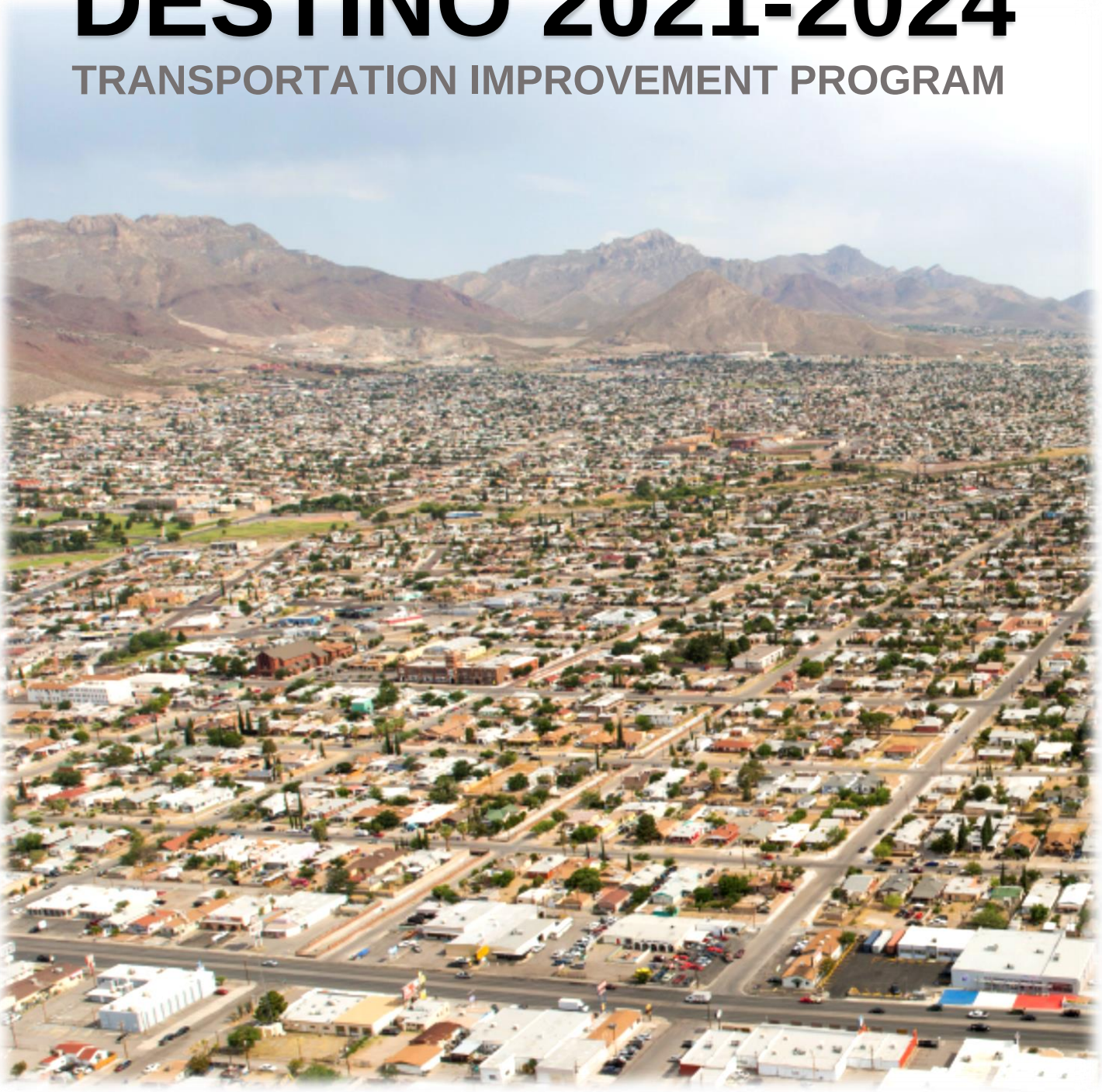
DESTINO 2021-2024

TRANSPORTATION IMPROVEMENT PROGRAM



El Paso Metropolitan Planning Organization

TABLE OF CONTENTS

DESTINO 2021-2024

Transportation Improvement Program

(TIP)

El Paso Metropolitan Planning Organization

211 N. Florence, Room 202

El Paso, Texas 79901

Phone: (915) 212-0258 Fax: (915) 212-0257

www.elpasompo.org

Public Comment/Involvement period

March 29th – April 28th
October 16th - 23th
November 6th - 13th
January 15th - 22nd 2021

Virtual public meeting

April 8th, 2020

Participating Agencies

City of Anthony, NM
City of El Paso, TX
City of San Elizario, TX
City of Socorro, TX
City of Sunland Park, NM
County of El Paso, TX
Dona Ana County, NM
Otero County, NM
Town of Anthony, TX
Town of Clint, TX
Town of Horizon City, TX
Village of Vinton, TX
New Mexico Department of Transportation, District 1
New Mexico Department of Transportation, District 2
Texas Department of Transportation, El Paso District 24

Prepared by:

El Paso Metropolitan Planning Organization

Approved by:

Transportation Policy Board (TPB), May 22, October 23, November 13, 2020 & Jan 22, 2021

Submitted to:

FHWA and FTA

Prepared in cooperation with the Texas Department of Transportation, the New Mexico Department of Transportation, the U.S. Department of Transportation, the Federal Highway Administration and the Federal Transit Administration.

1. Metropolitan Planning Organization

Federal regulations require the creation and management of a Metropolitan Planning Organization (MPO) for every urban area having a population of more than 50,000. Federal regulations require that the TIP shall cover a period of not less than four years, and be updated at least every four years. The El Paso MPO, which was designated by the City of El Paso, Texas, in 1988, produces a fiscally constrained TIP covering a period of four years.

The El Paso's Transportation Policy Board (TPB) is responsible for transportation planning and programming for the El Paso MPO. The TPB directs MPO staff through the Executive Director of the MPO. The MPO office is located at 211 N. Florence, Room 202, El Paso, Texas. The MPO's planning area is El Paso County, Texas, southern Dona Ana County, New Mexico, and a small portion of Otero County, New Mexico. The MPO coordinates urban area-wide multi-modal transportation plans, which involve the study of present transportation regional patterns in relation to current and projected development.

The MPO is responsible for the preparation of the Metropolitan Transportation Plan (MTP), Transportation Improvement Program (TIP), Unified Planning Work Program (UPWP), and other documents as required by federal regulations. The MTP and the TIP accommodate future traffic by improving transportation facilities and programs, expanding transit services, and planning new highways and arterials.

2. Role of the Transportation Policy Board

The Transportation Policy Board (TPB) was established for the purpose of setting transportation policy to ensure that regional transportation projects and studies are developed in accordance with federal and state laws, rules and regulations. The TPB is composed of elected public officials from local governments, membership from the Texas Department of Transportation (TXDOT), the New Mexico Department of Transportation (NMDOT), Texas and New Mexico State Senators and Representatives, the City of El Paso's mass transit provider, and Sun Metro. See section six for the structure of the Transportation Project Advisory Committee (TPAC), which makes recommendations to the TPB for approval of project selection, and technical issues for planning and programming transportation projects in the region.

3. Purpose of the Transportation Improvement Program

The TIP is a short-range program of transportation improvements for the MPO's planning area, and is required by federal law. The TIP is prepared and coordinated by MPO staff with participating agencies that implement transportation projects and programs in accordance with regulations issued by the United States Department of Transportation.

Before adoption by the TPB, the draft TIP is reviewed by the implementing agencies, and is presented for public involvement for at least 30 days. Local officials, the Texas Department of Transportation, the New Mexico Department of Transportation, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) use the adopted TIP as a guide in budgeting funds for regional transportation improvements.

The Destino 2021-2024 TIP is consistent with the El Paso MPO's Destino 2045 Metropolitan Transportation Plan (MTP). The El Paso MPO's Destino documents were produced through a Comprehensive**,** Cooperative, and Continuing transportation planning process carried on by the MPO in consultation with TXDOT, NMDOT, and the public transit operator(s) in the region. The TIP contains all projects to be funded with federal transportation funds, as well as all regionally significant transportation projects funded with non-federal funds.

The inclusion of a project in the TIP reflects a consensus of priority needs among the citizens living in the MPO study area, locally-elected officials, local transportation agency representatives, transit providers, and representatives of TXDOT and the NMDOT. The TIP is, in effect, a listing of transportation priorities, estimated costs and recommended implementation dates. The TIP may be amended as transportation needs and/or funding levels change.

4. Definition of Area

The City of El Paso, as an urban area having a population of over 200,000, is classified as a Transportation Management Area (TMA). The TMA designation applies to the overall metropolitan planning area, which includes the following primary participants:

- City of El Paso
- City of San Elizario
- City of Socorro, TX
- El Paso County
- Mass Transit Provider - Sun Metro
- Town of Anthony, TX
- Town of Clint, TX
- Town of Horizon City, TX
- TXDOT-El Paso District
- Village of Vinton, TX
- City of Anthony, NM
- City of Sunland Park, NM
- Dona Ana County, NM
- NMDOT-District 1
- NMDOT-District 2
- Otero County, NM

5. Public Participation Plan

The intent of the Public Participation Plan (PPP) for the El Paso Metropolitan Planning Organization (MPO) is to include residents living in the MPO's Study Area, community groups, private and public agencies, and transportation providers in an effort that is proactive and that provides complete information, timely public notice, and full public access to key decisions made through the MPO. The PPP supports early and continuing involvement of the public in developing transportation plans and programs. All documents have, as a minimum, 30 days of continuing public review and comment periods. Concerns of a wide variety of involved parties are integrated into the PPP and the plan encourages and

provides for the greatest level of education on transportation issues. Opportunities for residents to contribute ideas and voice opinions early and often, both during and after the preparation of draft plans and programs is provided by the PPP.

Every effort is made to accommodate traditionally under-served audiences, including low-income and minority households, and persons with disabilities. A concerted effort is made to hold public meetings, public hearings, and open houses at locations that comply with the Americans with Disabilities Act (ADA) requirements, as well as locations in the vicinity of scheduled bus routes.

In compliance with Environmental Justice requirements, the MPO will respond to the needs of low-income and minority populations by choosing meeting locations, times and formats that are appropriate, accessible and reassuring to affected populations. All accommodations for the visual and/or hearing impaired and Spanish-speaking individuals are provided upon request prior to all public meetings. All public meeting announcements are announced on the MPO website and are published in various local periodicals and announced on regional radio stations.

