

8 Finance Plan and Institutional Issues

Funding the entire US 190 corridor (since no improvement projects were developed along I-10) is challenging given the current limitations of traditional funding sources and the limited economic feasibility of proposed improvements. The following analysis lists highway funding tools, summarizes Texas highway funding needs and sources, and assesses potential funding sources for the proposed US 190 improvements.

This chapter provides context for the US 190 corridor needs relative to overall state needs and sources. Proposed changes in State fuel taxes, vehicle registration fees, vehicle sales taxes, and federal highway donor status are considered. Additionally, institutional issues and the relevance regarding US 190 are addressed.

8.1 Highway Funding Recurring and Non-Recurring Sources

Highway funding nationally comprises a wide array of recurring and non-recurring sources. Recurring sources traditionally reflect annual fees and taxes, while non-recurring sources reflect debt financing that leverages recurring sources (highway related or general funds). The traditional recurring and non-recurring funding sources are included in **Table 8-1**. Additional information on these funding sources are included in the *Finance Plan and Institutional Issues Technical Memorandum* previously prepared for this study.



Table 8-1 Highway Funding Sources

Traditional Recurring Sources	Non-Recurring Sources	
State Motor Fuel Taxes	Bonds	General Obligation Bonds
Sales Taxes		Revenue Bonds
Vehicle Registration Fees		Private Activity Bonds
License, Fees, and Permits		Build America Bonds
Federal Receipts	Loans	Transportation Infrastructure Finance and Innovation Act
		Federal Section 129(a) Lending
		State Infrastructure Bank
		National Infrastructure Bank
	Other	Tolls
		Federal Grants
		Dedicated Taxes
		Transportation Reinvestment Zones

8.2 Texas Highway Needs, Funding Sources, and Mechanisms

The following section compares forecasted highway needs to net funding and revenue sources. This provides context from which to understand the cost of the proposed US 190 capital investment relative to the State's overall needs and net available funding.

8.2.1 Highway and Bridge Needs

Highway transport system infrastructure needs identified in The Texas Statewide Long-Range Transportation Plan (SLRTP)¹ totals approximately \$370 billion between 2010 and 2035. These total needs, summarized by type in **Table 8-2**, average \$14.2 billion per year. At \$277.1 billion, highway improvements and bridge replacements comprise 75 percent of total needs versus \$92.5 billion for road and bridge maintenance (25 percent).

On an annual basis, an average of \$3.6 billion is needed simply to maintain the roads and bridges. Comparatively, \$10.7 billion is needed in new road and bridge infrastructure. Combined, the SLRTP indicates that an average of \$14.2 billion is required annually to maintain existing roads and bridges as well as expand the system.

¹ The Texas SLRTP 2035;
http://www.txdot.gov/public_involvement/transportation_plan/report.htm



Table 8-2 Statewide Highway Needs Through 2035
(\$ Millions, 2010)

Needs & Maintenance	Amount		Percent
	Total	Avg. Annual	
HIGHWAY			
Improvements			
Metro/Urban from TTI	\$242,046	\$9,309	65.5%
Urban based on new MPO boundaries	1,047	40	0.3%
Rural Capacity	3,529	136	1.0%
Subtotal	\$246,622	\$9,485	66.7%
Maintenance			
Routine Pavement	\$7,540	\$290	2.0%
Preventive/Rehabilitative	83,244	3,202	22.5%
Subtotal	\$90,784	\$3,492	24.6%
Total Highway	\$337,406	\$12,977	91.3%
BRIDGE			
Replacement			
On-System	\$22,389	\$861	6.1%
Off-System	8,042	309	2.2%
Subtotal	\$30,431	\$1,170	8.2%
Maintenance and Inspection	\$1,710	\$66	0.5%
Total Bridge	\$32,141	\$1,236	8.7%
TOTAL HIGHWAY & BRIDGE NEEDS			
Improvements & Replacements	\$277,053	\$10,656	75.0%
Maintenance and Inspection	92,494	3,557	25.0%
Total	\$369,547	\$14,213	100.0%

Source: The Texas Statewide Long-Range Transportation Plan 2035

Note: Totals may not add up exactly due to rounding.

8.2.2 Funding Sources and Mechanisms

Current funding for Texas highways comes from both recurring and non-recurring sources, included previously in Table 8-1. Constraints and limitations on traditional recurring sources (e.g., fuel taxes and registration fees) have necessitated exploration of other local sources to help fund new highway development.

