

TEXAS FREIGHT MOBILITY PLAN: TEXAS TRANSPORTATION PLANNING PROCESS



May 8, 2014



THE TEXAS TRANSPORTATION PLANNING PROCESS

The purpose of this white paper is to briefly outline the current Texas Department of Transportation (TxDOT) planning and project selection process, particularly as it relates to freight projects. While this paper is not an exhaustive review of all TxDOT plans and projects, it does provide an initial insight into the project planning, selection, and prioritization process. Understanding this process is critical in order to understand how freight projects and initiatives are considered in statewide planning. This information will serve as an input into recommendations regarding incorporating and prioritizing freight projects in statewide planning, a critical component of the Texas Freight Mobility Plan (TFMP).

The paper is organized in the following way:

- Introduction
- Discussion of the TxDOT Strategic Plan
- Coordination with Other Plans
- The TxDOT Planning and Project Selection Process, including:
 - Texas Transportation Plan (TTP)
 - Statewide Rural Transportation Plan (RTP)
 - Metropolitan Transportation Plan (MTP)
 - Unified Transportation Program (UTP)
 - Statewide Transportation Improvement Program (STIP)
- Freight Project Consideration in the Current Planning Process
- Next Steps

Introduction

The challenge faced by TxDOT in continuing to provide safe and reliable transportation is one of balancing the needs of transportation system users with the limited funding available to meet those needs. Setting realistic, attainable goals and providing the best value for every transportation dollar spent is accomplished through a planning process—one that is comprehensive, cooperative, and continuing (3-C). The process must be thoroughly transparent and inclusive of all transportation stakeholders (i.e., users of the Texas transportation system).

Transportation planning includes a number of steps:

- Monitoring existing conditions;
- Forecasting future population and employment growth, including assessing projected land uses in the region and identifying major growth corridors;
- Identifying current and projected transportation problems and needs and analyzing, through detailed planning studies, various transportation improvement strategies to address those needs;
- Developing long-range plans and short-range programs of alternative capital improvement and operational strategies for moving people and goods;
- Estimating the impact of recommended improvements to the transportation system on environmental features, including air quality; and
- Developing a financial plan for securing sufficient revenues to cover the costs of implementing strategies.

TxDOT Strategic Plan 2013-2017

The department's mission and goals are stated in the Agency Strategic Plan for the Fiscal Years 2013-2017. The Strategic Plan presents the high-level goals and philosophies for providing safe and reliable transportation solutions for Texas. Core activities are included which will help support these goal areas.



The mission of TxDOT is to work with others to provide safe and reliable transportation solutions for Texas. TxDOT has developed agency goals to assist in providing direction in fulfilling the mission of the department. In order to support each goal, objectives have been developed to assist in achieving the goals. The TxDOT Mission, Values, Goals, and Objectives are as follows:

**Exhibit 1: TxDOT Mission, Values, Goals, and Objectives
as Defined in the 2013-2017 Strategic Plan**

Mission	Work with others to provide safe and reliable transportation solutions for Texas
Values	Trust: We understand the importance of being trustworthy and credible, both as an agency and as individuals.
	Integrity: We honor our commitments and keep our word.
	Responsibility: We are reliable and dependable in carrying out our mission and roles.
	Excellence: We do our work at a high level of quality.
	Service: We do what we do for others with a spirit of humility and honor.
Goals	Maintain a Safe System
	<i>Objective:</i> Reduce crashes and fatalities on the system through innovations, technology, and public awareness
	<i>Objective:</i> Maintain and preserve the transportation assets of the state of Texas
	Address Congestion
	<i>Objective:</i> Partner with local officials to develop and implement congestion mitigation plans in Texas
	Connect Texas Communities
	<i>Objective:</i> Prioritize new projects that will increase the state GDP and enhance access to goods and services throughout the state
	Become a Best in Class State Agency
	<i>Objective:</i> Ensure the agency deploys its resources responsibly and has a customer service mindset
<i>Objective:</i> Focus on work environment, safety, succession planning, and training to develop a great workforce	

Source: TxDOT Strategic Plan 2013-2017

Coordination with Other Plans

The transportation planning process is defined, coordinated, implemented, and documented through a series of plan and program documents. Exhibit 2 provides a brief overview of the key plans that guide the process and programs that identify the projects and services on which transportation funds will be expended, as well as the various local, state and federal transportation agencies responsible for the development and/or approval of each.



Exhibit 2: TxDOT Plans for Coordination with TTP

Plan/Program	Who Develops?	Who Approves?	Time Period	Content	Update Cycle
TxDOT Strategic Plan	TxDOT	Texas Transportation Commission	5 years	TxDOT's operational goals and strategies	Every 4 years
Texas Transportation Plan (TTP)	TxDOT	Texas Transportation Commission	24 years	Future goals, strategies, and performance measures	Every 4 years
Statewide Rural Transportation Plan (RTP)	TxDOT	Texas Transportation Commission	24 years	Future goals, strategies, and performance measures	Every 4 years
Unified Transportation Program (UTP)	TxDOT	Texas Transportation Commission	10 years	Projects to be funded/built in a 10-year period	Annually
Metropolitan Transportation Plan (MTP)	Metropolitan Planning Organizations (MPOs)	MPO	20+ years	Future goals, strategies, and projects	Every 5 years (Every 4 years in Air Quality Non-Attainment Areas)
Statewide Transportation Improvement Program (STIP)	TxDOT	USDOT	4 years	Transportation investments	Every 2 years
Transportation Improvement Programs (TIP)	MPOs-TxDOT Districts	Governor*/MPOs	4 years	Transportation investments (projects)	Every 2 years
Corridor Studies (e.g., MY-35)	TxDOT	Texas Transportation Commission	N/A	Benefit cost analysis and feasibility	As needed
Texas Rail Plan	TxDOT	Texas Transportation Commission	5 and 20 years	Focus on goals and strategies	Every 5 years
Texas Airport System Plan	TxDOT	Texas Transportation Commission	5, 10, and 20 years	Focus on general aviation needs	Annually
Texas Port Capital Plan	Port Authority Advisory Committee	Texas Transportation Commission	2 years	Goals, objectives, and projects	Annually

