PORT AUTHORITY ADVISORY COMMITTEE

2020-2021 TEXAS PORT CAPITAL PROGRAM

86TH LEGISLATIVE SESSION

2020-2021 Port Capital Program Projects by Rank

Rank	Port	Project Name	Project Type	Cost*	Page
1	Port Freeport	Freeport Harbor Channel Deepening and Widening		$295,000,000	17
2	Port of Galveston	Pier 37 Repairs		$9,200,000	13
3	Port of Beaumont	Main Street Terminal 1		$79,000,000	6
4	Port of Beaumont	Buford Rail Yard Interchange Track		$13,143,096	7
5	Port of Corpus Christi	Corpus Christi Ship Channel Improvement Project		$327,000,000	22
6	Port Freeport	Velasco Terminal		$250,000,000	18
7	Port of Galveston	Refurbishment of Old Port Industrial Road		$2,725,000	11
8	Port Freeport	Lower Stauffer Channel Dredging		$5,300,000	15
9	Port Freeport	Parcel 14 Stabilization		$60,000,000	16
10	Port of Brownsville	Brazos Island Harbor Ship Channel Deepening		$210,500,000	25
11	Port of Port Arthur	Rail Reliever		$4,287,500	10
12	Calhoun Port Authority	South Peninsula Development Phase I		$62,191,300	19
13	Port of Port Arthur	Berth 6 Expansion		$55,000,000	8
14	Port Freeport	Velasco Terminal Main Gate Study		$258,490	14
15	Port of Corpus Christi	Harbor Island Deep Draft Crude Export Facility		$55,800,000	21
16	Port of Port Arthur	Berth 5 Cargo Deck and Multimodal Transfer Area		$13,400,000	9
17	Port of Victoria	VCND South Industrial Site Development		$16,450,000	20
18	Port of Galveston	Fill Slips 38/39		$24,950,000	12
19	Port of Corpus Christi	La Quinta Channel Deepening Study		$3,000,000	24
20	Port of Corpus Christi	Corpus Christi Ship Channel Deepening Study		$3,000,000	23
			GRAND TOTAL	**$1,490,205,386**	

**Costs based on the values provided by the individual Ports and Port Authority.*

2020-2021 TEXAS PORT CAPITAL PROGRAM

86TH LEGISLATIVE SESSION

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LETTER FROM THE CHAIRWOMAN

Phyllis Saathoff
Chairwoman
Port Freeport
Upper Coast Representative

As chair of the Port Authority Advisory Committee (PAAC), I am pleased to present the 2020-2021 Texas Port Capital Program. Texas is a port-driven state and relies on a strong port system to maintain its leading position as the nation's top exporter and importer by tonnage. In 2017, Texas ports moved nearly 525 million tons of cargo and nearly 1.9 million cruise passengers. According to the Texas Ports Association, in 2015 Texas ports provided more than $368 billion in economic value to the state. The state's maritime system continues to be a critical gateway to international trade, which is vital to the Texas economy.

Our ports have seen some of the highest export revenue growth in the nation due to the increasing export of commodities like oil, gas, liquefied natural gas (LNG), and plastics. Four Texas ports were cited among the top ten fastest growing U.S. ports in terms of export revenue this past year. Export revenue should continue to grow as oil and gas production in Texas is forecasted to nearly triple by 2025. The growth in the energy sector combined with growing consumer demand worldwide indicates a strong upward trend in cargo to be handled at Texas ports for the foreseeable future. Keeping up with such growth is challenging when there is limited funding for modernizing our port system. These funding challenges can be seen at the local, state, and federal level. Five Texas ports have authorized federal channel improvement projects that are receiving insufficient federal funding, causing delays at a time when they should be a national priority.

Texas ports have invested heavily in upgrading their facilities. In the last five years, our ports have invested over $1.3 billion into port facilities and have leveraged $67.4 billion of private investments during this same timeframe. We have also seen great support for ports from their surrounding communities, with two separate voter-approved bond packages that will help repair failing port facilities and fund the local cost-share to deepen one of our ship channels.

All Texas ports, large and small, stand to benefit from investments in the Texas port system. This plan identifies over $7.7 billion of planned projects in the port system. Ports themselves will invest over $2.5 billion into their port facilities alone and over $830 million to cover their local share of ship channel deepening and widening projects. We anticipate that this will leverage over $63.3 billion of additional private investment in the next five years alone.

Presented in this Port Mission Plan: Investment Strategy, are high-value projects that will enhance port efficiency, improve the movement of freight through intermodal systems, create new jobs, and attract private investment. The PAAC approved this document and its state funding request of $575 million, which is only a fraction of the $7.7 billion of needed improvements in the port system. State funding for these strategic capital investments will help accelerate the implementation of these projects needed to support the growing Texas economy, currently the 10th largest economy in the world, for decades ahead.

We ask for your support for our ports, because investing in ports is investing in Texas.

THE PORT AUTHORITY ADVISORY COMMITTEE (PAAC)

The Port Authority Advisory Committee (PAAC) develops the biennial Texas Port Mission Plan and Port Capital Program. These reports highlight the funding needs of the Texas port system. The PAAC is comprised of nine members. Under Chapter 55 of the Transportation Code, the Texas Transportation Commission appoints the seven members of the PAAC to represent the upper coast, lower coast, and Port Houston. The Lieutenant Governor and the Speaker of the House of Representatives each appoint an additional PAAC member.

Mission

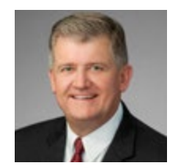
"Elevate port issues as a vital component of the Texas transportation system and advise the Texas Transportation Commission and Department on matters relating to maritime transportation."

PORT AUTHORITY ADVISORY COMMITTEE MEMBERS

Phyllis Saathoff
Chairwoman
Port Freeport
Upper Coast Representative

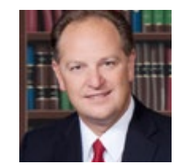
Michael Plank
Lieutenant Governor Appointee

Allan Ritter
Speaker of the House Appointee



Roger Guenther
Port Houston
Permanent Member

Chris Fisher
Port of Beaumont
Upper Coast Representative



Larry Kelley
Port of Port Arthur
Upper Coast Representative

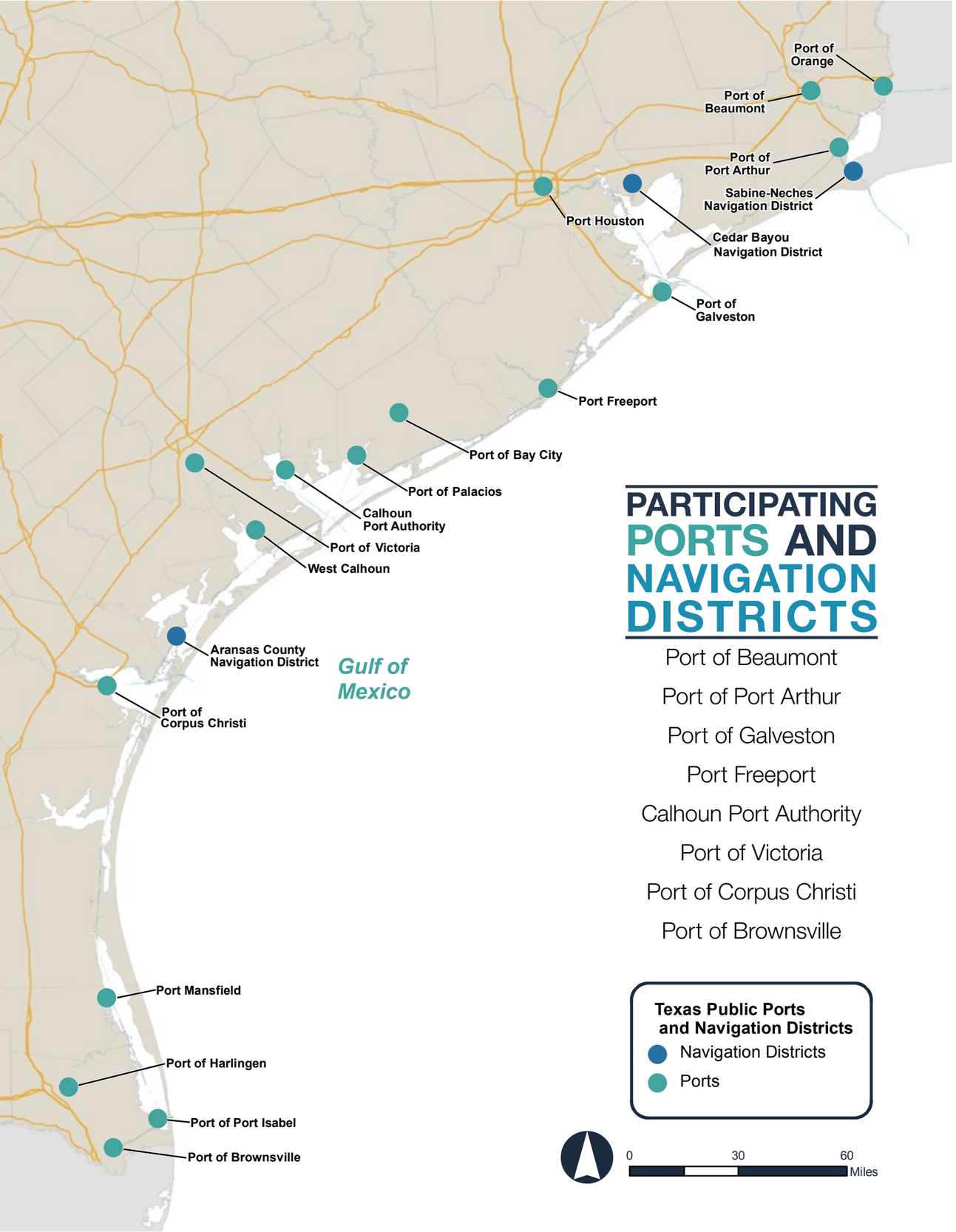
Eduardo A. Campirano
Port of Brownsville
Lower Coast Representative