State Highway Fund (SHF)

The SHF administers recurring and non-recurring highway funding sources. As seen in **Table 8-3**, the recurring tax and fee revenues rose steadily (average of 2.4 percent



per year) from \$2.82 billion in 2001 to \$3.56 billion in 2011. Conversely, federal funds went from \$1.81 billion in 2001 to a high of \$3.25 billion in 2005 and then fell to \$1.97 billion the following year. Major non-recurring SHF revenues include Proposition 14 Bond Proceeds (years 2006 – 2008 and 2010), as well as Commercial Paper (ranging from \$0.62 billion to \$1.49 billion between 2006 and 2011). Concession Agreements injected \$3.20 billion in 2008 and another \$0.47 billion in 2011.

Table 8-3 Highway Fund Revenues (\$ Millions)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Tax and Fee Revenues											
State Motor Fuel Tax	\$2,022	\$2,078	\$2,087	\$2,130	\$2,148	\$2,194	\$2,238	\$2,276	\$2,227	\$2,227	\$2,275
Motor Vehicle Registration Fees	752	730	789	846	875	933	984	1,024	1,066	1,111	1,139
Special Vehicle Registration Fees	--	15	13	14	17	20	23	56	70	62	82
Sales Tax on Lubricants	29	30	31	32	33	35	37	39	40	40	41
Vehicle Certificate Fees	18	19	18	24	24	26	26	27	26	26	26
Total Taxes and Fees	\$2,821	\$2,872	\$2,938	\$3,046	\$3,097	\$3,208	\$3,308	\$3,422	\$3,429	\$3,466	\$3,563
Federal Funds	\$1,809	\$2,320	\$2,604	\$2,776	\$3,250	\$3,091	\$1,974	\$2,690	\$2,667	\$1,868	\$2,080
SHF Bond Proceeds (Proposition 14)	--	--	--	--	--	\$628	\$1,001	\$1,473	--	\$1,492	--
Commercial Paper	--	--	--	--	--	\$300	\$170	\$270	\$445	\$60	--
Concession Agreements	--	--	--	--	--	--	--	\$3,197	--	--	\$458
Others ¹	\$311	\$713	\$292	\$281	\$690	\$1,642	\$2,292	\$1,804	\$1,100	\$693	\$470
Total Taxes and Fees	\$4,941	\$5,905	\$5,834	\$6,103	\$7,037	\$8,869	\$8,745	\$12,856	\$7,641	\$7,579	\$6,571

Source: The Texas Statewide Long-Range Transportation Plan 2035, Table 3-11, and Texas annual cash report at <http://www.window.state.tx.us/finances/pubs/cashrpt/>

¹Others fees include cash transfers from other accounts, toll revenue, ARRA funds, and local participation funds.

Bonds

While the non-recurring bond proceeds, commercial paper, and concession agreements help fund projects sooner rather than later, they do not address the long-term funding issues that require an average of \$14.1 billion in annual highway and bridge needs. For this reason other funding sources are sought in Texas primarily through bonding. These include the Texas Mobility Fund, General Obligation Bonds, Toll Road Bonds, etc.

Texas Mobility Fund (TMF) – The Texas Mobility Fund (TMF) allows TxDOT to issue bonds secured by future revenue, which accelerates financing of mobility projects throughout the state. The TMF is administered by the Texas Transportation Commission (TTC) as a revolving fund to finance construction, reconstruction, acquisition, and expansion of state highways, including design and right-of-way costs. TMF funds may also be used to provide state participation in constructing publicly-owned toll roads and other public transportation projects.²

² TxDOT; http://www.txdot.gov/public_involvement/mobility_fund.htm



As seen in **Table 8-4**, \$6.4 billion in bond proceeds were distributed between 2005 and 2009 based on Proposition 15 guidelines. Various motor vehicle related fees and other revenues are used to make annual debt service payments and to cover other expenses. In 2011, for example, the annual debt service fee was \$326.6 million (not shown in Table 8-4).

Table 8-4 Texas Mobility Fund Revenues (\$ Millions)

	2005	2006	2007	2008	2009	2010	2011
TMF Bond Proceeds	\$1,041	\$771	\$2,245	\$1,157	\$1,201	--	--
Motor Vehicle Inspection Fees	--	83	85	86	83	89	90
Driver Record Information Fees	--	--	54	62	58	56	57
Driver License Fees	--	--	--	118	102	100	127
Vehicle Certificate of Title Fees	--	--	--	--	74	74	80
Other ¹	83	29	39	38	17	34	48
Total	\$1,124	\$883	\$2,423	\$1,461	\$1,535	\$353	\$402

Source: The Texas Statewide Long-Range Transportation Plan 2035, Table 3-13, and TxDOT http://www.txdot.gov/txdot_library/publications/finance/mobility_fund.htm

¹ Includes Motor Carrier Act Penalties, Interest on State Deposits and Treasury Investments – General, Non-Program, Other Miscellaneous Governmental Revenue. Years 2010 and 2011 include Build America Bonds Subsidy of \$13.9 million and \$35.0 million. Also includes adjustment for erroneous deposit of \$144 million in year 2007 and subsequent year 2008 correction.