*Note:** While the legislature gives the approval authority to the Governor, the Governor delegates the authority back to TxDOT
 Source: TxDOT Statewide Transportation Improvement Program 2013-2016



Key Elements of the Statewide Transportation Planning and Project Selection Process

The various plans and programs identified in Exhibit 2 are part of a comprehensive planning and programming process flowing from TxDOT's agency mission to project-level implementation, as shown in Exhibit 3. The Texas Transportation Commission (Commission) has adopted rules (Texas Administrative Code, Title 43, Chapter 16), governing the planning and development of transportation projects.

Exhibit 3: Agency Mission to Specific Projects

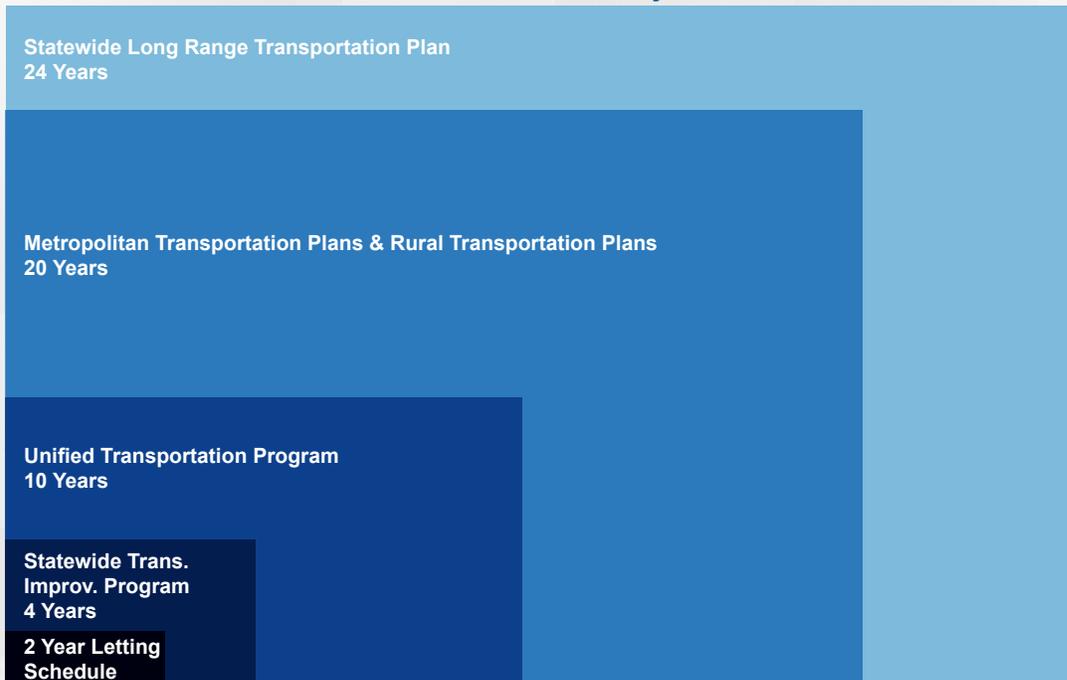


Source: TxDOT Unified Transportation Program 2014-2023

For example, the TTP identifies the needs to be met and specific goals which projects listed in the UTP are oriented toward achieving. The UTP serves as the mid-range programming document which links the planning activities of the TTP, TRP, and the MTPs to the detailed programming activities under the STIP and TxDOT's 24-month Letting Schedule.

The different plans and programs in this family of documents are shown in Exhibit 4.

Exhibit 4: UTP in the TxDOT Family of Documents



Source: TxDOT Unified Transportation Program 2014-2023

Texas Transportation Plan

The TTP is TxDOT's 24-year "blueprint" for the multimodal planning process that will guide the collaborative efforts between TxDOT, local and regional decision-makers, and all transportation stakeholders to reach a consensus on needed transportation projects and services across the state. The TTP is consistent with, and integrates, other mode-specific (e.g., rail, airport, water port) plans.

The TTP provides the framework for advancing TxDOT's values, mission, and goals identified in the Strategic Plan.



Through coordination with existing TxDOT plans, and those in development, the TTP links the Strategic Plan goals with project prioritization and programming. TTP development includes an analysis of existing and ongoing TxDOT, metropolitan planning organization (MPO), rural, and modal plans (such as the State Rail Plan) to ensure consistency with other ongoing efforts and initiatives, such as those listed in Exhibit 2.

The specific requirements for the development of the TTP are outlined in the Texas Administrative Code (Title 43, Part 1, Chapter 16, Subchapter B) and are as follows:

- 24-year planning horizon with an update cycle every 4 years;
- Inclusion of all modes of the transportation system;
- Integration with the STIP and UTP;
- Inclusion of specific, long-term goals for the state that advance Strategic Plan goals;
- Inclusion of specific, measurable targets for each goal;
- Consideration of MPO and Regional Planning Organization transportation plans and strategies;
- Identification of priority corridors, projects, or areas of concern with respect to meeting plan goals; and
- Inclusion of a participation plan for obtaining input on goals, targets, and project selection and prioritization.

The 2035 TTP is currently being updated, and, in accordance with TxDOT's commitment to operational excellence and innovation, the TTP will be performance-based and will apply state-of-the-art methodologies that link investment decisions with the achievement of the long-term goals defined in the Strategic Plan (Exhibit 1). In addition to the clear articulation of goals, the update will include a method for predicting and tracking progress towards TTP goals over time as well as the effects of investments on system performance. The Texas Freight Mobility Plan will also be integrated into the TTP.