John LaRue
Port of Corpus Christi
Lower Coast Representative

Jennifer Stastny
Port of Victoria
Lower Coast Representative

Goals

- Identify high-priority and strategic port projects and make recommendations to the department for investment
- Incorporate maritime interests in TxDOT planning activities and documents
- Promote Texas ports for economic development opportunities
- Identify federal, state, or other funding opportunities for maritime investment



PARTICIPATING PORTS AND NAVIGATION DISTRICTS

Port of Beaumont

Port of Port Arthur

Port of Galveston

Port Freeport

Calhoun Port Authority

Port of Victoria

Port of Corpus Christi

Port of Brownsville

INTRODUCTION

The 2020-2021 Texas Port Capital Program (PCP) is a key component of the Texas Port Mission Plan that is developed by the PAAC. The PCP takes a broad view of the needs of the Texas port system and considers port facilities, waterways and inland connections. Whereas waterways and inland connectivity needs are assessed in separate reports included in the Texas Port Mission Plan, the PCP is the only statewide maritime plan that addresses port facility needs.

The PAAC elevates matters related to maritime transportation to the Texas Transportation Commission and recommends strategic capital projects and studies to be considered for funding under the PCP. To do this, the PAAC conducts a biennial assessment of port capital improvement project needs and studies throughout Texas. Committee members evaluate projects that have been submitted by ports and navigation districts for their strategic importance to the port, the larger port system, and the state of Texas. The types of projects that are eligible to apply for inclusion in the PCP are shown below.

The PAAC voted to recommend a funding request of $125 million to help fund the projects included in the 2020-2021 PCP. This is only a fraction of the total project cost, which is approximately $1.5 billion. Funding the PCP will help accelerate the implementation of these projects so that Texas ports can remain competitive and continue to grow the state's economy. Ports are willing to provide at least a 25% project match.

The PCP is the only statewide maritime plan that addresses port facility needs.

The PAAC voted to recommend a funding request of $125 million to help fund the projects included in the 2020-2021 PCP. This is only a fraction of the total project cost, which is approximately $1.5 billion.

Waterways
Dredging
Ship channels
Turning basins
Harbors

Port Facilities
Wharves and docks
Storage facilities
Cruise terminals
Mechanized equipment
Land acquisition

Inland Connectivity
Roadways
Railroads

PORT CAPITAL PROGRAM DEVELOPMENT

Port Capital Program Eligibility

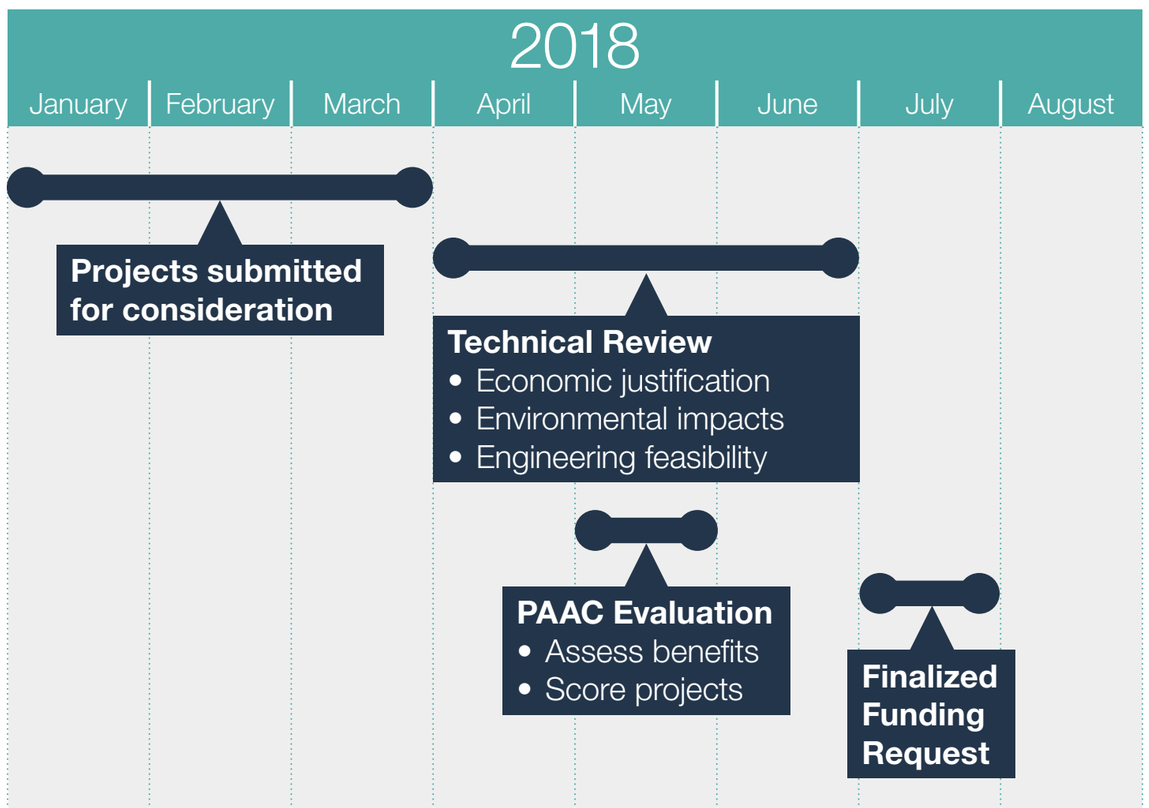
All Texas public ports and navigation districts may submit capital projects and studies that meet the eligibility requirements. The 20 public Texas ports and navigation districts were invited to submit proposed projects to be considered for the 2020-2021 Port Capital Program. Eight public ports or navigation districts elected to submit projects.

Project Eligibility

Eligible Projects	Project Examples	Minimum Criteria
Plans or Studies	• Planning Efforts • Feasibility Studies • Project Development*	✓ Meets Texas Transportation Ch. 55 eligibility ✓ Port will provide minimum 25% cost share ✓ Project lettable by the end of FY 2021 ✓ Project could be completed by the end of FY 2024 ✓ Shows economic, environmental, and engineering feasibility ✓ Has proven project support
Capital Projects	• Port Facilities • Inland Connectivity • Waterways	

**Up to 20% of design engineering*

EVALUATION PROCESS



Evaluation Criteria

Applicants selected the two most pertinent benefit categories out of the five benefit categories listed below for each project submission to be scored on. This allowed small-scale projects that can only address some of the benefit categories to be compared equitably with larger, more complex projects. The maximum score achievable was 10 points for each benefit category, for a total of 20 points possible per project.

Project Benefits Assessed

Economic Impact	The proposed project results in an economic benefit to the state in terms of job creation, new business development, or retention of existing business.
Operational Impact	The proposed project demonstrates a significant operational benefit in terms of cargo movement, reduction in vehicle wait times, improved access, or other efficiency factors.
Enhances Connectivity	The proposed project enhances connectivity to the state's multimodal transportation system.
Improves Safe and Secure Operations	The proposed project improves safe port operations or supports port security and resiliency.
Other Benefits	The proposed project provides additional secondary benefits in terms of environmental sustainability, air quality, quality of life, or other significant factors.

