

TxDOT Waterborne Freight Corridor Study

Task 5: Port and Waterway Funding and Financing Options

final report

prepared for

Texas Department of Transportation

prepared by

Cambridge Systematics, Inc.

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November 18, 2011

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Executive Summary

Identifying viable funding sources for critical port and waterway projects is a challenge faced by all coastal states. When developing an investment strategy for waterborne freight transportation in Texas, it is important to understand not only the Federal, state, and local funding sources that are available, but also the institutional framework in which ports operate, their governance models, how they interact with the Texas Department of Transportation (TxDOT) and other agencies, and the evolving role of the Federal government in funding maritime-related infrastructure.

Texas does not have a statewide port authority like some other Gulf Coast states (e.g., Mississippi). This means that Texas ports largely plan capital projects independently of each other, though they do collaborate from time to time on mutually beneficial projects. Ports interact with TxDOT through the Port Authority Advisory Committee, which advises the committee regarding port issues and needs (including funding recommendations), and prepares an annual Port Capital Program. However, TxDOT's involvement in port development has historically been limited to coordinating "outside the gates" road and rail connections to accommodate port growth and expansion. Nonetheless, TxDOT can engage with ports on an ongoing basis through the existing institutional structure, laying out an overall vision for the future of waterborne commerce in the State, and coordinating phased improvements to help achieve that vision.

There has always been a significant Federal role in port and waterway funding, but this role is changing. Reauthorization of Federal surface transportation legislation may well include specific provisions for maritime freight. There are other policy proposals that would create new funding opportunities for port projects, including tweaks to existing programs (such as the Transportation Infrastructure Grants and Economic Reinvestment (TIGER) grants), as well as new revenue collected through various user fees or taxes.

The exact nature and size of any new freight/maritime funding are highly uncertain due to the debate over the Federal budget and deficit and persistent weakness in the national economy, which discourages policy-makers from raising new revenue. Nonetheless, it seems likely that goods movement and maritime needs will help shape the transport funding debate going forward. This could create new opportunities for TxDOT and its port and waterway partners to fund critical landside and waterside infrastructure in accordance with an overall strategic vision.

In general, loan programs are easier to access than grants from a funding availability standpoint, since competition for limited grant funding is intense. Nonetheless, it is sometimes possible to assemble grant funding from multiple sources to help move an important project forward. At the same time, loan programs can be an attractive source of project finance since freight projects are often backed

by the private sector and may be able to generate sufficient revenues or user fees to cover debt service. There are comparatively few loan or grant programs that are dedicated specifically to the marine mode, which means that extra attention should be paid to developing compelling funding applications for these types of projects, especially for grant programs where waterside improvements would have to compete with other modes for scarce funding.

TxDOT has defined five strategic solution packages to address the State's future waterborne freight needs. All five packages are multimodal, but the set of projects in each one is geared towards a specific goal; for instance, some focus on expanding cargo capacity without regard for cost, while others tend to concentrate on maintaining existing infrastructure. This means that appropriate funding sources will vary by strategic package. Overall, loan programs are most applicable to the strategic packages that tend to concentrate more on capacity expansion and include many large, capital-intensive capacity expansion projects. Many grant programs may be better suited to small- or medium-scale projects, including those that maintain existing capacity rather than expand it.

1.0 Introduction

The Texas Department of Transportation (TxDOT) has commissioned a Waterborne Freight Corridor Study to help the DOT develop an understanding of the trends driving freight demand at Texas ports and waterways; identify key chokepoints impacting the efficiency of the State's waterborne and surface freight system; describe the key mobility, economic, and community/environmental impacts being caused (or exacerbated) by these growth patterns and chokepoints; and identify infrastructure, operational, and institutional recommendations to help the DOT and its local partners better address these issues.

An important part of this strategy is to help TxDOT to identify different options for funding and financing the types of projects and strategies discussed throughout this effort. This technical memorandum offers a summary of the existing, potential, and developing sources that may be available to TxDOT - either now or in the future. In an era of increasingly scarce funding options, the State must carefully track these sources, and creatively determine if, how, and when to financially participate in projects that support waterborne freight movement.

The remainder of this technical memorandum is organized as follows:

- **Section 2.0. Institutional Framework** - discusses the institutional structure of Texas seaports, and the changing Federal role in port and transportation funding.
- **Section 3.0. Port Funding and Financing Tools** - begins with a brief primer on Texas port and waterway funding today, then describes key port funding and financing programs at the Federal and state level, and rates them in terms of overall availability for funding improvements to Texas' waterborne freight system.
- **Section 4.0. Proposed Solution Packages** - describes the project solution packages identified for this study, and relates them to the funding programs described in Section 3.0. The goal is to identify which programs are best for funding certain types of key projects from an availability and applicability standpoint.
- **Section 5.0. Conclusions** - summarizes the key findings of this report.

2.0 Institutional Framework

Seaports in Texas and throughout the country have different ownership and governance structures, which can affect the grant and loan funding streams available to them. Texas, like most states, has some unique institutional arrangements regarding its port system, which also play a part in how port projects are funded. Moreover, this institutional environment will interact with an evolving Federal role in port funding, which could create new funding opportunities for Texas ports.

2.1 PORT OWNERSHIP AND GOVERNANCE

Seaports throughout the U.S. – and within Texas – can be owned and operated in very different ways. Understanding each of these institutional arrangements is important, as it may impact the types Federal and state funding and financing tools available to each port and to the collection of ports as a whole.

There are four primary models of port ownership and operations:

1. **Independent public ports** operate as stand-alone, publicly-owned entities, although they can collaborate from time to time on strategic partnerships, or to deliver mutually beneficial projects (for instance, a channel deepening that benefits two or more ports). Ultimately, however, each port is responsible for securing its own funding and setting its own priorities. Almost all of Texas' seaports operate under this model – for example, the Ports of Houston, Galveston, and Corpus Christi all operate as independent ports. Each port is accountable to its local governing board, which is a political subdivision of the State of Texas.¹
2. **State port authorities** serve as a single governing body for all public ports within a state. Under this model, individual ports have different organizational structures and management teams, but the state port authority is responsible for defining overall goals and priorities, lobbying for funding, and allocating those funds. Texas does not have a state port authority. Along the Gulf Coast, the Mississippi State Port Authority and the Alabama State Port Authority represent centralized state port authorities.
3. **Multimodal authorities** typically are local or regional organizations responsible for multiple public transportation modes and facilities. They are often associated with airports, bridges, ports, and other revenue generating

¹ The enabling legislation for Texas port authorities is provided in the Texas Transportation Code, Title 4, Subtitle A, Chapter 54, *Harbor and Port Facilities in Certain Municipalities*.

infrastructure; and are most common in large metropolitan areas. The Port Authority of New York and New Jersey is an example of a multimodal authority. There are no multimodal authorities in Texas.

4. **Private ports** are owned and operated completely by the private sector. They can take a variety of forms. Oftentimes, private ports are specially constructed to serve the needs of a single entity, usually a company that uses or deals in bulk products. A Texas example would be the ALCOA Point Comfort Operations Plant in Calhoun County. Less common is a major deepwater port that is privately owned and operated; however, the Port of Texas City is an example of such a facility.

Table 2.1 lists the ownership/governance structure of Texas' key port facilities.

Table 2.1 Port Ownership in Texas

Port	Ownership Model
<i>Calhoun Port Authority</i>	Independent Public
<i>Cedar Bayou</i>	
<i>Port of Bay City</i>	
<i>Port of Beaumont</i>	
<i>Port of Brownsville</i>	
<i>Port of Corpus Christi</i>	
<i>Port of Freeport</i>	
<i>Port of Galveston</i>	
<i>Port of Harlingen</i>	
<i>Port of Houston</i>	
<i>Port of Orange</i>	
<i>Port of Palacios</i>	
<i>Port of Port Arthur</i>	
<i>Port of Port Isabel</i>	
<i>Port of Port Mansfield</i>	
<i>Port of Texas City</i>	Private
<i>Port of Victoria</i>	Independent Public
<i>Port of West Calhoun</i>	

Communicating with TxDOT - The Port Authority Advisory Committee

Institutional interaction between Texas ports and TxDOT occurs via the Port Authority Advisory Committee (PAAC), which was established by the 74th Texas

Legislature in 1995. It serves as an information exchange between the port industry, TxDOT, and the Texas Transportation Commission. The committee is composed of seven members: one from the Port of Houston Authority, three from ports located on the upper Texas coast, and three representing ports located on the lower Texas coast. TxDOT considers PAAC input when developing policies that affect the Texas port and waterway system. Specifically, the PAAC advises Texas Transportation Commission (TTC) and TxDOT on the following:

- Issues concerning port authorities;
- Intermodal and multimodal issues facing Texas waterways and ports;
- The identification of potential funding sources for port and waterway improvements; and
- Port infrastructure needs.

The PAAC is responsible for identifying needs on the Texas waterway system. To support this function, the PAAC completes activities highlighted in Table 2.2 below.

