



**TEXAS DEPARTMENT OF TRANSPORTATION
WRITTEN TESTIMONY**

**House Transportation and International
Trade & Intergovernmental Affairs Committees**

85th Legislature Interim Charges – Ports and International Trade

Tuesday, March 20, 2018 at 8:00 a.m.

Knapp Medical Center, Weslaco

HOUSE INTERIM CHARGE

Review the current state of infrastructure at Texas' international shipping ports and border ports of entry in Texas. Identify transportation-related impediments to international trade and estimate the impact of those challenges, including border wait times, on the state's economy. Make recommendations for improvements to facilitate international trade and economic growth.

OVERVIEW OF TEXAS PORTS AND WATERWAYS

Texas' maritime transportation system consists of ports, waterways and intermodal landside connectors, which are critical gateways for the movement of domestic and international freight. Texas ranks second in the nation for waterborne commerce, moving more than 496 million tons of cargo—more than 20 percent of the nation's total—in 2016.¹

Texas ports are vital components of the state economy. According to an economic impact analysis prepared for the Texas Ports Association in 2016, approximately 116,000 Texas jobs are directly related to seaport operations. In total, approximately 1.6 million jobs are generated from economic activity dependent on the state's ports. These jobs generate more than \$92 billion in personal income and local consumption, while the port industry contributes about \$6.9 billion in state and local tax revenue.

Texas has 11 deep-draft ports, with channels at least 30 feet deep, and six shallow-draft commercial ports (See *Appendix A., Texas Port Map*). Ten of the state's ports rank among the top 100 U.S. ports in total tonnage, including both deep-draft and shallow-draft channels. In terms of tonnage, Port Houston handles more imports and exports than any other U.S. port, ranking first in total international tonnage and second in domestic tonnage in 2016.² In 2017, Port Houston handled 2.4 million twenty-foot equivalent units (TEUs), a 13 percent year-over-year increase.³ The Port of Beaumont ranks fifth in total tonnage nationally and serves as the number one military outload port in the world. The Port of Corpus Christi, an energy hub, ranks sixth, while the Port of Texas City, a privately owned facility, ranks fifteenth. The Port of Galveston is the fourth busiest cruise embarkation port in the U.S. and served more than 1.8 million passengers in 2017.

The petrochemical sector dominates international waterborne trade in Texas. In June 2016, the highly anticipated Panama Canal expansion project was completed. The expanded canal allows larger container ships, bulk vessels, and liquefied natural gas (LNG) tankers and a new fleet of liquefied petroleum gas (LPG) tankers to transit the canal. These larger vessels

¹ <http://www.navigationdatacenter.us/wcsc/stateton16.htm>

² <http://www.navigationdatacenter.us/wcsc/porttons16.html>

³ http://porthouston.com/wp-content/uploads/2017-Port-Houston-Commission-Press-Release_FINAL-.pdf.

A TEU is a standard unit of measure describing the capacity of container ships, terminals and containers. The measure is based on the volume of a 20-foot container; one standard forty-foot container equals to 2 TEUs.

will enable shippers to more competitively export Texas' energy, chemical and agricultural products worldwide. One of the greatest opportunities resulting from the expansion of the canal is the export of LNG. Texas currently has two LNG export facilities under construction at Freeport and Corpus Christi, while several other facilities are awaiting federal approval.

Another important aspect of Texas' maritime trade is the volume of its intrastate movements, which mostly occur along the Gulf Intracoastal Waterway (GIWW), a 1,100-mile shallow-draft protected waterway that connects ports along the Gulf of Mexico from Brownsville, Texas to St. Marks, Florida. The Texas portion of the GIWW covers 379 miles of Texas' coastline and handles 63 percent of the GIWW's total traffic.

The GIWW is an integral component of the extensive supply chains of Texas petrochemical and manufacturing industries. In 2014, 86 million tons were moved on the GIWW, 91 percent of which were petroleum and chemical products. In June 2016, the Texas portion of the GIWW was designated as the Marine Highway 69 (M-69) corridor, which makes projects along the waterway eligible for federal funding with the aim of increasing waterborne transportation and simultaneously improving mobility and reducing traffic on Interstate-69 and on other highways adjacent to the Texas Gulf Coast. Though designed to be 125-feet wide and 12-feet deep, the waterway is not been maintained to those dimensions due to a lack of federal funding. As a result, the operating depth is only nine-feet; carriers must "light load" their barges to ensure that the vessel does not scrape bottom at any point during transit. This practice raises the cost of shipping goods on the GIWW.

