segment Improvement Strategies
- 8. Segment Committee Findings and Recommendations
- 9. Financial Plan
- 10. Implementation Plan
 - Figures, Tables, and Appendices



Segment Committee Meeting #2 and Public Meetings

Open Discussion

Akila Thamizharasan, Manager Corridor
Planning Branch, TxDOT

Segment and Public Meeting Logistics



Meeting Locations



There will be four rounds of Segment Committee Meetings and Public Meetings*. The dates and locations of the first round are shown below.

Segment	City	Date/Location
Segment 2	Big Spring	<ul style="list-style-type: none"> November 18, 2019 Hotel Settles
Segment 3*	Del Rio	<ul style="list-style-type: none"> November 4, 2019 City of Del Rio Civic Center
Segment 1*	Amarillo	<ul style="list-style-type: none"> November 20, 2019 Amarillo Civic Center



For each round of public meetings, one meeting will be held on a rotational basis in Amarillo, Laredo, Lubbock, and San Angelo, as mandated per HB 1079.



Desired Outcomes

- Provide a summary of HB 1079
- Discuss the purpose and goals of the corridor feasibility study
- Discuss existing conditions and needs for each segment
- Explain the purpose and structure of the Advisory and Segment Committees
- Provide the planning schedule and next steps



Inform

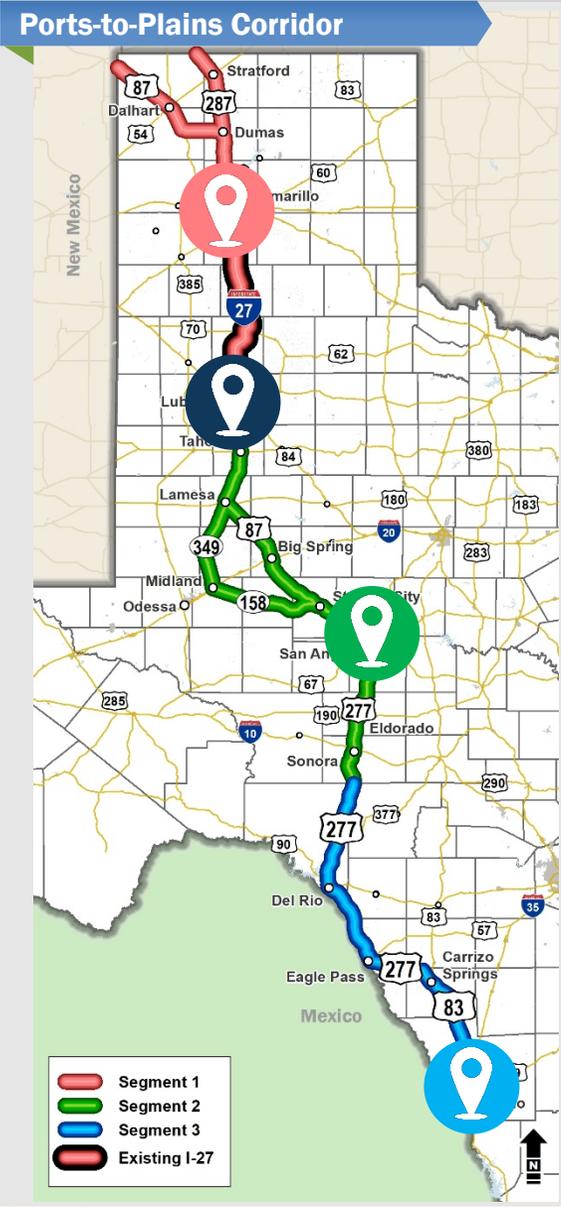
- Handouts
- Exhibits
- Narrated PowerPoint

Consult and Collaborate

- Consistency with Advisory and Segment Committees
- Consult with agency partners

Engage

- Display ads
- Study webpage
- Bilingual outreach
- Live polling (Mentimeter)



Amarillo

- Next Meeting: February 6, 2020



Lubbock

- Next Meeting: March 2020



San Angelo

- Next Meeting: January 23, 2020



Laredo

- Next Meeting: February 3, 2020



February 2020 Meeting #2

Public Meetings
Round 1 Summary

Invited Speakers -
Various Topics

Forecasting and Future
Conditions

Measures of
Performance /
Evaluation Matrix

Preliminary Strategies
and Recommendations

Report Chapters

April 2020 Meeting #3

Public Meetings
Round 2 Summary

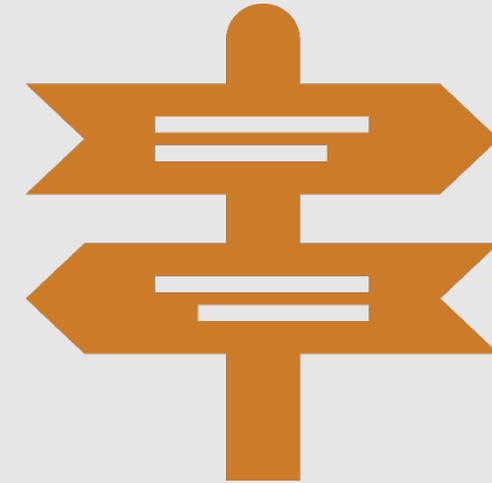
Invited Speakers -
Various Topics

Economic Development
Impacts

Finalize/Prioritize
Recommendations

Financial Plan

Draft Segment
Committee Reports and
Executive Summaries



June 2020 Meeting #4

Public Meetings
Round 3 Summary

Final Segment
Committee Reports and
Executive Summaries



Location

- Segment Committee Meeting
February 5, 2020
- Location
*Concho Valley Transit District
Annex Building
San Angelo, TX*



For more information visit
www.txdot.gov keyword search
"Ports to Plains"