Statewide Rural Transportation Plan

The RTP is the rural component of the TTP. As part of the TTP, the RTP is a blueprint for the planning process in the rural areas that will guide the collaborative efforts between TxDOT, local and regional decision-makers, and all transportation stakeholders to reach a consensus on needed transportation projects and services through 2035. It is a standalone document, fully consistent with the TTP. The RTP is a multi-modal transportation plan that includes the following modes:

- Highways;
- Non-Automobile/Non-highway modes;
- Bicycles and Pedestrians;
- General Aviation;
- Inland Waterways;
- Rail (freight and passenger); and
- Public Transportation.

Metropolitan Transportation Plans

Federal law requires that a MPO be designated for each urban area with a population of 50,000 or more. The MPO will provide a continuing, cooperative, and comprehensive transportation planning process that results in plans and programs that consider all transportation modes and supports metropolitan community development and social goals. These plans and programs lead to the development and operation of an integrated, intermodal transportation system that facilitates the efficient, economic movement of people and goods.

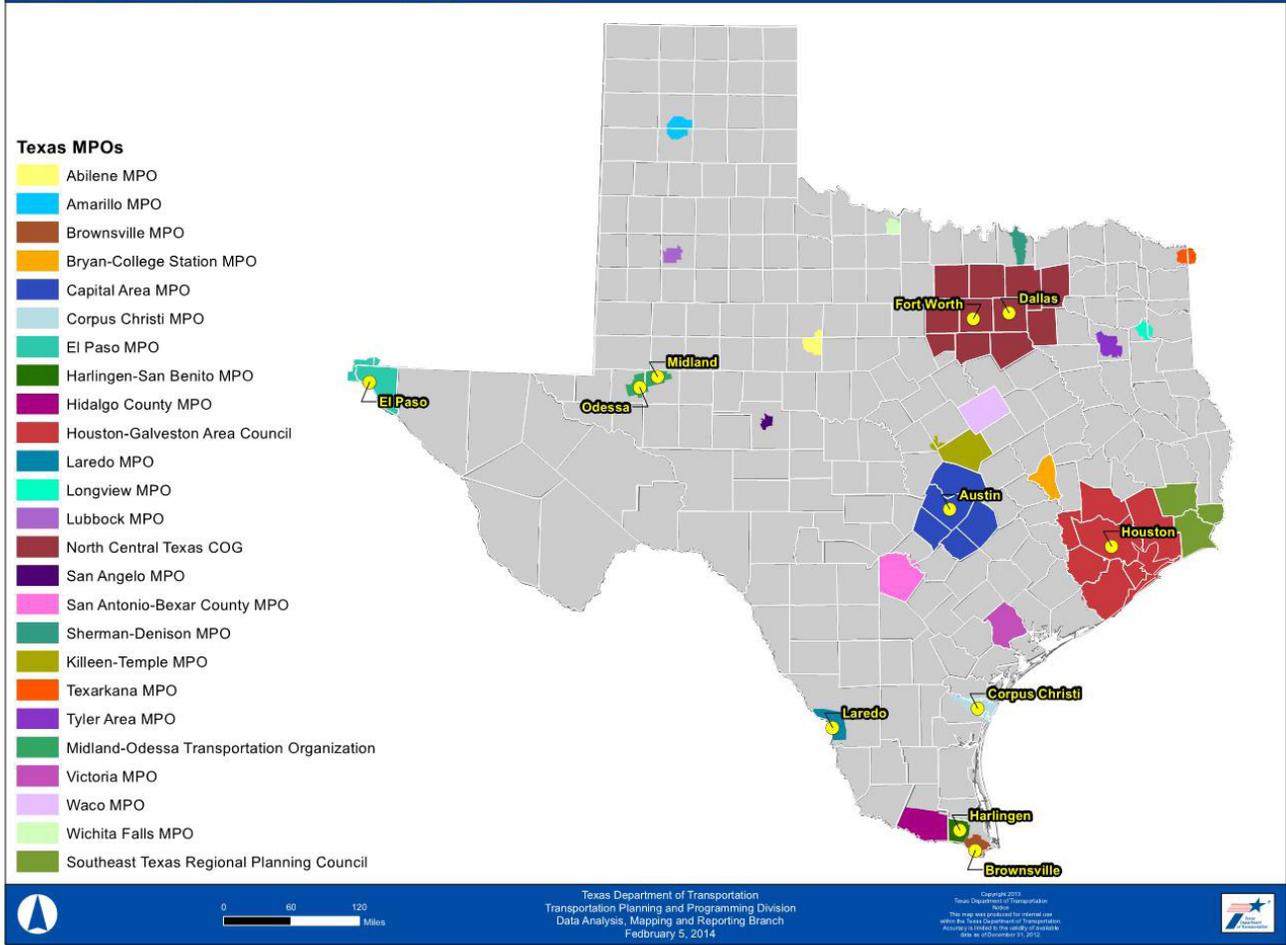
There are twenty-five MPOs in Texas (See Exhibit 5). Each of the MPOs receives federal funding for transportation planning. Many also receive state and local funds to carry out their mandated planning activities.



Exhibit 5: Texas MPOs

Texas Freight - Metropolitan Planning Organizations

2014



Source: Association of Texas Metropolitan Planning Organizations <http://www.texasmpo.org/mpos.html>

MPOs undertake a similar – but more localized – planning process to develop multimodal MTPs which are consistent with the TTP and identify needed transportation improvements and services within the metropolitan area boundaries for the next 20 to 25 years.

The policy for the metropolitan planning process is to promote consistency between transportation improvements and state and locally planned growth and economic development patterns. MPOs are to cooperate with the state in developing transportation plans and programs within their urbanized area (UZAs). This transportation planning process is to result in plans and programs consistent with the UZA's comprehensive planned development. In addition, these plans are to provide for the development of transportation facilities (including pedestrian walkways and bicycle facilities) and serve as an intermodal system for the state and the nation.