The PPP applies to the MTP, TIP and may be utilized—with appropriate modifications—for any other MPO document requiring public involvement, including the Public Participation Plan itself, which requires 45 days of public review. Specific Public Participation Plan measures are described in:

- The Metropolitan Transportation Plan (MTP)
- The Transportation Improvement Program (TIP)
- Amendments to Adopted Documents

For a complete copy of the MPO's Public Participation Plan, please contact the MPO at (915) 212-0258 or log on the MPO's web page at www.elpasompo.org.

6. Project Selection Process

The TPAC has sixteen (16) voting members. The TPAC makes recommendations to the TPB on issues related to the MTP, TIP, UPWP, transportation studies, and project selection criteria. The TPAC reviews and makes recommendations to the TPB on projects for inclusion in the MPO's MTP and TIP. The TPAC has regularly scheduled monthly meetings, but holds special meetings as necessary. The TPAC members are selected by their agency. Nine (9) voting members of the TPAC (50% plus 1) constitutes a quorum.

Table 1. The Transportation Project Advisory Committee's membership as of 01/28/2020:

Voting Members:	
City of El Paso	1 member
Texas Department of Transportation	1 member
El Paso County (designated by Commissioner's Court)	1 member
Town of Horizon City	1 member
Village of Vinton	1 member
Town of Anthony, TX	1 member

City of Anthony, NM	1 member
City of Socorro	1 member
City of Sunland Park, NM	1 member
City of San Elizario	1 member
Ysleta Del Sur Pueblo	1 member
Sun Metro	1 member
Town of Clint	1 member
New Mexico Department of Transportation (NMDOT)	1 member
Doña Ana County, New Mexico	1 member
University of Texas at El Paso	1 member

The El Paso MPO's Transportation Policy Board (TPB) approved a two-tier project selection process that includes requirements for both the MAP-21 National Goals and the Congestion Management Process strategies. MAP-21 requires MPOs to establish and use a performance-based approach to transportation decision making and development of transportation plans. The planning process established a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas as defined in the MAP-21 Act. A methodology is necessary to reduce project deliverable delays and improve regional planning by the Project Selection Process (PSP). The Fixing America's Surface Transportation Act (FAST Act) maintains current program structures and funding shares between highways and transit, continues efforts of MAP-21, and includes streamlining the approval process for new transportation projects.

The phases of the project selection process begin with Phase 1 Call for projects and Phase 2 Need and Purpose. PSP Tier 1 (MTP) Phase 2.1 MAP-21 National Goals establishes national performance goals for the Federal-aid highway program in seven areas: safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability and reduced project delivery delays. PSP Tier 1 (MTP) Phase 2.2 MPO Congestion Management Process Strategies identified travel demand management strategies, traffic operation strategies, public transportation strategies, road capacity strategies and non-CMP strategies. PSP Tier 2 (TIP) Phases 2.3 through 2.3H evaluates a project based on information provided by the sponsoring agency for project financing and project readiness. Phase 3 is the development of a draft Project List, Phase 4 is the TPAC Recommendation, Phase 5 is Public Involvement and Phase 6 is TPB action.

7. Performance Measures

Performance measures are quantifiable indicators of progress towards achieving the goals and objectives set forth in the Destino 2045 MTP. The United States Department of Transportation has enumerated several performance measures that the El Paso MPO will report progress towards to demonstrate compliance with MAP-21 and the FAST Act. The measures set forth by the USDOT can be considered "tracking" measures, as they rely primarily on observed data to identify trends. To help the MPO position itself to be successful at reporting progress towards the targets it will adopt through the Texas and New Mexico DOTs on the federal tracking measures. The Destino 2045 and the Destino 2021-2024 TIP proposes the use of several planning-level performance measures that the

MPO can estimate or forecast using its existing modeling tools. These measures provide a proxy for the relative performance of different mixes of potential TIP projects – i.e. "alternatives" – and to help the MPO select the best program of projects to help its meet the goals set forth by the community through the visioning process as well as the targets it will set under federal law.

The planning-level performance measures recommended for the Destino 2045 (Table 2) can be roughly categorized within the goals of the plan, although several of these measures indicate progress towards multiple goals. Additionally, some indicators (such as crash rates) that are useful for identifying deficiencies on the existing system are not easily adaptable to forecasting tools. For these goals, the Destino 2045 recommends performance measures that describe the overall program of projects' ability to introduce safety improvements at crash hotspots, replace deficient infrastructure, and address access and/or operational concerns at Ports of Entry.

Table 2. Performance Measures

GOALS	ALTERNATIVES EVALUATION PERFORMANCE MEASURES
Safety	Number of projects that include safety enhancements located near crash hotspots
Maintenance & Operations	Number of projects that repair or replace deficient bridges or pavements
Mobility	Speed Index Annual hours of delay
Accessibility & Travel Choice	Percentage of jobs, key destinations, and population within ½ mile of high-quality, rapid transit Commute times from Environmental Justice zones Percentage non-SOV trips Average trip costs Number of projects that improve operations or multimodal access at current or future POEs
Sustainability	Estimated emissions Total VMT & VMT per capita
Economic Vitality	Annual hours of delay along major freight corridors Percentage of jobs accessible within 30 minutes (by any mode)
Quality of Life	There is no specific performance measure for this goal. The indicator for this goal is a summary of performance on each goal alternative relative to the other alternatives.

8. Most Used TIP funding Sources

Table 3. The 12 Traditional federal funding sources used in Texas

CATEGORY	DESCRIPTION
1-Preventive Maintenance and Rehabilitation.	Preventive maintenance and rehabilitation of the existing State Highway System. The rehabilitation funds may be used for rehabilitation of the Interstate Highway System main lanes, frontage roads, structures, rehabilitation of signs, pavement markings, striping, etc. The Transportation Planning and Programming Division may approve the use of rehabilitation

	funds for the construction of interchanges and HOV lanes on the Interstate Highway System. Rehabilitation funds may not be used for the construction of new SOV lanes.
2 – Metropolitan Area (TMA) Corridor Metro Projects	Mobility and added capacity projects on major state highway system corridors, which serve the mobility needs of the Metropolitan Areas (TMA) MPOs.
3 -Non-Traditional Funding	This funding category will place all the non-traditional funding categories in Texas into Category 3.
4 – Statewide Connectivity Corridor Projects	Mobility and added capacity projects on major state highway system corridors, which provide statewide connectivity between urban areas and corridors, serving mobility needs throughout the state.
5 – CMAQ	Addresses attainment of national ambient air quality standard in the non-attainment areas (currently Dallas-Fort Worth, Houston, San Antonio and El Paso). Funds cannot be used to add capacity for single occupancy vehicles.
6 – Consolidated Structure Rehabilitation	Replacement or rehabilitation of eligible bridges on and off the state highway system (functionally obsolete or structurally deficient). Replacement of existing highway-railroad grade crossings, and the rehabilitation or replacement of deficient railroad underpasses on the state highway system. Specific locations evaluated by cost-benefits derived index (benefits such as improved traffic flow, accident/fatality reduction).
7 – STP Metro-Mobility	Transportation needs within metropolitan area boundaries with populations of 200,000 or greater. Projects selected by Metropolitan Planning Organizations (MPOs).
8 – STP Safety – Federal Hazard Elimination Programs	Safety related projects – on and off state highway system. Projects are evaluated using three years of accident data, and ranked by Safety Improvement index.
8 – STP Safety – Federal Railway Highway Safety Program	Installation of automatic railroad warning devices at hazardous railroad crossing on and off state highway system, selected from statewide inventory list which is prioritized by index (# of trains per day, train speed, ADT, type of existing warning device, train-involved accidents within prior five years, etc).
9 – Enhancements	Projects above and beyond what normally is expected for transportation enhancements – twelve general activities as outlined since TEA-21. Projects recommended by local government entities, reviewed and recommended by committee, selected by Texas Transportation Commission.
9– Transportation Alternatives Set-Aside (TASA)	Transportation-related activities as described in the Transportation Alternatives Set-Aside Program, such as on and off-road pedestrian and bicycle facilities, and infrastructure projects for improving access to public transportation.
10 – Miscellaneous – State Park Roads 1992	Construction and rehabilitation of roadways within or adjacent to state parks, fish hatcheries, etc. subject to Memorandum of

	Agreement between TXDOT and TPWD. Locations selected and prioritized by TPWD.
10 - Miscellaneous-Railroad Grade Crossing Replanking Program 1992	Replacement of rough railroad crossing surfaces on the state highway system (approximately 140 installations per year statewide). Project selection based on conditions of the riding surface (highway, railroad and drainage) and cost per vehicle using the crossing.
10 - Miscellaneous-Railroad Signal Maintenance Program 1992	Contributions to each railroad company based on number of state highway system crossings and type of automatic devices present at each crossing.
10 - Miscellaneous-Construction Landscape Programs 1992	New landscape development projects such as typical Right of Way landscape development, rest area/picnic area landscape development, erosion control and environmental mitigation activities on the state highway system.
10 - Miscellaneous- (Federal) 1992	Federal programs such as Forest Highways, Indian Reservation Highways, Federal Lands Highways, and Ferry Boat Discretionary.
11 – District Discretionary	Miscellaneous projects on the state highway system selected at the district's discretion. A portion of these funds may be used off the state highway system.
12 – Strategic Priority	Commission selected projects, which promote economic development, provide system continually with adjoining states and Mexico or address other strategic needs as determined by the commission.
Proposition 1	Allocates money from the rainy day fund to State Highway Fund for construction, maintenance and rehabilitation.
Proposition 7	Supplies funding to the State Highway Fund from sales and use tax and state motor vehicle tax to build, maintain and restore non-tolled public roads.
FTA Section 5307	Mass Transit apportionment to urbanized areas based on population and operating performance.
FTA Section 5309	Funding for major transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit.
FTA Section 5339	Mass Transit discretionary funds for capital projects only.
FTA Section 5310	Provides federal funds to private nonprofit entities for the transportation of elderly and/or disabled persons.
FTA Section 5311	Rural Transit Program

9. Air Quality

The El Paso Metropolitan Planning Organization (MPO) requested the Texas Commission on Environmental Quality (TCEQ) to petition EPA for a re-designation of the Carbon Monoxide (CO) non-attainment area to attainment status, and EPA proposed approval of the re-designation request, and a maintenance plan on August 4, 2008. The proposal was a direct final, effective on October 3, 2008. The maintenance State Implementation Plan (SIP) for CO for the El Paso MPO was operating under a motor vehicle emission budget of 29.66 tons/day. The carbon monoxide (CO) limited maintenance plan was approved on September 8, 2017 (effective October 10, 2017).

