

Ports-to-Plains Advisory Committee Meeting Summary

October 1, 2019, 8:30 a.m.
Arbor Hotel and Conference Center
401 62nd St
Lubbock, Texas

Attendees

Advisory Committee Member	Organization	Attendance
Mayor George Arispe	City of Eldorado	Not Present
Mayor John Baker	City of Tahoka	Present
Judge Mike Braddock	Lynn County	Present
Judge Charlie Bradley	Schleicher County	Not Present
Mayor Bob Brinkmann	City of Dumas	Present
Mayor Ramsey Cantu	City of Eagle Pass	Present
Judge Terri Beth Carter	Sherman County	Present
Judge Bryan Cox	Martin County	Present
Judge Steve Floyd	Tom Green County	Designee Present (Guy Andrews)
Judge Ronnie Gordon	Hartley County	Present
Mayor Brenda Gunter	City of San Angelo	Present
Judge Kim Halfmann	Glasscock County	Present
Mayor Phillip Hass	City of Dalhart	Designee Present (James Stroud)
Judge Deborah Horwood	Sterling County	Not Present
Mayor Lane Horwood	City of Sterling City	Not Present
Judge Ernie Houdashell	Randall County	Not Present
Judge Terry Johnson	Midland County	Not Present
Judge Harold Keeter	Swisher County	Present
Mayor Bruno Lozano	City of Del Rio	Present
Mayor Jerry Morales	City of Midland	Present
Judge David B. Mull	Hale County	Present
Mayor Ginger Nelson	City of Amarillo	Designee Present (Jared Miller)
Judge Foy O'Brien	Dawson County	Present
Judge Lewis G. Owens, Jr.	Val Verde County	Not Present

Judge Curtis Parrish	Lubbock County	Present
Judge Francisco G. Ponce	Dimmit County	Not Present
Mayor Dan Pope	City of Lubbock	Present
Mayor Ricky Reed	City of Stratford	Not Present
Judge Johnnie “Rowdy” Rhoades	Moore County	Designee Present (Dee Vaughan)
Judge Wesley Ritchey	Dallam County	Present
Mayor Pete Saenz	City of Laredo	Not Present
Judge David R. Saucedo	Maverick County	Not Present
Mayor Wayne Seiple	City of Carrizo Springs	Not Present
Judge James Tullis Shahan	Kinney County	Not Present
Judge Souli Asa Shanklin	Edwards County	Not Present
Mayor Wanda Shurley	City of Sonora	Designee Present (Arturo Fuentes)
Judge Steven H. Smith	Sutton County	Present
Judge Hal Spain	Coke County	Not Present
Mayor Josh Stevens	City of Lamesa	Not Present
Mayor Shannon Thomason	City of Big Spring	Designee Present (John Medina)
Judge Tano E. Tijerina	Webb County	Not Present
Mayor David Turner	City of Odessa	Designee Present (Phillip Urrutia)
Judge Kathryn Wiseman	Howard County	Present
Judge Nancy Tanner	Potter County	Designee Present (Sebastin Ysaguirre)
Texas Transportation Commission		
Commissioner Alvin New	Texas Transportation Commission	Present
State Legislators		
State Senator Charles Perry	District 28	Present
State Representative Four Price	District 87	Present

Texas Department of Transportation (TxDOT)

Caroline Mays	Tim Juarez
Brian Barth	Steve Linhart
Dianah Ascencio	Sherry Pifer
Loretta Brown	Norma Rios
Blake Calvert	Peter Smith
Emily Clisby	Rusty Smith
Brian Crawford	John Speed
John DeWitt	Akila Thamizharasan
Kylan Francis	Trent Thomas
Lauren Garduno	Steve Warren
Carl Johnson	Neil Welch
Mark Jones	Casey Wells

Consultant Team

Wendy Travis	Garver	Joe Bryan	WSP
Jon Hetzel	Garver	Casey Carlton	WSP
Jerry Holder	Garver	Ruben Landa	WSP
Kirsten McCullough	Garver	Michael Penic	WSP
Tracy Michel	Garver	Rachel Lunceford	HG Consult
Michael Spayd	Garver	Lena Camarillo	PCI
Sean Wray	Garver		

Other Attendees

Christina Allen	LEDA
Jarrett Atkinson	City of Lubbock
Brad Baldrige	Xcel Energy
Jeremy Barbee	Lubbock Chamber of Commerce/Roy Neal Insurance
John Bariou	San Angelo Development Corporation Transportation Committee/Ports to Plains Alliance
James Beauchamp	Motran Alliance
Keith Bryant	Lubbock-Cooper Independent School District
Rey Carrasco	Kimley-Horn
Abel Castro	Lubbock Chamber of Commerce
Kevin Carter	Amarillo Economic Development Corporation
Kasey Coker	High Ground of Texas
Jennifer Davidson	Lubbock County
Kelly Davila	SPAC
Marie Evans	Lubbock Chamber of Commerce
Riescella Greiner	Lubbock Chamber of Commerce
Darren Grimes	Lubbock Chamber of Commerce
Kent Hance	Scarborough
Shannon Harmon	Senator Perry
Lindley Herring	US Representative Jodey Arrington
Duffy Hinkle	Ports to Plains Alliance

Ports-To-Plains Advisory Committee Meeting #1
October 1, 2019, Lubbock, Texas

December 2, 2019

Katrina Hodges	Lubbock Chamber of Commerce
Cheri Huddleston	Hance Scarborough
Norma Ritz Johnson	Lubbock Chamber of Commerce
H. David Jones	Lubbock Metropolitan Planning Organization
Shara Kanechny	Lubbock Chamber of Commerce
Heather Keister	Freese and Nichols
Jennifer Kiely	Joe's Wife
Joe Kiely	Ports to Plains Alliance
Chris Mandrell	Citibus – Lubbock
Kaley Mathis	US Representative Jodey Arrington
Eddie McBride	Lubbock Chamber of Commerce
Kaci Morris	US Congressman Jodey Arrington
Jeff Moseley	Texas Association of Businesses
Shelley Nutt	Lubbock Chamber of Commerce
John Osborne	Ports to Plains Alliance
Mary Owen	US Senator Ted Cruz
Tim C. Pierce	South Plains Association of Governments (SPAG)
Joel Riedel	Senator Cornyn
Milton Rilax	Ports to Plains
Gayalle Rubbo	Staffer
Pat Sims	City of Dumas
Danny Soliz	Workforce
Russell Thomasson	Lubbock National Bank
Jonah Tuls	Fox 34 TV
Fred Underwood	Trinity Company
Cameron Walker	Midland/Odessa Metropolitan Planning Organization
Victoria Whitehead	High Plains Water District
Andrew Wood	Fox 34 TV

1. Welcome

Brian Barth, TxDOT Director of Project Planning and Development, welcomed the attendees to the meeting.