Unified Transportation Program

Transportation projects and services identified in the first 10 years of the TTP and MTPs – for which TxDOT can reasonably anticipate funding – are included in TxDOT's UTP, which is approved by Commission.

The UTP is TxDOT's ten-year programming document to authorize and guide transportation project development and construction on Texas' intermodal transportation network. The Commission and TxDOT use the UTP as TxDOT's 10-year plan to guide transportation project development. The UTP is developed annually in accordance



with the Texas Administrative Code (Title 43, Part 1, Chapter 16)) and is approved by the Commission annually prior to August 31. The UTP authorizes projects for construction, development and planning activities and includes projects involving highways, aviation, public transportation, and state and coastal waterways.

The UTP is part of a comprehensive planning and programming process flowing from TxDOT's agency mission to project-level implementation. The UTP is an intermediate programming document linking the planning activities of the TTP, the RTP, and the MTPs to the detailed programming activities under the STIP and TxDOT's 24-month (2-year) Letting Schedule.

Specifically, the UTP is a listing of projects and programs that are planned to be constructed and/or developed within the first ten years of the 24-year TTP. Project development includes activities such as preliminary engineering work, environmental analysis, right-of-way (ROW) acquisition and design. Despite its importance to TxDOT as a planning and programming tool, the UTP is neither a budget nor a guarantee that projects will, or can, be built. However, it is a critical tool in guiding transportation project development within the long-term planning context. In addition, it serves as a communication tool for stakeholders and the public in understanding the project development commitments TxDOT is making.

The UTP includes funding strategies and projects to maintain and preserve the existing transportation system and taxpayer investments. The UTP also includes funding strategies and projects to construct transportation infrastructure. It takes several years for a project to be constructed once the need for that project has been identified. A more detailed discussion can be found in the Project Selection Process and UTP section of this document.

Transportation Improvement Program

The Statewide Transportation Improvement Program (STIP) is TxDOT's four-year capital improvement program developed under the United States Code (Title 12, Section 135g) the Texas Administrative Code (Title 43, Part 1, Chapter 16). A federally-approved STIP is required for projects to be eligible for funding.

As projects move closer to construction or implementation, they will advance from the UTP into a rural Transportation Improvement Program (RTIP) or MPO TIP. A TIP is a four-year program that contains a fiscally-constrained list of multimodal (e.g., highway, transit, bicycle, etc.) transportation projects in a specific rural or metropolitan area that accomplish the planning goals set out in the TTP and/or MTP. The STIP is the four-year program that includes the RTIPs and MPO TIPs, and represents all of the transportation projects to be constructed or implemented statewide.

The STIP (and TIPs contained therein) includes projects for which full funding is reasonably anticipated to be available in order to construct, complete, implement, operate and maintain the projects.

It can take many years for a roadway or transit project to go from planning and development (i.e., preliminary engineering work, environmental analysis, ROW acquisition, and design) to construction or implementation. The STIP identifies projects, programs and services that are very near (within four years) to being constructed or implemented to meet needs identified much earlier in the transportation planning process.

Project Selection Process and the UTP

In distributing funds for project development and implementation, the department may not exceed its Cash Flow Forecast. This forecast is developed by TxDOT's Finance Division and used to manage all available funds for the construction and maintenance of the transportation system.

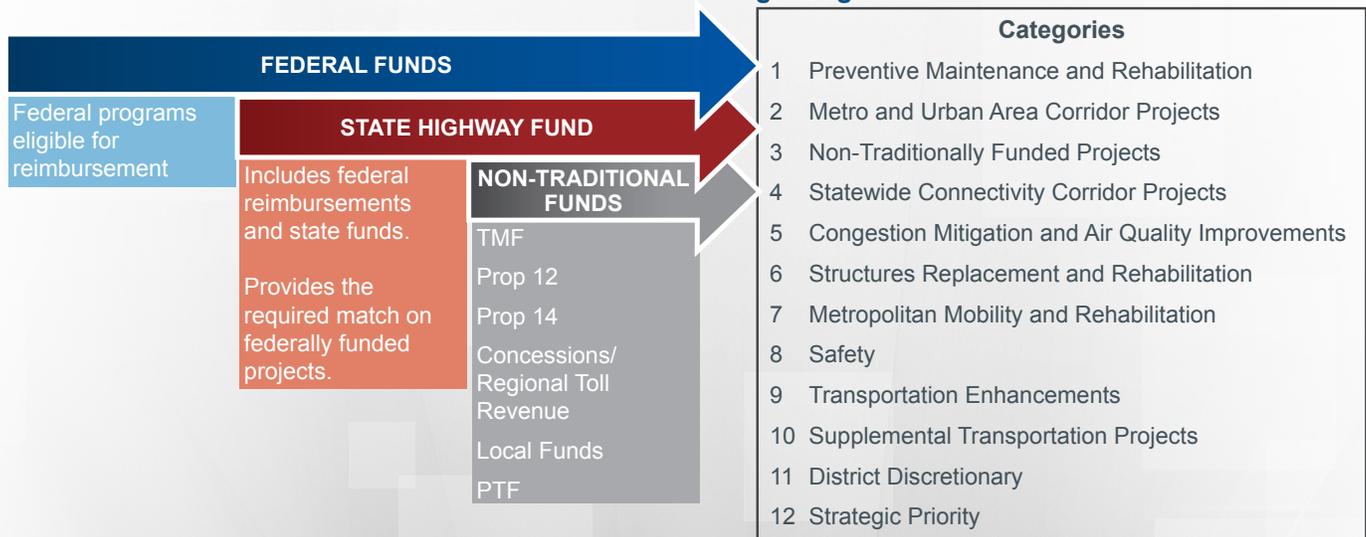
The framework for funding much of the state's transportation program is largely defined by the current federal transportation authorization bill. On July 6, 2012, the President of the United States signed into law the Moving Ahead for Progress in the 21st Century Act (MAP-21). MAP-21 authorizes a total of \$105 billion for fiscal years (FY) 2013 and 2014 for the federal-aid highway apportioned programs nationwide. Federal funding levels used in the development