For Particulate Matter 10 (PM-10) the SIP has a motor vehicle emissions budget of 12.05 tons/ day. Texas Administrative Code 30 TAC §111.147(1)(E) was developed in an effort to help develop a maintenance status for PM-10. These efforts include the pavement of new alleyways, unpaved alleyways not being used for residential garbage and recycling collection, and use of reclaimed asphalt pavement as an alternate means to pave the road. Texas Administrative Code 30 TAC §111.147(2) was developed to change the frequency of street sweeping in an effort that the City of El Paso can achieve the goal of street sweeping. In New Mexico, Doña Ana County implemented an erosion control regulations ordinance No 194-2000 to enhance the containment of PM-10 and reduction of negative health effects caused by the creation of fugitive dust. In addition, both the Texas and New Mexico developed a Natural Events Action Plan (NEAP). The NEAP provides analysis and documentation of the exceedances as attributable to uncontrollable natural events due to unusually high winds. In addition, the NEAP is designed to protect public health, educate the public about high wind events, mitigate health impacts on the community during future events, and identify and implement Best Available Control Measures (BACM) for man-made sources of windblown dust.

The MPO boundary had been expanded into a portion of Otero County and additional portions of Doña Ana County, New Mexico, a marginal PM-10 non-attainment area in Anthony, NM is within the area covered by the MTP and TIP. The New Mexico Department of Transportation (NMDOT) and their consultants may prepare a qualitative analysis of roadway projects that fall within the non-attainment area. A small portion of Dona Ana County (Sunland Park), NM was designated non-attainment under 2015 Ozone NAAQS on June 4, 2018 (Effective August 3, 2018) (83 FR 25776) . The NMED is currently developing a nonattainment State Implementation Plan (SIP) for the Sunland Park area to meet the requirements of the 2015 O3 NAAQS. In general, a nonattainment SIP for a marginal area must include an emissions inventory, adoption of Reasonably Available Control Technologies (RACT), nonattainment permitting programs, and an emissions offsetting program. The emission inventories SIP will not include a Motor Vehicle Emissions Budget and must be submitted to EPA no later than August 3, 2020. The remainder of the nonattainment SIP elements must be submitted to EPA by August 3, 2021.

Before the TIP is given final approval by the Federal Highway Administration (FHWA), it must be approved for air quality conformity. The MPO prepares an Air Quality Transportation Conformity Statement for the TIP, and comments are received through the public involvement process. The conformity statement is forwarded to the Texas Department of Transportation (TXDOT) and New Mexico Department of Transportation (NMDOT), TCEQ and other state and federal agencies for review through the State Consultative Procedures.

The statement is sent to the Texas and New Mexico FHWA State Division office for review and final approval. The FHWA consults with the Federal Transit Administration (FTA), and the statement is forwarded to the EPA. The FHWA takes into account any comments received by the general public, TCEQ, FTA or the EPA concerning the advisability of constructing certain projects, and grants approval based on federal guidelines. A similar process is followed with New Mexico state agencies such as the New Mexico Environmental Department (NMED), and the New Mexico FHWA State Division office.

The Destino 2021-2024 TIP is part of the Destino 2045 MTP. Transportation Conformity for the Destino 2021-2024 TIP will be determined as part of the conforming Destino 2045 MTP. The conformity statement is evaluated according to the amount of carbon monoxide (CO),

particulate matter (PM-10), volatile organic components (VOCs) and oxides of nitrogen (NO_X) emissions that are projected from the existing transportation network along with proposed projects. Changes in conformity rules contain several important differences from previous conformity determinations. Budget tests are made for PM10 and CO, and the no-greater-than-baseline year interim emission test for Ozone.

MOVES 2014a, an emissions modeling tool to help determine the amount of emissions produced by vehicles, was be used for the Destino 2045 MTP and Destino 2021-2024 TIP. The Texas Transportation Institute (TTI) is under a TXDOT contract to run the MOVES model for El Paso.

Projects marked "Exempt" may proceed towards implementation even in the absence of a conforming transportation plan and TIP. The EPA listed certain categories of projects as being exempt from conformity requirements in the Federal Register.

El Paso County, and southern Dona Ana County, New Mexico, and a small portion of Otero County, New Mexico are included on the same traffic model for the purpose of conformity determination. Separate figures are calculated for each area for vehicle miles traveled (VMT) and emissions. The El Paso County conformity determination reports CO, and PM-10 emissions where they must conform to the motor vehicle emissions budget tests. Southern Doña Ana County (including Sunland Park, Santa Teresa, La Union and the Gadsden High School area) does not currently have any emission budget tests. No tests are run for the Anthony, New Mexico PM-10 non-attainment area, since only a qualitative analysis is required.

Once the Destino 2021-2024 TIP receives final approval by the Transportation Policy Board, this TIP is included in NM & TX Statewide Transportation Plans (STIP's), and the document will be available for distribution upon request.

10. Grouped Documentation

Under 23 CFR 450.324(i) projects proposed for FHWA and/or FTA funding that are not considered by the State and MPO to be of appropriate scale for individual identification in a given program year **may be grouped by function, geographic area, and work type** by using applicable classifications under 23 CFR 771.117(c) and (d). In non-attainment and maintenance areas, these classifications must be consistent with the exempt project classifications contained in the U.S. EPA transportation conformity requirements (40 CFR Part 51).

The El Paso MPO is participating by grouping some projects in the Transportation Improvement Program (TIP) that are covered in the Texas Statewide Transportation Improvement Program (STIP). The Texas STIP can be located at http://www.txdot.gov/government/programs/stips.html and the New Mexico STIP at https://www.dot.state.nm.us/content/nmdot/en/POD_Pubs.html. Financial accountability for these projects are the responsibility of the STIP, therefore, are not accounted for in the Financial Summary for the El Paso MPO totals. These projects are "exempt" from conformity requirements. These projects do not need policy approval by the TPB for the purpose of revisions. See the following grouped project categories, and the "Definition of Grouped Projects."

Table 4. Grouped Projects Categories

PROPOSED CSJ (TXDOT)	GROUPED PROJECT CATEGORY	DEFINITION
5000-00-950	PE – Preliminary Engineering	Preliminary Engineering for any project except added capacity projects in a nonattainment area. Includes activities which do not involve or lead directly to construction, such as planning and research activities; grants for training; engineering to define the elements of a proposed action or alternatives so that social, economic, and environmental effects can be assessed.
5000-00-951	Right of Way Acquisition	Right of Way acquisition for any project except added capacity projects in a nonattainment area. Includes relocation assistance, hardship acquisition and protective buying.
5000-00-952 5000-00-957 5000-00-958	Preventive Maintenance and Rehabilitation	Projects to include pavement repair to preserve existing pavement so that it may achieve its designed loading. Includes seal coats, overlays, resurfacing, restoration and rehabilitation done with existing ROW. Also includes modernization of a highway by reconstruction, adding shoulders or adding auxiliary lanes (e.g., parking, weaving, turning, climbing, non-added capacity) or drainage improvements associated with rehabilitation.
5000-00-953	Bridge Replacement and Rehabilitation	Projects to replace and/or rehabilitate functionally obsolete or structurally deficient bridges.
5000-00-954	Railroad Grade Separations	Projects to construct or replace existing highway-railroad grade crossings and to rehabilitate and/or replace deficient railroad underpasses, resulting in no added capacity.
5800-00-950	Safety	Projects to include the construction or replacement/rehabilitation of guard rails, median barriers, crash cushions, pavement markings, skid treatments, medians, lighting improvements, highway signs, curb ramps, railroad/highway crossing warning devices, fencing, intersection improvements (e.g., turn lanes), signalization projects and interchange modifications. Also includes projects funded via the Federal Hazard Elimination Program, Federal Railroad Signal Safety Program, or Access Managements projects, except those that result in added capacity.
5000-00-956	Landscaping	Project consisting of typical right-of-way landscape development, establishment and aesthetic improvements to include any associated erosion control and environmental mitigation activities.
5800-00-915	Intelligent Transportation Systems Deployment	Highway traffic operation improvement projects including the installation of ramp metering control devices, variable message signs, traffic monitoring equipment and projects in the Federal ITS/IVHS programs.
5000-00-916	Bicycle and Pedestrian	Construction or rehabilitation of bicycle and pedestrian lanes, paths and facilities.
5000-00-917	Safety Rest Areas and Truck Weigh Stations	Construction and improvement of rest areas, and truck weigh stations.
5000-00-918	Transit Improvements	Projects include the construction and improvement of small passenger shelters and information kiosks. Also includes the construction and improvement of rail storage/maintenance facilities bus transfer facilities where minor amounts of additional

		land are required and there is not a substantial increase in the number of users. Also includes transit operating assistance, acquisition of third-party transit services, and transit marketing, and mobility management/coordination. Additionally includes the purchase of new buses and rail cars to replace existing vehicles of for minor expansions of the fleet [See Note 3].

Note 1: Projects funded with Transportation Alternatives Program (TAP), Transportation Enhancement, and Congestion Mitigation Air Quality funding require a Federal eligibility determination, and are not approved to be grouped.

Note 2: Projects funded as part of the Recreational Trails Program (RTP) consistent with the revised grouped project category definitions may be grouped. RTP projects that are not consistent with the revised grouped project category definitions must be individually noted in the Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP).

Note 3: In PM10 and PM2.5 nonattainment or maintenance areas, such projects may be grouped only if they are in compliance with control measures in the applicable implementation plan.

11. Americans with Disabilities Act (ADA)

During the planning process, every effort is made to accommodate the traditionally under-served public, including low-income and minority households and persons with disabilities. Concerted efforts are made to hold all public meetings, public hearings, and open houses at accessible locations that comply with Americans with Disabilities Act (ADA) requirements, as well as locations in the vicinity of scheduled bus routes. Additionally, TIP projects must comply with ADA requirements for accessibility.

12. MPO Glossary – Project Section

Table 5.

PROJECT CODE	DEFINITION	EXPLANATION
CSJ	Control Section Job Number	TXDOT-assigned number for projects entered into the Unified Transportation Plan (UTP)
CN	Control Number	NMDOT-number assigned for projects in New Mexico State Transportation Improvement Program (STIP)
PROJ ID	Project Identification	Code assigned by the MPO for local tracking/identification; used to relate projects to the Metropolitan Transportation Plan
F. CLASS	Federal Functional Classification	Federal classification of streets and highways into functional operating characteristics. Categories: Interstate Other Urban Freeways and Expressways Other Principal Arterials
FED PROG	Federal Funding Category	PM&R: Preventive Maintenance and Rehabilitation Metro ACP: Metropolitan Area (TMA) Corridor Projects Urban ACP: Urban Area (Non-TMA) Corridor Projects State CCP: Statewide Connectivity Corridor Projects CMAQ: Congestion Mitigation and Air Quality Improvement

		CSREHAB: Consolidated Structure Rehabilitation STP-MM: Surface Transportation Program - Metro-Mobility SAFE: Safety Projects ENHAN: Enhancement Projects MISC: Miscellaneous Dist Discret: District Discretionary STRATEGIC: Strategic Priority FTA: Federal Transit Administration STP-L: New Mexico, Surface Transportation Program Large Urban STP-FLEX: New Mexico, Surface Transportation Program-Flexible STP-TPS: New Mexico, Surface Transportation Program- Safety BOR/COR: Borders and Corridors
PHASE	Project Phase for Federal Funding	T - Transfers C – Construction E - Preliminary Engineering R - Right of Way Acquisition

Texas Highway Projects FHWA & Other Funds[1]

[1] Congestion Mitigation and Air Quality (CMAQ) Analyses can be found in Appendix A provided upon request and/or attached into the electronic version of this document.