The results of the full evaluation analysis are summarized in the chart below by cost and primary project types. The total cost of projects ranges from under $300,000 to just under $330 million.

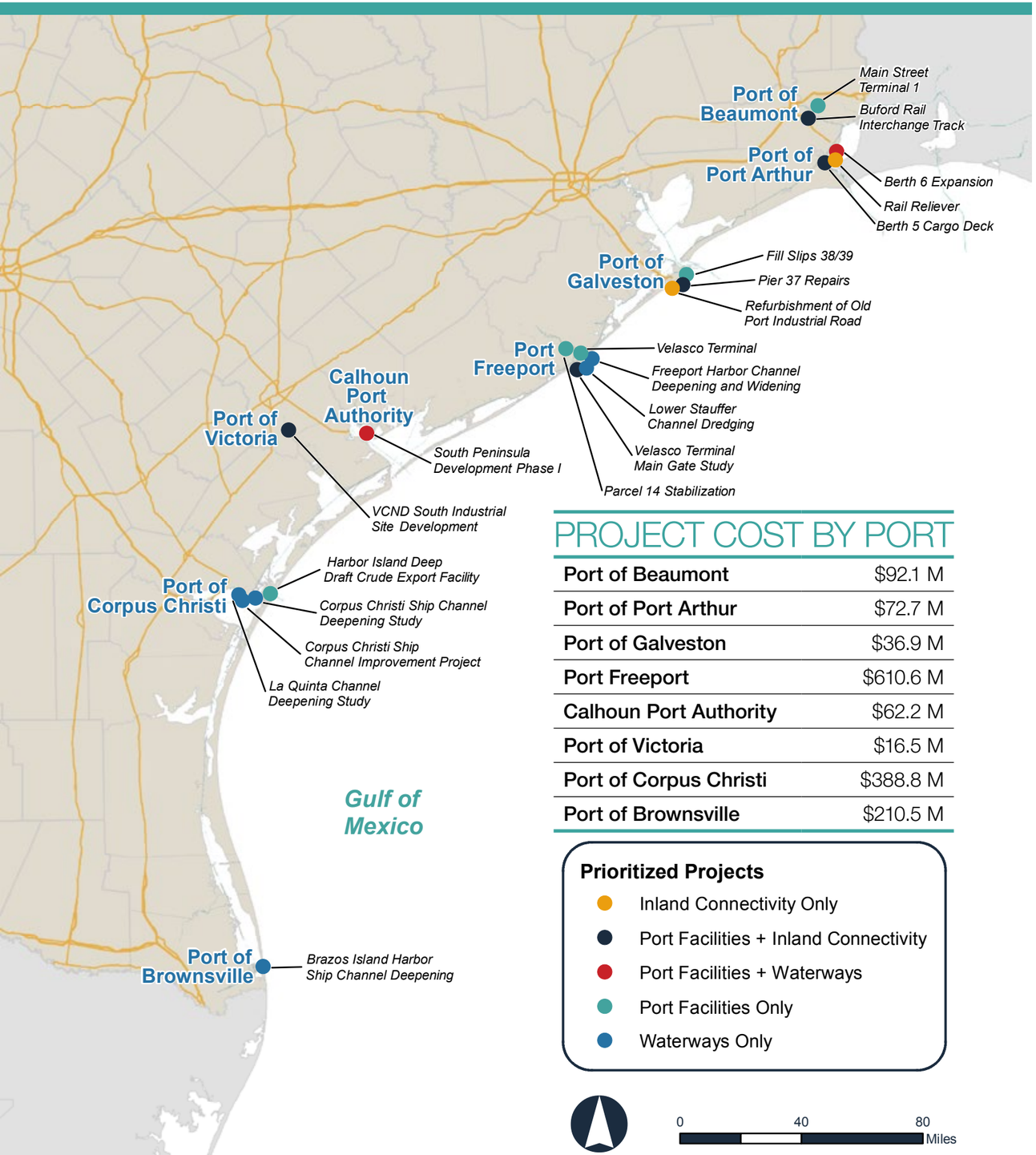
Results Summary

Project Type(s)	Eligible Projects	Cost Range of Projects
Port Facilities Only	5	$25 M to $250 M
Inland Connectivity Only	2	$3 M to $4 M
Waterways Only	6	$3 M to $327 M
Port Facilities + Inland Connectivity	5	< $1 M to $17 M
Port Facilities + Waterways	2	$55 M to $62 M

"As the nation's top exporting state, Texas plays a key role in ensuring American products reach markets across the globe, and international trade and the movement of goods are crucial to the Texas economy. Texas' seaports play a critical role in maintaining our state's economic strength, and keeping those ports competitive will be an important part of Texas' growth in the coming decades."

Glenn Hegar
Texas Comptroller of Public Accounts

PRIORITIZED PROJECT PROFILES



PROJECT COST BY PORT

Port of Beaumont	$92.1 M
Port of Port Arthur	$72.7 M
Port of Galveston	$36.9 M
Port Freeport	$610.6 M
Calhoun Port Authority	$62.2 M
Port of Victoria	$16.5 M
Port of Corpus Christi	$388.8 M
Port of Brownsville	$210.5 M

2020-2021 Port Capital Program Project Summary

Port	Project Type	Project Name	Score	Rank	Cost*	Page
Port of Beaumont		Main Street Terminal 1	15.4	3	$79,000,000	6
		Buford Rail Yard Interchange Track	15.1	4	$13,143,096	7
Port of Port Arthur		Berth 6 Expansion	13.4	13	$55,000,000	8
		Berth 5 Cargo Deck and Multimodal Transfer Area	12.3	16	$13,400,000	9
		Rail Reliever	14.0	11	$4,287,500	10
Port of Galveston		Refurbishment of Old Port Industrial Road	14.9	7	$2,725,000	11
		Fill Slips 38/39	11.9	18	$24,950,000	12
		Pier 37 Repairs	16.1	2	$9,200,000	13
Port Freeport		Velasco Terminal Main Gate Study	13.4	14	$258,490	14
		Lower Stauffer Channel Dredging	14.6	8	$5,300,000	15
		Parcel 14 Stabilization	14.1	9	$60,000,000	16
		Freeport Harbor Channel Deepening and Widening	16.7	1	$295,000,000	17
		Velasco Terminal	15.0	6	$250,000,000	18
Calhoun Port Authority		South Peninsula Development Phase I	13.9	12	$62,191,300	19
Port of Victoria		VCND South Industrial Site Development	12.1	17	$16,450,000	20
Port of Corpus Christi		Harbor Island Deep Draft Crude Export Facility	13.0	15	$55,800,000	21
		Corpus Christi Ship Channel Improvement Project	15.1	5	$327,000,000	22
		Corpus Christi Ship Channel Deepening Study	10.1	20	$3,000,000	23
		La Quinta Channel Deepening Study	11.7	19	$3,000,000	24
Port of Brownsville		Brazos Island Harbor Ship Channel Deepening	14.1	10	$210,500,000	25
				GRAND TOTAL	$1,490,205,386	

Costs based on the values provided by the individual Ports and Port Authority.

Main Street Terminal 1
Port of Beaumont

Project Details

Port Facility	Port of Beaumont
County	Jefferson
Project Status	Near Shovel Ready
Project Category	

Project Description

This project will remove and replace collapsed wharf structures at the Port of Beaumont. Docks 2, 3 and 4 were built in the 1950s on supporting infrastructure dating back to the early 1900s. The new wharf structures will support dock loads appropriate for modern operations.

Funding & Support

Total Cost	$79,000,000

Need for Funding

For a project of this scale, state funding is needed to remain competitive. Due to the Sabine-Neches Waterway (SNWW) federally-approved channel deepening, the startup of two large liquefied natural gas export terminals, and $70 billion in capital investment on the SNWW related to industrial construction and pipeline expansions in the area, the need for increased freight handling capabilities at the Port of Beaumont will be amplified.