Table 2.2 PAAC Activities to Support Needs Identification

PAAC Activities
<ul style="list-style-type: none">• Prepare a port mission plan• Review all eligible port and waterway projects and make recommendations to TxDOT regarding whether to fund them• Maintain current trade data to assist ports and international trade• Prepare an annual list of projects recommended for implementation, including the recommended state share of project costs• Advises the TTC and TxDOT on matters affecting port authorities within the State

Source: Texas Transportation Code, Title 4, Subtitle A, Chapter 55, Section 55.007, 'Duties of Committee'.

The PAAC also must prepare a biannual Port Capital Program, which outlines the goals and objectives of the committee with regard to the development of port facilities. By statute, the capital program must include projects or studies submitted by any port. It also must make recommendations for the construction of intermodal connections to a port and the development of other port or transportation facilities that enhance international commerce or security, promote the efficient flow of cargo, increase port revenues, increase cruise passenger activity, or otherwise promote economic development in Texas.²

² Texas Transportation Code, Title 4, Subtitle A, Chapter 55, Section 55.008, 'Capital Program'.

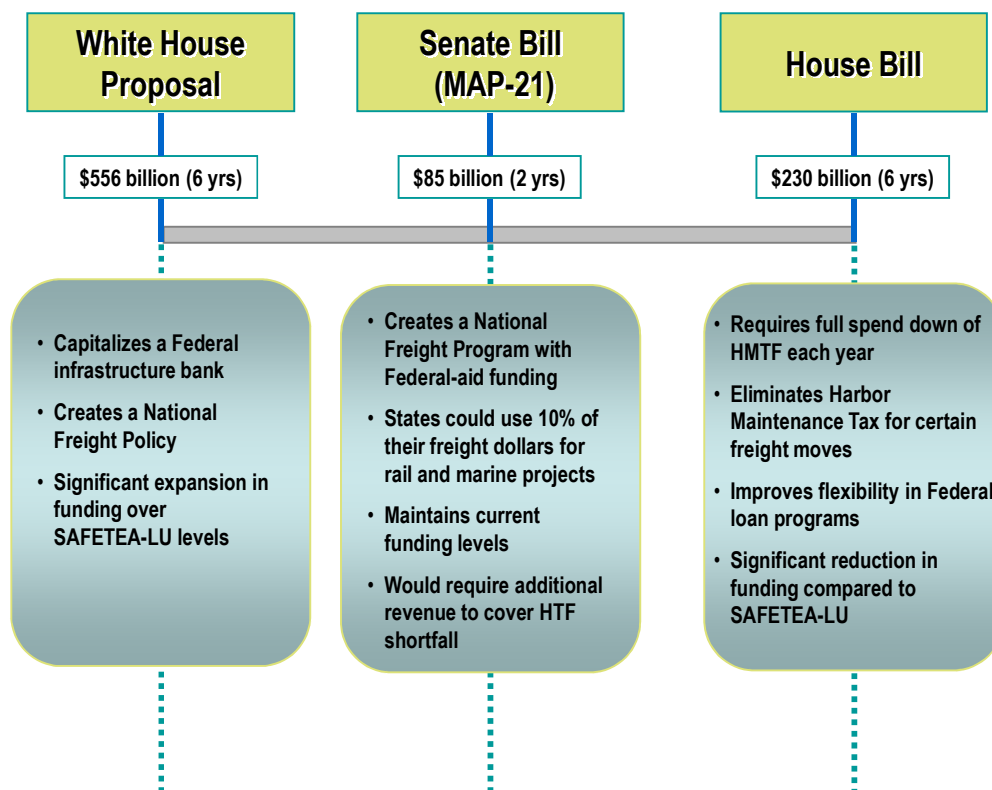
2.2 EVOLVING FEDERAL ROLE IN PORT AND TRANSPORTATION FUNDING

There are limited opportunities for Federal funding of waterborne freight system improvements. However, several new Federal transportation initiatives have been proposed that are worth noting for their potential to provide increased funding sources. They mainly revolve around new proposed legislation and the reauthorization of Federal transportation programs, as well as one new marine transportation funding program. There are also some proposals to raise new revenue for freight transportation projects through new or increased user fees or taxes.

Reauthorization of Surface Transportation Legislation

The current Federal surface transportation legislation, Safe, Accountable, Flexible, Efficient Transportation Equity Act, A Legacy for Users (SAFETEA-LU), expired in September 2009. In the absence of reauthorization, SAFETEA-LU provisions have continued since then through a series of extensions approved by Congress. During this time, several different proposals have been circulating in Washington (Figure 2.1).

Figure 2.1 Proposals for Surface Transportation Reauthorization



Source: Cambridge Systematics, Inc.

The Obama administration's proposal would cost \$556 billion and would create a national fund that would finance projects based on merit (essentially a Federal infrastructure bank). It would also provide for the creation of a National Freight Transportation Policy to invest in critical freight projects.

Similarly, the Senate Environment and Public Works Committee introduced draft legislation called Moving Ahead for Progress in the 21st Century, or MAP-21. This bill would continue funding transportation programs at current levels for two years (\$85 billion). It would also consolidate the seven existing core Federal-aid funding programs to five; one of which would be a National Freight Program. States would be allowed to obligate up to 10 percent of their freight apportionment to rail and marine projects. The bill has been passed by the Environment and Public Works Committee; however, House Transportation and Infrastructure Committee Chairman John Mica has repeatedly stated that he favors a six-year reauthorization, so ultimate passage of MAP-21 is uncertain at this time. In addition, Congress must find an additional \$12 billion to cover a Highway Trust Fund shortfall in order to move the bill forward.³

The House Bill, put forward by Representative Mica, is smaller in scale than the others, at \$230 billion.⁴ From a freight/perspective, there are two important provisions in the proposed legislation:

1. **Provisions for marine transportation.** For the first time ever, this legislation would specifically include language addressing port- and maritime-related investments. Most importantly for ports, it would require that funds in the Harbor Maintenance Trust Fund be fully spent down each year, and that they only be used for harbor and channel dredging. Furthermore, the Bill would eliminate the Harbor Maintenance Tax for domestic moves of international cargo from the first port of arrival, thus stimulating short sea shipping as an alternative to trucks.
2. **Improve flexibility in Federal loan programs.** The Bill would make key changes to the Transportation Infrastructure Finance and Innovation Act (TIFIA) and Railroad Rehabilitation and Improvement Financing (RRIF) loan programs, in order to encourage increased utilization. For TIFIA, the plan would broaden overall participation, loosen eligibility requirements, allow the TIFIA loan to pay for a larger share of project costs, expedite the approval process, and raise the program's budget authority to \$1 billion. For RRIF, the Bill would make the application process easier, expand the types of eligible

³ 'Senate Committee approves surface bill', *American Shipper*, Thursday, November 10, 2011.

⁴ Since the Bill was announced, Representative Mica has stated that he is looking for additional revenue of \$15 billion per year beyond what is coming into the Highway Trust Fund (HTF) to help pay for a more ambitious bill, but this revenue will not come from an increase in fuel taxes.

projects, provide better transparency regarding the loan decision, and allow for more flexible loan terms.

All three of these proposals include specific language and funding for freight. However, the passage of any comprehensive surface transportation overhaul this year is uncertain at this point due to ongoing Federal budget negotiations. If a bill is not passed by the end of the current fiscal year, many observers suggest that it is unlikely a bill will pass before the 2012 elections. Nonetheless, freight issues in general – and perhaps maritime issues specifically – are likely to inform whatever surface transportation legislation does eventually emerge.

Proposed Legislation and New Programs

Beyond the reauthorization debate, there are other policy proposals that may impact the port funding picture. There is also one recently implemented program that addresses needs on the nation’s inland and coastal waterways.

TIGER Act

The TIGER Act (Senate Bill 942) would essentially authorize the TIGER program (which is described in Section 3.1) on an ongoing basis through 2018. Eligible projects would be identical to those specified under TIGER II, and would thus include port infrastructure projects. However, the cost of dredging activities is specifically excluded under this bill. Beyond the grant, funding typically provided by the TIGER program, the bill includes secured loans and loan guarantees through a new Federal credit instrument. The maximum grant/loan guarantee amount would be \$500 million per project. Like TIGER III, selection criteria would focus more on economic competitiveness and sustainability as opposed to job creation. The bill language does not specify funding amounts.