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-577**	CS	C,E	El Paso	COEP	**$5,610,423**

TIP PROJECT NAME: **Bicycle Infrastructure Citywide**

LIMITS FROM: Citywide (Please see TIP History for complete street names)

LIMITS TO: Citywide (Please see TIP History for complete street names)

TIP DESCRIPTION: BicycleInfrastructureCitywide:ConstructBikeFacilitiesDowntownToInclude:BufferedBikeLanes,ConventionalBikeLanes,BikeBLVDs,SharedLaneMarkings,&ProtectedBikeLanes.TheProjectWillIncludeAssociatedSignage,Wayfinding,Striping,&IntersectionTreatments.

REMARKS: Amend the D2045 MTP, D21-24 TIP and 21-24 STIP to updates limits-Exempt

REVISION DATE: 07/2020
MPO PROJECT ID: **M090X**
MTP REFERENCE: M090X
FUNDING CATEGORY: CAT 5 CMAQ
VOC (Kg/Day): 0.878 CO (Kg/Day): 28.05
NOX (Kg/Day): 1.508 PM 10 (Kg/Day): 1.458

PROJECT HISTORY:
Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Total Project Cost Information:

Preliminary Engineering:	$814,643
Right Of Way:	$0
Construction:	$4,795,780
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$5,610,423**

Cost of Approved Phases: **$5,610,423**

Authorized Funding by Category/Share

	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5 CMAQ	$4,488,338	$0	$0	$1,122,085	$0	$5,610,423
Fund by Share	**$4,488,338**	**$0**	**$0**	**$1,122,085**	**$0**	**$5,610,423**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021. From: High Ridge from Resler; Escondido from Resler; Ojo de Agua from Westwind; Via Descanso from Ojo de Agua; Via Serena from Via Descanso; Marcus Uribe from Martin Luther King Jr; Sean Haggerty from US 54; Will Ruth from Dyer; Diana from US 54; Stahala from Diana; Hondo Pass from US 54; Magentic from Hondo Pass; Stanton from Cliff; Robinson from Oregon; Cotton from San Antonio; Sixth from Cotton; Val Verde from Paisano; Fonseca from Loop 375; Clark from Delta; Montwood from Viscount; Montwood from Zanzibar; Lomaland from Montwood; Phoenix from Hawkins; Alameda from Loop 375; Pellicano from George Dieter; Peter Cooper from Pellicano; George Dieter from Vista Del Sol; Bob Mitchell from George Dieter; Saul Kleinfeld from Turner; Nolan Richardson from Turner; Pebble Hills from Yarbrough; Lee Trevino from Edgemere To:High Ridge to Franklin Hills; Escondido to Westwind; Ojo de Agua to Via Descanso; Via Descanso to Via Serena; Via Serena to High Ridge; Marcus Uribe to Benny Emler; Sean Haggerty to Rushing; Will Ruth to McCombs; Diana to Railroad; Stahala to Hondo Pass; Hondo Pass to Magnetic; Magnetic to Atlas; Stanton to Brentwood; Robinson to Piedmont; Cotton to Sixth; Sixth to Campbell; Fonseca to Delta; Clark to Trowbridge; Montwood to McRae; Montwood to Lee Trevino; Lomaland to Trawood; Phoenix to Giles; Pellicano to Loop 375; Peter Cooper to Ben Proctor; George Dieter to Edgemere; Bob Mitchell to Saul Kleinfeld; Saul Kleinfeld to Bob Mitchell; Nolan Richardson to Pebble Hills; Pebble Hills to Lisa Sherr; Lee Trevino to Trawood
11/2019	2021	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to reduce CAT 5 CMAQ from $6,830,453 to $5,610,423, update the Limits and Project Description in FY 2021-Exempt From: High Ridge from Resler; Ojo de Agua from Westwind; Will Ruth from Dyer; Stahala from Diana; Montwood from Yarbrough; Lomaland from Montwood; Pellicano from George Dieter; Peter Cooper from Pellicano; George Dieter from Vista del Sol; Pebble Hills from George Dieter To: High Ridge to Franklin Hills; Ojo de Agua to Via Descanso: Will Ruth to McCombs; Stahala to Hondo Pass; Montwood to Lee Trevino; Lomaland to Trawood; Pellicano to Loop 375; Peter Cooper to Ben Proctor; George Dieter to Montwood; Pebble Hills to Lisa Scherr
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt From:From: High Ridge from Resler; Ojo de Agua from Westwind; Will Ruth from Dyer; Stahala from Diana; Montwood from Yarbrough; Lomaland from Montwood; Pellicano from George Dieter; Peter Cooper from Pellicano; George Dieter from Vista del Sol; Pebble Hills from George Dieter To: High Ridge to Franklin Hills; Ojo de Agua to Via Descanso: Will Ruth to McCombs; Stahala to Hondo Pass; Montwood to Lee Trevino; Lomaland to Trawood; Pellicano to Loop 375; Peter Cooper to Ben Proctor; George Dieter to Montwood; Pebble Hills to Lisa Scherr
11/2020	2021	11/2020	Amend the D2045 MTP, D21-24 TIP and 21-24 STIP to updates limits-Exempt From: High Ridge from Resler; Ojo de Agua from Westwind; Sean Haggerty to US 54 (Patriot Freeway); Montwood from Yarbrough; Lomaland from Montwood; Pellicano from George Dieter; Peter Cooper from Pellicano; George Dieter from Vista del Sol; Pebble Hills from George Dieter To: High Ridge to Franklin Hills; Ojo de Agua to Via Descanso: ; Montwood to Lee Trevino; Lomaland to Trawood; Pellicano to Loop 375; Peter Cooper to Missy Yvette Dr.; George Dieter to Montwood; Pebble Hills to Lisa Scherr

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-562**	VARIOUS	C,E	El Paso	COEP	**$12,016,000**

TIP PROJECT NAME: **Central Business District Phase IV (CBD 4)**

LIMITS FROM: Central Business District

LIMITS TO:

TIP DESCRIPTION: CBD4:St.ImprovementsOfCitysDtwnStsIncludes:CampbellKansas6thFatherRahm&Oregon. Kansas&CampbellConvertsTo2wayFrom8thToPaisano.KansasIncludesLnRedufrom3to2FromFatherRahmTo8th.CampbellincludesLnReduFrom3to2FromPaisanoto8th.BikeFacilitiesWillBeProvidedOnAllSts

REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt Project will include Road Diets

REVISION DATE: 07/2020

MPO PROJECT ID: **R307D**

MTP REFERENCE: R307D

FUNDING CATEGORY: CAT 7 STP MM

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to move from FY 2020 to FY 2021. - Exempt

* Note partial Preliminary Engineering was paid for in fiscal year 2018

Total Project Cost Information:

Preliminary Engineering:	$3,680,785
Right Of Way:	$0
Construction:	$10,213,600
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$13,894,385**

Cost of Approved Phases: **$12,016,000**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 7	STP MM	$9,612,800	$0	$0	$2,403,200	$0	$12,016,000
	Fund by Share	**$9,612,800**	**$0**	**$0**	**$2,403,200**	**$0**	**$12,016,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
			Amend to deprog from FY 2014 Cat7 in H13-16 TIP & prog in FY 2018 w/ Cat7 in H15-18 TIP (simultaneous submittal); includes PE part 2 & construction phase 1 (for PE part 1 see R307D-PE in FY 2014)
		10/2005	When Developing The 2006-2010 Amended Tip Terry Q Noted That Project Needs To Move (non Modeled) In The 2005 Net To Fy 2009 Therefore The Project Will Need To Move To The 2015 Network So An Amendment To 2030 Was Necessary.
	2007	08/2007	
	2010	03/2009	No Exact Date, But Project Was Amended Into Fy 2010 In 2008-2011 Stip/2008-2013 Tip (transborder Mtp)
	2012	05/2012	Moved To Fy 2012 In Tb Tip 2008-2013
	2014	08/2012	Moved W/ Develop Of Mission 2035 Mtp, 2011-2014 Tip Into Fy 2014. Cmaq=$1,532,398 And Stp-mm=$9,983,602
	2014	11/2012	Stayed In Fy2014 With Develop Of M13-16 Tip
	2014	10/2013	Increased Cost By $500,000 From M2013-2016 To H2013-2016 Tip In Same Fy 2014, And Removed Cmaq Funding, Only Using Cat7 Stp
	2018	03/2014	Amend To Deprog From Fy 2014 Cat7 In H13-16 Tip & Prog In Fy 2018 W/ Cat7 In H15-18 Tip (simultaneous Submittal); Includes Pe Part 2 & Construction Phase 1 (for Pe Part 1 See R307d-pe In Fy 2014); Due To Coep Not Ready To Let In Fy 2014; During Fy 2014-2016 Tip Clean Up And Fy 2017-2018 Project Call
02/2016	2018	02/2016	Amend to deprogram from FY 2018 in the H2040 MTP, H15-18 TIP, 2015-2018 STIP
05/2016	2014	03/2016	Increased cost by $500K; Removed CMAQ funds, using STP funds only w/ new MTP/TIP (Horizon 2040 MTP/ Horizon 2013-2016 TIP)
07/2016	2020	06/2016	Amend to program into H2040 MTP, H17-20 TIP, 17-20 STIP in FY 2020. EXEMPT
2/2018	2020	02/2018	Administratively amend H2040 MTP, H17-20 TIP, 17-20 STIP to change CSJ from 0924-06-190 to 0924-06-562. EXEMPT
07/2018	2020	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2020. Cost of Approved Phases: PE $1,802,400 plus Const $10,213,600 =$12,016,000
11/2019	2020	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to update the project description to include road diets. Exempt
02/2020	2021	01/2020	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to move from FY 2020 to FY 2021. - Exempt
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt Project will include Road Diets

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**2551-01-011**	FM 1905	C	Anthony	TXDOT	**$3,500,000**

TIP PROJECT NAME: **FM 1905 Reconstruction Roadway (SH20 to IH10)**
REVISION DATE: 07/2020
LIMITS FROM: SH 20 (S MAIN ST)
MPO PROJECT ID: **A134X**
LIMITS TO: I-10
MTP REFERENCE: A134X
TIP DESCRIPTION: FM 1905 Reconstruction Roadway (SH20 to IH10): Reconstruction of Roadway
FUNDING CATEGORY: CAT 7 STP-MM
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021

*Project Sponsor paying for PE and/or ROW Costs, if any.

