Executive Summary

Trans-Texas Corridor Rural Development Opportunities: *Ports-to-Plains Case Study*

prepared for

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Executive Summary

Key Findings

- The Trans-Texas Corridor (TTC) initiative has the potential to enhance mobility and economic development in rural Texas by providing new infrastructure capacity and options to existing and emerging industries.
- In the Ports-to-Plains Corridor in West Texas, development of intermodal and conventional rail terminal facilities and improvement of rail interconnectivity could increase the productivity of several existing and emerging industries, including cotton and ethanol.
- Electric transmission lines developed as TTC facilities could help offset transmission capacity constraints and efficiently move West Texas wind power to urban customers in Central and Eastern Texas.
- In order to advance these and other opportunities – including highway development – in the Ports-to-Plains Corridor and other rural regions of Texas, the key stakeholders should work together to analyze opportunities, identify beneficiaries, and form partnerships to moved development forward.

Background

First proposed in January 2002 by Governor Rick Perry, and approved by the Texas Transportation Commission in June of the same year, the Trans-Texas Corridor is a multiuse, statewide network of transportation routes in Texas that will incorporate existing and new highways, railways, and utility rights-of-way. In 2003, the Texas Legislature passed House Bill (HB) 3588 granting the Texas Transportation Commission and TxDOT broad powers to develop TTC facilities, including highway, freight rail, passenger rail, public utilities, and supporting structures within rights-of-way up to 1,200-feet wide. Following the passage of HB 3588, the Texas Legislature amended the Texas Transportation Code governing TTC development via HB 2702 to further enhance the State's ability to construct and operate TTC facilities. Chapter 227 of the Texas Transportation Code, or the "TTC Law," authorizes the State to build, own, and maintain any of the facilities shown below in Table ES.1.

Table ES.1 Trans-Texas Corridor Facilities

Facility	Includes
Transportation	
State highway Turnpike Freight railroad Passenger railroad	**Supporting Facilities:** Intermodal transfer or staging area, weigh station, inspection station, rest area, service station, restaurant, train or bus station, warehouse, freight interchange, switching yard, maintenance yard.
Public Utility	
Pipeline	Water, wastewater, natural gas, petroleum pipeline or associated equipment (i.e., pipeline pumping station).
Electric transmission	Electric transmission or distribution line or associated equipment.
Telecom/information	Telecommunications, information services, cable television infrastructure or associated equipment (fiber optic cable, conduit, wireless communications equipment).

Source: Texas Transportation Code Chapter 227. Trans-Texas Corridor.

The Trans-Texas Corridor legislation authorizes the State of Texas to utilize broad powers to implement these transportation and public utility facilities throughout the State. Since enactment in 2003, the State and its public and private partners have focused on development of priority corridors linking large urban areas, including the TTC-35 and TTC/I-69 corridors. While these corridors will provide benefits to many Texans, the State also recognizes the ability of TTC facilities to improve mobility and economic conditions in rural Texas regions. This study serves as a first step in exploring the potential of TTC development in rural Texas through a case study of the Ports-to-Plains Corridor in West Texas.

To implement these facilities, local, regional, and state partners from the public and private sectors will have to creatively assemble financing from multiple sources. Partnerships may receive funding from Federal and state sources for transportation and public utilities infrastructure, but backers of any project will likely need private financing to fully realize development proposals. In Texas, the TTC law empowers the State and its political subdivisions (Regional Mobility Authorities, etc.) to engage in Comprehensive Development Agreements (CDA) to pool available Federal, state, local, and private sector resources to develop TTC facilities. For rural corridors, CDAs may provide the appropriate institutional platform for pooling funding to move opportunities from the drawing board to reality.