Facility Safety Briefing

Rob Myer, General Manager of Arbor Hotel gave a safety briefing in case of emergencies.

Agenda Review

Mr. Barth discussed the importance of the study. There is a need for north-south connectivity, and the Texas 86th Legislature has asked TxDOT to work on this project. He introduced Caroline Mays, TxDOT Director of Freight, Trade and Connectivity Section, Transportation Planning and Programming Division, and said it is a great team working on this project. There is a lot to accomplish with the Advisory Committee as well as the entire study.

City of Lubbock Mayor Dan Pope welcomed the group to Lubbock. He thanked State Representative Four Price, State Senator Charles Perry, Texas Transportation Commissioner Alvin New, Judge Jeff Moseley, Congressman Arrington's Staff (From Washington DC), city managers, and TxDOT staff, including Caroline Mays. He gave recognition to the 2020 Unified Transportation Program, Freight Mobility Plan, and the 68 cities, counties, and MPOs that support House Bill (HB) 1079. Mayor Pope stated that the Freight Mobility Plan identified the Ports-to-Plains Corridor as a strategic corridor. Mayor Pope stressed connecting Interstate 27 (I-27) to Laredo will be critical to the economic prosperity of Texas. Fuel, food, and fiber movement is critical. In order for the state to grow, we must focus on this type of work. Mayor Pope also stated that the business case for the extension of I-27 is not going to be based on traffic or data. Courageous leadership will be required.

Caroline Mays welcomed and thanked the attendees for participation. She then circulated a sign-in sheet for committee members to sign. Only members of the committee will participate in the survey questions using an online application called Mentimeter and discussions. Public meetings will be held specifically for the public in November. Ms. Mays went through the contents of the handout packet and told committee members this was a hands-on meeting. Texas Transportation Commissioner Alvin New was the facilitator of the meeting.

2. Opening Remarks

Texas Transportation Commissioner Alvin New recognized former Commissioners Fred Underwood and Jeff Moseley and introduced State Senator Charles Perry, District 28.

Senator Perry thanked TxDOT. He explained the Bill was prescriptive but had to leave flexibility for planning. The need for connectivity, agriculture, and energy as they drive the Texas budget, and the state's largest trading partner is Mexico. The bill contains practical and pragmatic language. Senator Perry thanked his staff, Shannon Harmon, and State Representative Price. He stressed TxDOT is deliberate in wanting input up and down the corridor, and feedback from this committee is critical. Senator Perry also stressed that the study is as good as the committee participates and that the right data is needed for the right outcome. This study must be taken seriously. There is a need to engage everyone, including chambers of commerce and economic development entities. Senator Perry introduced State Representative Four Price, District 87.

State Representative Price said House Bill (HB 1079) was a great bill to help author and contribute to. He thanked all attendees for coming and for their feedback over the next year. HB 1079 will require a meaningful document for the future of the region and state. He noted the many advocates who were in attendance. Representative Price explained that the state population is rapidly expanding, and there is a need for connectivity for agriculture, energy, and commerce. It is critical to lay the foundation now. Representative Price stressed that the results of the study should not be checking a box, but a document that is meaningful and good for the future of the corridor. He thanked Senator Perry for work on the bill and TxDOT for being organized through the process. The feasibility study is good for moving us forward.

Commissioner New encouraged attendees to think about the future. According to the state demographer, by 2045/2050, Lubbock County is projected to be 500,000 people, the Amarillo area (Potter County and Randall County) is projected at over 500,000, Midland County is projected at 590,000, Ector County is projected at 495,000, Andrews County is projected at 270,000 and Tom Green County is projected at 225,000. Many others will be increasing. We need to think about the future in terms of West Texas growth. Approximately 1.3 million people are projected to be living in

West Texas by 2050. If this type of population existed in other states, an interstate would be required. Laredo is in the top three ports in the U.S, along with Los Angeles/Long Beach, New York, along with other major ports like Miami, Houston and Seattle.; with tariffs in place, it is number one.

Laredo provides connectivity to Corpus Christi and Houston. There is \$109 billion in trade with Mexico and include storage tanks, automobiles, and equipment. The United States sends agricultural products and energy products into Mexico. Laredo is a huge port, and there is only one major interstate (I-35). It consists of one bridge with seven lanes turning into two lanes. Cotton and oil/gas are huge factors in Texas. Commissioner New also stated that economic development requires roadways. Commissioner New asked the Advisory Committee to remain conscious of the state's budget. Push hard to keep the budget at the forefront, only do what is needed. The outcomes of this meeting include Segment Committee formation, chair election (required under TxDOT administration code), and vice-chair election. TxDOT is the vehicle for process and organization. This is a quick process and has a lot of information and milestones to accomplish.

Mr. Barth led introductions. Members of the committee introduced themselves. Ms. Mays introduced her team from TxDOT. Wendy Travis with Garver introduced the consultant team.

3. Overview of HB 1079 Ports-To-Plains Corridor Feasibility Study

Blake Calvert, TxDOT Legislative Liaison, provided an overview of HB 1079. The bill sets the framework for today's agenda. Mr. Calvert quoted the bill saying, "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". Mr. Calvert explained there will be another four Advisory Committee meetings rotated between Lubbock and San Angelo, with the next one being in San Angelo. There will also be Segment Committees which will be comprised of cities, counties, Metropolitan Planning Organizations (MPOs), ports, chamber of commerce, economic development corporations, trucking industry, and other interested parties. There will also be public involvement. The public meetings will be held in conjunction with the Segment Committee meetings. They will be held rotationally at four locations to get a cross-section of the corridor. The entire report will be public.

Midland Mayor Jerry Morales asked if the quarterly meetings were set in stone. Mr. Calvert replied yes. He further explained there are specific deadlines laid out in the bill. He explained the Segment Committee Reports are due by June 30, 2020 to the Advisory Committee, the Advisory Committee shall review and compile the Segment Committee reports and submit them to TxDOT by October 31, 2020, and the feasibility study report required by TxDOT to the Legislature and the Governor is due by January 1, 2021.

Mayor Morales suggested if an opportunity to have a segment committee meeting or public meeting would be possible and added that he would like to see one in the Permian Basin or Midland. Mayor Pope agreed with Mayor Morales. Ms. Mays responded it would be a possibility and TxDOT would work with them on details of the Segment Committee and the public meetings. TxDOT is trying to stay within the requirements of the bill. She said a copy of HB 1079 and the Minute Order are included in the packet handed to attendees.

Ruben Landa from the consultant team explained the online tool, Mentimeter, which allows Advisory Committee members to anonymously provide feedback/input via their phones. Two test questions were given to the committee to verify the operational capabilities of Mentimeter.