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to program in 2021

Total Project Cost Information:

Preliminary Engineering:	$500,000
Right Of Way:	$0
Construction:	$3,500,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$4,000,000**

Cost of Approved Phases: **$3,500,000**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 7	STP-MM	$2,800,000	$700,000	$0	$0	$0	$3,500,000
	Fund by Share	**$2,800,000**	**$700,000**	**$0**	**$0**	**$0**	**$3,500,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
02/2020	2021	01/2020	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to program in 2021
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-602**	CS	C,E	El Paso	COEP	**$2,063,990**

TIP PROJECT NAME: **Playa Drain Shared Used Path (Whittier to Elvin) 2021**
REVISION DATE: 07/2020
LIMITS FROM: Whittier Dr.
MPO PROJECT ID: **E404X**
LIMITS TO: Elvin Way
MTP REFERENCE: E404X
TIP DESCRIPTION: Playa Drain Shared Used Path (Whittier to Elvin) 2021: The project consists of a shared used path with shade trees, vegetation, and other amenities
FUNDING CATEGORY: Cat 9, Cat 3
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021.-Exempt

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to program in FY 2021-Exempt

Total Project Cost Information:

Preliminary Engineering:	$310,436
Right Of Way:	$0
Construction:	$1,753,554
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$2,063,990**

Cost of Approved Phases: **$2,063,990**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 9TAP	TASA	$1,651,192	$0	$0	$412,798	$0	$2,063,990
	Fund by Share	**$1,651,192**	**$0**	**$0**	**$412,798**	**$0**	**$2,063,990**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
11/2019	2021	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to program in FY 2021-Exempt
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021.-Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-615**	N/A	T	El Paso	County EP	**$894,646**

TIP PROJECT NAME: **Regional Transit Start-up assistance for FY21**
REVISION DATE: 07/2020
LIMITS FROM: County Wide
MPO PROJECT ID: **T001-1**
LIMITS TO: County Wide
MTP REFERENCE: T001-1
TIP DESCRIPTION: Regional Transit Start-up assistance for FY21: Establish Transit Service to provide a more efficient, single, seamless, transit system in El Paso County, Horizon City, Vinton, Anthony, San Elizario, Clint, and Socorro
FUNDING CATEGORY: CAT 5
VOC (Kg/Day): 2.784 CO (Kg/Day): 44.015
NOX (Kg/Day): 2.182 PM 10 (Kg/Day): 1.041
REMARKS: Program into the D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021 - Exempt

*Note project is phased from FY 2021 - 2023

PROJECT HISTORY:
Program into the D2045 MTP, D19-23 TIP and 19-22 STIP in FY 2021 - Exempt

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$4,139,859
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$4,139,859**

Cost of Approved Phases: **$894,646**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	5	CMAQ	$715,717	$0	$0	$178,929	$0	$894,646
		Fund by Share	**$715,717**	**$0**	**$0**	**$178,929**	**$0**	**$894,646**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
05/2020	2021	04/2020	Program into the D2045 MTP, D19-23 TIP and 19-22 STIP in FY 2021 - Exempt
07/2020	2021	05/2020	Program into the D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021 - Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-605**	CS	C,E	El Paso	CoEP	**$9,788,645**

TIP PROJECT NAME: **Rojas Dr Widening**
REVISION DATE: 07/2020
LIMITS FROM: LP 375
MPO PROJECT ID: **A429X-CAP**
LIMITS TO: Bill Burnett
MTP REFERENCE: A429X-CAP
TIP DESCRIPTION: Rojas Dr Widening: Reconstruction and widening from 4 to 6 lanes
FUNDING CATEGORY: CAT 7 STP-MM, CAT 10 CBI, CAT 3 LC
REMARKS: Program into the D2045 MTP, D21-24 TIP, and 21-24 STIP in FY 2021

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to program in FY 2021

Total Project Cost Information:

Preliminary Engineering:	$410,000
Right Of Way:	$0
Construction:	$9,378,645
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$9,788,645**

Cost of Approved Phases: **$9,788,645**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	7	STP-MM	$2,200,000	$0	$0	$550,000	$0	$2,750,000
Cat	10	CBI	$5,302,916	$0	$0	$1,325,729	$0	$6,628,645
Cat	3LC	Local Contribution	$0	$0	$0	$0	$410,000	$410,000
		Fund by Share	**$7,502,916**	**$0**	**$0**	**$1,875,729**	**$410,000**	**$9,788,645**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
05/2020	2021	01/2020	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to program in FY 2021
07/2020	2021	05/2020	Program into the D2045 MTP, D21-24 TIP, and 21-24 STIP in FY 2021

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**2552-02-035**	SL 375	C	El Paso	TXDOT	**$5,000,000**

TIP PROJECT NAME: **SL 375 Interchange (at SGT Major)**

LIMITS FROM: 1.0 MI N of SGT Major

LIMITS TO: 1.0 MI S of SGT Major

TIP DESCRIPTION: SL 375 Interchange (at SGT Major): OPERATIONAL IMPROVEMENTS FOR THE INTERSECTIONS OF SERGEANT MAJOR BLVD AT LOOP 375 NORTHBOUND AND SOUTHBOUND RAMPS

REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021

REVISION DATE: 07/2020

MPO PROJECT ID: **F409X-MOD**

MTP REFERENCE: F409X-MOD

FUNDING CATEGORY: CAT 2

*Project Sponsor paying for PE and/or ROW Costs, if any.

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to reprogram from FY 2020 to FY 2021, removing $4,850,000 of Category 7 adding $5,000,000 of Category 2 TMA

Total Project Cost Information:

Preliminary Engineering:	$500,000
Right Of Way:	$0
Construction:	$5,000,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$5,500,000**

Cost of Approved Phases: **$5,000,000**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 2M TMA		$4,000,000	$1,000,000	$0	$0	$0	$5,000,000
	Fund by Share	**$4,000,000**	**$1,000,000**	**$0**	**$0**	**$0**	**$5,000,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
11/2019	2020	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to program in FY 2020
02/2020	2020	01/2020	Admin amend the D2045 MTP, D19-23 TIP, 19-22 STIP to reduce CAT 7 from $5,000,000 to $4,850,000 in FY 2020
05/2020	2021	04/2020	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to reprogram from FY 2020 to FY 2021, removing $4,850,000 of Category 7 adding $5,000,000 of Category 2 TMA
07/2020	2021	05/2020	Program into the D2045 MTP, D21-24 TIP, 21-24 STIP in FY 2021

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-570**	CS	C,E	El Paso	COEP	**$2,572,079**

TIP PROJECT NAME: **Downtown Bicycle Improvements Phase I**
REVISION DATE: 07/2020
LIMITS FROM: Various (Please see TIP history for complete street names)
MPO PROJECT ID: **M089A**
LIMITS TO: Various (Please see TIP history for complete street names)
MTP REFERENCE: M089A
TIP DESCRIPTION: DowntownBikeImprovementsPhaseI:ConstructBikeFacilitiesDowntownToInclude:BufferedBikeLanes,ConventionalBikeLanes,BikeBLVD's,SharedLaneMarkings,&ProtectedBikeLanes.TheProjectWillIncludeRoadDietsAssociatedSignage,Wayfinding,Striping,&IntersectionTreatments.
FUNDING CATEGORY: CAT 5 CMAQ
VOC (Kg/Day): 0.203 CO (Kg/Day): 3.778
NOX (Kg/Day): 0.118 PM 10 (Kg/Day): 0.196
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to reduce CAT 5 CMAQ from $4,272,273 to $2,572,079 and update the Limits in FY 2022-Exempt

Total Project Cost Information:

Preliminary Engineering:	$428,357
Right Of Way:	$0
Construction:	$2,143,722
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$2,572,079**

Cost of Approved Phases: **$2,572,079**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5	CMAQ		$2,057,663	$0	$0	$514,416	$0	$2,572,079
	Fund by Share		**$2,057,663**	**$0**	**$0**	**$514,416**	**$0**	**$2,572,079**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022. From: El Paso from Franklin; El Paso from Sheldon; Main from Santa Fe; Main from Oregon; Mills from Sheldon; Missouri from Santa Fe; Myrtle from Stanton; San Antonio from Anthony; Sheldon from Santa Fe; Virginia to Mills; Magoffin from San Antonio To: Campbell to Paisano; El Paso to Main; El Paso to Paisano; Main to El Paso; Main to Campbell; Mills to Virginia; Missouri to Campbell; Myrtle to Campbell; San Antonio to Virginia; Sheldon to El Paso; Virginia to San Antonio; Magoffin to Virginia
11/2019	2022	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to reduce CAT 5 CMAQ from $4,272,273 to $2,572,079 and update the Limits in FY 2022-Exempt From: Campbell from Missouri; El Paso from Sheldon; Main from Oregon; Mills from Sheldon; Missouri from Santa Fe; Myrtle from Stanton; San Antonio from Anthony; Sheldon from Santa Fe; Virginia to Mills; Magoffin from San Antonio To: Campbell to Paisano; El Paso to Overland; Main to Campbell; Mills to Virginia; Missouri to Campbell; Myrtle to Campbell; San Antonio to Virginia; Sheldon to El Paso; Virginia to San Antonio; Magoffin to Virginia
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt From: Campbell from Missouri; El Paso from Sheldon; Main from Oregon; Mills from Sheldon; Missouri from Santa Fe; Myrtle from Stanton; San Antonio from Anthony; Sheldon from Santa Fe; Virginia to Mills; Magoffin from San Antonio To: Campbell to Paisano; El Paso to Overland; Main to Campbell; Mills to Virginia; Missouri to Campbell; Myrtle to Campbell; San Antonio to Virginia; Sheldon to El Paso; Virginia to San Antonio; Magoffin to Virginia

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**3451-01-040**	FM 1281	C	Horizon	TXDOT	**$6,000,000**

TIP PROJECT NAME: **Horizon at Darrington Intersection Imp.**
REVISION DATE: 07/2020
LIMITS FROM: Horizon at Darrington Intersection
MPO PROJECT ID: **A435X**
LIMITS TO:
MTP REFERENCE: A435X
TIP DESCRIPTION: Horizon at Darrington Intersection Imp.: Intersection & Operational Imprv
FUNDING CATEGORY: CAT 2
REMARKS: Program into the D2045 MTP, D21-24 TIP, and 21-24 STIP in FY 2022

*Project Sponsor paying for PE and/or ROW Costs, if any.