Ports-to-Plains Case Study Summary

The Ports-to-Plains Corridor extends for 1,390 miles from the U.S./Mexico border in Texas through portions of Oklahoma and New Mexico to Denver, Colorado. Within Texas, the Corridor spans more than 600 miles from Laredo to north of Amarillo. The Lubbock-based Ports-to-Plains Corridor Coalition (the Coalition) formally advocates for transportation and economic development in the Corridor and, since its formation nearly a decade ago, has obtained Federal and state funding for many transportation improvements, especially for expansion of existing highway routes from two to four lanes. Currently, about half the Corridor's highway mileage has either been upgraded to four- or six-lane divided highways or is in the design or construction phase of development.[1] The primary mission of the Coalition is to enhance the transportation system of the Corridor in order to increase trade and economic development. Increasingly, the Coalition is exploring multimodal transportation needs to advance its mission.

The examination of TTC development opportunities in the Ports-to-Plains Corridor is the first test case by the Texas Department of Transportation (TxDOT) to identify opportunities to implement TTC facilities in predominantly rural regions of the State. Through application of a methodology designed for this study, the Ports-to-Plains Case Study responds to the following core questions:

1. *What are the opportunities for developing TTC infrastructure in the Ports-to-Plains Corridor?*
2. *What financial and institutional actions are likely to lead to construction and continued maintenance of new infrastructure in the Ports-to-Plains Corridor?*
3. *What types of development/financing opportunities exist for other rural Texas corridors and what is the framework for analyzing feasibility?*

For the Ports-to-Plains Corridor, the answers to these questions are straightforward and are intended to guide TxDOT, the Ports-to-Plains Corridor Coalition, and other interested parties toward tangible progress in applying the TTC concept in rural areas.

[1] Ports-to-Plains Corridor Coalition.

1. What are the opportunities for developing TTC infrastructure in the Ports-to-Plains Corridor?

Additional Rail Terminals and Connectivity Could Increase Freight Efficiency in the Ports-to-Plains Corridor

Rail is the most economical mode of shipment for several current and emerging agricultural commodities produced in the Ports-to-Plains Corridor, including cotton and ethanol. While the railroads indicate they have sufficient mainline capacity and that future demand can be accommodated relatively easily through the addition of sidings, there is a lack of rail terminal and yard capacity in the Corridor that currently forces many shipments to truck and has the potential to stymie future growth. There also is a gap in rail system connectivity that, if filled, would provide greater access to the Lubbock and Midland-Odessa regional markets and potentially cultivate economic development.

Agricultural transportation demand is driving the need for terminals and connectivity. The cotton industry lacks intermodal terminal capacity to accommodate a significant share of containerized bales for export originating in the Ports-to-Plains Corridor. As a result, shippers use trucks to drive containers of cotton from the Lubbock region to the Dallas-Ft. Worth Metroplex where they are subsequently loaded onto unit trains of 60 to 100 rail carloads for international shipment via U.S. seaports. The development of one or more intermodal rail terminals in the Ports-to-Plains Corridor could decrease truck vehicle miles traveled (VMT) and generate public and private benefits including lower shipment costs, decreased highway maintenance costs (e.g., the timing and costs associated with pavement resurfacing may decrease with lower truck volumes), and enhanced safety.

In the future, there may be potential to ship other agricultural commodities by rail, including by container, and to establish other intermodal facilities serving regional distribution needs. The best location for these intermodal terminals may be at sites near major transportation junctions where multiple modes converge. Locations along major highway corridors that provide access to regional population centers hold the greatest promise. East of Sweetwater, for example, there is an opportunity to construct an intermodal yard on a relatively flat section of land between the BNSF Railway (BNSF) and Union Pacific Railroad (UP) lines adjacent to I-20. This and other sites with similar characteristics might be considered for future development.

In addition, the Texas Panhandle is beginning to experience considerable development of ethanol plants, which depend heavily on rail for outbound shipments to urban markets. In order to support this burgeoning industry, the State, the Coalition, and other partners should work with the rail and ethanol industries to ensure that the industry has the ability to transport outbound products via reliable Class I rail service.