of this document are based on the allocation processes contained within MAP- 21 and on the taxes that are estimated will be generated from the sale of motor fuels in Texas over the life of the UTP. Because MAP-21 is only a 2-year bill, assumptions have been made concerning the continuation of the MAP-21 funding levels for the remaining years in the UTP. These assumptions play an important role in the identification of funds for supplemental program authority (PA), as described in the Supplemental Program Authority (PA), which represents the amount over and above the UTP fiscally constrained funding limit.

Additional funding sources are also considered in the cash forecast used to determine UTP funding levels including the State Highway Fund and other non-traditional funds. A critical concept for understanding the distribution of funding to individual projects is that of funding categories. The Texas Administrative Code specifies twelve funding categories for highway related projects, as shown in Exhibit 6.

Exhibit 6: UTP Funding Categories



Source: TxDOT Unified Transportation Program 2014-2023

The distribution of funding by category ensures the UTP program of projects is aligned with the department's transportation goals. A summary of available funding by category is provided in Exhibit 7.

Exhibit 7: FY 2014-2023 Funding Availability by Category

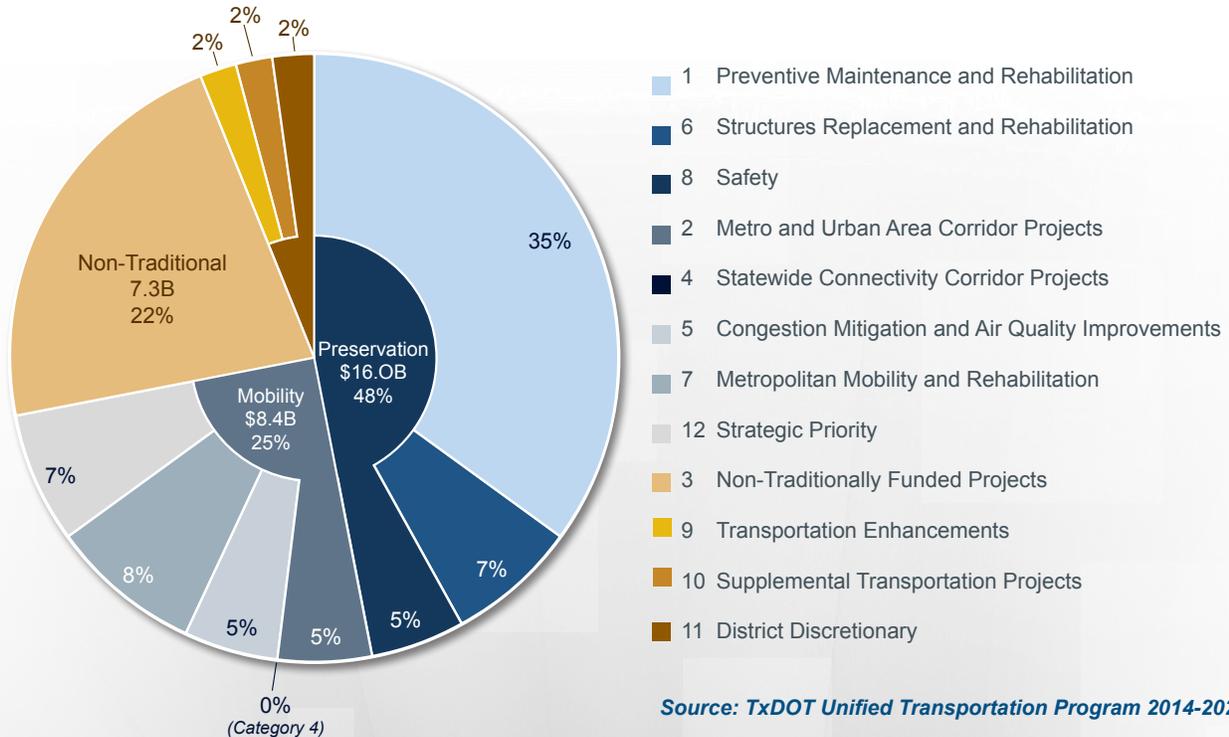
Funding Category	2014-2023 UTP Funding
1 - Preventative Maintenance and Rehabilitation	11,797,220,000
2 - Metro and Urban Area Corridor Projects	1,703,430,000
3 - Non-Traditionally Funded Transportation Projects	7,268,830,000
4 - Statewide Connectivity Corridor Projects	0
5 - Congestion Mitigation and Air Quality Improvement (CMAQ)	1,521,430,000
6 – Structures Replacement and Rehabilitation	2,500,000,000
7 - Metropolitan Mobility and Rehabilitation	2,847,270,000
8 - Safety	1,711,310,000
9 - Transportation Enhancements	633,310,000
10 - Supplemental Transportation Projects	746,060,000
11 - District Discretionary	623,810,000
12 - Strategic Priority	2,305,730,000
Total	33,658,400,000

Source: TxDOT Unified Transportation Program 2014-2023



The information provided in Exhibit 7 and Exhibit 8 is a snapshot in time.

Exhibit 8: FY 2014-2023 UTP Funding Overview by Category



Source: TxDOT Unified Transportation Program 2014-2023

Project-Specific and Allocation Funding Categories

Each funding category (shown above) has a specific purpose. In addition, categories differ in whether they are project-specific or an allocation program. The project specific categories are categories for which specific projects are selected and identified for funding in the UTP. Typically, these are major projects to improve mobility. For those categories that are allocation programs, the management of funds is delegated to TxDOT districts or divisions; these projects are generally related to maintenance. If projects are listed in these categories, it is for informational purposes only. Category 1 projects are not required to be listed at all.