Project Support

- Port of Beaumont Board of Commissioners
- City, County & Chamber of Commerce
- Local, State & Federal Representatives
- Metropolitan Planning Organization
- U.S. Army 84200 Transportation Battalion
- Longshoremen's Association
- Regional Economic Development Initiative

Project Benefits

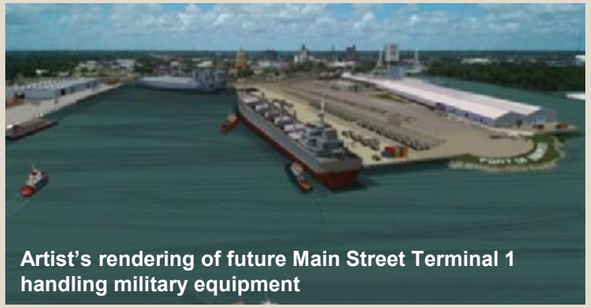
Economic Benefits

- Increase port capacity by 25%
- Generate 3,152 direct, indirect, induced and related user jobs based on a 2015 economic impact study
- Annual $450 million increase in economic activity
- Docks would support movement of:
  - Military cargo for #1 strategic outload port in the world
  - General cargo for #5 port in nation by tonnage

Operational Impact

- Increase military/general cargo docks from three to four
- Improve the flow of cargo into the port and eliminate bottlenecks
- Support the anticipated expansion of the Sabine-Neches Waterway
- Eliminate truck trips from other ports to Port of Beaumont
  - Avoid 420 trips by 2020 and 2,100 trips by 2068

Collapsed decks of Docks 3 and 4. Support structure dates back to early 1900s



Artist's rendering of future Main Street Terminal 1 handling military equipment

Buford Rail Yard Interchange Track
Port of Beaumont

Project Details

Port Facility	Port of Beaumont
County	Jefferson
Project Status	In Design
Project Category	

Project Description

This project will add over 16,000 feet of new rail track and realign and upgrade over 4,200 feet of existing rail track. It will upgrade existing road crossings, improve security fencing and lighting, and improve drainage.

Funding & Support

Total Cost	$13,143,096

Need for Funding

State funding is needed to plan this project as a continuation of the 2014 Port of Beaumont Master Plan to alleviate inter-city vehicular traffic congestion, by performing unit train switching within the port, and maximizing current rail capacity. Specifically, this project addresses the current rail capacity limitation of single-direction unit train handling at the Port of Beaumont terminal by alleviating "spot on arrival" constraints for rail lines.

Project Support

- Port of Beaumont Board of Commissioners
- Local, State & Federal Representatives
- County and City officials
- BNSF, UP, and KCS railroads
- Port stakeholders at large

View of current Buford Railyard from foreground to background

Project Benefits

Economic Benefits

	PV* at 7%	PV* at 3%	Undiscounted
Construction and Eng. Costs	($13.2M)	($13.2M)	($13.2M)
NPV of Benefits	$19.2M	$39.7M	$72.0M
B-C Ratio	1.45	3.00	5.46

**PV = Present value, NPV = Net present value; B-C = Benefit-cost*

- Project supports movement of diverse cargo like:
  - Bulk and break bulk like grain, agriculture goods, paper products, aggregate, and rock
  - Project cargo like wind energy components
  - Rolling stock, iron & steel and military equipment

Operational Impact

- Relieves constraint of current single unit-train rail track caused by dramatic 586% increase in rail cargo
- Alleviates rail congestion in area and will attract new rail intensive business
- 100% increase in rail interchange capacity

Other Benefits

- Reduce inter-city congestion and improve safety on public highways as more cargo can be transported by rail rather than trucks
- Improve neighborhood congestion and public safety by allowing unit train switches to occur inside the port
- Alleviate rail waiting times and shipping delays
- Reduce noise pollution in the Beaumont metropolitan area
- Reduce exhaust gas emissions from idling vehicles and trains

View of aggregate elevator connection to rail spur at Buford

Berth 6 Expansion
Port of Port Arthur

Project Details

Port Facility	Port of Port Arthur
County	Jefferson
Project Status	In Design
Project Category	

Project Description

This project will extend the southwest limit of the Berth 5 wharf by 1,000 feet to create Berth 6. The project will also include dredging to a 45-foot depth.

Funding & Support

Total Cost	$55,000,000

Need for Funding

This project adds capacity and increases berth capability to address vessels associated with a deeper channel and a wider Panama Canal. The expansion supports continued port growth, as several emerging markets, including liquid energy and bulk cargo, support the need. The present dock/building configuration limits certain opportunities.

Project Support

- Board of Trustees of Port of Port Arthur
- City, County & Chamber of Commerce
- State & Federal Representatives
- Industries and port stakeholders at large

Rendering of Berth 6 Expansion

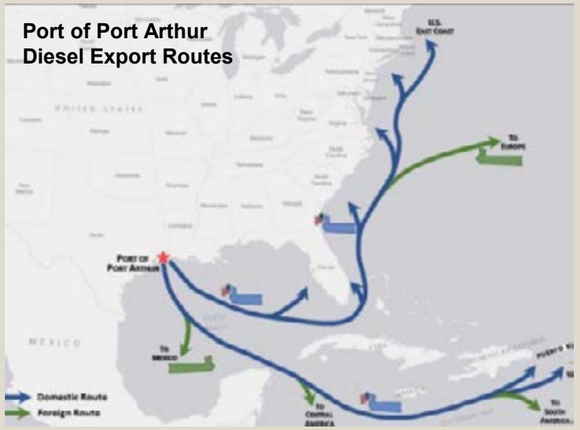
Project Benefits

Economic Benefits

- Project supports an estimated 150-200 construction jobs and 200+ permanent jobs
- Benefit-cost ratio of 1.19
- $13.5 million over 20 years from improving wood pellet/chip throughput and inland transportation costs at this terminal
- $7.2 million estimated over 20 years from improving ship loading efficiency
- $27.6 million estimated in economic competitiveness benefits over 20 years by increasing throughput of distillate/diesel vessels and reducing associated transportation costs
- Project supports movement of:
  - Liquid bulk like new diesel & distillate export
  - Bulk cargo such as wood pellets from east Texas
  - Project cargo like refinery components

Operational Benefits

- Improving ship loader reduces total vessel loading time and generates economic benefit for current facility users
- Increased volume allows upgraded facility to handle 47 additional liquid bulk vessels in the first year of operation, nearly double current volume
- Lower risk of vessel collision
- Improves safety conditions for Port personnel



Berth 5 Cargo Deck and Multimodal Transfer Area
Port of Port Arthur

Project Details

Port Facility	Port of Port Arthur
County	Jefferson
Project Status	Near Shovel Ready
Project Category	

Project Description

This project will construct a cargo deck extension to the existing general cargo facility. An elevated dock will be constructed to connect to the new berth and will allow for the transfer of bulk, breakbulk, and project cargo. The improved area will provide multimodal access to the berth and improve cargo movement in a safe manner.

Funding & Support

Total Cost	$13,400,000

Need for Funding

The dock deck addition is a necessary completion project to increase port utilization of added berth. Additionally, the deck expansion will accommodate an existing ship loading system to increase bulk handling efficiency.

Project Support

- Board of Trustees of Port of Port Arthur
- City, County & Chamber of Commerce
- State & Federal Representatives
- Industries and port stakeholders at large

Project Benefits

Economic Benefits

- Supports an estimated 150-200 construction jobs and 200+ permanent jobs.
- Expansion supports continued port growth. The present dock and building configuration limits certain opportunities.
- Support movement of project cargo, bulk cargo, and multimodal cargo, including:
  - Wood pellets and forest products
  - Liquid energy

Operational Benefits

- Reduces traffic congestion, decreases slewing, and increases safety
- Facilitates movement of on-dock rail, as well as marine berth and truck access

Project Rendering of Berth 5 Cargo Deck and Berth 6 Expansion

View of current conditions at project site

Rail Reliever
Port of Port Arthur

Project Details

Port Facility	Port of Port Arthur
County	Jefferson
Project Status	Ready for Final Design
Project Category	

Project Description

This project will construct a stabilized rail area including 1,750 feet of track, crossovers, and switches to provide additional capacity, capability, and connectivity to serving rail carriers.

Funding & Support

Total Cost	$4,287,500

Need for Funding

The requested funding is aimed to complete a phased expansion of an existing project. Phase 1 was completed through funding from the Federal Highway Administration and included acquiring land, project design and permitting, and construction of 6,700 feet of rail. This project is in Phase 2 and is currently under preliminary design. The combined cost of Phase 1 and Phase 2 is estimated at $10 million. The Port has matching funds available and needs state funding in order to be able to cover the Phase 2 project costs.