Both cotton and ethanol shipments frequently travel to California for export or consumption and could benefit from increased rail system connectivity that would link the Lubbock region directly to the Union Pacific mainline near Midland-Odessa. The new

link, which is currently under study by the State, would follow the Permian Basin Railways line from its current terminus near Seagraves to the Union Pacific Texas & Pacific (TP) Line. If the State designated the new link a TTC facility, local communities might benefit from increased economic activity and shippers may benefit from lower shipping costs resulting from increased rail access and direct competition from two class I carriers, BNSF and Union Pacific.

Most rail development opportunities are located in the Panhandle portion of the Ports-to-Plains Corridor because other parts of the Corridor have little or no rail service. Ongoing state-sponsored studies, including the La Entrada al Pacifico Study, will assess future needs.

Key Policy and Planning Recommendations

- **Pursue Intermodal Terminal Development.** The State or the Coalition should encourage a rigorous analysis of potential sites for intermodal or rail terminal facilities to determine critical details of potential development to support cotton and other agricultural industries. This activity should draw from ongoing freight studies sponsored by TxDOT, including the La Entrada al Pacifico Study and the Regional Freight Study focusing on West Texas. Ultimately, the study should more fully vet the suitability of intermodal sites and should identify a set of highly promising sites (including the Reese Center in Lubbock) for development through potential public-private partnerships. The Ports-to-Plains Corridor Coalition, under the guidance of its Board, could lead this analysis.

- **Support Rail Needs of Emerging Ethanol Industry.** The Ports-to-Plains Corridor Coalition, TxDOT, and other partners should cooperatively support the needs of the budding West Texas ethanol and biodiesel industries by ensuring that producers maintain good access to Class I railroads. This may include assisting producers in establishing regional storage/intermodal terminals (such as the Manly Terminal under development in Iowa) as a means of cost saving.

- **Encourage Rail Connectivity.** The Coalition should work with TxDOT and use ongoing state-supported studies to explore the feasibility of directly connecting the Lubbock region to the Midland-Odessa area via extension of the Permian Basin Railways line south of Seagraves. This new link could provide economic development benefits and shipper benefits resulting from enhanced access and capacity for agricultural shippers. The Coalition and TxDOT also should assess the benefits of designating the rail line as a TTC facility.

West Texas Wind Power Could Be Transmitted to Texas Urban Areas Through TTC Facilities

Wind energy development in the Texas Panhandle has captured national attention and headlines in recent months. According to the Wall Street Journal, West Texas currently is experiencing a land grab of historic proportions as large international energy corporations compete to lease expansive quantities of land in the Texas Panhandle to establish wind farms.[2] At the same time, several large electricity transmission consortia await approval of applications submitted to the Texas Public Utilities Commission (PUC) for the rights to link some of the State's best wind producing regions to urban consumers in the eastern part of the State. One of the proposals, by the Sharyland Utilities, LP would draw wind power from the Texas Panhandle onto the main Electric Reliability Council of Texas (ERCOT) power grid via a $1.5 billion, 800-mile "Panhandle Loop." Through the effective and timely application of the TTC authority, TxDOT and the Ports-to-Plains Corridor Coalition could partner with these interests to aid the development of this needed energy solution.

Key Policy and Planning Recommendations

- **Consider Development of Electric Transmission Lines as a TTC Facility**. The TTC law authorizes TxDOT to build, own, and maintain public utilities, including electric transmission facilities. Given recent interest, investment, and proposals before the PUC with regard to Panhandle wind power and the State's legislative mandate to increase the share of wind power provided to consumers, the time is appropriate for TxDOT and the Ports-to-Plains Corridor Coalition to join in the planning and development of transmission facilities in the region. The intent of the TTC law with regard to transmission facilities is to empower TxDOT with the ability to coordinate and participate with partners to develop corridors that would serve multiple purposes and that relate to other TTC facilities to form "systems." This is the first potential test case of the TTC in constructing long-distance transmission facilities and both TxDOT and the Ports-to-Plains Corridor Coalition should participate in the planning and implementation of the rapidly progressing developments to transmit wind power within the State. Other participants should include the two Regional Reliability Councils that control the power grid, ERCOT and Southwest Power Pool (SPP); Texas regulatory agencies, including the PUC, the General Land Office (GLO), and the Texas Commission on Environmental Quality (TCEQ); private wind development companies; transmission developers; and potentially affected private landowners.