PROJECT HISTORY:
Program into the D2045 MTP, D19-23 TIP, and 19-22 STIP in FY 2022

Total Project Cost Information:

Preliminary Engineering:	$360,000
Right Of Way:	$0
Construction:	$6,000,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$6,360,000**

Cost of Approved Phases: **$6,000,000**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 2M	TMA		$4,800,000	$1,200,000	$0	$0	$0	$6,000,000
	Fund by Share		**$4,800,000**	**$1,200,000**	**$0**	**$0**	**$0**	**$6,000,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
05/2020	2022	04/2020	Program into the D2045 MTP, D19-23 TIP, and 19-22 STIP in FY 2022
7/2020	2022	05/2020	Program into the D2045 MTP, D21-24 TIP, and 21-24 STIP in FY 2022

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**2121-01-094**	IH 10	C	El Paso	TXDOT	**$170,058,472**

TIP PROJECT NAME: **IH 10 WIDENING (Antonio St to Mesa St)**
REVISION DATE: 07/2020
LIMITS FROM: 0.22 MILES WEST OF FM 1905 (ANTONIO STREET)
MPO PROJECT ID: **I405X-CAP**
LIMITS TO: SH 20 (MESA ST)
MTP REFERENCE: I405X-CAP
TIP DESCRIPTION: IH 10 WIDENING: WIDEN FROM 4 TO 6 LANES DIVIDED
FUNDING CATEGORY: CAT 2 TMA, CAT 4U
REMARKS: Amend the D2045, D21-24 TIP, 21-24 STIP to move from FY 2021 to FY 2022

*Project Sponsor paying for PE and/or ROW Costs, if any.

PROJECT HISTORY:
Program into the D2045, D21-24 TIP, 21-24 STIP in FY 2021.

Total Project Cost Information:

Preliminary Engineering:	$3,591,774
Right Of Way:	$0
Construction:	$170,058,472
Construction Engineering:	$3,151,965
Contingencies:	$131,943
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$3,452,501
Total Project Cost:	**$180,386,655**

Cost of Approved Phases: **$170,058,472**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	2M	TMA	$127,574,778	$31,893,694	$0	$0	$0	$159,468,472
Cat	4	Urban Connecti vity	$8,472,000	$2,118,000	$0	$0	$0	$10,590,000
			$0	$0	$0	$0	$0	$0
		Fund by Share	**$136,046,778**	**$34,011,694**	**$0**	**$0**	**$0**	**$170,058,472**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
02/2019	2021	11/2018	Amend the D2045 MTP, D 19-22 TIP, and 19-22 STIP to add $87,951,432 to CAT 2.
02/2020	2021	01/2020	Admin amend the D2045 MTP, D 19-23 TIP, and 19-22 STIP to remove $20,150,000 of CAT 7 STP-MM and $3,288,920 of CAT 11 District Discretionary in FY 2021.
02/2020	2021	02/2020	Admin amend the D2045 MTP, D 19-23 TIP, and 19-22 STIP to add $34,498,120 of CAT 2M and $10,590,000 of CAT 4U in FY 2021.
07/2020	2021	05/2020	Program into the D2045, D21-24 TIP, 21-24 STIP in FY 2021
11/2020	2022	11/2020	Amend the D2045, D21-24 TIP, 21-24 STIP to move from FY 2021 to FY 2022

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**2121-04-114**	IH 10	C	El Paso	TXDOT	**$17,000,000**

TIP PROJECT NAME: **IH 10 WIDENING (Eastlake to FM 1281)**
REVISION DATE: 07/2020
LIMITS FROM: EASTLAKE BLVD
MPO PROJECT ID: **I062X-CAP**
LIMITS TO: FM 1281 (HORIZON BLVD)
MTP REFERENCE: I062X-CAP
TIP DESCRIPTION: IH 10 WIDENING (Eastlake to FM 1281): WIDEN FROM 4 TO 6 LANES
FUNDING CATEGORY: CAT 11 Rider 11B, CAT 2 TMA
REMARKS: Amend the D2045 MTP, D21-24 TIP and 21-24 STIP to move from FY 2021 to FY 2022

*Project Sponsor paying for PE and/or ROW Costs, if any.

PROJECT HISTORY:
Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021

Total Project Cost Information:

Preliminary Engineering:	$1,033,543
Right Of Way:	$0
Construction:	$17,000,000
Construction Engineering:	$906,986
Contingencies:	$37,967
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$993,466
Total Project Cost:	**$19,971,962**

Cost of Approved Phases: **$17,000,000**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	2M	CAT 2 TMA	$5,600,000	$1,400,000	$0	$0	$0	$7,000,000
Cat	11	Rider 11 B	$8,000,000	$2,000,000	$0	$0	$0	$10,000,000
		Fund by Share	**$13,600,000**	**$3,400,000**	**$0**	**$0**	**$0**	**$17,000,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
05/2020	2021	04/2020	Program into D2045 MTP, D19-23 TIP and 19-22 STIP in FY 2021
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021
11/2020	2022	11/2020	Amend the D2045 MTP, D21-24 TIP and 21-24 STIP to move from FY 2021 to FY 2022

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-564**	CS	C	El Paso	County EP	**$11,965,758**

TIP PROJECT NAME: **John Hayes (Darrington/Berryville)(Construction Phase 1)**
REVISION DATE: 07/2020
LIMITS FROM: Pellicano Dr.
MPO PROJECT ID: **P004X-CAP-1**
LIMITS TO: Montwood
MTP REFERENCE: P004X-CAP-1
TIP DESCRIPTION: John Hayes (Darrington/Berryville)(Construction Phase 1): Build 6-lane divided roadway with bike lanes
FUNDING CATEGORY: CAT 7 STP-MM, CAT 3 LC
REMARKS: Program into the D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2022
*Note project is phased, PE was in FY 2019 and second phase is in FY 2025
*Project Sponsor paying for PE and/or ROW Costs, if any.

Total Project Cost Information:

Preliminary Engineering:	$2,555,280
Right Of Way:	$0
Construction:	$29,965,758
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$32,521,038**

Cost of Approved Phases: **$11,965,758**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	7	STP-MM	$8,096,606	$0	$0	$2,024,152	$0	$10,120,758
Cat	3LC	Local Contribution	$0	$0	$0	$0	$1,845,000	$1,845,000
		Fund by Share	**$8,096,606**	**$0**	**$0**	**$2,024,152**	**$1,845,000**	**$11,965,758**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2022	05/2020	Program into the D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2022

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**2552-02-028**	LP 375	C	El Paso	TXDOT	**$54,663,725**

TIP PROJECT NAME: **Loop 375 (Purple Heart) Widening and Construction of Frontage Roads**
REVISION DATE: 07/2020
LIMITS FROM: Spur 601
MPO PROJECT ID: **F057X-CAP**
LIMITS TO: US 62/180 (Montana Ave.)
MTP REFERENCE: F057X-CAP
TIP DESCRIPTION: Loop 375 (Purple Heart) Widening and Construction of Frontage Roads: Widen 4 to 6 lanes on mainlanes and construct 2 lane frontage roads in each direction.
FUNDING CATEGORY: CAT 2, CAT 4(3c)
REMARKS: Amend the D2045 MTP, D21-24 TIP and 21-24 STIP to move from FY 2021 to FY 2022

*Project Sponsor paying for PE and/or ROW Costs, if any.

PROJECT HISTORY:
Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021

Total Project Cost Information:

Preliminary Engineering:	$2,421,570
Right Of Way:	$7,626,000
Construction:	$54,663,725
Construction Engineering:	$2,125,051
Contingencies:	$88,955
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$2,327,672
Total Project Cost:	**$69,252,973**

Cost of Approved Phases: **$54,663,725**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	2M	2M	$29,819,200	$7,454,800	$0	$0	$0	$37,274,000
Cat	4	4U	$13,911,780	$3,477,945	$0	$0	$0	$17,389,725
		Fund by Share	**$43,730,980**	**$10,932,745**	**$0**	**$0**	**$0**	**$54,663,725**

05/2017	2019	04/2017	Amend to program into amended H2040 MTP, H17-20 TIP, 17-20 STIP in FY 2019.
07/2018	2019	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2019.
05/2019	2019	04/2019	Administrative Amendment to add $10,000,800 of Cat 2M in FY 2019.
08/2019	2020	06/2019	Amend the D2045 MTP, D19-22 TIP, 19-22 STIP to move from FY 2019 to FY 2020.
05/2020	2021	04/2020	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to move from FY 2020 to FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021
11/2020	2022	11/2020	Amend the D2045 MTP, D21-24 TIP and 21-24 STIP to move from FY 2021 to FY 2022

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-587**	CS	C,E,R	Horizon	Horizon	**$13,091,758**

TIP PROJECT NAME: **N. Darrington Reconstruction**
REVISION DATE: 07/2020
LIMITS FROM: Eastlake Boulevard
MPO PROJECT ID: **A432X**
LIMITS TO: Oxbow Drive
MTP REFERENCE: A432X
TIP DESCRIPTION: N. Darrington Reconstruction: Reconstruction of an existing 4-lane roadway
FUNDING CATEGORY: CAT 7 STP-MM, CAT 3 LC
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022.

Total Project Cost Information:

Preliminary Engineering:	$2,471,000
Right Of Way:	$500,000
Construction:	$8,308,758
Construction Engineering:	$747,000
Contingencies:	$1,065,000
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$13,091,758**

Cost of Approved Phases: **$13,091,758**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 7	STP-MM		$8,496,607	$0	$0	$2,124,151	$0	$10,620,758
Cat 10	State Funded		$0	$2,471,000	$0	$0	$0	$2,471,000
	Fund by Share		**$8,496,607**	**$2,471,000**	**$0**	**$2,124,151**	**$0**	**$13,091,758**

02/2020	2022	01/2020	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to move from FY 2030 to FY 2022.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022.