Project Support

- Board of Trustees of Port of Port Arthur

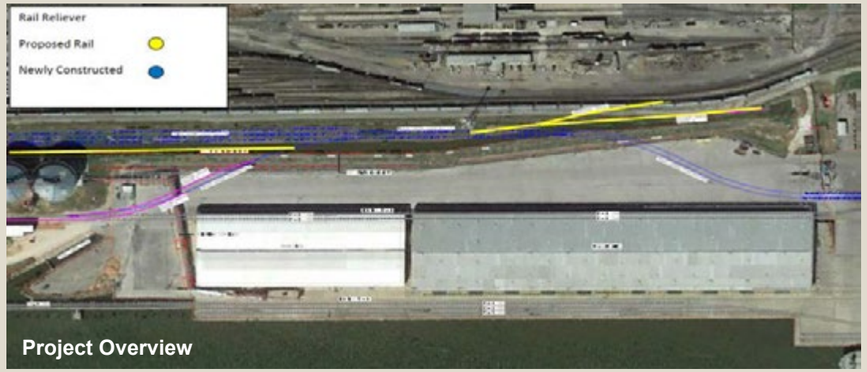
Project Benefits

Operational Impact

- Reduces truck traffic congestion and increases safety on public highways
- Decreases truck and rail dwell times
- Addresses in-port and outside-port rail congestion
- Rail improvements would support:
  - Movement of breakbulk, bulk, container, and cargo
  - Transloading to rail carriers, enabling direct intermodal service to and from major markets of the U.S. and Canada
  - Added capability to secure sensitive or high-value cargo

Enhances Connectivity

- Includes access to a delivering rail carrier and improves overall capacity
- Facilitates movement from truck to rail or rail to truck
- Enhances first mile/ last mile connectivity between the rail and dock
- Mitigates potential risks during maintenance or if the main track is out of service



Project Overview

Refurbishment of Old Port Industrial Road
Port of Galveston

Project Details

Port Facility	Port of Galveston
County	Galveston
Project Status	Ready for Final Design
Project Category	

Project Description

This project will repair and improve Old Port Industrial (OPI) Road between 33rd and 41st Streets. The project will also improve railroad crossings in the area and install a certified truck scale. This project connects to the Port's Rider 48 project.

Funding & Support

Total Cost	$2,725,000

Need for Funding

State funding is needed to improve the 3,050 feet of roadway, including raising the grade of the western end of the road approximately 6 inches, reconstructing the entire roadway to establish a 30-foot-wide concrete road, improving storm drainage, reconstructing two railroad crossings with turn out, and constructing a truck scale on the south side of OPI Road.

Project Support

- Board of Trustees of the Galveston Wharves
- Support of local government
- Industry and stakeholders located within the Port complex
- City of Galveston
- Tenants of the Port who conduct operations in the west end

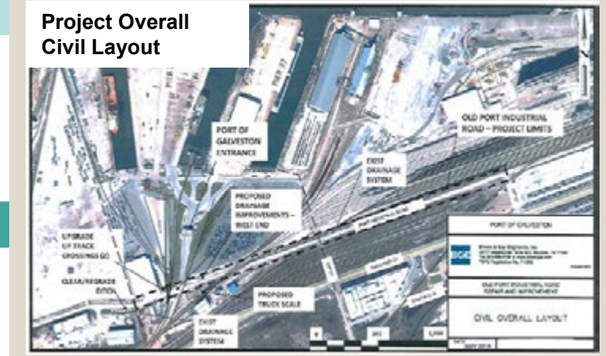
Project Benefits

Operational Impact

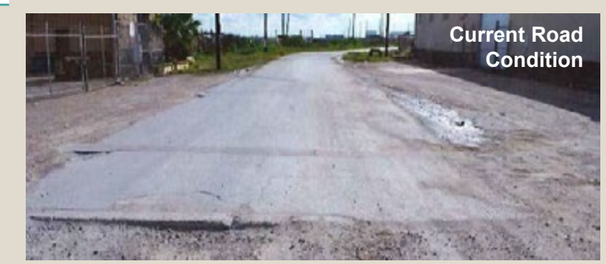
- Project expected to generate operational benefit by improving existing deteriorated pavement and reducing street flooding by improving drainage
- New proposed truck scales would alleviate light loading of up to 8 trucks per week
- Project would support movement of:
  - Transshipment of bulk liquid products and supplies such as bunker and diesel fuel
  - Rolling stock and construction equipment
  - Agricultural products like fruits and vegetables

Safety Benefits

- Improves highway safety by improving road conditions for commuting traffic including both commercial trucks and regular cars
- Improves safety for vehicles carrying oversized cargo
- Eliminates unsafe, congested, one-lane usage of OPI Road due to flooding



Project Overall Civil Layout


Current Road Condition

Fill Slips 38/39
Port of Galveston

Project Details

Port Facility	Port of Galveston
County	Galveston
Project Status	Design Not Complete
Project Category	

Project Description

This project will remove deteriorated wharves and fill in the area between two piers to create 5.7 acres of additional area for cargo storage. Repurposing this underutilized slip area will support the growing breakbulk and roll-on/roll-off cargo operations as well as the expansion plans for multiple tenants.

Funding & Support

Total Cost	$24,950,000

Need for Funding

State funding is needed to help the Port meet both current and future cargo demands for clients. There is insufficient room in the west end of the Port to handle all of the cargo operations and as a result, existing customers must reduce cargo dwell time or store cargo off port facilities. The lack of available uplands means that the Port is unable to accommodate new business and limit the Port's ability to remain competitive.

Project Support

- Board of Trustees of the Galveston Wharves
- City of Galveston
- Stakeholders within Port complex

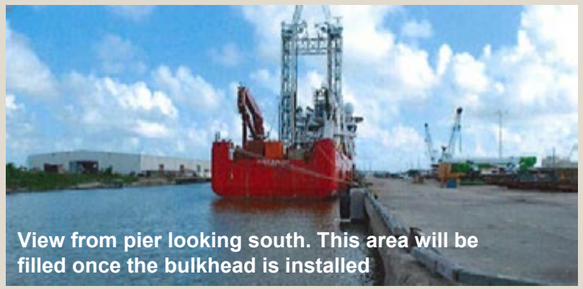
Project Benefits

Economic Benefits

- Create an additional 5.7 acres of usable space for staging additional cargo
- Generate over $21 million in revenue for the Port from ground rent, dockage, and wharfage
- Create 35 permanent jobs over a 10-year period
- Generate 132 direct and indirect construction jobs with a payroll of $4.6 million
- Enable the Port to expand operations and have the potential to construct a vehicle processing center in the future

Operational Impact

- Increase Port's cargo storage capacity by removing damaged and dilapidated infrastructure
- Expands upland storage capacity for major commodities delivered:
  - Breakbulk cargo like refrigerated fruit and vegetables
  - Wind energy and project cargo
  - Auto vehicles



View from pier looking south. This area will be filled once the bulkhead is installed

Existing bulkhead showing state of deterioration. Fill material (old bricks and concrete) is visible through holes

Pier 37 Repairs
Port of Galveston

Project Details

Port Facility	Port of Galveston
County	Galveston
Project Status	Design Not Started
Project Category	

Project Description

This project funds the engineering, design, and construction work to rehabilitate Pier 37, a key marine terminal that is the only dock in the Galveston-Houston-Texas City port complex for the loading and unloading of explosive cargo. In addition to repairing the damaged pier elements, the project will also refurbish the on-dock rail.

Funding & Support

Total Cost	$9,200,000

Need for Funding

State funding is needed to help the Port improve the efficiency and safety of current hazardous cargo handling procedures. By Coast Guard regulations, ships with explosive cargo, must have that cargo unloaded and stored ashore before other cargo transfer operations can take place. These ships call first at Pier 37 to unload the explosive cargo before continuing on to docks in Galveston, Houston, or Texas City.

Repairing damaged portions of the pier will remove hazards during the unloading process and improvements. The project will enable explosive cargo to be loaded directly from ship to rail, improving safety and reducing double-handling of cargo.