This document authorizes funding levels for categories 1-12. While projects are listed for categories 2-12, only categories 2, 3, 4, parts of 10, and 12 are project-specific as defined above. Categories 1, 5, 6, 7, 8, 9, parts of 10, and 11 are allocations and any listing of specific projects is provided for informational purposes only. The remaining funding levels and lists of projects for the Aviation Capital Improvement Program, Rail Transportation, Public Transportation, and State Waterways and Coastal Waters are authorized by separate Texas Transportation Commission action.

In developing the UTP, the department is required to clearly reference the TTP and specify how the UTP supports or relates to the department's long-term transportation goals.

TxDOT Project Selection Process

Understanding TxDOT's project selection process helps Texans understand how the roads and bridges they drive on every day are selected for funding. Learning how projects are prioritized and how funding is structured helps Texans know how they can participate in the process, make suggestions, and propose projects to address the transportation problems they face.



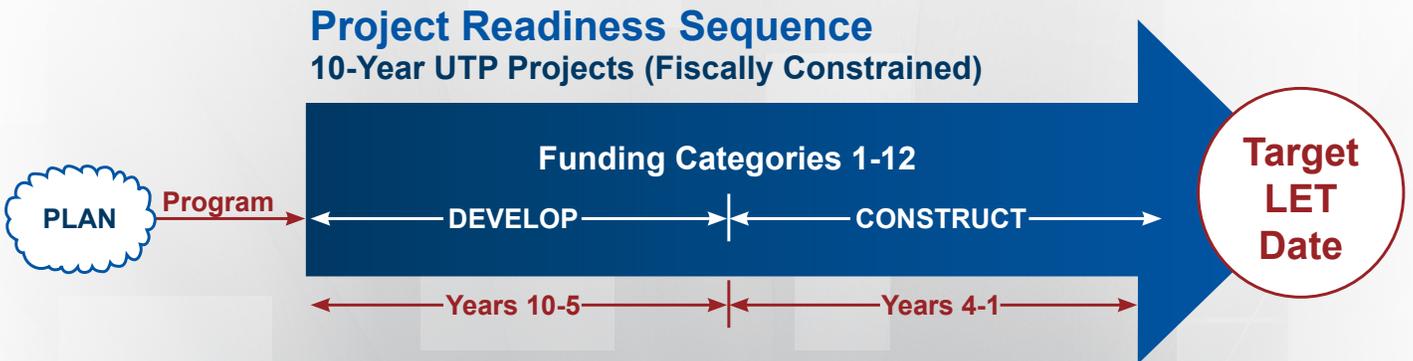
Overall, the intent of the department's project selection process is that it be consistent with the department's goals: the need for the project to address these goals is a primary driver of projects moving forward into implementation. However, project selection is also guided by the funding available for project implementation. This constraint is key to understanding the complexity of prioritizing and selecting projects across TxDOT's entire program.

An important factor in the project selection process is the amount of funds available to construct projects. For the purpose of the UTP, the steps required in project development have been organized into four levels of development authority: PLAN, DEVELOP, CONSTRUCT, and LET. The Commission uses these levels of authority to authorize district resource expenditures to complete the development actions included in each level.

Role of the UTP in Project Selection

Depending on the category of funding, TxDOT, in collaboration with the MPO as appropriate, selects the projects that fit within the financial constraint of the allocations for the relevant time period. For the purpose of the UTP, this process may be summarized as a project readiness sequence, as shown in Exhibit 9. The general relationship of level of authority to the timeline of the UTP is as follows: projects listed in the first four years of the UTP are authorized for a CONSTRUCT level of authority and projects in the later six years of the UTP are authorized for a DEVELOP level of authority. PLAN level of authority projects are typically at a stage that is prior to the UTP and therefore are generally not included in the UTP.

Exhibit 9: Project Readiness Sequence



Source: TxDOT Unified Transportation Program 2014-2023

Exhibit 10 contains a summary of the UTP funding categories and the various project selection methods by category. The typical steps of the project selection process are described next.