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-604**	CS	C,E	Socorro	Socorro	**$756,780**

TIP PROJECT NAME: **Passmore Road Shared-Use Path**
REVISION DATE: 07/2020
LIMITS FROM: Franklin Canal at Passmore Road
MPO PROJECT ID: **E503X**
LIMITS TO: Upper Clint Lateral at Passmore Road
MTP REFERENCE: E503X
TIP DESCRIPTION: Passmore Road Shared-Use Path: A 12-foot shared-use path along Passmore Road for bicyclists and pedestrians.
FUNDING CATEGORY: CAT 9 TASA
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to program in FY 2022. Exempt

Total Project Cost Information:

Preliminary Engineering:	$98,710
Right Of Way:	$0
Construction:	$658,070
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$756,780**

Cost of Approved Phases: **$756,780**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 9	CAT 9 FLEX TASA		$605,424	$0	$0	$151,356	$0	$756,780
	Fund by Share		**$605,424**	**$0**	**$0**	**$151,356**	**$0**	**$756,780**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
02/2020	2022	12/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to program in FY 2022. Exempt
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-612**	N/A	T	El Paso	County EP	**$1,000,000**

TIP PROJECT NAME: **Regional Transit Start-up assistance for FY22**
REVISION DATE: 07/2020
LIMITS FROM: County Wide
MPO PROJECT ID: **T001-2**
LIMITS TO: County Wide
MTP REFERENCE: T001-2
TIP DESCRIPTION: Regional Transit Start-up assistance for FY22
FUNDING CATEGORY: CAT 5
REMARKS: Program D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022 - Exempt
VOC (Kg/Day): 2.784 CO (Kg/Day): 44.015
NOX (Kg/Day): 2.182 PM 10 (Kg/Day): 1.041

*Note project is phased from FY 2021 - 2023

PROJECT HISTORY:
Program into the D2045 MTP, D19-23 TIP and 19-22 STIP in FY 2022 - Exempt

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$4,139,859
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$4,139,859**

Cost of Approved Phases: **$1,000,000**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5 CMAQ		$800,000	$0	$0	$200,000	$0	$1,000,000
Fund by Share		**$800,000**	**$0**	**$0**	**$200,000**	**$0**	**$1,000,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
5/2020	2022	04/2020	Program into the D2045 MTP, D19-23 TIP and 19-22 STIP in FY 2022 - Exempt
07/2020	2022	05/2020	Program D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022 - Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-617**	CS	C,E	El Paso	County EP	**$1,329,356**

TIP PROJECT NAME: **Tornillo North Sidewalks/SUP**
REVISION DATE: 07/2020
LIMITS FROM: Drake St, Los Coyotes Dr. and Oil Mills Rd.
MPO PROJECT ID: **E505X**
LIMITS TO: Various County Streets/roadways
MTP REFERENCE: E505X
TIP DESCRIPTION: Tornillo North Sidewalks/SUP: Design and Construction of new sidewalks 5 ft wide, driveways, striping, crosswalks and 24 ADA Ramps. along different streets at Tornillo, TX.
FUNDING CATEGORY: CAT 9 TASA (TXDOT)
REMARKS: Program into the D2045 MTP, D21-24 TIP and 21-24 STIP-EXEMPT. Tornillo North Sidewalks and Inkind = $237,385

PROJECT HISTORY:
Program into the D2045 MTP, D19-23 TIP and 19-22 STIP-EXEMPT. 2019 TA/SRTS state-selected; Commission approved 1/30/20 MO 115662

Total Project Cost Information:

Preliminary Engineering:	$265,871
Right Of Way:	$0
Construction:	$1,063,485
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$1,329,356**

Cost of Approved Phases: **$1,329,356**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 9TAP TASA (TXDOT)		$1,063,485	$0	$0	$265,871	$0	$1,329,356
Fund by Share		**$1,063,485**	**$0**	**$0**	**$265,871**	**$0**	**$1,329,356**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
05/2020	2022	04/2020	Program into the D2045 MTP, D19-23 TIP and 19-22 STIP-EXEMPT. 2019 TA/SRTS state-selected; Commission approved 1/30/20 MO 115662
07/2020	2022	05/2020	Program into the D2045 MTP, D21-24 TIP and 21-24 STIP-EXEMPT. Tornillo North Sidewalks and Inkind = $237,385

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-616**	CS	C,E	El Paso	County EP	**$1,432,619**

TIP PROJECT NAME: **Tornillo South Sidewalks/SUP**
REVISION DATE: 07/2020
LIMITS FROM: Cobb Ave, Florinda Dr., Linda Dr., Florella Dr., 2nd St. and 3rd. St.
MPO PROJECT ID: **E504X**
LIMITS TO: Various County streets/roadways
MTP REFERENCE: E504X
TIP DESCRIPTION: Tornillo South Sidewalks/SUP: Design and Construction of new sidewalks 5 ft wide, new 12 ft wide Shared Use Path (SUP), driveways, striping, crosswalks and 28 ADA Ramps along different streets at Tornillo, TX.
FUNDING CATEGORY: CAT 9 TASA (TXDOT)
REMARKS: Program into the D2045 MTP, D21-24 TIP and 21-24 STIP-EXEMPT. Tornillo South Sidewalk/SUP and Inkind = $255,825

PROJECT HISTORY:
Program into the D2045 MTP, D21-24 TIP and 21-24 STIP-EXEMPT. 2019 TA/SRTS state-selected; Commission approved 1/30/20 MO 115662

Total Project Cost Information:

Preliminary Engineering:	$286,524
Right Of Way:	$0
Construction:	$1,146,095
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$1,432,619**

Cost of Approved Phases: **$1,432,619**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 9TAP TASA (TXDOT)		$1,146,095	$0	$0	$286,524	$0	$1,432,619
	Fund by Share	**$1,146,095**	**$0**	**$0**	**$286,524**	**$0**	**$1,432,619**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
05/2020	2022	04/2020	Program into the D2045 MTP, D21-24 TIP and 21-24 STIP-EXEMPT. 2019 TA/SRTS state-selected; Commission approved 1/30/20 MO 115662
07/2020	2022	05/2020	Program into the D2045 MTP, D21-24 TIP and 21-24 STIP-EXEMPT. Tornillo South Sidewalk/SUP and Inkind = $255,825

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-566**	N/A	E	El Paso	COEP	**$3,421,422**

TIP PROJECT NAME: **Traffic Management Center Upgrade Phase 1**
REVISION DATE: 07/2020
LIMITS FROM: City of El Paso city limits.
MPO PROJECT ID: **S301D**
LIMITS TO: City of El Paso city limits.
MTP REFERENCE: S301D
TIP DESCRIPTION: TMCUPhase1: The project includes the upgrade of the City of El Paso TMC&Traffic Signal controller equipment city wide. P1 is the design phase. P2 includes both design&construction.P3-5 are the implementation&construction of the design
FUNDING CATEGORY: CAT 5 CMAQ
VOC (Kg/Day): 3.5
CO (Kg/Day): 68.03
NOX (Kg/Day): 8.91
PM 10 (Kg/Day): 10.15
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022.-Exempt

*Note project is phased from FY 2022 - 2026

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to reduce CAT 5 CMAQ from $5,360,329 to $3,660,329 in FY 2022

Total Project Cost Information:

Preliminary Engineering:	$5,360,329
Right Of Way:	$0
Construction:	$17,172,252
Construction Engineering:	$2,129,397
Contingencies:	$0
Indirects:	$319,404
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$24,981,382**

Cost of Approved Phases: **$3,421,422**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5 CMAQ		$2,737,138	$0	$0	$684,284	$0	$3,421,422
	Fund by Share	**$2,737,138**	**$0**	**$0**	**$684,284**	**$0**	**$3,421,422**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
02/2020	2022	01/2020	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to reduce CAT 5 CMAQ from $5,360,329 to $3,660,329 in FY 2022
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022.-Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-618**	CS	C,E	El Paso	COEP	**$999,953**

TIP PROJECT NAME: **Ysleta Middle School SRTS**

REVISION DATE: 07/2020

LIMITS FROM: Elvin Way from Alameda; Independence Dr from Elvin; Playa Lateral from Elvin Way

MPO PROJECT ID: **E506X**

LIMITS TO: Elvin Way to Victor; Independence Dr to Jesuit Dr; Playa Lateral to Jesuit Dr.

MTP REFERENCE: E506X

TIP DESCRIPTION: YsletaMiddleSchoolSRTS:InstallationOfSchoolZoneFlashersAlongIndependenceDrive,ADA Ramps@MultipleLocations&SchoolZoneSignsWillBeUpgradedToMeetMUTCDStandards@ YMS.BikeLanes@ElvinWayBetweenAlameda&VictorLane&Hike&BikeTrailAmongPlayaLateralBetweenElvin&JesuitDr

FUNDING CATEGORY: CAT 9 SRTS (TXDOT)

REMARKS: Program into the D2045 MTP, D21-24 TIP and 21-24 STIP-EXEMPT. 2019 TA/SRTS state-selected; Commission approved 1/30/20 MO 115662

PROJECT HISTORY:
Program into the D2045 MTP, D19-23 TIP and 19-22 STIP

Total Project Cost Information:

Preliminary Engineering:	$249,953
Right Of Way:	$0
Construction:	$750,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$999,953**

Cost of Approved Phases:
$999,953

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 9TAP	SRTS (TXDOT)	$999,953	$0	$0	$0	$0	$999,953
Fund by Share		**$999,953**	**$0**	**$0**	**$0**	**$0**	**$999,953**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
5/2020	2022	04/2020	Program into the D2045 MTP, D19-23 TIP and 19-22 STIP
07/2020	2022	05/2020	Program into the D2045 MTP, D21-24 TIP and 21-24 STIP-EXEMPT. 2019 TA/SRTS state-selected; Commission approved 1/30/20 MO 115662

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-613**	N/A	T	El Paso	County EP	**$2,245,213**

TIP PROJECT NAME: **Regional Transit Start-up assistance for FY23**
REVISION DATE: 07/2020
LIMITS FROM: County Wide
MPO PROJECT ID: **T001-3**
LIMITS TO: County Wide
MTP REFERENCE: T001-3
TIP DESCRIPTION: Regional Transit Start-up assistance for FY23
FUNDING CATEGORY: CAT 5
REMARKS: Program D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023
VOC (Kg/Day): 2.784 CO (Kg/Day): 44.015
*Note project is phased from FY 2021 - 2023
NOX (Kg/Day): 2.182 PM 10 (Kg/Day): 1.041

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$4,139,859
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$4,139,859**

Cost of Approved Phases: **$2,245,213**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5	CMAQ		$1,796,170	$0	$0	$449,043	$0	$2,245,213
	Fund by Share		**$1,796,170**	**$0**	**$0**	**$449,043**	**$0**	**$2,245,213**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2023	05/2020	Program D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-611**	CS	C,E	El Paso	COEP	**$22,451,630**

TIP PROJECT NAME: **Sean Haggerty Dr Extension**
REVISION DATE: 07/2020
LIMITS FROM: Nathan Bay Dr
MPO PROJECT ID: **B201X-CAP**
LIMITS TO: Dyer St
MTP REFERENCE: B201X-CAP
TIP DESCRIPTION: Sean Haggerty Dr Extension: Construct new 4-Lane bridge with pedestrian and bike facilities from Nathan Bay Dr to Dyer St.
FUNDING CATEGORY: CAT 7, CAT 3 LC
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023

Total Project Cost Information:

Preliminary Engineering:	$1,170,000
Right Of Way:	$0
Construction:	$17,641,369
Construction Engineering:	$3,360,711
Contingencies:	$0
Indirects:	$279,550
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$22,451,630**

Cost of Approved Phases: **$22,451,630**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 7	STP-MM		$16,833,304	$0	$0	$4,208,326	$0	$21,041,630
Cat 3LC	Local Contribution		$0	$0	$0	$0	$1,410,000	$1,410,000
	Fund by Share		**$16,833,304**	**$0**	**$0**	**$4,208,326**	**$1,410,000**	**$22,451,630**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**3592-01-009**	SH 178	C	El Paso	TXDOT	**$193,500,000**

TIP PROJECT NAME: **SH 178 OPERATIONAL IMPROVEMENTS**
REVISION DATE: 07/2020
LIMITS FROM: NM/TX STATELINE
MPO PROJECT ID: **P136X**
LIMITS TO: IH 10
MTP REFERENCE: P136X
TIP DESCRIPTION: SH 178 OPERATIONAL IMPROVEMENTS: Interchange improvements to include grade separation(s), rebuild I-10 overpass, U-turns, 4 Direct Connectors (DC) (3, 2-lane DC and only EB to WB DC will be 1-Lane)
FUNDING CATEGORY: CAT 12 Strategic Priority
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023

*Project Sponsor paying for PE and/or ROW Costs, if any.