Project Support

- Board of Trustees of the Galveston Wharves
- City of Galveston
- Stakeholders within Port complex

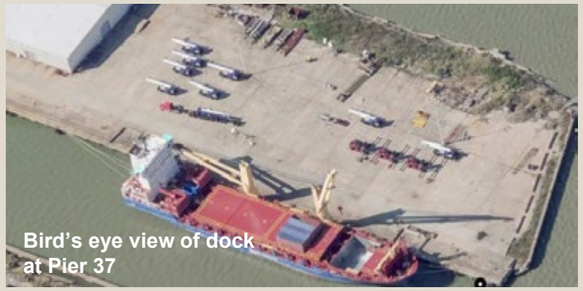
Project Benefits

Operational Impact

- Increases amount of cargo leaving by rail and decreases truck usage, which will relieve highway congestion along IH-45
- Increases operational efficiency by eliminating double-handling of cargo
- Major commodities impacted by this project are:
  - Explosive cargo at only terminal in Galveston-Houston-Texas City regional port system certified to carry it
  - Rolling stock and machinery, such as cars and construction equipment
  - General cargo

Safety Benefits

- Operations made safer by repairing structures supporting the damaged deck and eliminating unloading hazards
- Repaired bulkhead will provide better support for vehicles driving on to and off of the pier
- Repaired rail will allow explosives to be moved either by truck or rail, as appropriate
- Enables explosive cargo to be loaded directly from ship to rail, requiring less overall handling



Bird's eye view of dock at Pier 37

Velasco Terminal Main Gate Study
Port Freeport

Project Details

Port Facility	Port Freeport
County	Brazoria
Project Status	Ready To Procure
Project Category	

Project Description

Port Freeport is continuing to expand its new container terminal in phases, which necessitates the construction of a new gate. This study will help the Port determine the size and technology needed to be deployed at the gate. The main entrance will be approximately 8-12 lanes wide and will be designed to accommodate inspections of cargo and equipment, include proper signage and turnout lanes, and facilitate truck movement in to and out of the port.

Funding & Support

Total Cost	$258,490

Need for Funding

State funding is requested to complete the study. The Port aims to use this study to find answers for some key questions, including: how many lanes the port needs, what type of traffic flow issues can be expected, and what type of technology should be deployed.

Project Support

- Port Freeport Commission

Velasco Terminal is equipped with two Post-Panamax cranes with plans to add five additional cranes

Project Benefits

Economic Benefits

- As the main gate to Velasco Terminal is part of the overall project itself, it shares a portion of the overall annual economic impact of the terminal. The project will provide the following benefits based on 780,000 Twenty-foot Equivalent Unit (TEU) movement.
  - Jobs $4,492
  - Personal Income (1000) $271,782
  - Business Revenue (1000) $202,539
  - Local Purchases (1000) $187,520
  - State & Local Taxes (1000) $24,460

Operational Impact

- With 90,000+ TEUs current movement, a proper entrance and location of multi-lane road in and out of the terminal will be critical for future 1.5M TEUs activity projections

View of current Velasco terminal backlands towards future main gate

View of existing Main Gate

Lower Stauffer Channel Dredging
Port Freeport

Project Details

Port Facility	Port Freeport
County	Brazoria
Project Status	Final Design Completed
Project Category	

Project Description

This project will expand the channel approach at Berth 7 to accommodate container ships and other large vessels. It will also create a wider turning basin so that ships may safely pass while a vessel is at Berth 6. This will allow full use of Berth 6 and 7 and eliminate vessel waiting time due to berth congestion.

Funding & Support

Total Cost	$5,300,000

Need for Funding

State funding is needed for expansion of the channel approach to Berth 7. This will allow vessels to safely navigate from the Freeport Harbor Channel to the berths within the channel. Channel dredging will allow larger vessels to navigate the channel and will improve safety by allowing easier navigation around berths within the channel.

Project Support

- Port Freeport Commission
- Included in Port Freeport 5-year capital plan
- U.S. Army Corps of Engineers approved

Project Benefits

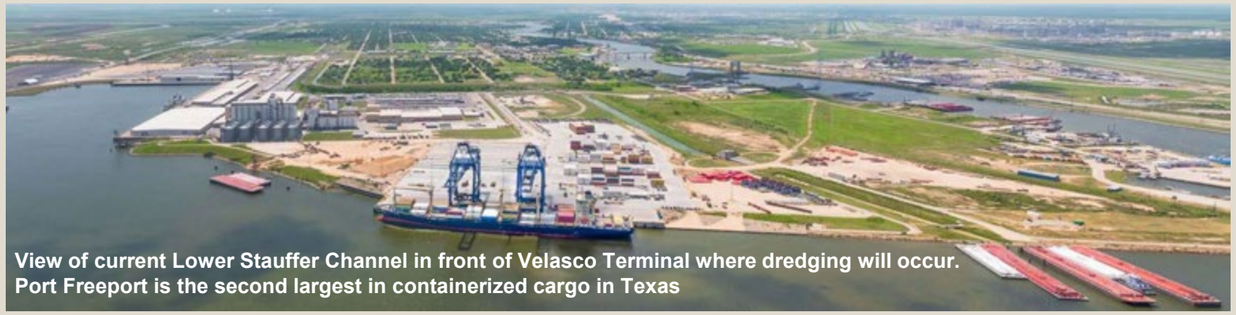
Economic Benefits

- Benefit-cost ratio of up to 4.8 in the Lower Reach and up to 6.1 in the Higher Reach
- Project would support movement of:
  - Containerized goods such as fresh fruit and plastic resin up to eventual 1.5M-2M TEUs
  - Crude oil
  - Offshore service vessels

Operational Impact

- Reduced vessel waiting times due to berth congestion
- Increased vessel safety (at berth or in transit) by allowing vessel traffic to easily pass Berths 6, 7, and 8

Port Freeport has the shortest deepwater channel on the Texas Coast with a distance of 7.5 miles from deep water to the inner harbor


View of current Lower Stauffer Channel in front of Velasco Terminal where dredging will occur. Port Freeport is the second largest in containerized cargo in Texas

Parcel 14 Stabilization
Port Freeport

Project Details

Port Facility	Port Freeport
County	Brazoria
Project Status	In Final Design
Project Category	

Project Description

This project will construct a fully operational multi-modal facility with 200 acres of parking for cars, trucks, and construction machinery. The project will also establish a warehouse for resin packaging and cross-dock operations.

Funding & Support

Total Cost	$60,000,000

Need for Funding

Major growth pending in manifest rail moves and roll-on/roll-off (Ro/Ro) cargo of all types necessitates construction of a multi-modal facility to accommodate this growth in phases. Currently 21,000 feet of track are already under construction at Parcel 4.

Project Support

- Port Freeport Commission
- Energy and petrochemical industry

Plan view of Parcel 14 rail-served multimodal industrial park

Project Benefits

Economic Benefits

- Economic Impact Statement calculates $180 million in economic benefits
- Additional 80 acres for Ro/Ro cargo expected to support 120 new jobs producing an annual payroll of approximately $3.75 million per year
- Facility will have capacity to process 72,000 vehicle equivalent units/year, generating more than $2 million annually in fees, local purchases, and taxes

Operational Impact

- Stabilization of Parcel 14 would help the Port manage the growth of its Ro/Ro, plastics and heavy machinery businesses by providing storage and operational capacity for rail operations and loading and unloading of auto, resin and manifest unit trains.
- Project would support future multimodal movement of:
  - Ro/Ro cargo, like autos and construction equipment
  - Project and heavy lift cargo, like cranes
  - Conventional breakbulk and containers
  - Plastic resin

Ongoing construction of the 15,000 feet of new rail serving the multimodal industrial park

Feeder rail connecting to Parcel 14 under construction

Freeport Harbor Channel Deepening and Widening
Port Freeport

Project Details

Port Facility	Port Freeport
County	Brazoria
Project Status	In Design
Project Category	

Project Description

Congress authorized this project in the Water Resources Reform and Development Act of 2014 (WRRDA 2014) to widen the main channel and deepen it from the 45-foot existing channel depth up to 55 feet. This will accommodate Post-Panamax container vessels and Post-Panamax tankers.

Funding & Support

Total Cost	$295,000,000
Federal Cost Share	$165,000,000
Local Cost Share	$130,000,000

Need for Funding

In May 2018, voters in the Port Freeport Navigation District approved a $130 million bond package to support the Freeport Harbor Channel Project. State funding is needed to achieve the approximately 56% matching federal funds requirement for timely completion of the Freeport Harbor Channel project. The additional depth will allow larger vessels to navigate the channel, leading to an increase in cargo volume entering the port. Thousands of direct and indirect jobs and millions of dollars in additional revenue will be created in the area as a result of the finished channel expansion.