Proposition 12 General Obligation Bonds – The \$5.0 billion in general obligation bonds authorized by voters in 2007 for transportation projects are supported using general revenue, rather than fuel tax revenues. The Program 1 dispersion of \$2.0 billion was approved in 2010. The other Program 2 distribution of \$3.0 billion has been approved by the TTC but has not yet been dispersed. The Commission intends to distribute the funds between the 25 TxDOT districts (\$1.4 billion), the 25 MPOs (\$0.6 billion), statewide highway connectivity improvements (\$0.2 billion), bridges (\$0.5 billion), and congestion mitigation projects (\$0.3 billion) in the four most congested state regions (Houston, Dallas-Fort Worth, Austin, and San Antonio).³

Other Debt Strategies

Other debt strategies used to address the funding shortfall include the Texas State Infrastructure Bank. The Texas SIB was created in 1997 when the State Legislature authorized TxDOT to administer the SIB program. The SIB program helps local communities meet their infrastructure needs by providing capital fund access at lower-than-market interest rates. The SIB operates as a revolving loan fund, where the account balance grows through the monthly interest earned and repaid principal and interest payments. SIB financial assistance can be granted to any

³ TxDOT; http://www.txdot.gov/project_information/prop12.htm



public or private entity authorized to construct, maintain or finance an eligible transportation project. To be eligible for funding a project must be on the state's highway system and included in the statewide Transportation Improvement Plan.⁴ As of September 2011, The Texas Transportation Commission approved 94 loans totaling \$477 million from the SIB program. The loans have helped leverage \$3.5 billion in transportation projects in Texas.⁵

8.2.3 TxDOT Funding Forecasts

The ten-year financial plan outlined in the 2012 Unified Transportation Plan (UTP) provides forecasts of available funding. This financially constrained plan, developed by TxDOT in 2012, projects \$29 billion of available funding over the next ten years (an average \$2.9 billion per year). This includes the expected sale of bonds under Proposition 12 and Proposition 14, toll revenue agreements, concession payments, and contracted maintenance.⁶

In November 2009, TxDOT also released a long-range financial forecast (2021 through 2035). Excluding potential new bond issues, the funds available for highways from 2012 to 2035 totals nearly \$50 billion – net of payments for existing bonds. The allocation of these anticipated future funds for the years 2012–2021⁷ and 2022–2035⁸ is shown in **Table 8-5**.

Forecasted highway needs total \$369 billion over the 2010-2035 period, approximately \$14.2 billion (see Table 8-1) per year, while net funding sources currently identified from 2012 to 2035 totals only \$49.7 billion (\$2.1 billion per year). On an annual basis, future identified funding only accounts for 15 percent of identified needs.

4 TxDOT; <http://www.txdot.gov/business/governments/sib.htm>

5 TxDOT; <http://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/gov/sib/approved.pdf>

6 TxDOT

7 TxDOT

8 Texas SLRTP



Table 8-5 Future Available Highway Project Funding (\$ Millions, 2010)

	2012–2021	2022–2035	Total
CATEGORY			
Preventive Maintenance and Rehabilitation	\$10,957	\$10,351	\$21,308
Corridor Projects			
Metropolitan Area	\$1,761	\$0	\$1,761
Urban Area	226	0	226
Statewide Connectivity	19	0	19
Corridor Subtotal	\$2,006	\$0	\$2,161
Congestion Mitigation and Air Quality Improvement	\$1,121	\$2,108	\$3,229
Structures	2,500	3,500	6,000
Metropolitan Mobility/Rehabilitation	2,030	2,930	4,960
Safety	1,236	1,826	3,062
Transportation Enhancements	647	832	1,479
Supplemental Transportation Projects	631	447	1,078
District Discretionary	645	877	1,522
Strategic Priority	2,468	0	2,468
Category Subtotal	\$24,241	\$23,361	\$44,873
PROGRAM			
Concessions and Toll Revenue Agreements	1,473	na	1,473
Local Participation	1,707	na	1,707
Pass through Finance	728	na	728
Tx Mobility Fund	77	na	77
Prop 12 (voter approved \$5 Bn)	\$4	na	4
Prop 14	418	na	418
Prop 14 Safety Bond	122	na	122
Federal Earmarks	274	na	274
Program Subtotal	\$4,803	na	\$4,803
TOTAL			
Category and Program Total	\$29,044	\$23,361	\$49,676
Average Annual	\$2,640	\$1,669	\$2,070