4. Feasibility Study Purpose, Goals, Scope and Schedule

Purpose and Goals

Ms. Mays discussed the goals of the feasibility study. She read the purpose and goals exactly as written in HB 1079 and showed a draft map with a proposal for separating the corridor into three segments, which would define the areas of responsibility for the Segment Committees. Goals include transport of products, employment opportunities, relieve traffic congestion, freight movement, maximizing the use of existing highways while striving to protect private property, identification of areas that may be feasible for interstate highway development, project costs, and evaluation funding sources.

Mentimeter Question #1: Which goals of the corridor feasibility study are the most important to you? Prioritize the study goals.

There were 31 responses. The number of responses is in parentheses. They are summarized as: economic development (26), safety and mobility (20), freight movement (18), interstate designation (15), traffic congestion (10), existing infrastructure (9), funding sources (7), energy products (5), project costs (5), and private property (3).

Mayor Pope stated there is the need to discuss other goals of the Ports-to-Plains Feasibility Study, such as diverting traffic from I-35.

Ms. Mays said the goals are specific to HB 1079, and additional goals would be discussed as the next Mentimeter question.

Howard County Judge Kathryn Wiseman explained there are other needs in the area, including the lack of housing near Big Spring and that is limiting growth in the area.

Commissioner New explained there are many factors, but the purpose of this study is to focus on transportation needs. Ms. Mays agreed with Commissioner New and said this is just one piece of the larger picture, but this study would be focused on the requirements of HB 1079.

Mayor Morales asked for an overview of HB 1079. He explained there are a lot of fatal crashes in the Permian Basin and funding is needed for I-20 to improve safety.

Commissioner New said HB 1079 can be found in the packet handed out to attendees. The Bill is prescribed by legislature and focuses on a north-south Ports-to-Plains corridor. The Permian Basin regional freight plan is a second and separate effort.

Mentimeter Question #2: Would you propose a new goal to pursue instead?

There were 27 responses. They are summarized as: no/none (19), relief for and diversion of traffic from I-35 and other major highways (2), and use existing route and ROW to the extent possible (1)

Mayor Pope said potential diversion of traffic from I-35 to I-27 could happen over time and needs to be taken into consideration. Ms. Mays said I-35 traffic diversions will be a factor that TxDOT will examine during the future forecasting analysis phase which will be discussed at the next Advisory Committee meeting.

City of San Angelo Mayor Brenda Gunter asked what would happen when the bridge (*assumed to be the Presidio-Ojinaga Rail Bridge, located between the Cities of Presidio, Texas and Ojinaga, Chihuahua on the United States-Mexico international border*), is expected to open in June 2020. Ms. Mays responded TxDOT would be looking at those traffic projections and freight traffic in the future forecasting analysis phase.

Scope and Schedule

Wendy Travis from the consultant team discussed the study scope and process. Existing conditions set the baseline for the study, and input from the committee is very important in the planning process. After existing conditions are determined, forecasting and future conditions are determined. From this information, preliminary alternatives will be developed. To screen the alternatives, evaluation criteria and an evaluation matrix will be prepared for comparisons. The feasibility study will evaluate economic development impacts of the corridor, analyze corridor improvement strategies, and provide recommendations. A financial plan and implementation plan will be developed as well. These will all be developed with input from the Advisory Committee, Segment Committees and the public. Ms. Travis reviewed the schedule and major milestones of the project. To meet the schedule, efforts will overlap. Ms. Mays added by having a fifth Advisory Committee Meeting, TxDOT is going above and beyond the Bill requirements.

Mayor Pope asked what role Garver has in this project.

Ms. Mays explained that along with TxDOT staff, the consultants will help with meetings, logistics, technical analysis, and reports through the entire process. The consultant team's work will be completed with oversight from TxDOT staff.

Judge Wiseman asked if the meetings will be run in order of the segments. Ms. Mays responded no; they are just shown in order on the timeline.

Mentimeter Question #3: What are your thoughts on the scope and schedule for the Ports-to-Plains Corridor Feasibility Study?

There were 22 responses. They are summarized as: realistic and doable (9) and aggressive/ambitious (8).

10:15-10:30 BREAK

5. Existing Corridor Conditions and Needs

Peter Smith, TxDOT Director of Transportation Planning and Programming Division, opened the next discussion about existing conditions. He explained knowing the current conditions will help determine what is needed for the future for transportation needs. Factors include traffic congestion, physical conditions, pavement, and bridges. He talked about having different perspectives on traffic congestion and asked the group where there were potential opportunities. Mr. Smith explained that TxDOT needs local knowledge from Advisory Committee Members to determine where transportation needs are located.

Mentimeter Question#4: What are the key needs and challenges in the corridor?

There were 23 responses. They are summarized as: safety and congestion (10), connectivity (5), improved road conditions (5), and freight mobility (2)

Judge Wiseman explained heavy truck traffic tears up roads, Mayor Morales said outdated infrastructure and keeping up with growth is a challenge, and City of Amarillo designee Jared Miller said large trucks cause congestion in downtown Amarillo.

Mentimeter Question #5: What are the potential opportunities in the corridor?

There were 24 responses. They are summarized as follows: economic development and commerce (11), safety and congestion (8), and multimodal development and connectivity (5).

City of Del Rio Mayor Bruno Lozano commented access to other corridors could relieve congestion and provide better connections.

Sherman County Judge Terri Beth Carter noted at US 87/54, there are 20,000 trucks per day, causing bottlenecks through Stratford and decreasing connectivity and it is a safety concern.

Akila Thamizharasan, TxDOT Corridor Planning Branch Manager, continued the discussion by reviewing existing conditions. She reviewed the current corridor characteristics including miles of corridor, counties and cities along the corridor, corridor sections, and access control. Ms. Mays asked if there were any comments. Mayor Morales asked what the pros and cons were to access control. Ms. Mays responded four-lane divided highway and interstate access control would be presented and discussed later in today's discussion. Judge Wiseman said a reliever route has been placed around Big Spring and they are ready.

Population and Economic Conditions

Mike Spayd, a member of the consultant team, presented the corridor population growth from 1990 to 2017. Population has steadily increased overall.

Mentimeter Question #6: Do you expect the population in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

There were 26 responses. They are summarized as: exponential growth due to energy sector and border trade (10), as Texas grows so will this region (5), grow but decline in some areas (3), and decline (1).

Judge Wiseman commented not only is oil a factor in West Texas, but wind farms are too. Commissioner New commented there are agriculture and energy inputs in West Texas. Agriculture included cotton, sheep, and goats, along with cattle.

Mayor Gunter commented historically speaking, interstates were created to move military, not to deal with growing populations. She also stated that original interstates were not developed based on population or traffic, but for economic development and connectivity. It is important to be able to move product faster and cheaper. Therefore, we should not rely on traffic counts for determining the need for the corridor.