Project Support

- Port Freeport Commission
- U.S. Army Corps of Engineers approved
- $130 million general obligation bond package authorized by taxpayers in May 2018
- 70% of tax base is comprised of industrial/commercial businesses

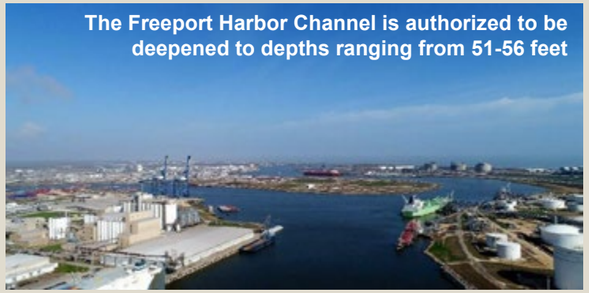
Project Benefits

Economic Benefits

- Benefit-cost ratio of 1.53
- $13.9 million net benefits through transportation cost reduction
- Could add 15,000-30,000 distribution and industrial jobs within the SH 36A corridor, with ⅔ of these in Freeport
- $800 million increase in annual income and sales tax revenues
- Major commodities impacted by this project are:
  - Crude oil, petroleum, and chemical products
  - Containerized goods like consumer products
  - Offshore service and exploration vessel

Operational Impact

- Will accommodate larger Panamax class vessels
- Improved safety for all vessels at berth or in transit
- Accommodates larger vessels and supports more efficient vessel movements.



The Freeport Harbor Channel is authorized to be deepened to depths ranging from 51-56 feet

Authorized project footprint

Velasco Terminal
Port Freeport

Project Details

Port Facility	Port Freeport
County	Brazoria
Project Status	Construction Ready
Project Category	

Project Description

This project will construct the expansion of the Velasco Terminal to support container and roll-on/roll-off (Ro/Ro) cargo. This project includes the construction of three berths which will add 1,600 feet of berth and a roll-on/roll-off ramp at the port facilities. The terminal will be equipped with five new cranes. Additionally, the project will stabilize the remaining nearby staging area.

Funding & Support

Total Cost	$250,000,000

Need for Funding

Port Freeport is the second largest container handling port in Texas. State funding would support the construction of the Velasco Terminal project, which is being built in phases. The Port will construct berths 8, 9 and 10 to provide additional container and Ro/Ro dock space. Also, the port aims to purchase five state-of-the-art Post-Panamax container cranes and stabilize all backlands.

Project Support

- Port Freeport Commission
- Energy industry and area petrochemical resin producers
- Included in 5-year capital plan

View of the current 800-foot berth at Velasco Terminal. Permit to extend container terminal berths an additional 1600 feet has been approved

Project Benefits

Economic Benefits

- At full buildout, Velasco Terminal could create 3,182 direct jobs, 2,340 induced jobs and 3,462 indirect jobs
- Total personal income would increase by $544M
- Local business revenue would increase by $405M
- Local purchases would increase by $375M
- State and local taxes would generate additional $424M

Operational Benefits

- Provides opportunity for the Port to expand into Panamax vessel operations
- Improves Port's overall throughput capability
- Project would support movement of:
  - Containerized goods such as fresh fruit and plastic resin up to eventual 1.5M-2M TEUs
  - Project cargo and breakbulk operations
  - Heavy lift and containers

Conceptual layout showing berths and container yard

South Peninsula Development Phase I
Calhoun Port Authority

Project Details

Port Facility	Calhoun Port Authority
County	Calhoun
Project Status	Final Design Completed
Project Category	

Project Description

This project will construct one deep-water berth and two barge berths to support the movement of liquid cargo. The project will also include onshore infrastructure including necessary access roads. This is Phase 1 of a larger project that includes three deep-water berths and six barge berths.

Funding & Support

Total Cost	$62,191,300

Need for Funding

State funding is needed to support the growing demand from existing and new tenants for additional brown water and deep-water facilities for the import and export of petrochemical products and crude oil. The construction includes construction of one deep-water berth (liquid cargo ship dock) and two barge berths (liquid cargo barge docks) along with onshore infrastructure.

Project Support

- Calhoun Port Authority Board of Commissioners
- The project is being coordinated with current and future industries, tenants, and stakeholders. This project is gaining support from industries quickly.

Project Benefits

Economic Benefits

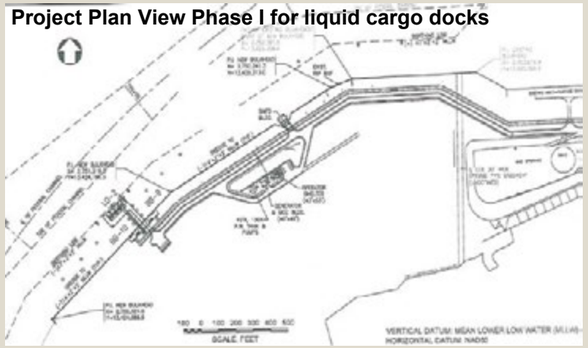
- Creates 50 full time permanent jobs at the Port and locally
- Adds to the already $12.3 billion dollar impact of the port to the State of Texas
- Allows local industry to move more product used in manufacturing of plastic and crude oil exports

Operational Impact

- Improved cargo movement capabilities
- Reduction in vehicle wait times
- Improved access
- Will reduce truck transport of crude oil on public highways
- Docks would support movement of:
  - Crude oil and natural gas condensate
  - Liquid petrochemical products including those used in plastics manufacturing

Aerial view of existing site

Project Plan View Phase I for liquid cargo docks



VCND South Industrial Site Development Project
Port of Victoria

Project Details

Port Facility	Port of Victoria
County	Victoria
Project Status	Ready for Final Design
Project Category	

Project Description

This project extends McCoy Road, a heavy-haul road serving as the main entrance to the South Site, extends the port's existing general cargo dock, and creates a 5-acre multi-purpose dock and warehouse, along with handling equipment for the container dock.

Funding & Support

Total Cost	$16,450,000

Need for Funding

State funding is needed to support the development of South Industrial Site at the Port of Victoria, a project which impacts a variety of stakeholders in the region. With Caterpillar's recent move to the area, the continued expansion of the area by the petrochemical industry, and interest in the region coming from industry and developers around the nation, consideration of Victoria for projects is at an all-time high. The port has matching funds available, but it is not in a position at this time to fund the entire project.

Project Support

- The Victoria County Navigation District
- Local government
- Regional planning organization
- Industry partners

Project Benefits

Economic Benefits

- Combination of easy barge access with deep water connections, rail, and highway frontage options has already sparked interest of industrial developers
  - The Port has nearly 2,000 acres of prime property that can be developed
- With Port's commitment to build/upgrade more facilities on site, many more developers expected, which will aid in job creation and greatly enhance the economy of the area

Operational Impact

- Extending McCoy Road to Fleet Avenue would create direct access to State Highway 185, which is vital for efficient means of transporting products to and from this site location.
- Project would support movement of:
  - General, containerized and dry bulk cargo

Project Overview

View of existing general purpose dock

Harbor Island Deep Draft Crude Export Facility
Port of Corpus Christi Authority

Project Details

Port Facility	Port of Corpus Christi Authority
County	Nueces
Project Status	Planning and Permitting
Project Category	

Project Description

This project will plan, permit, design, and construct a crude oil export facility. The preliminary and final design will focus on an initial facility for construction of the marine berth upon completion of final design. The project will require the demolition of the existing structure.

Funding & Support

Total Cost	$55,800,000

Need for Funding

The Port is the 4th largest U.S port in total tonnage, and largest in U.S. produced crude exports. The 2015 lifting of the U.S. crude export ban, along with new pipelines planned from the Permian Basin to the Port will require a deeper and wider ship channel to accommodate safe passage of larger vessels and export docks for these vessels. Funding of this project will allow the Port and U.S. companies to significantly increase export capacity and solidify Texas and the Nation as a world energy leader. Port-owned property at Harbor Island is well positioned for development of deep water bulk liquids transfer facilities.

Project Support

- Port of Corpus Christi Commission
- Commission approved design consultants for project in May 2018

Project Benefits

Economic Benefits

- The Corpus Christi Ship Channel (CCSC) project, combined with this project, will provide over $100 million in annual transportation cost savings, **not** including crude oil exports
- Project provides key infrastructure to accommodate increasing volumes
  - Port expected to surpass 1 million barrels/day (bpd) of crude export by 2020, and 2 million bpd by 2023
- Project will help U.S. further shift trade deficit and positively impact producers, midstream operators, and port industries
- Supports movement of crude oil exports from Permian and Eagle Ford shale production

Operational Impact

- Project will position the Port to accommodate larger vessels, keeping up with the world's vessel fleet
- Proximity to deep water and location in outer harbor makes project location ideal for crude export and will help relieve congestion within inner harbor areas
- Helps diversify geographic reach of the CCSC

Tanker departing PCCA Oil Dock #1 – note loading arms at center picture are up. This is an example of what a crude export dock at Harbor Island may look like, only bigger for larger vessel loading

VLCC Anne arrives at Port of Corpus Christi on test run for crude exporting

Corpus Christi Ship Channel Improvement Project
Port of Corpus Christi Authority

Project Details

Port Facility	Port of Corpus Christi Authority
County	Nueces
Project Status	Construction Ready
Project Category	

Project Description

Congress authorized this project in the Water Resources Reform and Development Act of 2014 (WRRDA 2014) to widen the main channel and deepen it from the 47-foot existing channel depth up to 54 feet. The project will extend from Gulf of Mexico to the Viola Turning Basin. The project will also include widening the channel to 530 feet and include barge shelves for the safe passage of shallow-draft vessels.