[2] "The Texas Wind Powers a Big Energy Gamble". Jeffrey Ball. Wall Street Journal. March 12, 2007.

- **Define the State's Role in Providing TTC Transmission Facilities.** In the future, there will be other opportunities for the State to participate via its TTC authority in the transmission of public utilities, including wind power, natural gas, water, and other goods in both rural and urban areas. In order to prepare for these upcoming opportunities, TxDOT should further investigate the State's role in TTC transmission through a series of case studies or white papers that test the legal, institutional, planning, engineering, and financial aspects of providing public utility infrastructure through TTC development. These case studies should culminate in the development of a step-by-step strategy to guide TxDOT's coordination with the public and private sector utility development community.

Highway Development Opportunities Exist, But Are Limited

Based on the interviews conducted for this study, the conditions and capacity of the Texas highway system in the Ports-to-Plains Corridor are good to excellent. It is a credit to the Ports-to-Plains Corridor Coalition and TxDOT that trucking companies and other users of the system give the facilities high marks for maintenance, limited congestion and delay, and reliability. That said, there are several locations within the Ports-to-Plains Corridor, especially south of I-20, that may have development potential. These development opportunities include several reliever routes and a section of U.S. 277 south of Del Rio that could be widened from a two- to four-lane divided highway. All of these proposals are in various stages of study and development by TxDOT. The TxDOT Texas Turnpike Authority Division (TTA) currently is analyzing toll feasibility to provide financing on all the proposed sections of U.S. 277. In addition to the sections currently under study, some highway sections may warrant improvement to provide for enhanced safety and facilitate trade, especially between Del Rio and I-10. Following the recommendation presented below, the Ports-to-Plains Corridor Coalition should work with TxDOT to move development opportunities forward through benefit-cost analysis and appropriate financing, including the use of local option taxes or international bridge crossing tolls to implement needed improvements.

2. What financial and institutional actions are likely to lead to construction and continued maintenance of new infrastructure in the Ports-to-Plains Corridor?

Define the Benefits and Beneficiaries of TTC Development to Structure Financial Participation

Given the scarcity of public funding, development opportunities in the Ports-to-Plains Corridor will require financial participation from multiple stakeholders. Participants will have to pool resources and bring public and private partners to the together to fund projects. One of the most important precursory activities to defining a financing plan and moving development forward is the careful identification of economic impacts and benefits related to development to determine who benefits. Potential benefits fall into several categories for each of the three broad development opportunities outlined in this study and are cataloged in Table ES.2 below.

Table ES.2 Potential TTC Development Benefits

Opportunity	Benefits
Rail Improvements (Intermodal terminals, ethanol terminals, system connectivity)	• Lower freight shipment cost • Faster freight travel time to market • Reduced emissions • Decreased safety costs • Lower highway maintenance costs • Less congestion (especially as trucks enter urban areas, e.g., DFW) • Economic development including real estate • Increased tax revenues from real estate investment • Improved rail access to freight markets
Electric Transmission (Wind Power)	• Improved air quality (zero source pollution) in rural and urban areas • National security/energy independence • Lower consumer power costs • Economic development
Highway Improvements	• Faster freight travel time to market • Decreased highway safety costs (safer engineering, divided highways) • Less congestion on busy segments • Economic development through improved speed and access

Some of these benefits can be quantified, others are qualitative. Economic and financial analyses, including economic impact assessment, benefit-cost analysis, and financial feasibility analysis, could help quantify more fully the magnitude of impacts, the benefits and beneficiaries, and ultimately the financial viability of the development opportunities. These analyses, especially benefit-cost, can guide financial participation of development partners to ensure that cost sharing is equitable and commensurate with benefits received.