Mayor Pope commented that Ector County is not included, but Odessa is called out in the bill. It needs to be included in population analysis.

Mr. Spayd continued the presentation by reviewing corridor median household income from 1990-2017, which had also increased in most counties with the strongest growth in the 1990s.

Mentimeter Question #7: Do you expect median household income in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

There were 20 responses. They are summarized as: expected to grow (14), continue to grow due to energy and agricultural production (3), unsure (1), remain the same (1), and decline (0).

Judge Wiseman commented median income would have to increase from current salary levels.

Mayor Pope commented 4,500 new jobs were created in Lubbock in 2018, and more than one-third of the jobs pay in excess of \$50,000. It's important to focus on keeping millennials in the community as they are moving to Lubbock at twice the pace as the U.S. and 40% more than the state rate. He also noticed manufacturing jobs will likely bring employment.

Mr. Spayd continued the presentation by discussing corridor total employment from 1990 to 2017. It has grown over the last 30 years and follows a similar pattern to population growth.

Mentimeter Question #8: Do you expect total employment in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

There were 22 responses. They are summarized as: growth due to economy, energy sector and agriculture (10), growth due to agriculture production and manufacturing (7), remain the same (1), and decline (0).

Mayor Gunter noted technology will play a role as well. Rural areas must keep pace.

People and Freight Movement

Joe Bryan, a member of the consultant team, continued the presentation with corridor total freight tonnage, inbound and outbound freight tonnage, distribution of corridor freight commodities outbound and inbound, businesses receiving and shipping freight, and foreign trade truck tonnage across the corridor.

Mentimeter Question #9: What are the key needs and challenges for moving freight in the corridor?

There were 22 responses. They are summarized as follows: enhance safety (10), eliminate pinch points and bottlenecks (6), and bridge clearance and infrastructure improvement (5).

Judge Wiseman commented there is a problem with connecting roads to highways due to the roads being in disrepair. Bridge vertical clearance issues are also a problem.

Mayor Gunter also noted safety and quality of roads are an issue. Potholes and rundown highways are a problem.

Mentimeter Question #10: Do you expect freight activities and movement in the corridor to grow, decline, or remain the same in the next 30 years? Why?

There were 23 responses. They are summarized as: grow abundantly due to trade and economic development (17), growth due to increased demand as roads are built to handle the increase in supply (2), grow due to better roads (3), remain the same (1), and decline (0).

Mayor Gunter commented with the expected opening of the bridge (assumed to be the Presidio-Ojinaga Rail Bridge, located between the Cities of Presidio, Texas and Ojinaga, Chihuahua on the United States-Mexico international border) in 2020, Laredo being a top port, and lots of goods coming through the Mexico border, freight movement should grow.

Mr. Bryan continued the presentation by discussing energy sector development. Oil and gas wells, oil and gas production, pipelines, and wind were all reviewed. Texas has a huge amount of oil production and is also leading the U.S. with wind energy production.

Mentimeter Question #11: What are the key needs and challenges for moving energy products to markets in the corridor?

There were 20 responses. They are summarized as: connecting roads and highway infrastructure (7), congestion and safety (4), lack of pipeline capacity (3), and sustainable roads with improved durability (3).

Mayor Morales said to look at rail as an example. Fifteen years ago, logistics for energy was completely different. Technological advances could completely change the future, and we need to take into consideration.

Mentimeter Question #12: Do you expect energy development in the corridor to grow, decline, or remain the same in the next 30 years? Why?

There were 23 responses. They are summarized as: grow with the population and increased technological capabilities (16), Wind will grow, mineral will eventually decline as resources deplete. Technology will extend mineral play beyond 30 years (1), wind and solar will grow due to need in the more populated areas already shortages. Need better transmission capabilities (1), remain the same (1), unsure (1), and decline (1).

John Speed, Odessa District Engineer with TxDOT, asked if there was a way of capturing transient populations. There is a growing need for population to come through the area but only stay a short amount of time. Is there a way to capture that population in the study? Mr. Bryan commented we still need to find a way to account for this type of population. There is the potential the populations could be sustained if services are provided. Commissioner New noted that there was no agricultural analysis and that should be done similar to the energy analysis.

Infrastructure Conditions

Mr. Bryan continued the presentation by discussing corridor pavement conditions. Overall, conditions are good. Most are in the good or very good category. However, bridges will need to support a greater volume of traffic in the future.

Mentimeter Question #13: What are the key corridor pavement and bridge needs and challenges?

There were 19 responses. They are summarized as: pothole repair and general maintenance (4), replacement of antiquated bridges and infrastructure (3), increase use of concrete roadways (3), and increased bridge clearance (1).

Mr. Spayd continued the presentation by discussing corridor average daily traffic, growth in traffic volumes, corridor average daily truck traffic, level of service, and corridor existing level of service. He explained what level of services means and showed a map where most areas in the corridor are currently operating at Level of Service A, which is free flowing with easy lane changes. He also explained the existing truck traffic in the corridor and noted truck traffic can cause pavement deterioration but also creates economic development opportunities in the corridor.

Mentimeter Question #14: What are the key bottlenecks, needs, and challenges for moving people and freight in the corridor?

There were 22 responses. They are summarized as: access control (7), diverting traffic to bypass towns and cities (5), multiple lanes and continuous traffic flow without traffic signals (4), and expansion and quality of roads (3).

Safety

Mr. Spayd continued the presentation by discussing safety in the corridor. He reviewed corridor total crashes, corridor truck crashes, corridor fatal crashes, contributing factors to crashes, corridor speeding related crashes (2014-2018), corridor failure to yield/stop crashes (2014-2018), corridor crashes in adverse weather (2014-2018), and corridor intersection related crashes (2014-2018). He noted the highest rates of crashes occur in cities including Midland, Big Spring, and Amarillo. Rates were slightly lower in Lubbock. The most common cause of crashes is speed and failure to stop/yield.

Mentimeter Question #15: What are the key safety needs and challenges in the corridor?

There were 22 responses. They are summarized as: four-lane controlled access (9), less intersections (4), and safety and emergency routes (4).

Judge Wiseman commented north of Big Spring, there are many trucks and there are lots of crashes and fatalities.

Mentimeter Question #16: Which roadway feature contributes the most to safety issues in the corridor?

There were 24 responses. They are summarized as: number of lanes and necessity of turn lanes (7), improved and controlled access with signage (6), and length of interstate highway and driver awareness/ falling asleep (1).