Funding

Total Cost	$327,000,000
Federal Cost Share	$225,000,000
Local Cost Share	$102,000,000

Need for Funding

In September 2017, through the Project Partnership Agreement with the U.S. Army Corps of Engineers (USACE), the Port of Corpus Christi Authority (PCCA) approved accelerating funding of $32 million to USACE to expedite initial construction.

In March 2018, the Port Commission approved a Plan of Finance specifically to support this project. PCCA has developed a robust and aggressive capital improvement program to build new infrastructure to meet these growing demands and to accelerate the deepening and widening of its ship channel.

This channel improvement project is the port's top priority.

Project Support

- Port of Corpus Christi Commission
- Congressional authorization through WRRDA 2014
- U.S. Army Corps of Engineers
- City of Corpus Christi
- Stakeholders within port complex

Project Benefits

Economic Benefits

- Increases goods value exports by nearly $35 billion annually, reducing the national trade deficit
- Increases export of oil and gas, supporting U.S. trading partners and bolstering domestic energy production
  - PCCA exported +$6 billion of crude oil in 2017
- Provides over $100 million in annual transportation cost savings, **not** including crude oil exports
- Supports future $18 billion liquefied natural gas (LNG) liquefaction facility with capacity of 22 million tons annually

Operational Impact

- Accommodates deeper draft vessels and allows 2-way traffic without channel closure, which will create an operational advantage and provide for a more secure port through less standby traffic
- Deeper/wider channel supports movement of:
  - Petroleum products and crude oil (esp. exports from Permian and Eagle Ford shale production)
  - Bulk grain including sorghum and corn
  - Goods for port ranked 4th in U.S. in total tonnage

Bird's eye view of the Corpus Christi Ship Channel at Harbor Bridge

View of the Inner Harbor portion of the Corpus Christi Ship Channel

Corpus Christi Ship Channel Deepening Study
Port of Corpus Christi Authority

Project Details

Port Facility	Port of Corpus Christi Authority
County	Nueces
Project Status	Study Authorization and Agreement Needed
Project Category	

Project Description

This navigation feasibility study will evaluate the deepening of the Corpus Christi Ship Channel (CCSC) to a maximum depth to support 99% of the world's vessel fleet from the authorized 54-foot depth from the Gulf of Mexico to the La Quinta Junction. This would allow for the accommodation of Very Large Crude Carriers (VLCC) for crude oil export.

Funding

Total Cost	$3,000,000

Need for Funding

The Port of Corpus Christi Authority (PCCA) is the largest crude export port and the 4th largest port in total tonnage in the U.S. The 2015 lifting of the U.S. crude export ban, along with new pipelines from the Permian Basin to the PCCA, will require a deeper and wider ship channel to accommodate safe passage of larger vessels. The greater depth would increase the benefits offered by the 54-foot deepening of the CCSC.

Project Support

- Port of Corpus Christi Commission

Project Benefits

Economic Benefits

- Reduction of transportation costs by allowing larger vessels to carry crude oil fully loaded at berth, avoiding lightering costs at sea
- Incentivizes more midstream producers to export crude product out of the port
- Benefits Texas crude producers and associated industries (upstream, pipeline, terminal operators, vessels)

Operational Impact

- Increases efficiency of transporting goods, as tonnage has increased by 21% with existing customers, and by up to 153% in the Ingleside region
- Reduces congestion that would come with increased tonnage growth

VLCC Anne at Oxy Ingleside Energy Center, near the proposed upper limit of the study

VLCC Anne on the CCSC on way to Oxy Ingleside Energy Center

La Quinta Channel Deepening Study
Port of Corpus Christi Authority

Project Details

Port Facility	Port of Corpus Christi Authority
County	Nueces
Project Status	Study Authorized, Needs Feasibility Cost Share Agreement
Project Category	

Project Description

The 2016 Water Infrastructure Improvements for the Nation (WIIN) Act study for the Corpus Christi Ship Channel includes the La Quinta Channel, a segment of the Corpus Christi Ship Channel system. The study will evaluate the feasibility of deepening the La Quinta Channel to 54 feet to match the authorized depth of the main Corpus Christi Ship Channel.

Funding

Total Cost	$3,000,000

Need for Funding

With existing customers, such as Cheniere and Voestalpine, traffic at the La Quinta Channel has increased. By the end of 2017, cargo tonnage has increased by more than 21%. Funding of the La Quinta Channel Deepening Feasibility Study will allow the Port and U.S. companies to significantly increase export capacity and solidify Texas and our nation as a world energy leader.

Project Support

- Port of Corpus Christi Commission
- U.S. Army Corps of Engineers
- City of Corpus Christi
- Stakeholders within port complex

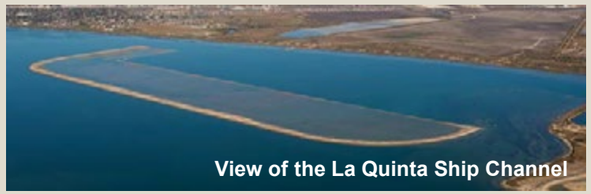
Project Benefits

Economic Benefits

- Reduce transportation costs by allowing fewer, more deeply loaded ships to carry the same projected cargo through La Quinta Channel
- Reduce operating costs for several La Quinta facilities that have experienced significant increases in tonnage, which will boost economic gains in the associated supply-customer chain

Operational Impact

- The resultant project will allow deeper drafting vessels, increases efficiency of transporting goods, reduces vessel calls needed to deliver the same cargo, and reduces congestion that could come with future growth in tonnage
- Deeper channel will support movement of:
  - General and dry bulk cargo like polyethylene and iron ore, iron ore pellets, and hot briquetted iron for steel mills
  - Liquid natural gas exports
  - Larger offshore drilling rigs



View of the La Quinta Ship Channel

1st US crude oil export departing on the Theo T via the Corpus Christi Ship Channel

Brazos Island Harbor Ship Channel Deepening
Port of Brownsville

Project Details

Port Facility	Port of Brownsville
County	Cameron
Project Status	In Final Design
Project Category	

Project Description

Congress authorized this project in the Water Infrastructure Improvements for the Nation Act of 2016 (WRDA 2016). This project will deepen 16 miles of the Brazos Island Harbor Ship Channel from its previously authorized depth of 42 feet up to 52 feet. Over 65 million cubic yards of dredged material are expected to be placed in disposal sites and placement areas.

Funding

Total Cost	$210,500,000
Federal Cost Share	$121,000,000
Local Cost Share	$89,500,000

Need for Funding

The Port has experienced strong growth with tonnage on Brazos Island Harbor, nearly doubling from 5,907,000 short tons in 2011 to 10,600,000 short tons in 2017 (a 79% increase from 2011 and a 546% increase from 1990). Foreign imports have been the primary driver, including petroleum, iron, and steel products. There is also a need for deeper transport related to offshore rigs operating in the Gulf of Mexico and servicing in the port. State funding is needed for the channel expansion.

Project Support

- Brownsville Navigation District Commission
- Congressional authorization under WRDA 2016
- Broad community and regional support

Project Benefits

Economic Benefits

- Benefit-cost ratio of 6.4 to 1
- Total average annual benefits of $20,539,000
- Reduced transportation costs for petroleum product tankers, dry bulk, and iron and steel bulk carriers

Operational Impact

- Increased cargo movement
- Reduced transit times
- Enhances operational safety by allowing deeper, more fully loaded vessels to carry cargo and reduce the number of vessels in transit
- Reduced risk of grounding
- Deeper channel supports movement of:
  - Petroleum products and crude oil
  - Dry bulk material like limestone and sand
  - Fabricated metal, iron ore, iron, and steel
  - Large semi submersible oil rigs – this port and Pascagoula have only dry docks in US for jack-up and semi-submersible rig service

Bird's eye view of channel at Liquid Cargo Dock

Break bulk cargo at Docks 15 and 16

Front Cover: Port Freeport.
Back Cover: Port of Beaumont.