Key Policy and Planning Recommendations

- **Conduct Economic and Financial Analyses to Determine Cost-Sharing Roles of Investors.** Economic impact and benefit-cost analyses should be conducted for each of the development opportunities identified in this study. The most pressing need, given the advanced progress of various wind power transmission proposals before state

regulators at the PUC, is to determine the benefit-cost of involvement of the State in developing electric transmission lines as Trans-Texas Corridor facilities. The next priority is site selection analysis for intermodal terminal development by conducting a benefit-cost assessment to rank the feasibility and to help structure a financing plan for development. Finally, there is a need for more intensive study and benefit-cost analysis to determine financial partnerships for other highway improvements discussed in this report. The Coalition should work with the TxDOT Texas Turnpike Authority Division in developing this analysis. Benefit-cost results for each of these opportunities projects should strongly consider the economic impacts of investment and may require economic impact assessments.

Allowing Cities to Establish RMAs Could Aid Rural TTC Development in West Texas

State statute defines a Regional Mobility Authority as "a political subdivision formed by one or more counties to finance, acquire, design, construct, operate, maintain, expand, or extend (tolled or nontolled) transportation projects." The RMA law devolves transportation development powers to allow local or regional jurisdictions greater flexibility to finance, design, and build infrastructure. RMAs throughout the State, including one RMA in a rural area (Northeast Texas RMA). With few exceptions, the ability to participate in an RMA is limited to the county level of government. In general, county-based RMAs function well where county governments have sufficient political power to drive development forward in cooperation with other local governments. However, in the Ports-to-Plains Corridor and throughout rural Texas, municipal governments typically hold greater political power – including the ability to levy local option taxes – than counties. This situation inhibits RMA formation, which could be promoted by allowing cities participate in RMAs.

Key Policy and Planning Recommendations

- **Allow Cities to Participate in RMAs.** On an institutional level, the Ports-to-Plains Coalition and TxDOT should work with the Texas Legislature to consider changes to existing laws to allow for additional flexibility to establish city-based RMAs in rural areas to facilitate development. In the Ports-to-Plains Corridor, this would ideally allow for a greater number of Texas municipalities to join RMAs to further leverage the resources available to fund improvements for the development opportunities outlined in this report, especially associated with intermodal terminal and highway opportunities.

3. What types of development/financing opportunities exist for other rural Texas corridors and what is the framework for analyzing feasibility?

TTC Development Opportunities Exist in Other Rural Texas Corridors

Based on the findings of this study, other rural Texas corridors have the potential to develop TTC facilities. Some of the most promising potential opportunities are the same ones identified for the Ports-to-Plains Corridor, including a mix of rail improvements, power transmission, and highway development. Depending on the natural resources, agricultural commodities, and other industries in other rural Texas corridors, potential may exist to develop other TTC facilities to support goods movement and public utilities conveyance. These opportunities, for example, may include intermodal terminals that reduce the number of trucks carrying lumber, minerals, or agricultural products on Texas highways by diverting them to rail facilities. There also may be development opportunities related to passenger or freight transportation where rural TTC corridors connect larger urban centers.

Key Policy and Planning Recommendations

- **Evaluate the TTC Development Opportunities on Other Rural Corridors**. TxDOT should measure the potential to develop TTC facilities in other rural corridors of the State. This can be accomplished through application of the analytical framework designed for this study and successfully utilized in the Ports-to-Plains Case Study. The framework consists of the four following steps: 1) Identify infrastructure gaps between supply and demand regions for commodities (e.g., agriculture, mining, energy, water); 2) Determine participation feasibility by industry (who is willing to participate financially and under what conditions); 3) Identify beneficiaries (who benefits, where, and how much); and 4) Develop a cost-sharing plan to move forward with appropriate financial arrangements.