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6. Interstate Facility Design Features

Ms. Thamizharasan explained HB 1079 stated the study should evaluate the need for a continuous flow, four-lane divided highway meeting interstate highway standards to the extent possible. Rachel Lunceford, a member of the consultant team, continued the presentation by explaining the differences between a four-lane divided highway and an interstate with frontage roads. Differences include driveway access, design speeds, right-of-way width, and at-grade intersections. She showed examples of both a four-lane divided highway and a four-lane interstate with frontage roads.

Judge Wiseman asked if frontage roads are always required when designing an interstate. Mr. Barth responded they are not required, but it is a good idea to include them in design as it can become an issue for access in the future. Commissioner New said interstates built in the 1950s (example given: Tyler) are running into those problems currently as the area around the interstate is developed. Judge Wiseman asked if frontage roads would be included if the interstate was constructed. Commissioner New replied the Segment Committee would have input on the frontage roads.

Sutton County Judge Steve Smith said in Sonora, they are hoping to build a safety route could connect to I-27 in the future. He noted it is important to acquire the right-of-way property early on for future frontage roads, even if they are not constructed at the same time as the interstate.

Commissioner New responded that Judge Smith's input was the type of information needed from the Segment Committees to make decisions. Ms. Thamizharasan said right-of-way for interchanges will also need to be acquired.

Mayor Pope asked how much right-of-way TxDOT has along the route already. Ms. Mays responded TxDOT would have information at the next meeting.

Mayor Morales asked if future frontage roads would be one-way. Commissioner New said yes, for safety purposes. Ms. Mays explained this information is outlined in HB 1079, and right-of-way, interstate designation, and reliever routes will all have to be studied. Much of this detail will be discussed by the Segment Committee members.

7. Election of Advisory Committee Chair and Vice Chair

Commissioner New informed the Committee there was one nomination for Chair, Mayor Pope. He opened the floor for other chair nominations. There were no other nominations. He asked for a show of hands by the Advisory Committee members in support of Mayor Pope as the chair. Hands were raised in support, and Commissioner New asked if the Mayor was capable and willing to take on the role. Mayor Pope said he was and was elected as Chairman of the Advisory Committee. Commissioner New then asked for any nominations for Vice Chair. Mayor Gunter nominated Judge Smith. Commissioner New asked for a show of hands in support of Judge Smith for Vice Chair. Hands were raised in support, and Judge Smith agreed to the position of Vice Chair.

Recommendations for Membership of the Segment Committees

Commissioner New explained the Segment Committee Members would be recommended by the Advisory Committee. He also said there would be more information at the segment level at the Segment Committee meetings and agriculture would be discussed in more detail, as there was limited time to prepare that information adequately for the Advisory Committee meeting.

Corridor Segments

Ms. Mays gave background on how the segments were formed. Mayor Pope said Lubbock is technically in two segments and asked if they needed to be involved in both. Ms. Mays said the decision was to be made by them. Lubbock County Judge Curtis Parrish thought it would be best for Lubbock County to be in Segment 2. Mayor Pope agreed. TxDOT will have the segment map updated to show Lubbock County and Lubbock in Segment 2. A motion was made by Mayor Gunter to approve the Segment Committee boundaries as revised and seconded by Mayor Cantu. The Advisory Committee unanimously voted to approve the motion.

Mayor Gunter pointed out both the Chair and Vice Chair would be in Segment 2, and perhaps Sonora should be moved to Segment 3. Judge Smith replied he would attend Segment 3 meetings in addition to Segment 2.

There were a total of 10 Advisory Committee Members representing Segment 1, 14 Advisory Committee Members representing Segment 2, and 2 members representing Segment 3. A total of 26 of the 44 Advisory Committee Members were present for voting.

At this point, representatives from each segment separated into groups to review the lists of potential Segment Committee members. Members were added and removed for each group. The revised lists were shown to the entire Advisory Committee.

A motion was made by Mayor Gunter to approve the Segment 1, Segment 2, and Segment 3 Committee Membership as presented with the changes. The motion was seconded. The Advisory Committee unanimously voted to approve the motion.

A few conflicts with segment meeting dates were discussed. Segment 3 will be scheduled on November 6th and a request to revise the venue to be in Del Rio was made. It was agreed that Segment 2 meetings would be rescheduled to November 18, 2019. To accommodate other conflicts, Segment 3 meetings were rescheduled to November 19, 2019. TxDOT and the consultant team will contact facilities and confirm the dates and locations and send invitations to the Segment Committees.

8. Advisory Committee Report Outline

Ms. Mays continued the discussion by reviewing the Advisory Committee Report outline. She explained that due to a tight deadline, sections of the reports will be presented at each Advisory and Segment Committee meeting for review. Segment Committee meetings will present specific information for their area, and information will be presented to the Advisory Committee at the corridor level. She said the Segment Committees, with support from TxDOT, will prepare reports and make recommendations to the Advisory Committee and the Advisory Committee's report will really be a summary of the Segment Committee's reports and recommendations. She asked if anyone had any comments on the Advisory Committee report outline. No comments were provided.

Judge Wiseman thanked her, the TxDOT staff and their consultants for organizing this meeting and compiling information together in such a short amount of time.

9. Planning for Segment Committee and Public Meetings #1

TxDOT Project Development Manager Steve Linhart presented the Segment and public meeting logistics. There will be four rounds of Segment Committee Meetings and Public Meetings. Segment Committee meetings will be a similar format to the Advisory Committee meeting. Public meetings will be interactive with Mentimeter questions to better engage the public in the study and include an opportunity for attendees to provide written comments. There will also be display boards and information for the public to review.

Advisory Committee Meeting #2

The tentative date for the second Advisory Committee Meeting is January 23, 2020 in San Angelo. Ms. Mays told the Committee they are welcome to invite speakers to address the committee at the next meeting. This will need to be coordinated through Mayor Pope and Judge Smith. All materials will be sent to the Advisory Committee prior to the meeting and listed on the Ports-to-Plains Feasibility Study website. A “Save the Date” reminder of the next Advisory Committee meeting would be provided by TxDOT.

Open Discussion

Ms. Mays asked if there was any input from the TxDOT District Engineers in attendance.

Steve Warren, TxDOT Lubbock District Engineer, commented he was pleased to have I-27 being studied, and it was his third journey involving I-27. He appreciated the way this has been put together and it was in the hands of stakeholders. He also noted how important it was for any proposed improvements along the corridor to be budget-wise.

Carl Johnson, TxDOT Abilene District Engineer, commented he was here to help and to answer any questions. He appreciated the Legislature put this in the hands of the people.

Mark Jones, TxDOT San Angelo District Engineer, commented this has been an eye-opener. He had been working on relief routes in Sonora and San Angelo which will benefit from this project. He asked if anyone has thought of informal town halls or virtual meetings, which might help with rural populations. Commissioner New said those types of opportunities will be provided during the study.