Maintenance of the GIWW is the responsibility of the U.S. Army Corps of Engineers (USACE). The Texas Department of Transportation (TxDOT) serves as the official non-federal sponsor of the waterway. As such, TxDOT's primary responsibility is the provision of lands, easements, rights of way, relocations and necessary disposal areas for maintenance and operation of the GIWW. TxDOT is also required to provide the real estate for placement areas that accommodate the ongoing needs of USACE's dredging program.

2017-2018 PORT CAPITAL PROGRAM

The Port Capital Program is a biennial report required by Chapter 55, Texas Transportation Code, that provides a strategic listing of priority port projects of statewide significance that should receive funding from a General Revenue funding source, if funding becomes available.

In the 2017-2018 Port Capital Program, the Port Authority Advisory Committee identified twenty high-priority improvement projects for the biennium that would help promote economic development, improve port access and enhance intermodal transportation opportunities. Collectively, these projects have an estimated cost of \$217.2 million, with the ports pledging to contribute \$85.4 million of that total. The projects encompass a variety of

improvements, including rail and road upgrades, dock and bulkhead repairs and site improvements. Because each of these projects are inside port gates and not on publicly accessible roadways, they not eligible for any current state funding through TxDOT.

TEXAS PORT FUNDING OPPORTUNITIES

TEXAS MOBILITY FUND

As initially established in 2001, the Texas Mobility Fund (TMF) was only authorized to be used for (1) construction, reconstruction, acquisition and expansion of state highways; (2) participation by the state in the payment of a portion of the costs of constructing and providing publicly owned toll roads; and (3) other public transportation projects.⁴ The TMF was modified in 2013 by House Bill 1, 83rd (3rd Called Special Session) to specifically expand eligible uses of the fund and authorized funds to be expended on qualified port projects.⁵

RIDER 48 (2015)

In 2015, the 84th Texas Legislature included Rider 48 in the General Appropriations Act (HB 1, 84R, 2015), which authorized TxDOT to use up to \$20 million from the TMF for the 2016-2017 biennium to provide funding for port capital improvement projects selected by the Port Authority Advisory Committee (PAAC) and approved by the Texas Transportation Commission (Commission). This rider marked the first time that explicit funding for port projects had been included in Texas' state budget. Rider 48 included a signing statement from Governor Greg Abbott that recognized the value of ports to the Texas economy but cited concerns regarding the constitutionality of using the TMF for port capital projects. Therefore, in implementing Rider 48, TxDOT worked to ensure that all projects selected by the Commission for Rider 48 funding were public roadways that enhanced port connectivity.

The Commission approved the inclusion of eight projects eligible for Rider 48 funding in the February 2016 update to the Unified Transportation Program (UTP)⁶. (See *Appendix B., Rider 48 Summary*).

RIDER 45 (2017)

In 2017, the 85th Texas Legislature included Rider 45 in the General Appropriations Act (SB 1, 85R, 2017), to once again explicitly authorize funding for certain port projects selected by the PAAC and approved by the Commission. Rider 45 authorized TxDOT the use of up to \$20 million in each fiscal year of the 2018-2019 biennium to provide funding for public roadway projects that improve connectivity to Texas ports. Unlike Rider 48 in 2015, the

⁴ Tex. Const. Art. III, § 49-k.

⁵ Chapter 55 (Funding of Port Security, Projects, and Studies), Texas Transportation Code.

⁶ The Port Houston project was included in the May 2016 update of the UTP.

funds authorized this biennium in Rider 45 may come from any available source of revenue, including but not limited to the TMF.

At its January 4, 2018 meeting, the PAAC selected a final list of projects for recommendation to the Commission, totalling \$17.7 million in Fiscal Year (FY) 2018 and \$14.6 million in FY 2019. TxDOT will administer the funds as a grant to local governments. (See *Appendix B., Rider 45 Summary*).