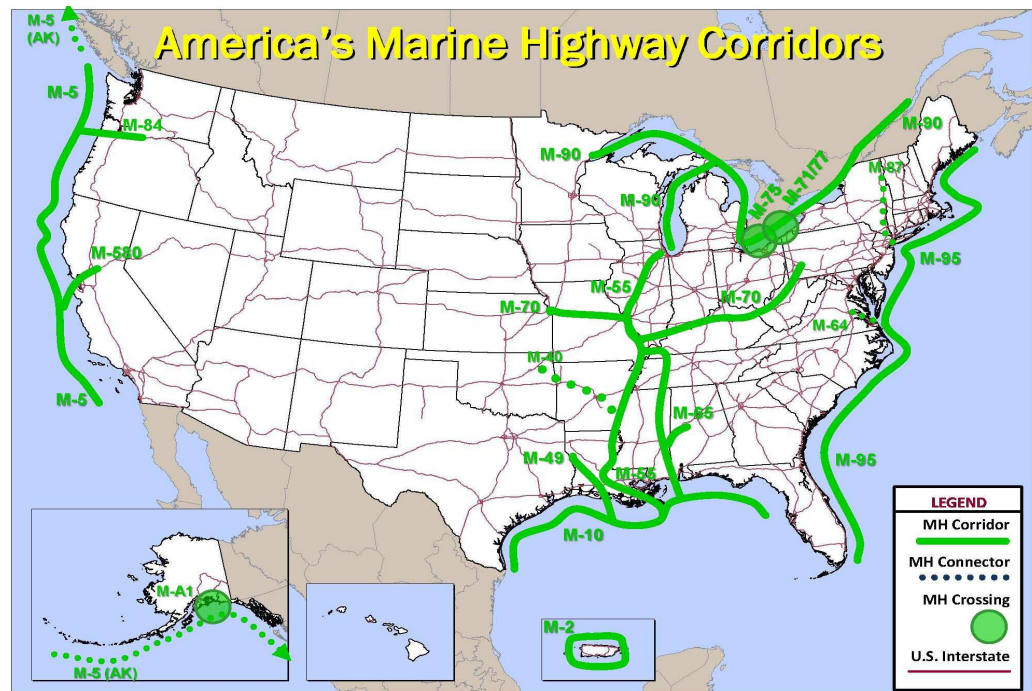
American Infrastructure Investment Fund (AIIF) Act of 2011

The AIIF Act (Senate Bill 936) would create two key transportation funding vehicles that ports may be able to take advantage of: 1) a transportation-focused infrastructure investment fund authorized at \$5 billion per year; and 2) a National Infrastructure Investment grant program funded at \$600 million per year. These elements would be authorized through Fiscal Year (FY) 2013. A Board of Directors and an expert advisory committee, coordinated within U.S. DOT’s Office of the Secretary, would provide an oversight function. Eligible projects include highways/bridges, freight rail lines, ports, pipelines, inland waterways, and airports, among others. The Act would also allow states to use the Federal Highway Administration (FHWA) Surface Transportation Program formula funding for port infrastructure projects and freight/passenger rail projects.

Marine Highway Program

The Marine Highway Program was fully implemented in April 2010. The Marine Highway Corridors represent routes where water transportation can provide relief to congested overland corridors. In August 2010, the U.S. DOT Secretary identified 18 marine corridors, 8 projects, and 6 initiatives for further development. The Maritime Administration made \$7 million available at the same time; grants were made through a competitive process. Currently, Texas is part of one marine highway corridor (M-10, as shown in Figure 2.2) and two projects (Gulf Atlantic Marine Highway Project and Cross Gulf Container Expansion Project). This program could receive further funding in the future, which could provide additional opportunities to develop Texas' Marine Highway infrastructure.

Figure 2.2 Designated Marine Highway Corridors



Source: Port of Pittsburgh Commission.

Realize America's Maritime Promise (RAMP) Act

The RAMP Act (H.R. 104) would require annual expenditures from the Harbor Maintenance Trust Fund (HMTF) to be equal to receipts into the fund plus interest credited to it for that fiscal year. It would also limit the use of trust fund monies to harbor maintenance programs only. The bill would preclude the House or the Senate from considering any bill or resolution that would cause HMTF resources in a fiscal year to be less than the level of receipts plus interest for that year. This would correct two major issues associated with the HMTF: first, that Congress typically does not appropriate the full amount of taxes

collected for their intended purpose of harbor maintenance; and second, that the balance has been used to mask the Federal deficit, or for other purposes unrelated to ports.

As of July 2011, this legislation had been referred to the House Transportation and Infrastructure Committee; however, it has not been voted upon by the full House or Senate.

American Jobs Act

A recent jobs bill put forward by President Obama also includes significant new funding for transportation infrastructure. The American Jobs Act (S. 1549), in addition to providing various incentives to spur private sector hiring, also includes \$50 billion in new spending on transport infrastructure. This would include money for roads, bridges, airports, and upgrades to intercity passenger rail lines (which can also benefit freight railroads). In addition, the bill would provide additional funding for the TIFIA loan program, replenish funding for the TIGER grant program, and create a National Infrastructure Bank with \$10 billion in seed money, which could help finance toll road and bridge projects. Loan payments to the National Infrastructure Bank would be used to finance more projects. Although this bill does not seem likely to pass in its entirety, it is possible that some of the infrastructure provisions could be passed on a piecemeal basis, or that some of the transportation provisions could work their way into an overall reauthorization bill.

Potential New Sources of Revenue

The limited number of Federal programs targeted towards port infrastructure expansion has spurred proposals for new revenue-raising mechanisms to help fund port projects. User-based fees (such as assessments on cargo movements) are emerging as a new source of funds, although other proposals rely on slight changes to existing revenue sources. Key trends in the freight funding debate are summarized here.

User Fees

A variety of user fee proposals – like a national container fee – has been suggested in recent years. For example, legislation introduced in the House in 2007 (H.R. 5102) would have established a fee levied on all containerized imports and exports moving through U.S. ports. The fee would be set at 0.075 percent of the cargo's fair market value, with a cap of \$500. The money thus raised would be used to fund transportation projects in the freight corridors where the fee is collected. However, this bill never became law. Ports themselves have differing opinions on such fees; some like them, but others do not. The policy position of the American Association of Port Authorities (AAPA) is against port cargo fees;

however, they feel that if Congress adopts such a fee, it should be levied on all types of cargo (not just containers), since all freight movements would stand to benefit from freight projects.⁵ AAPA also recommends that all revenues collected from such a fee should be returned to the port authority where the fees were collected, and that there should be an “opt out” provision for ports that do not wish to participate.

Tax Incentives

Tax incentives are one way to spur private investment in transportation infrastructure. Since freight projects are often driven by the private sector, tax incentive programs can be an effective way to accelerate project delivery. AAPA and American Association of State Highway and Transportation Officials (AASHTO) both support targeted tax incentives for freight rail projects, including port access projects. Favorable tax treatment is often tied to some measurable public benefit, which for a port project might be expected job creation. Tax credit bond financing is another approach suggested by many transportation advocates. These would be structured like Private Activity Bonds, but with broadened eligibility to include more types of freight projects.

Fuel Tax Increase

Federal motor fuel taxes on both gasoline and diesel fuel are deposited into the HTF. These levies provide more than 80 percent of the revenue used for Federal surface transportation projects.⁶ However, fuel taxes have not been raised since 1993, which has led to steady erosion in the purchasing power of the HTF over time. Many officials and stakeholder groups are, therefore, calling for an increase in fuel tax rates to restore the purchasing power of the HTF. AAPA has proposed an increase in both gasoline and diesel taxes, along with an indexing mechanism that would tie future increases to inflation. A portion of the new proceeds would be dedicated to freight mobility projects. Industry observers, however, are under no illusion about the political difficulty of raising motor fuel taxes given ongoing high gas prices and the current fiscal climate.

New Freight-Dedicated Revenue Streams

There are a number of ideas for creating new revenue streams dedicated solely to freight transportation investments. During the reauthorization debate, there have been calls for a port set-aside (similar to set-asides for other purposes that already exist in law) that would provide a certain amount of funds for port

⁵ American Association of Port Authorities, ‘Surface Transportation Authorization’, position paper dated March 2011.

⁶ http://www.transportation-finance.org/funding_financing/funding/Federal_funding/motor_fuel_taxes.aspx.

projects before program funds were apportioned for other uses. However, there is no assurance that such a provision would survive the legislative process.

Other ideas include dedicating a share of revenues from customs duties to freight transportation projects and imposing a bill of lading fee, which would have the ability to derive revenue from the value of cargo throughout the supply chain. In the longer term, AASHTO has suggested a freight transportation value tax (a levy on the value added to products and services by freight transportation) and a weight-distance tax on commercial vehicles (provided the fuel tax is replaced with a vehicle miles traveled tax for passenger movements).⁷

⁷ AASHTO, 'Freight Authorization Policy', http://www.transportation.org/sites/policy_docs/docs/vi.pdf.

3.0 Port Funding and Financing Tools

3.1 TEXAS PORT FUNDING TODAY

Texas' seaports are largely self-funded through their revenue streams (gathered through lease arrangements, dockage charges, real estate investments, cruise ship fees, demurrage charges, and other methods). Ports typically pursue major "inside the gate" capital expansions on their own; often using bond issues to finance construction. Ports may also use internal revenue streams to pay for smaller projects, such as road improvements on port property.

However, ports do look for funding partners on a match basis for some larger capital expansion projects, or as a means to accelerate capacity enhancements. For example, deepening and maintenance of Federal channels is eligible for funding through the U.S. Army Corps of Engineers (USACE). Depending on the size of a project or its priority, a local match may be required.

In general, ports will only coordinate with TxDOT for "outside the gates" roadway and rail projects (i.e., connections between a port and a major highway or rail facility). In these situations, Texas ports will normally partner with TxDOT to identify needs and potential benefits of the project, and then allow TxDOT to coordinate the funding in partnership with the Federal government. An example would be the reconstruction of Clinton Drive from the Port of Houston to Interstate 610 – which was identified as a high-priority project through a process that included TxDOT and the Port.