Brian Crawford, TxDOT Amarillo District Engineer, commented he was excited to be part of the process and he has been working on a lot of projects in Segment 1, which will directly be related to this project.

John Speed, TxDOT Odessa District Engineer, commented he is at the heart of the energy sector congestion in the Permian Basin. It is important to look at economics as we go through this process. We need to look at the relationship between agriculture, energy, universities, and communities to find a cost-effective way to move forward.

Judge Wiseman pointed out 15 years ago they thought the Big Spring reliever route would take 30-40 years. It was accomplished in less than three years. She said you never know how quickly things can happen.

The meeting adjourned at 3:00 p.m.

Action Items:

- TxDOT and Consultant Team to gather existing agricultural data.
- TxDOT and Consultant Team to include the Presidio-Ojinaga bridge in the forecast conditions analysis.

- The next Advisory Committee meeting will be held on January 23, 2020 in San Angelo. A save the date will be sent prior to the meeting.
- Update the segment map to show Lubbock County and Lubbock in Segment 2.



Ports-to-Plains Corridor Feasibility Study Advisory Committee Meeting #1 Mentimeter Summary

October 1, 2019 8:30 a.m.

Arbor Hotel & Conference Center - Lubbock, Texas

Through the development of an interactive survey hosted via Mentimeter, members of the Ports-to-Plains Advisory Committee provided input on the Ports-to-Plains Corridor Feasibility Study (HB 1079) on October 1, 2019.

Feedback is summarized below and correlates with the accompanying slides. Please note that the respondent total may differ slightly from question to question based on voluntary responses of the Advisory Committee. Summarized responses are provided for each question and represent the most commonly given responses by theme. Some outlier responses were not summarized in this document.

Mentimeter Questions and Responses

Question 5: Which goals of the corridor feasibility study are the most important to you? Prioritize the study goals.

Response: 31 Respondents

Choices	Votes
Economic development	26
Safety and mobility	20
Freight movement	18
Interstate designation	15
Traffic congestion	10
Existing infrastructure	9
Funding sources	7
Energy products	5
Project costs	5
Private property	3

Question 6: Would you propose a new goal to pursue instead?

Summarized Responses: 27 Respondents

- No/None (19)
- Relief for and diversion of traffic from I-35 and other major highways (2)
- Use existing route and ROW to the extent possible (1)



Question 7: What are your thoughts on the scope and schedule of the Ports-to-Plains Corridor Feasibility Study?

Summarized Responses: 22 Respondents

- Realistic and doable (9)
- Aggressive/Ambitious (8)

Question 9: What are the key needs and challenges in the corridor?

Summarized Responses: 23 Respondents

- Safety and congestion (10)
- Connectivity (5)
- Improved road conditions (5)
- Freight mobility (2)

Question 10: What are the potential opportunities in the corridor?

Summarized Responses: 24 Respondents

- Economic development and commerce (11)
- Safety and congestion (8)
- Multimodal development and connectivity (5)

Question 11: Do you expect the population in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Summarized Responses: 26 Respondents

- Exponential growth due to energy sector and border trade (10)
- As Texas grows so will this region (5)
- Grow but decline in some areas (3)
- Decline (1)

Question 12: Do you expect median household income in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Summarized Responses: 20 Respondents

- Expected to grow (14)
- Continue to grow due to energy and agricultural production (3)
- Unsure (1)
- Remain the same (1)
- Decline (0)

Question 13: Do you expect total employment in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Summarized Responses: 22 Respondents

- Growth due to economy, energy sector and agriculture (10)
- Growth due to agriculture production and manufacturing (7)
- Remain the same (1)
- Decline (0)



Question 14: What are the key needs and challenges for moving freight in the corridor?

Summarized Responses: 22 Respondents

- Enhance safety (10)
- Eliminate pinch points and bottlenecks (6)
- Bridge clearance and infrastructure improvement (5)

Question 15: Do you expect freight activities and movement in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Summarized Responses: 23 respondents

- Grow abundantly due to trade and economic development (17)
- Growth due to increased demand as roads are built to handle the increase in supply (2)
- Grow due to better roads (3)
- Remain the same (1)
- Decline (0)

Question 16: What are the key needs and challenges for moving energy products to markets in the corridor?

Summarized Responses: 20 Respondents

- Connecting roads and highway infrastructure (7)
- Congestion and safety (4)
- Lack of pipeline capacity (3)
- Sustainable roads with improved durability (3)

Question 17: Do you expect energy development in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Summarized Responses: 23 Respondents

- Grow with the population and increased technological capabilities (16)
- Wind will grow, mineral will eventually decline as resources deplete. Technology will extend mineral play beyond 30 years. (1)
- wind and solar will grow due to need in the more populated areas already shortages. need better transmission capabilities (1)
- Remain the Same (1)
- Unsure (1)
- Decline (1)

Question 18: What are the key corridor pavement and bridge needs and challenges?

Summarized Responses: 19 Respondents

- Pothole repair and general maintenance (4)
- Replacement of antiquated bridges and infrastructure (3)
- Increase use of concrete roadways (3)
- Increased bridge clearance (1)



Questions 19: What are the key bottlenecks, needs, and challenges for moving people and freight in the corridor?

Summarized Responses: 22 Respondents

- Access control (7)
- Diverting traffic to bypass towns and cities (5)
- Multiple lanes and continuous traffic flow without traffic signals (4)
- Expansion and quality of roads (3)

Question 20: What are the key safety needs and challenges in the corridor?

Summarized Responses: 22 Respondents

- Four-lane controlled access (9)
- Less intersections (4)
- Safety and emergency routes (4)

Question 21: Which roadway feature contributes the most to safety issues in the corridor?

Summarized Responses: 24 Respondents

- Number of lanes and necessity of turn lanes (7)
- Improved and controlled access with signage (6)
- Length of interstate highway and driver awareness/ falling asleep (1)



Advisory Committee Survey



Please rate the following:



too cold

How is the temperature in the room?

-0.3

too warm

What is your favorite college football team?