SHIP CHANNEL IMPROVEMENT REVOLVING FUND

Also in 2017, the 85th Texas Legislature passed Senate Bill (SB) 28, which established the Ship Channel Improvement Revolving Fund (fund) as an account in the general revenue fund. The bill requires the Commission to establish a revolving loan program to finance qualified projects for navigation districts to deepen or widen ship channels, provided that the project is authorized by the U.S. Congress and meets other standards provided by Commission rule. Money credited to the fund can include gifts, grants, donations, money appropriated to the Commission for certain purposes, loan repayments and interest earned. At this time, TxDOT is drafting rules to implement the Ship Channel Improvement Revolving Fund but the fund has not been capitalized.

There are currently four projects in Texas that are currently authorized by Congress and qualify for funding from the Ship Channel Improvement Fund. (See *Figure A.*) The Water Resources and Reform Development (WRRDA) Act of 2014 and Water Infrastructure Improvements for the Nation (WIIN) Act of 2016 each contained a provision to de-authorize projects authorized by Congress after seven years of inactivity. Thus, each of the four currently authorized projects is eligible for de-authorization in either 2021 or 2023 if the local entities are not able to provide funding for the projects.

FIGURE A. QUALIFIED SHIP CHANNEL IMPROVEMENT FUND PROJECTS

CHANNEL & NON-FEDERAL SPONSOR	CURRENT DEPTH	AUTHORIZED DEPTH	AUTHORIZATION YEAR	APPROXIMATE TOTAL COST	FEDERALCOST	NON-FEDERAL COST
Corpus Christi Ship Channel (<i>Port of Corpus Christi Authority</i>)	45 ft.	52 ft.	2014	\$353M	\$182M	\$170M
Freeport Harbor Channel (<i>Port Freeport</i>)	45 ft.	55 ft.	2014	\$239M	\$121M	\$118M
Sabine-Neches Waterway (<i>Sabine-Neches Navigation District</i>)	40 ft.	48 ft.	2014	\$1.1B	\$748M	\$366M
Brazos Island Harbor Channel (<i>Brownsville Navigation District</i>)	42 ft.	52 ft.	2016	\$210M	\$121M	\$89M
TOTAL				\$1.9B	\$1.17B	\$743M

TEXAS MARITIME TRANSPORTATION SYSTEM CHALLENGES

Texas ports and waterways are critical engines for both the Texas and national economy. While each port is unique and has its own infrastructure challenges, an overarching challenge is the lack of sufficient funding for projects. While some ports have the ability to fund waterside infrastructure developments, many Texas ports – particularly the small ports—have difficulty in this area. Additionally, while channel improvements have significant positive economic impacts on the state, there is limited federal funding and no dedicated state funding for these projects. Port Houston, for example, recently spent its own funds to deepen the Bayport and Barbours Cut channels to allow for transit by larger container ships.

HURRICANE HARVEY

On August 25, 2017, Hurricane Harvey made landfall on the Texas coast near Port Aransas. A preliminary estimated total impact of Hurricane Harvey on the Texas maritime system, based on a survey conducted in September 2017, is nearly \$20 billion. Ports reported roughly \$250 million in infrastructure impacts, including damage to port facilities and required channel dredging due to shoaling. An estimated \$17.4 billion in economic impact is expected, largely due to revenue loss from port closures and impacts on industry dependent on Texas ports. The remainder is due to additional operational impacts and future mitigation efforts.

Most ports and waterways experienced full channel closure during and following the storm. As a result, vessels were diverted to other Gulf Coast ports or had to wait in the Gulf. The cost of vessel diversion is significant, but difficult to estimate for all Texas ports. Port Houston, for example, had to divert 63 vessels to other ports at a cost of between \$1 - \$2 million per vessel. Additionally, many vessels had to “light load” to enter draft-restricted channels. For instance, at Calhoun Port Authority, all deep-draft vessels could only enter or leave the port at 31 feet of draft, rather than the normal 36 feet. Each foot of lost draft for deep-draft vessels can cost the shipper between \$25,000 and \$50,000 in transportation cost.