TxDOT may influence the process in several ways; for example, through its interaction with PAAC, TxDOT regularly assesses port-related transportation needs in the State. TxDOT can also contribute by identifying new state highway capacity or freight rail needs that may be triggered by port expansion and trade growth. Finally, most transportation investments in the State are planned, programmed, and implemented through the TxDOT statewide planning process, which is further described in Section 3.3.

3.2 FEDERAL FUNDING AND FINANCING TOOLS

The Federal government provides limited funding for port and waterway projects throughout the country, as well as for multimodal (rail and highway) connector projects. Broadly speaking, Federal programs can be described as one of two types distinguished by the manner in which funding is made available:

1. **Grant Programs.** These programs provide Federal dollars for projects that meet the criteria of a given funding program. They can often be targeted to specific projects to address freight transportation needs.
2. **Federal Financing Tools.** These are credit facilities that allow sponsors of transportation projects to access capital in order to fund new infrastructure and/or equipment. These programs can take the form of loans, credit enhancement, or debt financing; and typically feature attractive terms, such as low interest rates and long repayment periods. Financing tools allow project sponsors to leverage both public and private resources to stimulate capital investment in transportation infrastructure.

Federal Grant Programs

The key Federal grant programs that are available for ports (as well as highway and rail projects that support port connectivity) are summarized in Table 3.2.⁸ Grant programs are described in terms of the freight modes to which they apply and approximate annual funding levels. In addition, programs are rated in terms of funding availability according to the following scale (Table 3.1).

Table 3.1 Relative Program Availability Scale

Relative Rating	Definition
<i>Fully available</i>	<ul style="list-style-type: none"> • Funds are completely available provided that all application requirements are met. A viable and fully funding source.
<i>Limited availability</i>	<ul style="list-style-type: none"> • Funds may be available, but are restricted due to earmarking, lack of Federal funding or support, or other policy factors.
<i>Not available</i>	<ul style="list-style-type: none"> • Funds are not available for use.

Source: Cambridge Systematics, 2011.

Any of these programs can be used for various port capital projects, but there are some restrictions on mode or project type for most of them. For instance, the Harbor Maintenance Trust Fund and the Inland Waterways Trust Fund (which are intended to offset harbor maintenance and inland waterway construction costs respectively) are the only programs solely dedicated to the marine mode. (The USACE Continuing Authorities Program can be used for navigation projects, but in practice it is mainly used for environmental and flood control work.) Port projects other than dredging work are specifically eligible for TIGER III grants. Other programs are dedicated to rail (e.g., Railway-Highway Crossings) or highways (e.g., Surface Transportation Program). There is also one Coast Guard-administered program (the “Alteration of Bridges” plan, authorized

⁸ Detailed descriptions of these programs may be found in Appendix A.

through the Truman-Hobbs Act⁹⁾ that is dedicated to improving bridges that are found to obstruct navigation, either because of their location or changing operational characteristics on the nation's waterways (such as larger ships requiring greater air draft).

Table 3.2 Federal Grant Programs for Port and Port-Related Projects

Program	Modes	Funding	Availability
<i>HMTF</i>	Marine	Subject to appropriations; \$766 million in FY 2008	Limited availability
<i>Coast Guard Bridge Program/Truman-Hobbs Act</i>	Marine/highway (for bridges that obstruct navigation)	Subject to appropriations; \$262.4 million (FY 2009) ^a	Limited availability
<i>Continuing Authorities Program</i>	Marine	Varies, but limited to small projects	Limited availability
<i>TIGER III</i>	All modes; port projects are eligible, as are bridges/and freight rail projects	\$527 million	Limited availability
<i>Railway-Highway Crossings</i>	Rail	\$880 million (FY 2006-FY 2009)	Limited availability
<i>Economic Development Administration Grants</i>	All modes	\$255 million (FY 2010)	Limited availability
<i>Capital Grants for Rail Line Relocation</i>	Rail	\$34.5 million (\$24.5 million earmarked)	Limited availability
<i>National Highway System (NHS)</i>	Truck/highway (can be used for port access projects)	\$6.1 billion (FY 2010)	Limited availability
<i>Surface Transportation Program</i>	Truck/Highway	\$6.5 billion (FY 2010)	Limited availability
<i>Congestion Mitigation and Air Quality</i>	All modes	\$1.8 billion (FY 2010)	Limited availability
<i>Inland Waterways Trust Fund</i>	Marine	\$58.5 million (FY 2010)	Not available
<i>Freight Intermodal Distribution Pilot Grant Program</i>	All modes; projects must be intermodal	\$30 million	Not available

Sources: Inland Waterways Users Board, RAMP Coalition, U.S. Maritime Administration, Economic Development Administration, FHWA.

^a Of this total, \$142 million was appropriated under the American Recovery and Reinvestment Act.

⁹http://www.dhs.gov/xlibrary/assets/recovery/CG_Alteration_of_Bridges_Program_Plan_5-15-09.pdf

Another key takeaway is that grant programs in general have limited or no availability for Texas port and waterway projects. Normally, this is because competition for grant funding is intense, and port projects must compete with many other legitimate needs to secure funding under these programs. In some cases, earmarking limits or eliminates funding opportunities; for example, the Freight Intermodal Distribution Pilot Program is unavailable because all program funds were earmarked for specific projects under the SAFETEA-LU. Finally, the Inland Waterways Trust Fund is unavailable because Congress has not appropriated any money from it since the late 1980s.

Federal Financing Tools

Key Federal financing tools available for Texas port and port-related projects are summarized in Table 3.3. Programs are summarized by mode and approximate funding levels. Programs are also rated in terms of funding availability, using the same three-tiered scale defined earlier. Detailed descriptions of each program are provided in Appendix A.

Table 3.3 Federal Financing Tools for Port and Port-Related Projects

Program	Modes	Funding	Availability
<i>Private Activity Bonds</i>	All modes	Up to \$15 billion	Fully available
<i>State Infrastructure Bank (SIB)</i>	Rail, truck, ports	Varies	Fully available
<i>TIFIA</i>	Rail, truck, ports	\$122 million per year	Fully available
<i>RRIF</i>	Rail	\$35 billion under SAFETEA-LU	Fully available
<i>Grant Anticipation Revenue Vehicles (GARVEE Bonds)</i>	All modes	N/A	Not available

Sources: FHWA, TxDOT, FRA.

With the exception of GARVEE Bonds (which are unavailable in Texas because of certain provisions within the state constitution), loan funding is far more available for waterborne freight improvements than grant funding. Moreover, certain characteristics of freight projects may make them amenable to financing through debt instruments. Since most freight projects involve the private sector, some may be good candidates for programs designed to attract private capital to transportation projects, such as Private Activity Bond (PAB) financing. PABs allow state and local governments to issue tax-free bonds for transportation projects sponsored by the private sector, significantly lowering the cost of capital for such projects. Texas also has an SIB, which can be used to extend loans to public or private sponsors of surface transportation projects, including rail and truck access to ports.

3.3 STATE FUNDING AND FINANCING TOOLS

State-level funding and financing programs are summarized in Table 3.4 by program name, funding level, and availability. Funding availability is rated with the same scale used for Federal grant and loan programs.

TxDOT provides limited maintenance funding for the Texas portion of the Gulf Intracoastal Waterway on a match basis with the Federal government. These funds are used to acquire land for disposal of dredge spoil and other activities to support the routine maintenance of the waterway. TxDOT has budgeted about \$7 million for these activities for FY 2012 through FY 2021, but appropriations must be separately approved by the TTC.

The other state program specific to the marine mode is the Port Access Account Fund. This fund was created by the Legislature in 2001 as a line item in the state budget to be used for port and waterway needs. The PAAC (described in Section 2.1) develops a Port Capital Program every two years, which includes all needs identified by Texas seaports. Theoretically, these projects could be funded by the PAAF, but lawmakers have not appropriated any money to the fund since its creation so it is effectively unavailable for Texas port and waterway improvements.

The TxDOT statewide transportation programming process is used to plan and program improvements to the state highway network. Projects are funded by different project categories within the Unified Transportation Plan (UTP), usually on a match basis with Federal funds. Few (if any) of these categories are port-specific, but some do affect ports; for example, Statewide Connectivity Corridor Projects can include improvements on port access routes. Funding is limited under these programs because port-related projects would have to compete with other transportation needs for scarce resources.

Table 3.4 State Funding Programs for Port and Port-Related Projects

Program	Modes	Funding	Availability
<i>GIWW Matching Funds</i>	Marine	Varies	Limited availability
<i>Port Access Account Fund</i>	Marine	\$0	Not available
<i>Statewide Transportation Programming</i>	All modes	\$27.92 billion (FY 2012-FY2020)	Limited availability

Sources: TxDOT 2012 Unified Transportation Program, Texas Ports 2011 to 2012 Capital Program, Gulf Intracoastal Waterway Legislative Report – 82nd Legislature.

There is growing evidence that the Texas public will support transportation projects identified by TxDOT, MPOs, and city and county governments. In 2007, Harris County voters approved \$250 million for specific Port of Houston Authority improvements, including container terminal, security, and environmental projects. A state constitution amendment of \$5 billion in general obligation bonds for highway improvements – some impacting goods freight

connectivity benefiting marine ports was approved and \$4 billion were enabled 2011, backed by the State's general revenue fund, rather than from fuel taxes. Actions such as these indicate a willingness by both the public and state legislators to consider investing more public money into transportation system improvements, including those benefiting waterborne freight movements.