Source: Based on the Texas Statewide Long-Range Transportation Plan 2035, Table 3-9. Note that original the 2009 UTP data has been updated with current year 2012 data. Also, the Long-Range funding projection values over a 15-year period (2021-2035) has been reduced by a year since the updated UTP.



8.3 US 190 Corridor Funding Needs, Resources, and Institutional Issues

Constrained by many factors, the SHF lacks sufficient revenues to invest in many required highway construction projects. For this reason, imminent funding for the entire US 190 corridor would be challenging even if the entire corridor project was economically feasible. To expedite funding the smaller, economically feasible corridor projects, will require resourceful funding strategies.

The following section provides an overview of the US 190 funding needs, considering the economically feasible sections which had a benefit-cost ratio equal to or greater than 1 as discussed in Chapter 6. The next section provides an overview of how changes in recurring sources would affect the overall SHF, and a qualitative assessment of these changes on potentially funding the economically feasible segments. The third section addresses institutional issues associated with multi-jurisdictional interaction and funding disbursements that might affect US 190 funding.

8.3.1 US 190 Funding Needs

US 190 capital investment funding needs comprise various planning and construction costs, which include environmental documentation, engineering design, utility relocation, right-of-way, construction, and inspection. These costs are first summarized for the entire project by alternative, and then summarized by segment.

8.3.2 Total Project Investment Needs

The ten corridor improvement alternatives included upgrading the entire corridor to either a continuous four-lane divided highway or a four-lane freeway facility. Total Freeway Options 1 and 2 are the most expensive with a capital investment cost of approximately \$5.0 billion. Total Four-Lane Highway Options 1, 2, and 3 are significantly less expensive ranging between \$2.5 billion to \$3.0 billion.

Economically Feasible Section Investment Needs

Further dividing the costs by segment and then identifying the economically feasible segments indicates that combined investment needs range between \$0.6 billion for Total Four-Lane Highway Options 2 and 3 to \$2.0 billion for Fort-to-Port Option 1. The conceptual estimates for the segments determined to be economically feasible, and the conceptual estimates for the full corridor Preliminary Alternatives for comparison are included in Table 8-6.



The economically feasible segments are primarily located in the Central Section which includes improvements to Segments E (Lampasas to Copperas Cove), H (Temple to Madisonville), O (FM 93) and P (SH 30 between Bryan and Huntsville). Of these, Segment O under Total Freeway Option 2 is not economically feasible, and Segment P is only feasible under a sensitivity analysis (refer to *Detailed Evaluation of Conceptual Alternatives Technical Memorandum, Chapter 10 – Economic Feasibility and Impact Evaluation*).

Table 8-6 Alternative Capital Expenditures by Segment (\$ Millions, 2010)

Section	Segment	FWY 1	FWY 2	4LN1	4LN2	4LN3	FTP1	FTP2	EVAC	MS1	MS2
I-10	A	na									
West	B	na	na	\$490.2	na	na	na	na	\$490.2	\$490.2	\$490.2
	R	na									
	M	\$256.6	na	na	\$103.4	na	\$256.6	\$256.6	na	na	na
	C	\$517.6	na	\$284.5	\$284.5	na	\$517.6	\$517.6	\$284.5	\$284.5	\$284.5
	S	na									
	N	na	\$368.0	na	na	\$158.7	na	na	na	na	na
	D	\$1,171.1	\$1,171.1	\$635.1	\$635.1	\$635.1	\$1,171.1	\$1,171.1	\$635.1	\$635.1	\$635.1
Central	E	\$280.4	\$280.4	\$73.5	\$73.5	\$73.5	\$280.4	\$280.4	\$73.5	\$73.5	\$280.4
	F	na									
	G	na									
	H-West	\$85.7	na	\$45.5	na	na	\$85.7	\$85.7	\$85.7	\$85.7	\$85.7
	O	na	\$114.5	na	\$67.3	\$67.3	na	na	na	na	na
	H-Central	\$842.3	\$842.3	\$447.5	\$447.5	\$447.5	\$842.3	\$842.3	\$842.3	\$842.3	\$842.3
	H-East	\$389.7	na	\$207.1	na	na	\$389.7	\$389.7	\$389.7	\$389.7	\$389.7
	P	na	\$628.7	na	\$288.4	\$288.4	na	na	na	na	na
I	na	na	na	na	na	na	na	na	na	na	
East	J	\$839.2	\$839.2	\$435.6	\$435.6	\$435.6	\$435.6	\$839.2	\$839.2	\$839.2	\$839.2
	K	\$364.1	\$364.1	\$204.3	\$204.3	\$204.3	\$204.3	\$204.3	\$364.1	\$204.3	\$204.3
	L	\$299.3	na	\$149.2	na						
	Q	na	\$307.7	na	\$154.2	\$154.2	\$154.2	\$154.2	\$307.7	\$154.2	\$154.2
TOTAL											
All Segments		\$5,046.1	\$4,916.1	\$2,972.5	\$2,693.8	\$2,464.7	\$4,337.7	\$4,741.3	\$4,311.9	\$3,998.7	\$4,205.7
Feasible Segments		\$1,897.4	\$1,122.7	\$922.7	\$588.2	\$588.2	\$2,033.7	\$1,598.1	\$1,391.2	\$1,391.2	\$1,598.1