Additionally, the Sabine-Neches Navigation District, Port Freeport and the Port of Corpus Christi have all indicated that some of the negative economic and operational impacts may have been mitigated if their authorized channel improvement projects had been constructed.

The Sabine-Neches Navigation District estimates that if its deepening project had been constructed prior to Harvey, the waterway would have had only five days of draft restrictions at two-feet per day. Instead, the waterway was under draft restrictions for more than a month. The draft restrictions limited the ability of the Sabine-Neches Waterway to deliver fuel to the nation, energy exports to global markets, and efficiently deploy military cargoes to foreign theaters. Had the improvement project been constructed, the impact to navigation may have been reduced by 88 percent. Additionally, if the channel had been at its

authorized 48-foot depth prior to the storm, the shoaling would not have impacted the military's ability to rapidly deploy its tonnage on either contracted or military-owned vessels, and the waterway would have been closed to LNG vessels only five days instead of eleven.

Port Freeport indicated that if its improvement project had been completed before the hurricane made landfall, there would have been no reason to divert deep-draft vessels or to light-load crude tankers. Similarly, the Port of Corpus Christi reported that the construction of the Corpus Christi Ship Channel Deepening and Widening Project would have likely reduced the impacts of the hurricane on deep-draft navigation, thus allowing for increased movement of goods through the Port of Corpus Christi. Having a wider channel could have allowed for earlier ship traffic to move instead of being restricted to one-way traffic.

MOVING FORWARD: TEXAS PORTS MISSION PLAN

Chapter 55, Texas Transportation Code, requires the PAAC to prepare a maritime port mission plan. On behalf of the PAAC, TxDOT has recently contracted with a consultant to develop the 2020-2021 Texas Ports Mission Plan, which updates the strategic goals and objectives of the PAAC and provides an assessment of Texas maritime ports, challenges and opportunities. The plan will be submitted to the Commission, Governor, Lieutenant Governor and Speaker of the House on December 1, 2018, prior to the 86th (2019) Texas Legislature.

The Mission Plan bundles three distinct reports to highlight different needs within the entire port system: (1) Texas Ports Capital Program Report; (2) Port Connectivity Report; and (3) Ship Channel Improvement Project Report. By bringing together capital projects within port boundaries, port connectivity projects on public roads and waterside ship channel improvements, the Texas Ports Mission Plan will highlight both the economic impact of Texas ports and their total funding needs to maintain current infrastructure and make improvements for future economic growth.

The Texas Ports Capital Program Report will identify the state's maritime needs by outlining capital projects, plans or studies that enhance international trade; promote cargo and cruise passenger movement; enhance security; increase port revenues; provide economic benefit to the state; or connect maritime ports to another transportation mode.

The Port Connectivity Report aims to develop a more comprehensive understanding of landside road and rail connectivity needs at Texas ports. It will document existing port connections and conditions, assess system demand and identify mobility needs and opportunities to improve multi-modal port connectivity. Additionally, the study will identify alternatives to improve connectivity, as well as funding and financing options. A final implementation strategy will identify potential project champions and implementation dates, and group projects into short-, mid- and long-term categories. This component will also identify corridors for consideration as part of the Rural and Urban Freight Corridor program outlined in the Fixing America's Surface Transportation (FAST) Act and projects eligible for

the federal Transportation Investment Generating Economic Recovery and Infrastructure for Rebuilding America grant programs.

The Ship Channel Improvement Project Report will summarize the four Texas ship channel improvement projects that have been congressionally authorized that are therefore eligible to receive monies from the Ship Channel Improvement Revolving Fund. Additionally, the report will identify the upcoming ship channel improvement projects that are currently in the feasibility study phase and would be ready for congressional authorization in the next WRDA legislation. Project details in the report will include:

- Current and proposed depths
- Channel improvement features (i.e. widening, turning basins and mooring facilities)
- Design vessels and key commodities targeted by improvements
- Project cost breakdown
- Implementation phasing
- Project benefits

Taken together, the individual components of the Mission Plan will show a comprehensive picture of the funding needs of Texas ports and waterways.