4.0 Applying the Funding Tools

4.1 STRATEGIC PACKAGE DEFINITION

One of the intended outcomes of the *TxDOT Waterborne Freight Corridor Study* is a set of “Strategic Packages”. The intent of these packages is to provide TxDOT with different scenarios for the State’s potential investment into the waterborne freight system. Each strategic package will be driven by a particular goal: for example, *Strategic Package #2: Maximize Texas’s Cargo Capacity* will provide a set of projects/strategies that TxDOT might consider if the end goal is to maximize the potential for waterborne cargo throughput (regardless of price or geographic diversity). All five packages are meant to be multimodal in nature; and combine related transportation infrastructure, operational, and policy-level improvements in a manner that addresses systemwide concerns on the TxDOT waterborne freight system.

The strategic packages are briefly summarized below. In the following section, each package matched with specific funding programs, which are best suited to the types of projects included in each strategic package.

Strategic Package #1: Port and Waterways Focus

Description

These two packages (#1a and #1b) work to strengthen the waterborne system for delivering freight, focusing entirely on improvements to ports, inland waterways, channels, and other components of the marine transportation system.

- **Package #1a - Port Focus** includes all deepwater and inland port projects, except for maintenance dredging of the Gulf Intracoastal Waterway; and
- **Package #1b - GIWW Focus** includes only those projects that target safety, efficiency, or throughput of the GIWW.

Both packages will include those projects and strategies designed to maintain or improve the capacity, safety, and efficiency of Texas’s ports and inland waterway system.

Project/Strategy Definition

- These two packages focus only on those projects that are associated directly with a marine port or inland waterway (GIWW). It does not include projects from the highway, rail, or air cargo transportation modes.
- These two packages may include a geographically diverse set of projects/egies, in order to achieve maximum reach and market penetration of the waterborne freight delivery system.

- These two packages include projects from all categories – maintenance, capacity enhancement, and strategic investment.

Strategic Package #2: Maximize Texas' Cargo Capacity

Description

This package focuses on investments that maximize the cargo handling capacity of the Texas port system. As such, it will be primarily focused on increasing capacity and efficiency throughout the cargo delivery supply chain, and less on other factors such as cost or geographic dispersion of investments. In addition, this package will recognize the anticipated impact on Texas ports of national and international shipping trends and events, such as the widening of the Panama Canal and potential diversion from West Coast ports. This package can include projects from all modes, is not limited by cost, and would mostly focus on capacity enhancements that maximize the benefits of freight movement.

Project/Strategy Definition

- This package may include multimodal projects/strategies from the waterborne, highway, rail, air cargo, or intermodal systems.
- This package is not limited by cost, and may therefore include large-scale, capital-intensive projects.
- This package is likely to focus on the larger Texas ports that have greater cargo carrying capacity, strategic locations, or other existing advantages.
- This package will include projects from all categories – maintenance, capacity enhancement, and strategic investment. However, capacity enhancement projects will appear prominently as the focus of this strategic package.

Strategic Package #3: Create System Redundancy

Description

This package recognizes that each individual port in the Texas port system is vulnerable to disruptions caused by natural disaster (hurricanes or other), labor disputes, weather-related incidents, security breaches, or other potential events. It strives to strengthen the resiliency of the Texas ports system as a whole, rather than focusing on individual ports. Therefore, this package will be more geographically dispersed than others, and will likely favor projects that preserve and maintain existing capacity and efficiency. This package may include projects from any mode; focuses mainly on projects that maintain existing capacity, rather than creating new capacity; and would be geographically diverse to maximize port system redundancy.

Project/Strategy Definition

- This package may include multimodal projects/strategies from the waterborne, highway, rail, air cargo, or intermodal systems;
- This package will focus on projects and strategies that maintain and upgrade existing infrastructure, rather than invest in new cargo handling capacity; and
- This package will focus on a geographically diverse set of projects to ensure that multiple Texas ports are able to provide redundancy in the event of disruptions to normal operations.

Strategic Package #4: Focus Resources on Key Texas Industries

Description

Phase I of the TxDOT Waterborne Freight Corridor Study identified several industries that are critical to sustaining Texas's economy and quality of life, including petroleum, manufacturing production, chemical production, cotton production, and retail. This package focuses on those projects/strategies that provide for the efficient, cost-effective, and safe transport of goods and materials that support the supply chains for these industries. As such, it will draw heavily from the Phase I work with the Stakeholder Advisory Committee to identify bottlenecks, issues, and system deficiencies that correspond to specific supply chains. Such projects fall into several categories, including routine maintenance, capacity enhancement, and strategic investments.

Project/Strategy Definition

- This package may include multimodal projects/strategies from the waterborne, highway, rail, air cargo, or intermodal systems;
- This package will include projects/strategies that support the supply chains of key Texas industries; and
- This package will include maintenance, capacity enhancement, and strategic investment projects/strategies.

Strategic Package #5: Strategic Positioning for Economic Growth

Description

This package recognizes that Texas's port system is a part of a global economy; and will respond to economic and supply chain trends at the statewide, national, and international levels. For this package, it is assumed that the most optimistic global supply chain trends are achieved, and that there is increased demand for capacity at Texas ports based on factors, such as rising national consumption, increasing exports from thriving U.S.-based agriculture and manufacturing, increased imports due to rising U.S. income levels, and increased shipping

through the widened Panama Canal. Projects in this package are not constrained by cost and would therefore include many strategic investments. Projects also could be multimodal and geographically diverse as needed to create a thriving Texas waterborne freight system.

Project/Strategy Definition

- This package assumes that the future includes a healthy U.S. and world economy. It is not constrained by cost or timeframe of projects, and therefore may include some large, capital-intensive projects.
- This package will include projects from all categories – maintenance, capacity enhancement, and strategic investment. However, strategic investment projects will appear prominently as the focus of this strategic package.
- This package will include multimodal and geographically diverse projects as needed to create a thriving Texas waterborne freight system.

4.2 FUNDING PROGRAMS BY STRATEGIC PACKAGE

Federal and State Grant Programs

Table 4.1 evaluates the overall applicability of Federal and state grant funding programs by strategic package. Only funding programs that were identified as available to TxDOT are included here. Applicability to each strategic package is rated low, medium, or high, depending on the types of projects each funding program is intended to address. A few things are apparent upon inspection of the table.

There are relatively few reliable grant funding programs for large, capital-intensive projects. TIGER III grants appear to be the only program with the potential to fund a large waterside infrastructure investment. (EDA Grants can be used for waterside infrastructure projects, but they are restricted to economically distressed areas and tend to be under \$2 million.) Capital Grants for Rail Line Relocation can help offset the costs of relocating a freight rail line, but this program was only funded at \$34.5 million in FY 2010, most of which was earmarked. By way of comparison, the anticipated cost of the East Houston Rail Bypass is more than \$280 million. Finally, although NHS and STP funding could be used for highway projects that improve port access, these projects would have to compete with other road projects for scarce resources.

- Similarly, there is a lack of port- and waterway-specific grant funding streams. *Strategy Package #1 Port and Waterways Focus* only has four programs with high applicability; two of which are for routine maintenance or small navigation projects (GIWW matching funds, the HMTF, and the Continuing Authorities Program). The third such program (CMAQ) is restricted to projects with an air quality benefit, and awards tend to be rather small.

Table 4.1 Applicability of Federal and State Grant Programs by Strategic Package

Strategy Packages	Example Projects	Grant Funding Programs												
		HMTF	Coast Guard Bridge Program	Continuing Authorities Program	TIGER III	Railway-Highway Crossings	EDA Grants	Capital Grants for Rail Line Relocation	NHS	Surface Transportation Program	Congestion Mitigation and Air Quality	TxDOT GIWW Matching Funds	Statewide Transportation Programming	
Package #1a: Port and Waterways Focus	<ul style="list-style-type: none"> Velasco Terminal Colorado Structures Mooring Maintenance 	●	◐	●	◐	○	◐	○	○	○	○	●	●	○
Package #1b: GIWW Focus	<ul style="list-style-type: none"> GIWW maintenance dredging GIWW channel width or bridge clearance projects 	●	◐	◐	○	○	○	○	○	○	◐	●	○	
Package #2: Maximize Texas' Cargo Capacity	<ul style="list-style-type: none"> Port of Houston grade separations and double tracking Freeport Channel widening 	○	●	○	●	●	◐	●	◐	◐	○	○	◐	
Package #3: Create System Redundancy	<ul style="list-style-type: none"> USACE maintenance dredging FM 523 upgrade 	●	○	●	◐	○	○	○	●	●	◐	●	●	
Package #4: Focus Resources on Key Texas Industries	<ul style="list-style-type: none"> Rail siding at Dow Chemical plant near Freeport Ingleside Industrial Corridor 	●	◐	◐	◐	◐	◐	●	◐	◐	◐	●	◐	
Package #5: Strategic Positioning for Economic Growth	<ul style="list-style-type: none"> Corpus Christi Ship Channel Capacity Dredging East Houston Rail Bypass 	◐	●	○	●	◐	●	●	◐	◐	◐	○	◐	

○ Low ◐ Medium ● High

Source: Cambridge Systematics, Inc. 2011.