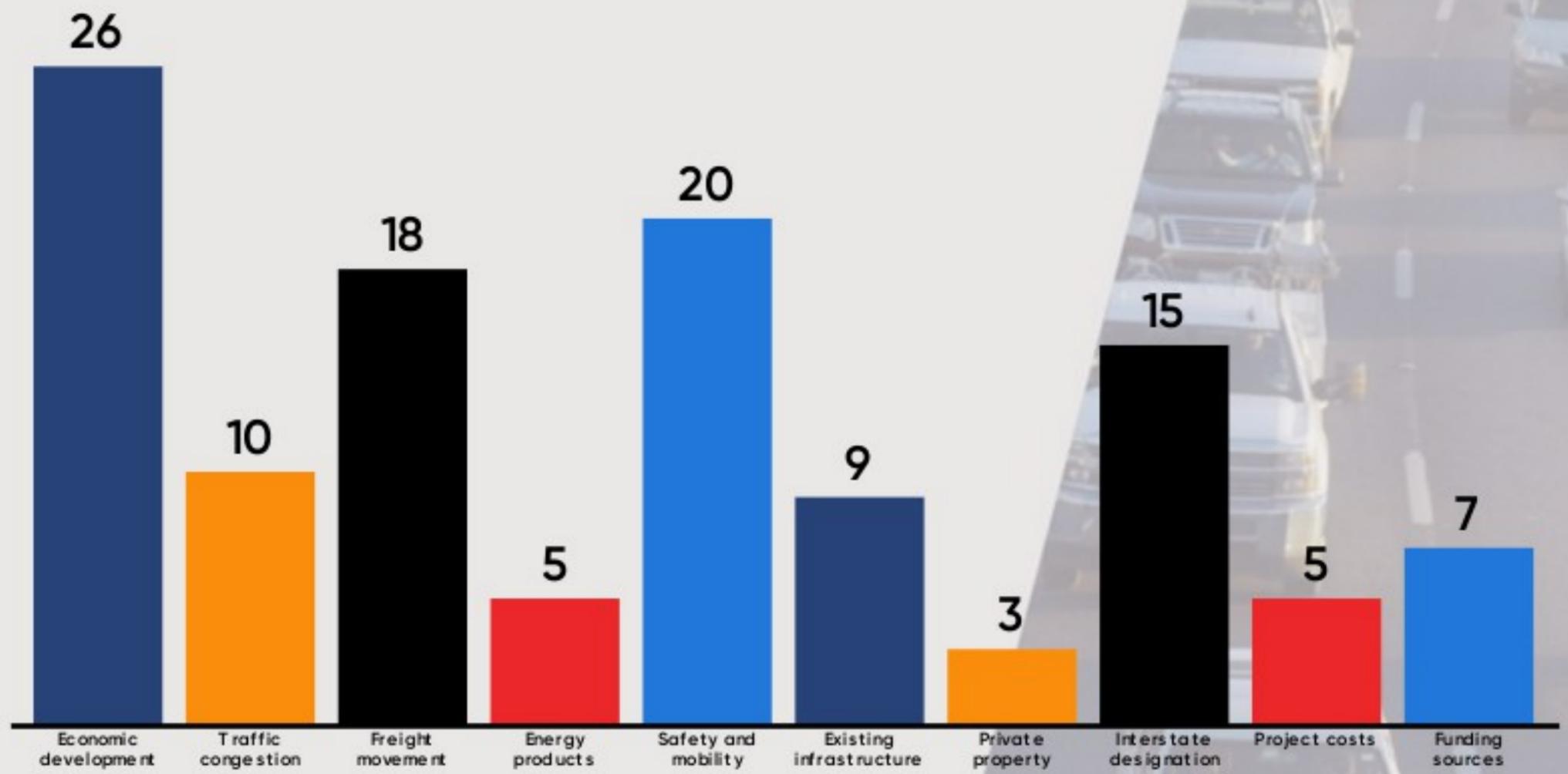
wt buffs
ttu
dallas horns
texas am
baylor
alabama crimson tide
texas tech
texas
longhorns
lsu
texas tech red raiders
texas teck
red raiders
kansas state



Pause



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



Would you propose a new goal to pursue instead?



No

No

No

No

No

No

No

No

None



Would you propose a new goal to pursue instead?



No

No

No.

Diversion of traffic from I-35 and other major highways.

No

I think we are on the right track

I feel that's these are very good goals

No

Use existing route and ROW to the extent possible.

Would you propose a new goal to pursue instead?



No

No this goal is the right format

No. We need safe highways to transport energy and food

no. Goals seem very clear!

relief of existing interstate congestions

Not really... without this establish nothing else matters

X

None

No

Would you propose a new goal to pursue instead?



No

No



What are your thoughts on the scope and schedule of the Ports-to-Plains Corridor Feasibility Study?

Okay with this schedule

No additional comments at this time. Thank

Very aggressive schedule.

Realistic schedule - will need to stick to the stated scope to hit timeline.

Seems like reasonable scope and schedule

Aggressive, but doable. Everyone needs to get onboard and participate. This is absolutely critical to the future of West Texas.

Very ambitious. While I think the scope is correct, it is a lot of ground to cover in a relatively short period

Ambitious goals and timeline

Ambitious... but doable with all participants

What are your thoughts on the scope and schedule of the Ports-to-Plains Corridor Feasibility Study?

It's fine

It is aggressive but we can get there

Looks good.

We are moving in the right direction

The scope and schedule will be challenging but I think it will be achievable.

Very ambitious but achievable.

Tight but necessary already behind in terms of needs so timing is important. Time is money.

I think we are heading in the right direction

Needed for a long time glade to see it moving forward

What are your thoughts on the scope and schedule of the Ports-to-Plains Corridor Feasibility Study?

It will be a daunting task but a necessary and doable task

Scope is well defined Schedule manageable

The timeline seems to be laid out to where there is no lag time. Scope- will it be inclusive of past studies and the comments of the past. Budgeting will be critical

Ok

Right of ways for construction

Right of ways

X understand soccer yes scene



Pause



What are the key needs and challenges in the corridor?



What are the potential opportunities in the corridor?



Do you expect the population in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Grow. Exponentially.

Grow a lot more

Grow. Awareness of what west Texas has to offer.

Grow, because of accessibility

Petroleum industry

Grow significantly!

Grow due to the favorable economic conditions in Texas

Grow at a steady pace

Grow



Do you expect the population in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Overall the corridor population will more than likely grow. However, there are some areas that will remain steady or continue a slow decline.

As long as energy and agriculture continue to grow, West Texas will grow as well

Grow. Texas will grow. Quality of life is attractive to many. Strong and diverse economy

Grow as predicted along with growth in the entire state.

Increase due to economic growth, population growth and increased access.

Grow due to importance of energy sector as well as alternative energy such as solar wind.

Varies areas will grow, but there are counties that will dry up

Grow due to the energy sector in the Permian Basin and trade on the border.

Grow. Food, fuel and fiber.

Do you expect the population in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

The population will increase as more modes of transportation are improved and/or expanded.

Grow overall but decline in some areas

Grow. City taking a new economic growth approach.

grow, steadily

Each city's respective industries

Population will grow. Growth will be focused in larger cities. Economic development efforts in those cities will enhance need for enhanced facilities.

Grow

Grow. Employment opportunities will continue to enhance the quality of life along the corridor.

Grow industry is growing also

Do you expect the population in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Depends on the leadership in Washington DC

Grow

Barring a crash, continued growth

Decrease in some areas

Increase. Job opportunities will continue to support the influx of population due to the diverse industries along the corridor.