CONCLUSION

Though each of the state's ports and waterways face unique challenges based on its location, business model and local economy; the single most challenge common to all Texas ports is the needs for additional funding for capital improvements, channel operations and maintenance. TxDOT will continue to work with our state's ports to identify impediments to their growth and help them meet those challenges within the constraints of current available funding. TxDOT will also continue to work with members of the PAAC, as well as the state's port authorities and navigation districts and other maritime stakeholders to identify and prioritize strategic investments of statewide importance. If funds become available, TxDOT will work with the PAAC to address the needs for port infrastructure and other waterside capital improvements, including ship channel improvement projects.



Appendix A.

Texas Port Map





Appendix B.

Rider 48 (84R, 2015) and Rider 45 (85R, 2017) Project Summaries

Rider 48 Summary

Port	Project	Project Status	Rider 48 Funds	Total Cost
Port Arthur	Widen and improve Lakeshore Drive.	Expected to let in March 2018.	\$1,237,500	\$1,475,000
Beaumont	Widen Old Highway 90 & upgrade intersections between I-10 and Port Access Road.	Construction began on Feb. 5, 2018.	\$550,618	\$611,798
Houston	Expand Peninsula Street to four lanes and Jacintoport Blvd to five lanes; install rail gate arms at six rail crossings.	Final ROW acquisition and utility clearing in progress. Expected to let in the third quarter of 2018.	\$10,191,050	\$12,738,812
Galveston	Improve Old Port Industrial Road, 33 rd Street, and the intersection of 28 th Street and Harborside Drive.	Project was returned to the port and converted to a local let project by the Houston District Office. The project is in final design state and a letting date has not yet been determined.	\$1,088,471	\$1,360,589
Palacios	Widen land bridge on SH 35 and improve drainage.	Construction was expected to begin Jan. 2018, but was delayed due to inclement weather.	\$2,323,731	\$2,323,731
Victoria	Rehabilitate and widen McCoy Road, Canal Road, and Old Bloomington Road.	Construction is 46% complete	\$2,856,668	\$3,808,891
Corpus Christi	Widen Joe Fulton International Trade Corridor near mile marker 5.	Construction is 28% complete.	\$1,675,000	\$3,350,000
Calhoun Port Authority	Improve roadway and drainage on south end of FM 1593.	Construction is 99% complete.	\$79,962	\$84,924
TOTAL			\$20,003,000	\$25,753,745

Rider 45 Summary

FY18 Project Summary				
Port	Project Description	Rider 45 Request	Local Match	Total Project Cost
Beaumont	Construct bridge on Carroll Street to eliminate an at-grade rail crossing.	\$5,087,464	\$1,695,488	\$6,783,952
Port Arthur	Improve Houston Street port entrance and 4 th Street rail crossing.	\$834,554	\$357,666	\$1,192,200
Port Arthur	Improve Lakeshore Road port entrance to develop turnaround for freight and passenger vehicles.	\$810,450	\$347,336	\$1,157,785
Palacios	Construct an extension of Richman Road to connect to Highway 35.	\$1,283,355	\$67,545	\$1,350,900
Harlingen	Strengthen Port Road and Cemetery Road, and expand intersection of FM 106 and Port Road.	\$7,847,611	\$413,032	\$8,260,643
Victoria	Widen McCoy Road; rehabilitate and widen Bayer Road.	\$1,870,212	\$623,404	\$2,493,615
TOTAL FY 18		\$17,733,645	\$3,504,470	\$21,239,095

FY19 Project Summary				
Port	Project Description	Rider 45 Request	Local Match	Total Project Cost
Houston	Expand Port Road from four to six lanes.	\$9,675,000	\$3,225,000	\$12,900,000
Corpus Christi	Improve intersections along Joe Fulton International Trade Corridor.	\$2,233,458	\$558,365	\$2,791,823
Corpus Christi	Construct a dedicated truck queuing lane on the Joe Fulton International Trade Corridor.	\$1,931,108	\$482,776	\$2,413,884
Palacios	Rehabilitate East and West Holsworth Road, Treacy Road, Friery Drive, 11 th Street and Shipyard Road.	\$765,700	\$48,300	\$805,000
TOTAL FY 19		\$14,596,266	\$4,314,441	\$18,910,707