In summary, most grant funding streams are best suited to projects that are small to medium in scope; probably because funding limitations naturally put a ceiling on the size of any one award.

This means that grant programs tend to be most applicable to *Strategy Package #3 Create System Redundancy*, which focuses more on preserving the existing system than adding new capacity. Nonetheless, certain projects within each strategy package would be amenable to grant funding through targeted grant programs. For example, grade separations or double-tracking projects at the Port of Houston could be funded through Capital Grants for Rail Line Relocation or Railway-Highway Crossings. Moreover, it may be possible to combine funding from a variety of sources to implement a larger project or program related to one of the solution packages. Strategic packages that tend to include large, capital-intensive capacity projects with regional or national benefits – such as *Strategy Package #2 Maximize Texas’s Cargo Capacity* and *Strategy Package #5 Strategic Positioning for Economic Growth* – are also probably in the best position to receive funding through the TIGER program, since they focus on long-term economic impacts and competitiveness.

Federal Loan Programs

Table 4.2 lists available Federal loan programs and rates their applicability to each solution package using the same three-tiered scale. Again, programs are related to solution packages based on the types of projects likely to be found in each package vis-à-vis the types of projects each program is intended to address.

Overall, financing tools are most applicable for large-scale, expensive capacity projects. Private Activity Bonds in particular would be useful for all solution packages except *Strategy Package #3 Create System Redundancy*, which would probably be more easily funded through a combination of traditional grant streams for more routine maintenance projects and loans for larger scale projects. Through their tax-exempt status, PABs can leverage low-cost financing for critical freight projects that are backed by the private sector.

Although it cannot be used for waterside investments, TIFIA is useful for large and costly surface transportation projects that facilitate access to port terminals. For example, the Port of Miami Tunnel Project was recently funded through a TIFIA loan for \$341.5 million. This would make TIFIA loans highly applicable to *Strategy Package #2 Maximize Texas’s Cargo Capacity* and *Strategy Package #5 Strategic Positioning for Economic Growth*, which include many costly highway and rail improvements around ports. TIFIA loans must be paid back through user fees or other dedicated revenue streams.

Table 4.2 Applicability of Financing Tools by Strategic Package

Strategy Packages	Example Projects	Financing Tools			
		Private Activity Bonds	SIB	TIFIA	Rail Rehabilitation and Improvement Financing
Package #1a: Port and Waterways Focus	<ul style="list-style-type: none"> Velasco Terminal Colorado Structures Mooring Maintenance 	●	○	○	○
Package #1b: GIWW Focus	<ul style="list-style-type: none"> GIWW maintenance dredging GIWW channel width or bridge clearance projects 	◐	○	○	○
Package #1: Maximize Texas' Cargo Capacity	<ul style="list-style-type: none"> Port of Houston grade separations and double tracking Freeport Channel widening/deepening 	●	◐	●	●
Package #2: Create System Redundancy	<ul style="list-style-type: none"> USACE maintenance dredging FM 523 upgrade 	○	●	○	◐
Package #3: Focus Resources on Key Texas Industries	<ul style="list-style-type: none"> Rail siding at Dow Chemical plant near Freeport Ingleside Industrial Corridor 	●	●	◐	◐
Package #5: Strategic Positioning for Economic Growth	<ul style="list-style-type: none"> Corpus Christi Ship Channel Capacity Dredging East Houston Rail Bypass 	●	◐	●	●

○ Low ◐ Medium ● High

Source: Cambridge Systematics, Inc., 2011.

As with grant programs, there do not appear to be many loan programs that are specifically targeted towards waterside improvements like new terminal construction or capacity dredging. Because of this, only one financing program (PABs) is really applicable to *Strategy Package #1 Port and Waterways Focus*. As noted above, TIFIA can only be used for port projects that facilitate intermodal exchange or access in and out of the port. RRIF loans can only be used for rail projects, while SIBs do not have a marine account under current law. The SIB could be effective, however, for financing projects contained in *Strategy Package #3 Create System Redundancy* since these are more likely to involve access improvements to existing roads and rail lines serving ports.

RRIF loans may be a useful source of finance for certain rail capital projects. Moreover, this program has been historically underutilized, due to an application process considered by some railroads to be too burdensome, as well as the recent recession. This means there could be significant untapped financing capacity in the RRIF program. There are also some policy proposals that may make the RRIF application process easier for railroads. Of course, projects financed through RRIF loans would have to be attractive enough to the railroads involved to enable them to pay the loan back - meaning close cooperation between TxDOT and any rail carriers interested in RRIF loans would be important.

5.0 Conclusions

This section summarizes the key findings of this report regarding TxDOT's options for funding critical waterborne freight system infrastructure moving forward. TxDOT can use these findings to maximize the potential of the current marine freight system, and identify potential new funding streams.

- The Federal role in funding waterborne freight infrastructure is changing. A challenging fiscal environment has spurred a vigorous debate over all forms of government spending, including infrastructure outlays. At the same time, recognition among policy-makers and business leaders that the nation's deteriorating infrastructure may threaten economic growth in the future is encouraging new thinking about transportation funding, including freight funding. It is possible that reauthorization legislation will include a freight program, and there are proposals for several new programs and funding sources that may improve the funding outlook for waterborne freight projects in Texas.
- Most grant programs are best suited to small- or medium-sized projects due to funding limitations. These funding sources may therefore be most appropriate for routine maintenance projects or smaller-scale capacity improvements. This would include most of the projects in *Strategy Package #3 Create System Redundancy*, as well as many projects found in the other solution packages.
- The TIGER grant program has the potential to fund large capital projects with significant national or regional economic benefits. As noted in Section 2.3, there are legislative proposals circulating in Washington to provide additional funding for the TIGER program, or even authorize it on a continuing basis (through 2018). This would create a new source of grant funding for Texas port-related projects that can demonstrate a significant economic benefit. An assessment of which projects/solution packages are most likely to meet this criterion, and continuing engagement with key stakeholders may help to secure limited TIGER grant funds in the future.
- Loan programs are often appropriate for more capital-intensive capacity projects or solution packages that are capable of generating revenue or user fees sufficient to pay the loans back. The RRIF, TIFIA, and SIB programs can all be used to finance port rail or highway access routes and other improvements related to intermodal exchange of freight at ports. Private Activity Bonds might be a useful source of project finance for port projects that are not directly related to surface transportation access, such as the Velasco Terminal at the Port of Freeport.
- Although the first round of funding for the MARAD Marine Highways Program has already been obligated, it may receive additional funding in

future, especially as debates over reauthorization take shape. Since one marine highway and two projects in Texas have already been funded under the program, TxDOT could be in a good position to secure additional funds under this program as they become available.

A. Appendix

A.1 FEDERAL FUNDING PROGRAMS

Harbor Maintenance Trust Fund (HMTF)

The HMTF was authorized under the Water Resources Development Act of 1986. This Act created an ad valorem tax levied on cargoes imported or moved domestically through Federally maintained channels and harbors. The tax is paid on imported and domestic cargoes (the levy on exports was declared unconstitutional in 1988). Tax proceeds are deposited into the Harbor Maintenance Trust Fund and are used by the USACE to offset channel maintenance costs. Projects are normally funded through the USACE district offices, similar to the Inland Waterways Trust Fund. The Federal share is 100 percent for coastal ports with a harbor less than 45 feet deep, and 50 percent for those with harbors more than 45 feet deep. However, money from the HMTF is subject to annual appropriations from Congress, just like the Inland Waterways Trust Fund. In recent years, Congress has not appropriated the full amount of Trust Fund revenues for harbor maintenance activities, which has caused a surplus to accumulate in the fund that now stands at more than \$4 billion. Although funds are not completely unavailable (as is the case with the Inland Waterways Trust Fund), they are severely restricted. USACE estimates that annual dredging needs range from \$1.3 billion to \$1.6 billion, but channel maintenance appropriations have only averaged about \$800 million annually over the last five years.¹⁰

Coast Guard Bridge Program

The Coast Guard Bridge Program was authorized by the Truman-Hobbs Act of 1940.¹¹ That act requires the Secretary of Transportation to order the alteration or removal of any bridge that is found to be an unreasonable obstruction to navigation. Bridges are normally found to present unreasonable obstructions when changes in the use of waterways – for example, larger ships – create the need to raise bridge clearances, or make other improvements that allow ships to pass safely. Congress makes appropriations for this program each year, which are then disbursed and obligated by the Coast Guard to specific bridge alteration projects. Funds accumulate for projects once design work is complete, but are not expended until the Federal share of project costs is reached; whereupon, the Coast Guard authorizes the bridge owner to begin construction. Bridge owners

¹⁰American Association of Port Authorities, *Harbor Maintenance Tax*, Policy Position Paper dated March 2009.