Do you expect median household income in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Remain

Grow because of ag production.

Will grow

Grow. To serve increased population.

Grow- unconventional resource will provide more opportunities.

Grow due to influx of business for favorable economy of Texas

Grow. Economy. Energy and Ag. Quality of life. Beneficiary of TX growth

Increase

Should grow.

Do you expect median household income in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Growth. Need for service industries along the corridor.

Median household income will grow. Cities will not incentivize investment/economic growth that does not provide high paying jobs.

It depends on the activities along the corridor if we just move things it will lower but if we focus on opportunities to attract it will grow

Income will grow

Income will increase due to demand and a shortage of skilled worker pool.

You would have to think it would grow

Grow. More people are now working due to new added major truck stops. Added pay check to families.

Grow slightly industry is still growing

Agriculture is critical for growth.

Do you expect median household income in the corridor to grow, decline, or remain about the same in the next 30 years? Why?



Grow, more job opportunities,

A major increase

Grow overall.



Do you expect total employment in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Grow

It will grow at a steady rate.

Grow due to expanding energy and ag output

Increase. But only in areas of diverse economy

Grow. Energy and Ag. Quality of life. Good jobs being created

It will grow, but at a slower rate due to a pag in local development of housing, etc

Grow explosively. Permian Basin is driving national economy

Grow, but many will commute to larger cities but still live in rural areas.

Growth will occur due to the energy, trade, and petroleum industries.

Do you expect total employment in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Energy and farming

Overall the corridor employment number will grow. In my county it has remained steady and I don't expect that to change.

Population in corridor will increase

grow due to increased opportunities to attract companies due to easier access to major trade routes

Grow because of increase in population will result in need for more services.

Total employment will grow, but will be hampered by our extremely low unemployment numbers. Companies looking to invest will need to assure themselves how they will find quality employees in tight job market.

Grow in line with population growth.

With improvements to our highways the growth will increase.

Need to find more individuals who want to work in energy sector versus tech sector. Need more people

Do you expect total employment in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Some areas will grow and some will not simply because of the diversity

Employment growth will increase as population increase.

Grow steadily depending on ag condition

Grow. Current area trend to better serve our current interstate travelers. This could add more jobs with a new corridor.

Remain about the same. Agriculture is dependent on underground water. If we run out of water agriculture will be greatly effected

Grow. Distribution and manufacturing jobs

Manufacturing

Do you expect freight activities and movement in the corridor to grow, decline, or remain about the same in the next 30 years? Why?



Grow due to economic development

Grow

Grow. Trade along the border is continuing to grow, thus increasing freight movement.

Explode in amount

Grow. As corridor is established traffic will reroute to it

Grow the industry is still expanding

Grow due to production and population increase

About the same

increase, due to distribution options increased population needs, better access to trade

Do you expect freight activities and movement in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

It will continue rapid growth. More product to move, more population to accommodate

Grow due to better roads

Grow. Energy and Ag. Distribution to serve growth of West TX

Grow due to all segments of energy, fossil fuel, wind, solar.

It will grow, but will require expanded, safer, and faster access controlled facilities for continued growth.

Grow. As the demand for West Texas' products grow.

Grow- As infrastructure and economics improve, freight will be in higher demand!

Grow due to increased trade between US Canada and Mexico

Grow. We have to produce more to provide for the growing population.

Do you expect freight activities and movement in the corridor to grow, decline, or remain about the same in the next 30 years? Why?



If make improvements to our highways activity will increase

Increase as roadways are built to handle the increase

Freight activities will grow as population grows and infrastructure improves

International growth from import export industry will impact corridor substantially.

grow. More Freight will move north and south.

Border crossings increase with bridge opening n 2020

Do you expect energy development in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Decline

Grow with demands

Grow due to increased demand

Grow.

Grow. Advance technology

Grow to support the growing population.

Grow. Less dependence on foreign sources

Grow with the population

Remain about the same.

Do you expect energy development in the corridor to grow, decline, or remain about the same in the next 30 years? Why?



Grow. Continued technology improvements. US energy independence

Grow. As national energy demands grow.

Should grow as technology advances

Increase but not at same pace as now.

Grow substantially...

grow, due better technology increased demand and export capabilities

Grow due to demands for petroleum and wind energy

Grow!! New technology, increased demand for energy independence,

Grow, population increase will increase demand

Do you expect energy development in the corridor to grow, decline, or remain about the same in the next 30 years? Why?

Energy development will continue to grow as demand increases.

Not sure. Oil resources are where they are. Solar and wind, maybe

Wind will grow, mineral will eventually decline as resources deplete. Technology will extend mineral play beyond 30 years.

Continued growth technology continues to enhance productivity

wind and solar will grow due to need in the more populated areas already shortages. need better transmission capabilities

Grow. Natural gas will make a comeback. Gas will be used more to produce electricity. New oil technology is still being sought to find deeper in pockets of oil

What are the key corridor pavement and bridge needs and challenges?

Safety

Pothole repair. Taller bridges

Bridge replacement seems a priority

funding constraints

Concrete roadways

New bridge crossovers for ag

Funding

Replacing antiquated bridges and infrastructure

Longer lasting road surface.

What are the key corridor pavement and bridge needs and challenges?

Clearance, capacity, longevity

Height and load limits

Maintenance and safety

More concrete

Safety and improve or maintain maintenance

Height and turn circumference for wind blades on trucks

Building to accommodate the current AND future needs. Build to last, not necessarily the least expensive .

Hill and valley construction restraint

Overpasses, widener Lane's, on and off ramps that handle future growth.

What are the key corridor pavement and bridge needs and challenges?



Better designed intersections



Which roadway feature contributes the most to safety issues in the corridor?

Speed

Access control

Intersections

Four lanes

Traffic signals, pedestrians,
lack of access control.

Passing ability

Speed, intersections, turn
lanes

Improved access

Lack of grade separation

Which roadway feature contributes the most to safety issues in the corridor?

2 lane roads

Access

Lack of shoulders

Interstate vs 4 lane

Accessibility

On off ramps

Crossing traffic

Passing

Variation in speed. Stops through towns.

Which roadway feature contributes the most to safety issues in the corridor?

Number of lanes

Long stretch of interstate.
Drivers falling asleep.

Additional lanes for greater
passing

Lack of turn lanes

No turn lanes where needed

congestion. need to separate
Semi and small vehicle traffic.
Access point signage or
lighting

Speed, 2 lane highway, multiple intersections,
narrow highway intersections, the
population/freight has overgrown the
overpasses in the city



Pause



What are your thoughts on this outline?



Excellent outline.

I love the outline

It's going to be great

Delayed



Any questions for the presenter?