Source: CDM Smith Team, 2011

Unimproved segments*

Feasible segments

* Unimproved segments denote existing interstate facilities
Note: For limits of segments, refer to Figure 6-11



8.3.3 Local Transportation Improvement Strategies Investment Needs

In addition to the corridor-wide alternatives, potential local transportation improvements were identified and prioritized into near- to mid-term and long-term transportation improvement strategies. These potential improvements could address some of the mobility needs at a lower cost than the corridor-wide alternatives. The conceptual cost estimates for the individual projects range from \$3 million to \$280 million which were shown previously in Tables 7-7 and 7-8. The projects include intersection/interchange improvements, the addition of passing lanes consistent with a Super 2 design, relief routes, and added capacity.

8.3.4 Institutional Issues

Coordination between governing jurisdictions can leverage financial support by pooling different taxes, as well as financing multicounty improvements. However, institutional issues often arise in the coordination and collective funding of road improvements between separate jurisdictions, and between separate organizational units. These issues include multi-jurisdictional interaction and funding disbursement.

Multi-Jurisdictional Interaction

Institutional issues can arise during interactions between multiple jurisdictions, which require balancing and collective agreement. Multi-jurisdictional coordination comprises two general types: horizontal or vertical. Horizontal coordination arises between jurisdictions of similar types and/or functionality, such as between adjoining counties. Alternatively, vertical coordination reflects the collaborative interaction between two or more jurisdictions in which at least one has authoritative or largely-controlling influence; such as when a county coordinates with a state or federal agency. For the US 190 corridor, both general coordination types would probably be needed – the various counties along and abutting the corridor would need to horizontally coordinate, and simultaneously coordinate vertically with TxDOT, FHWA, and possibly even the military (in adherence to the Forts-to-Ports concept).

8.4 Funding Summary and Conclusions

Statewide annual highway and bridge maintenance costs were found to average \$3.6 billion through 2035, and annual improvement and replacement costs average another \$10.7 billion. Combined, total highway needs for Texas through 2035 were found to average \$14.2 billion per year. However, average annual available funding between 2010 and 2012 is only \$3.0 billion. Clearly, Texas is challenged in simply maintaining its existing highway infrastructure. Much discussion has centered on raising the state motor-fuel tax and/or raising/redistributing recurring funding



from other sources. Even if additional revenues were generated, many highway improvement projects would be competing for any available funding.

While other non-recurring sources, such as the Proposition 12 funding, have partially reduced the funding shortfall, severe budget shortfalls remain; also, these non-recurring funds span a limited time period and the funds are mostly for specific project types. In addition, other federal stimulus funding programs that have been introduced in recent years do not appear to be maintained in the long-term. Given these fiscal constraints, only the feasible sections of US 190 or the local transportation improvements have the potential to be funded. The funding needs for the feasible segments range from \$0.6 billion to \$2.0 billion depending on the improvement alternative, and the funding needed for the individual identified potential local transportation improvements ranged from \$3 million to \$280 million with the total of the near- to mid-term improvements being \$761 million and the long-term improvements being \$1.37 billion.

Difficult financial times have given rise to increased resourcefulness on the local level with cities and counties using various taxing instruments and inter-governmental agreements to raise funding for road improvements.