¹¹33 U.S.C. 516.

are reimbursed for the Federal government's share of project costs during construction. In FY 2009, this program received \$120.4 million during the regular appropriations cycle, but it also received an additional \$142 million under the American Recovery and Reinvestment Act (ARRA, commonly known as the stimulus bill). All of these funds were dedicated to four bridge improvements around the country, including the Galveston Causeway Bridge. The Federal share of project costs varies, but is usually in the 90- to 95-percent range (for the Galveston Causeway Bridge, it was 92 percent).

Continuing Authorities Program

The Continuing Authorities Program is administered by the USACE. It provides a framework, whereby, the Corps can resolve a variety of water resource issues without the need to obtain Congressional approval for each project, thus decreasing project delivery time. Although the program is mostly used for flood control and environmental projects, it can be used for small navigation projects, including channel dredging, breakwater or jetty construction, and widening of turning basins. Projects are funded on a match basis between the USACE and a non-Federal sponsor. The Federal share is limited to \$4 million for navigation projects. Applications for funding are made through the USACE District offices. Provisions for land, easements, rights of way, relocations, and dredged material placement are the responsibility of the local sponsor and may be credited towards the sponsor's share of project costs.

TIGER III

The Transportation Investments Generating Economic Recovery (TIGER) program was first established in 2009 as part of the American Recovery and Reinvestment Act (ARRA, commonly known as the stimulus bill). Whereas the first two rounds of TIGER were mainly focused on immediate job creation through 'shovel-ready' projects, this third round aims to fund projects, which would improve long-term competitiveness and sustainability for the nation, a region, or a locality. Port infrastructure projects are specifically included as an eligible type of project; however, dredging projects are not eligible. Other eligible project categories are highway and bridge projects, transit projects, and freight rail projects. States, localities, port authorities, transit agencies, metropolitan planning organizations (MPO), and coalitions that include private partners are eligible for the grants.

TIGER III will award a total of \$527 million to the selected projects. Of this, up to \$150 million may be awarded in the form of TIFIA payments.¹² These would offset the subsidy and administrative costs of the TIFIA program, if such an arrangement would further the purposes of the TIGER grant program.

¹²The TIFIA program is described below under 'Federal Financing Tools.'

Applicants are required to provide a 20-percent match. The DOT will accept initial applications from August 22, 2011 through October 3, 2011; final applications will be due from October 4 through October 31. While this is certainly a viable near-term option for funding port projects in Texas, it should be noted that the competition for funding under this program is intense: The first two rounds of TIGER attracted about 2,500 applications valued at \$79 billion, of which 126 projects were funded totaling \$2.1 billion.¹³

Railway-Highway Crossings

Formerly a set-aside of the STP program, the Railway-Highway Crossings program provides funding for projects that improve safety at public highway-rail at-grade crossings through the elimination of hazards and/or the installation/upgrade of protective devices at crossings. SAFETEA-LU requires that states set aside at least 50 percent of the funding allocation for the installation of protective devices at rail-highway crossings. If all needs for installation of protective devices have been met, then the funds available can be used for other at-grade crossing projects eligible under this program. The Federal share is 90 percent.

Eligible projects include separation or protection of grades at crossings, reconstruction of existing railroad grade crossing structures, and relocation of highways or rail lines to eliminate grade crossings. An extension of the SAFETEA-LU funded this program at \$220 million for FY 2010.

Inland Waterways Trust Fund

The Inland Waterways Trust Fund was created in 1978 “for making construction and rehabilitation expenditures for navigation on the inland and coastal waterways of the United States”.¹⁴ The Fund takes in fuel tax revenues (in this case, a tax levied on diesel fuel used in inland waterborne commerce) and distributes the funds to make needed improvements to the nation’s inland waterway system. The Trust Fund is intended to pay for up to one-half the cost of eligible inland waterway projects and is administered by the USACE. Normally, projects would be selected for funding through the USACE district offices, after local sponsors have identified sources of matching funds. However, fund disbursement requires annual appropriations from Congress, which have not been forthcoming since the late 1980s. As a result, these funds are effectively unavailable for making improvements to inland waterways in Texas.

¹³Edmondson, R. G., “DOT Announces Scaled-Down TIGER Grants,” *Journal of Commerce*, June 30, 2011. Of the funded projects, 33 were planning projects; the rest were all capital improvements.

¹⁴26 U.S.C. 9506, *Inland Waterways Trust Fund*.

Economic Development Administration (EDA) Grants

EDA provides grants for projects in economically distressed industrial sites that promote job creation and/or retention. Eligible projects must be located within an EDA-designated redevelopment area or economic development center. Port development and expansion projects are eligible for funding. Grantees must provide evidence of the economic distress that the project is intended to alleviate. Grant assistance is available up to 50 percent of the project, although the EDA can provide up to 80 percent for projects in severely depressed areas.

Freight Intermodal Distribution Pilot Grant Program

The Freight Intermodal Distribution Grant Program is a pilot program that provides funding for intermodal freight transportation and distribution facilities at ports, inland ports, and intermodal freight facilities. Projects funded under this program must be intermodal. Since ports are intermodal facilities by definition, they do qualify for funding. Projects are intended to relieve congestion, improve safety, facilitate international trade, and encourage public-private partnerships. SAFETEA-LU authorized \$6 million per year for this program through FY 2009; however, all of these funds were earmarked to six projects; none of which was in Texas. Therefore, this grant funding is unavailable to Texas ports at this time.

Capital Grants for Rail Line Relocations

The Rail Line Relocation Grant program provides grants to states for local rail line relocation and improvement projects that improve rail traffic safety, motor vehicle traffic flow, community quality of life, or economic development; or involve relocation of any portion of the rail line. SAFETEA-LU authorized \$350 million per year for this program for FY 2006 through 2009, subject to appropriations. No funds were appropriated for this program until FY 2008. In FY 2010 (the most recent year for which data are available), Congress appropriated approximately \$34.5 million to this program; however, \$24.5 million was earmarked for 27 noncompetitive projects, including 4 in Texas. At least 50 percent of the funds shall be awarded for grants of \$20 million or less. The Federal share of project costs is 90 percent.

Assuming Congress continues to appropriate funds for this program, it could be a viable funding source for certain projects if they involve the relocation of a rail line. At the same time, it is hard to say with certainty whether appropriations will continue given the ongoing budget negotiations in Washington, as well as the impending reauthorization of surface transportation legislation.

National Highway System (NHS)

The NHS is currently comprised of approximately 160,000 miles (256,000 kilometers) of roadway that have been determined to be important to the nation's economy, defense, and mobility. The NHS includes five subsystems of roadways, one of which is intermodal connectors between NHS highways and

intermodal facilities including ports. The NHS program provides formula funding for roadways designated as part of the NHS. Construction, reconstruction, resurfacing, and rehabilitation on a roadway connecting the NHS with a port are all eligible activities under this program.

The Federal share of NHS port access road funding is 80 percent. SAFETEA-LU funding for this program was \$30.5 billion for FY 2005 to FY 2009 (funding has been extended since then through temporary authorizations). The NHS is a 'formula distributed highway funding program,' meaning funds are distributed to states using formulas provided in law. Once apportioned to states, the use of these funds is subject to statewide and metropolitan planning process requirements set forth in law and regulation. This means that port access projects will have to compete with other transportation needs to access these limited funds.

Surface Transportation Program (STP)

The STP program provides flexible funding for projects on any Federal-aid highway, bridges on public roads, transit capital investments, and intracity and intercity bus terminals and facilities. Eligible freight projects include:

- Preservation of abandoned rail corridors;
- Bridge clearance increases to accommodate double-stack freight trains;
- Capital costs of advanced truck stop electrification systems; and
- Freight transfer yards.

The Federal share of STP funding is generally 80 percent. Like the NHS program, STP funds are distributed through formula appropriation, so port projects would have to compete with other projects for funding. For FY 2005 to FY 2009, SAFETEA-LU funded this program at \$32.6 billion. Continuing extensions have provided additional funding since then.

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The CMAQ program funds transportation projects and programs that improve air quality (by reducing transportation-related emissions) in nonattainment and maintenance areas for ozone, carbon monoxide (CO), and particulate matter (PM₁₀, PM_{2.5}).

CMAQ funds have been used for freight-related projects that improve air quality by reducing truck, locomotive or other emissions. Examples of CMAQ-funded freight projects include construction of intermodal facilities for moving containers off of highways and onto rail, defraying barge operating costs, rail track rehabilitation, diesel engine retrofits, idle-reduction projects, and new rail sidings. Additionally, though previously eligible, SAFETEA-LU highlighted advanced truck stop electrification system at truck parking facilities, on-road diesel engine retrofits, and other cost-effective mitigation activities as CMAQ

eligible projects. In addition, SAFETEA-LU provided new eligibility for nonroad diesel engine retrofit projects.

CMAQ funds may be used to fund construction and other activities that could benefit a private entity, if it can be documented that the project will remove truck traffic on the Federal-aid system or reduce other freight-related emissions, thus improving the region's air quality. This would be accomplished through a public-private partnership agreement. It is the public-private partnership agreement that allows spending public CMAQ funds on most private freight projects. CMAQ is often the only funding source that many freight projects can access.

The Federal share is generally 80 percent for CMAQ projects. In FY 2010, the program was funded at about \$1.8 billion under a SAFETEA-LU extension.