Exhibit 10: Overview of Project Selection by Category

Funding Category	Project Selection
1 - Preventive Maintenance and Rehabilitation	Projects selected by districts. Commission allocates funds through a formula allocation program.
2 - Metropolitan and Urban Area Corridor Projects	Projects selected by MPOs in consultation with TxDOT. Commission allocates funds through a formula allocation program.
3 - Non-Traditionally Funded Transportation Projects	Determined by legislation, Commission approved Minute Order, and local government commitments.
4 - Statewide Connectivity Corridor Projects	Selections based on engineering analysis of projects on three corridor types: <ul style="list-style-type: none"> • Mobility Corridors - based on congestion. • Connectivity Corridors - 2-lane roadways requiring upgrade to 4-lane divided. • Strategic Corridors - strategic corridor additions to the state highway network. An example would be the Ports-to-Plains corridor.
5 - Congestion Mitigation and Air Quality Improvement	Projects selected by MPOs in consultation with TxDOT. Commission allocates funds distributed by population weighted by air quality severity to non-attainment areas. Non-attainment areas designated by the Environmental Protection Agency (EPA).
6 - Structures Replacement and Highway Bridge Program; Federal Railroad Grade Separation Program	Projects selected by the Bridge Division (BRG) based on a listing of eligible bridges prioritized first by Deficiency Categorization (Structurally Deficient followed by Functionally Obsolete) and then by Sufficiency Ratings. Commission allocates funds through Statewide Allocation Program.
7 - Metropolitan Mobility/Rehabilitation	Projects selected by MPOs operating in transportation management areas, in consultation with TxDOT. Commission allocates funds through Federal program distributed to MPO's with an urbanized area population of 200,000 or greater (TMA's).
8 - Safety Federal Highway Safety Improvement Program (HSIP), Federal Railway-Highway Crossing Program, Safety Bond Program	Projects selected statewide by federally mandated safety indices and prioritized listing. Commission allocates funds through Statewide Allocation Program.
9 - Transportation Enhancements	Local entities nominate projects and TxDOT, in consultation with FHWA, evaluate for eligibility and make recommendations to Commission. TMAs select and rank projects within their areas in consultation with TxDOT. Projects in the Safety Rest Area Program are selected by the Maintenance Division (MNT).
9 - Transportation Alternatives	For Statewide allocation, local entities nominate projects and TxDOT, in consultation with FHWA, reviews them. Eligible projects are selected and approved by Commission on a per-project basis. For TMA allocation, respective TMA hosts program calls and selects eligible projects.
10 - Coordinated Border Infrastructure Program (CBI) and Congressional High Priority Projects	CBI projects selected by districts with FHWA review and approval. Discretionary funds are project specific based on legislation.
10 - Supplemental Transportation Projects: State Park Roads, Railroad Grade Crossing Replanking, Railroad Signal Maintenance, Landscape Incentive Awards, Green Ribbon Landscape Improvement, Curb Ramp Program	Texas Parks and Wildlife Department (TPWD) selects State Park Road projects in coordination with Districts. Rail Division in coordination with Districts selects Railroad Grade Crossing Replanking and Railroad Signal Maintenance projects. Landscape Incentive Awards are distributed to ten locations based on results of Keep Texas Beautiful Awards Program and managed by the Design Division. Green Ribbon Allocations are based on one-half percent of the estimated letting capacity for the TxDOT districts which contain air quality non-attainment or near non-attainment counties and managed by the Design Division. Curb Ramp Projects are selected based on conditions of curb ramps or location of intersections without ramps and managed by the Design Division.
11 - District Discretionary	Projects selected by Districts. Commission allocates funds through a formula allocation program. Minimum \$2.5 million allocation to each district per legislative mandate.
12 - Strategic Priority	Commission selects projects.

Source: TxDOT Unified Transportation Program 2014-2023



Project Selection: Typical Steps

At its core, the process of project selection as part of the planning process must be flexible, because, as explained above, at any point along the project development path, a decision may be made not to implement the project or the project definition may change to better meet the needs and balance community, environmental, and cost considerations. Transportation project development is a complex process, and yet this complexity is necessary to provide the most effective solution possible for each transportation need. There are five typical steps in the project selection process:



Identify a Need

Every project starts with an idea or need. The impetus for a project can come from any number of sources at the community, state or federal level. Once a need has been identified, project supporters usually approach TxDOT's local office or their local MPO. Local authorities are especially familiar with the unique demands of their area and with the transportation needs of the people who live there. If TxDOT is to be involved as a partner in developing the project, TxDOT assists in developing an initial project concept. It is this initial project concept and a very rough estimate of what it might take to develop the project which is first identified during the planning process. Planning activities to further work on this project are authorized internally to the department using the PLAN authority. Again, PLAN authority projects generally precede both the time range and level of authority for programming in the UTP. These projects may be part of the UTP development process as supplemental Planning Authority, which is not part of the fiscally constrained UTP.

Build an Initial Funding Strategy for the Project

Early in the planning process, TxDOT district staff and MPO staff develop whether a project is selected for consideration. Once an initial project concept has been defined, it competes with similar projects for funding. Projects are often funded through a combination of categories at a variety of authority levels, making this a complex task.

Project concepts are selected by the Commission based on available funding by category and each project's applicability to the following criteria:

- Maintaining a safe system;
- Addressing travel congestion;
- Connecting Texas communities;
- Maintaining the existing Texas transportation system;
- Facilitating the development and exchange of comprehensive multimodal transportation funding strategies; and
- Meeting additional goals outlined in the TTP.

Identification of a funding strategy is necessary for the department to ensure that work on project development activities continue in an efficient manner. The exact funding of a project may change over time as the project becomes more clearly defined through the project development process. Funding participation by other parties, including local participation, is a good indicator of project need.

Develop the Project

Once an initial project concept has gained at least a PLAN level of authority, TxDOT staff may begin work on the project. Transportation planning, design, and ROW acquisition are all primarily accomplished at the local level by TxDOT districts working with city and county officials.



Between the PLAN and DEVELOP stages, a project goes through increasingly detailed analysis including advanced planning activities, environmental planning and documentation, ROW acquisition and preliminary engineering. This process is fluid and somewhat flexible depending on the nature of the project and resources available to accomplish specific activities. By the time a project is authorized as having DEVELOP authority, the project concept has become more defined, and funding mechanisms have been adjusted as appropriate. Projects may remain in the development stage for up to 7 years while the following is completed:

- PS&E (Plans, Specifications and Estimates)
- ROW acquisition
- Local agreements (if required)
- Environmental clearance (NEPA)
- Public involvement

The UTP document is published annually due to adjustments that may be required as a result of better project information gained during the project development process.

Prepare for Construction

The project receives CONSTRUCT authority and is placed in the TIP/STIP with all sources of funding to complete the project phases for projects to be let to construction/implements within 1 to 4 years. Under the CONSTRUCT level of authority, a project may be scheduled on TxDOT's 24-month letting schedule. Construction contracts for projects on the Letting Schedule are awarded through a competitive bidding process. Once Commission has approved and awarded a contract, construction may begin on a project.

Construct the Project

The project has all funds identified/committed, all local agreements in place, required ROW are purchased, environmental clearance (including completion of public involvement), etc., and may then go to construction. Once a project is fully underway, construction oversight and maintenance are generally accomplished at the local level by TxDOT district staff and other transportation entities.

As the above steps demonstrate, building a highway, bridge or other major transportation improvement is a complex, long-term process that involves the participation of both transportation professionals and the public. Local priorities form the basis for how projects move through the TxDOT selection process. Inclusion in the UTP demonstrates the department's commitment to continue the development process for a project.

Prioritizing Efficient Freight Movement in the Project Selection Process

There are clear opportunities to improving freight movement and projects in the overall TxDOT Project Selection Process, including:

- Ensuring that freight-related improvements are reflected in all statewide plans, such as the Texas Airport System Plan, Texas Port Capital Plan, and Texas Rail Plan.
- Encouraging Metropolitan Transportation Plans to clearly designate and identify those recommendations and projects that improve the efficient movement of freight.
- Ensuring that other statewide, regional, and local plans, including corridor studies, have a freight movement component.
- More heavily weighting projects in the TTP on improvement to efficient freight movement.



Ultimately, the plans noted above should be inputs into the overall TTP, and the Texas Freight Mobility Plan. The UTP links the TTP, and MTPs with the Transportation Improvement Program and 2-Year Letting Schedule.

Finally, there is the opportunity to increase the importance and rating of projects that improve freight efficiency. In the UTP, there is freight criteria used to support those goals when projects are selected/prioritized by funding category. These are summarized as follows:

Exhibit 12: UTP Freight Related Project Selection Criteria

UTP Funding Category	Freight Related Criteria
Category 1: Preventive Maintenance and Rehabilitation	Considers truck traffic with funds often used on freight corridors either for rehabilitation or in combination with mobility funding.
Category 2: Metropolitan and Urban Corridor Projects	Addresses mobility and added capacity projects along a corridor that improves transportation facilities in order to decrease travel time and level or duration of traffic congestion, and to increase the safe and efficient movement of people and freight in metropolitan and urbanized areas. MPO funding allocation is based on a formula that includes Truck VMT.
Category 4: Statewide Connectivity Corridor Projects	Addresses mobility and added capacity project needs on major state highway system corridors which provide statewide connectivity between urban areas and corridors which serve mobility needs throughout the state. The highway connectivity network is composed of the: <ul style="list-style-type: none"> • Texas Trunk System; • National Highway System (NHS); • Connections from Texas Trunk System or NHS to major ports on international borders or Texas water ports. Selections based on engineering analysis of projects on three corridor types: <ul style="list-style-type: none"> • Mobility Corridors- based on congestion. • Connectivity Corridors- 2 lane roadways requiring upgrade to 4-lane divided. • Strategic Corridors- additions to the state highway network. An example would be Ports-to-Plains.
Category 6: Structures Replacement and Rehabilitation Highway Bridge Program; Federal Railroad Grade Separation Program	Program includes railroad grade separations. Projects are selected based on a cost-benefit index on train traffic, safety, costs of delay, etc.
Category 8: Safety Federal Highway Safety Improvement Program (HSIP), Federal Railway-Highway Crossing Program, Safety Bond Program	Projects selected statewide by federally mandated safety indices and prioritized listing. Commission allocates funds through Statewide Allocation Program.
Category 10: Supplemental Projects/ Border Crossings and Railroad Signal Maintenance Programs	Allocating formula includes percentage and weight of incoming commercial vehicles.
Category 10: Supplemental Projects/ Grade Crossings	Condition of riding surface and cost per vehicle; and number of grade crossings and relative safety devices in a district.
Category 11: District Discretionary	Allocations made to each district based on factors including Annual Truck Vehicles Miles Traveled.
Category 12: Strategic Priority	Commission selects projects to: <ul style="list-style-type: none"> • promote economic opportunity; • increase efficiency on military; deployment routes or to retain military assets in response to the Federal Military Base Realignment and Closure Report; and • maintain the ability to respond to both man-made and natural emergencies. Allocations provided to MPO's. Projects selected and ranked by the MPO in consultation with TxDOT.
Category: PA – Programming Authority	Allocations made based on factors including Annual Truck Vehicle Miles Travelled.

Source: CDM Smith Team



Other considerations and options could include explicit project criteria related to freight (rather than as a subset or component), in order to elevate the importance of freight. For example, the UTP process could include project selection criteria solely dedicated to freight movement.

Next Steps

Reviewing the current Texas transportation planning and project selection process provides insight into the role that freight plays in transportation planning within the state. Freight criteria are currently used in a limited capacity in the UTP to support goals when projects are selected/prioritized by funding category. Various funding categories include projects that improve and enhance the efficient movement of freight. Category 1 projects are critical to the preventive maintenance of the network; Category 2 projects improve mobility and capacity along the network; Category 6 projects help maintain and replace key highway bridges; railroad grade separations, and address bridge vertical clearance issues; Category 8 projects also assist in removing at-grade railway and highways crossings; Category 10 projects improve border crossing mobility, railroad grade crossings, and provide for railroad signal maintenance; and Category 12 projects are critical in promoting economic opportunity, including providing for the efficient movement of freight through the transportation network.

Better utilization and funding of Category 4 of the UTP, though, may provide an opportunity to elevate freight projects. Freight projects would fit exceptionally well under this category as it deals with connectivity issues on corridors, which is an important issue in freight. In particular, projects in this category are meant to address connectivity needs between the Texas Trunk System and the NHS to major ports on international borders or Texas water ports.

There is significant room to promote the role of freight in project selection/prioritization. Recommendations to incorporate freight into the transportation planning process should be developed and should ensure a link between freight specific planning documents and the UTP. Since the UTP mainly addresses highway projects, it is also important that alternative funding sources are identified in order to fund projects that will help improve other modes of transportation. Including freight more prominently in the transportation planning and project selection process and identifying alternative funding sources will help guarantee the efficient movement of freight in the future. Freight movement plays a vital role in the economic prosperity of Texas and consideration to freight movement should be a key consideration during the transportation planning and project selection process.



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