Highway Bridge Program

The Highway Bridge Program provides funding for replacement, rehabilitation, and systematic preventive maintenance of bridges. States must use a minimum of 15 percent of the funding for projects on off-system bridges (i.e., on non-Federal-aid eligible roadways).

The Federal share for most projects is 80 percent. For bridges on the Interstate System, the Federal share is 90 percent. For FY 2010, this program was funded at about \$4.3 billion.

A.2 FEDERAL FINANCING TOOL

Private Activity Bonds

Title XI Section 11143 of SAFETEA-LU amended Section 142(a) of the IRS Code to allow the issuance of tax-exempt private activity bonds (also known as tax-exempt facility bonds) for highway and freight transfer facilities. Therefore, states and local governments are allowed to issue tax-exempt bonds to finance highway and freight transfer facility projects sponsored by the private sector. In effect, this allows tax-exempt financing for transportation facilities owned or used by private entities, such as airports and docks. SAFETEA-LU includes a cap of \$15 billion on private activity bonds; approximately 30 percent of this total has been approved by U.S. DOT as of May 2011, providing funds for seven large, complex transportation projects.

Tax-exempt facility bonds have been used finance port capital projects. For example, the Port of Tacoma used private activity bonds (along with several other funding sources) to help pay for the construction of a 100-acre container terminal in partnership with Hyundai Merchant Marine. The Port issued \$40 million in private activity bonds for the project, which were repaid through lease income and container handling charges. More recently, three of the seven projects authorized under the PAB provisions of SAFETEA-LU were intermodal

rail projects: two for the CenterPoint Intermodal Center in Joliet, Illinois; and one for the I-80 RailPort in Seneca, Illinois.

State Infrastructure Bank (SIB)

The SIB program, expanded under SAFETEA-LU, allows all states, the District of Columbia, Puerto Rico, and other United States territories to establish infrastructure revolving funds eligible to be capitalized with Federal transportation funds. States can issue loans or other credit tools to public and private sponsors of transportation projects through their SIB.

States participating in the SIB program may capitalize their account(s) in their SIBs with Federal surface transportation funds as follows:

- **Highway Account.** Up to 10 percent of the funds apportioned to the state for the NHS, STP, Bridge, and Equity Bonus;
- **Transit Account.** Up to 10 percent of funds made available for capital projects under Urbanized Area Formula Grants, Capital Investment Grants, and Formula Grants for Other Than Urbanized Areas;
- **Rail Account.** Funds made available for capital projects under Subtitle V (Rail Programs) of 49 USC; and
- The state must match Federal funds used to capitalize the SIB on an 80 to 20 Federal/non-Federal basis.

The Texas Legislature established a State Infrastructure Bank for Texas within the state Transportation Code.¹⁵ The TTC is authorized to capitalize the SIB with Federal funds, the proceeds of bonds issued under the Transportation Code, loan repayments, investment income, state funds, and other money received by the State that is eligible for deposit. In February 2011, the TTC transferred \$60 million in unallocated money from the state highway fund to the SIB, to be used for financial assistance to qualified projects. Additionally, the 2009 Legislature appropriated \$1 billion in bond proceeds to capitalize the SIB.

Transportation Infrastructure Finance and Innovation Act (TIFIA)

The TIFIA credit program was originally enacted in the Transportation Equity Act for the 21st Century (TEA-21), and was continued with slight modifications under SAFETEA-LU. The strategic goal of this program is to leverage limited Federal resources and stimulate private capital investment by providing credit assistance (up to 33 percent of the project cost) for major transportation investments of national or regional significance. Credit assistance is provided through secured loans, loan guarantees, or lines of credit. Project costs must be at least \$50 million or one-third of the state's annual apportionment of Federal-aid

¹⁵Transportation Code, Chapter 222, Subchapter D.

highway funds, whichever is less. SAFETEA-LU expanded TIFIA eligibility to certain private rail projects. Eligibility for freight facilities include:

- Public or private freight rail facilities providing benefits to highway users;
- Intermodal freight transfer facilities;
- Access to freight facilities and service improvements, including capital investments for intelligent transportation systems (ITS); and
- Port terminals, only when related to surface transportation infrastructure modifications to facilitate intermodal interchange, transfer, and access into and out of the port.

SAFETEA-LU authorizes \$122 million per year to pay the subsidy costs of supporting Federal credit under TIFIA. There is no limit on the amount of credit assistance that can be provided to borrowers in a given fiscal year. Repayment of TIFIA loans is required to come from tolls, user fees, or other dedicated revenue sources. As of May 2011, TIFIA assistance amounted to \$8.3 billion, leveraging \$30.7 billion in transportation investments for a total of 24 projects. About \$1.6 billion in TIFIA debt has been repaid to date.

An example of a port-related project financed through TIFIA is the Port of Miami Tunnel project, which received a \$341.5 million TIFIA loan to help pay for a tunnel to link the Port (located on an island in Biscayne Bay) with critical highway connections on the mainland.

Rail Rehabilitation and Improvement Financing (RRIF)

The RRIF program provides loans and credit assistance to both public and private sponsors of rail and intermodal projects. Eligible projects include acquisition, development, improvement, or rehabilitation of intermodal or rail equipment and facilities. Direct loans can fund up to 100 percent of a railroad project with repayment terms of up to 25 years and interest rates equal to the cost of borrowing to the government. Thirty loans have been issued since 2002 for a total of \$1.7 billion. Projects can be of almost any size; the smallest loan issued was about \$56,000 (to C&J Railroad), while the largest was \$5.6 million (to Amtrak). Texas railroads such as Permian Basin Railways and the Tex-Mex Railroad have made use of RRIF.

SAFETEA-LU authorizes \$35 billion for this credit program, of which \$7 billion is directed to short line and regional railroads. In addition, SAFETEA-LU eliminated two major issues that had made RRIF loans virtually unusable to the railroads. First, it removed the requirement that collateral be provided. Second, it removed the “lender of last resort” provision, which required applicants to provide evidence that private lending was denied for the project by two lenders. Nonetheless, many observers still claim the application process is too burdensome. The fact that only about \$1.7 billion in loans have been issued out of \$35 billion authorized may lend some support to this contention, although other factors – such as the economic crisis – also may play a part.

Grant Anticipation Revenue Vehicles (GARVEE Bonds)

A Grant Anticipation Revenue Vehicle (GARVEE) bond is a financing instrument that allows states to issue debt backed by future Federal-aid highway revenues. Eligibility for freight projects is constrained by the underlying Federal-aid highway programs that will be used to repay debt service. GARVEE bonds have been used to finance freight projects; for instance, Rhode Island used them to help pay for construction of a freight-dedicated track alongside Amtrak's Northeast Corridor mainline tracks. Port-related projects that could be funded through these instruments include NHS port access roads, or any intermodal facility eligible for funding under Title 23 or Title 49 U.S.C.

Texas has not been able to issue GARVEE bonds because of provisions in the state constitution, which stipulate that highway bonds can only be financed on a pay-as-you-go basis, using fuel taxes and vehicle registration fees. Since authority to issue these securities would probably require changes to the state constitution, this source of project finance is effectively unavailable to Texas ports.

A.3 STATE FINANCING TOOL

GIWW Matching Funds

TxDOT is the designated non-Federal sponsor of the Texas portion of the Gulf Intracoastal Waterway. In this role, TxDOT participates/initiates studies relating to the GIWW; acquires property for dredged material disposal; and provides all other lands, easements, relocations, and right-of-way for maintenance and new construction along the waterway. The *TxDOT 2012 Unified Transportation Program* provides a total of \$6.75 million for these activities for FY 2012 through 2021; however, appropriations are subject to approval by the Texas Transportation Commission through separate minute order.

Statewide Transportation Programming

TxDOT plans and programs improvements to the State's transportation network through a defined statewide planning process, including the development of a Statewide Long Range Transportation Plan in collaboration with MPOs, local governments, and other stakeholders. This plan is operationalized through the Unified Transportation Plan (UTP), a 10-year plan that guides transportation project investments within the State.

Projects in the UTP are funded according to different project categories, normally on a match basis with Federal dollars (although some projects are 100-percent state funded). Since few if any of these categories are port-specific, we do not review each one here. However, some do affect ports; for instance, Statewide Connectivity Corridor Projects includes mobility or capacity improvements on corridors connecting the Texas Trunk System or NHS to Texas water ports, among other things.

Although the latest UTP includes projects totaling nearly \$28 billion, access to these funds for port projects will likely be restricted to some degree since they must compete with other transportation needs.

Port Access Account Fund (PAAF)

In 2001, the Texas Legislature created the PAAF, which is a line item in the general revenue fund that can be appropriated to TxDOT to fund port and waterway projects. However, to date the Legislature has not appropriated any money for the fund; therefore, the projects contained in the Port Capital Program, prepared by the PAAC, represent unfunded needs. The most recent Port Capital Program, for the 2011 to 2012 biennium, identified 81 projects worth approximately \$673 million. Assuming a 50-percent PAAF cost share (the maximum allowed under state law), this would necessitate about \$336 million in legislative appropriations.¹⁶

¹⁶TxDOT, *Texas Ports 2011 to 2012 Capital Program*.