Total Project Cost Information:

Preliminary Engineering:	$9,481,500
Right Of Way:	$0
Construction:	$193,500,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$202,981,500**

Cost of Approved Phases: **$193,500,000**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 12	Strategic Priorty		$154,800,000	$38,700,000	$0	$0	$0	$193,500,000
	Fund by Share		**$154,800,000**	**$38,700,000**	**$0**	**$0**	**$0**	**$193,500,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-566**	VARIOUS	C,E	El Paso	COEP	**$5,494,704**

TIP PROJECT NAME: **Traffic Management Center Upgrade Phase 2 - Design and Construction**

LIMITS FROM: City of El Paso city limits
LIMITS TO: City of El Paso city limits
TIP DESCRIPTION: TMCUPhase2 Design&Construction: The project includes the upgrade of the City of El Paso TMC&Traffic Signal controller equipment city wide. P1 is the design phase. P2 includes both design&construction.P3-5 are the implementation&construction of the design.
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023

REVISION DATE: 07/2020
MPO PROJECT ID: **S301E**
MTP REFERENCE: S301E
FUNDING CATEGORY: CAT 5 CMAQ
VOC (Kg/Day): 17.51 CO (Kg/Day): 340.135
NOX (Kg/Day): 44.538 PM 10 (Kg/Day): 50.758

*Note project is phased from FY 2022 - 2026

Total Project Cost Information:

Preliminary Engineering:	$5,360,329
Right Of Way:	$0
Construction:	$17,172,252
Construction Engineering:	$2,129,397
Contingencies:	$0
Indirects:	$319,404
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$24,981,382**

Cost of Approved Phases: **$5,494,704**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5	CAT 5 CMAQ	$4,395,763	$0	$0	$1,098,941	$0	$5,494,704
Fund by Share		**$4,395,763**	**$0**	**$0**	**$1,098,941**	**$0**	**$5,494,704**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-609**	CS	C,E	El Paso	COEP	**$1,869,824**

TIP PROJECT NAME: **Border Highway West Hike and Bike Trail**
REVISION DATE: 07/2020
LIMITS FROM: Racetrack (2) interchange
MPO PROJECT ID: **E112X**
LIMITS TO: Executive Center (2) interchange
MTP REFERENCE: E112X
TIP DESCRIPTION: Border Highway West Hike and Bike Trail: Project includes installation of an 11-foot asphalt pavement hike and bike trail with irrigated landscaping.
FUNDING CATEGORY: CAT 5
VOC (Kg/Day): 0.221 CO (Kg/Day): 2.964
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024
NOX (Kg/Day): 0.164 PM 10 (Kg/Day): 0.014

Total Project Cost Information:

Preliminary Engineering:	$467,456
Right Of Way:	$0
Construction:	$1,093,847
Construction Engineering:	$280,474
Contingencies:	$0
Indirects:	$28,047
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$1,869,824**

Cost of Approved Phases: **$1,869,824**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5	CMAQ		$1,495,859	$0	$0	$373,965	$0	$1,869,824
	Fund by Share		**$1,495,859**	**$0**	**$0**	**$373,965**	**$0**	**$1,869,824**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-607**	CS	C	Socorro	Socorro	**$20,000,000**

TIP PROJECT NAME: **Nuevo Hueco Tanks Extension-Phase I (Street name updated from "Old" Hueco Tanks to "Nuevo" Hueco Tanks)**
REVISION DATE: 07/2020
MPO PROJECT ID: **A527X-CAP-1**
LIMITS FROM: FM 76 North Loop Dr
MTP REFERENCE: A527X-CAP-1
LIMITS TO: SH 20 - Alameda Avenue
FUNDING CATEGORY: CAT 7, CAT 3 LC
TIP DESCRIPTION: Nuevo Hueco Tanks Extension-Phase I (Street name updated from "Old" Hueco Tanks to "Nuevo" Hueco Tanks): Build 4 lane roadway and shared-use path Program
REMARKS: into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024
*Note project is phased, PE was in FY 2020, Construction phases in FY 2024 and FY2031
*Project Sponsor paying for PE and/or ROW Costs, if any.

Total Project Cost Information:

Preliminary Engineering:	$3,500,000
Right Of Way:	$1,500,000
Construction:	$20,000,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$25,000,000**

Cost of Approved Phases: **$20,000,000**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 3LC	Local Contribution (TRZ)		$0	$0	$0	$0	$15,000,000	$15,000,000
Cat 7	STP-MM		$4,000,000	$0	$0	$1,000,000	$0	$5,000,000
	Fund by Share		**$4,000,000**	**$0**	**$0**	**$1,000,000**	**$15,000,000**	**$20,000,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
7/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-567**	VA	C	El Paso	COEP	**$4,771,259**

TIP PROJECT NAME: **Traffic Management Center Upgrade Phase 3 - Construction**

LIMITS FROM: City of El Paso city limits
LIMITS TO: City of El Paso city limits
TIP DESCRIPTION: TMCUPhase3 Construction: The project includes the upgrade of the City of El Paso TMC&Traffic Signal controller equipment city wide. P1 is the design phase. P2 includes both design&construction.P3-5 are the implementation&construction of the design.
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024

REVISION DATE: 07/2020
MPO PROJECT ID: **S301F**
MTP REFERENCE: S301F
FUNDING CATEGORY: CAT 3 LC, CAT 5
VOC (Kg/Day): 17.51 CO (Kg/Day): 340.135
NOX (Kg/Day): 44.538 PM 10 (Kg/Day): 50.758

*Note project is phased from FY 2022 - 2026

*Project Sponsor already received PE monies in Phases 1 & 2

Total Project Cost Information:

Preliminary Engineering:	$5,360,329
Right Of Way:	$0
Construction:	$17,172,252
Construction Engineering:	$2,129,397
Contingencies:	$0
Indirects:	$319,404
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$24,981,382**

Cost of Approved Phases: **$4,771,259**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 3LC	Local Contribution		$0	$0	$0	$0	$2,750,000	$2,750,000
Cat 5	CMAQ		$1,617,007	$0	$0	$404,252	$0	$2,021,259
	Fund by Share		**$1,617,007**	**$0**	**$0**	**$404,252**	**$2,750,000**	**$4,771,259**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-606**	CS	C	Vinton	Vinton	**$7,000,000**

TIP PROJECT NAME: **VALLEY CHILE RD RECONSTRUCTION**

LIMITS FROM: SH 20 (DONIPHAN DR)
LIMITS TO: IH -10
TIP DESCRIPTION: VALLEY CHILE RD RECONSTRUCTION: RECONSTRUCTION OF ROADWAY TO INCLUDE SIDEWALKS, DRAINAGE, LIGHTING AND ILLUMINATION, LANDCSAPING, AND IRRIGATION
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024

REVISION DATE: 07/2020
MPO PROJECT ID: **A137X**
MTP REFERENCE: A137X
FUNDING CATEGORY: CAT 7

*Project Sponsor paying for PE and/or ROW Costs, if any.

Total Project Cost Information:

Preliminary Engineering:	$1,000,000
Right Of Way:	$500,000
Construction:	$7,000,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$8,500,000**

Cost of Approved Phases: **$7,000,000**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 7	STP-MM		$5,600,000	$0	$0	$1,400,000	$0	$7,000,000
	Fund by Share		**$5,600,000**	**$0**	**$0**	**$1,400,000**	**$0**	**$7,000,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

FHWA to FTA Funds Transfer Projects[2]

[2] Congestion Mitigation and Air Quality (CMAQ) Analyses can be found in Appendix A provided upon request and/or attached into the electronic version of this document.

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-572**	N/A	T	El Paso	Sun Metro	**$2,288,542**

TIP PROJECT NAME: Alameda RTS 3rd year Operating Assistance
REVISION DATE: 07/2020
LIMITS FROM: Downtown terminal - Santa Fe
MPO PROJECT ID: T096X
LIMITS TO: Mission Valley Terminal - Alameda @ Zaragoza
MTP REFERENCE: T096X
TIP DESCRIPTION: Alameda RTS 3rd year Operating Assistance: 3rd year of Alameda RTS operations
FUNDING CATEGORY: CAT 5 CMAQ, CAT 3 LC
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021. - Exempt
VOC (Kg/Day): 3.842 CO (Kg/Day): 81.523
NOX (Kg/Day): 6.188 PM 10 (Kg/Day): 1.948

PROJECT HISTORY:
Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$2,288,542
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$2,288,542**

Cost of Approved Phases: **$2,288,542**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	5	CMAQ	$911,887	$0	$0	$227,972	$0	$1,139,859
Cat	3LC	Local Contribution	$0	$0	$0	$0	$1,148,683	$1,148,683
		Fund by Share	**$911,887**	**$0**	**$0**	**$227,972**	**$1,148,683**	**$2,288,542**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021. - Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-573**	N/A	T	El Paso	Sun Metro	**$1,538,029**

TIP PROJECT NAME: Dyer RTS 3rd year Operating Assistance
REVISION DATE: 07/2020
LIMITS FROM: Downtown terminal - Santa Fe
MPO PROJECT ID: T095X
LIMITS TO: Northeast Terminal - Dyer @ Diana
MTP REFERENCE: T095X
TIP DESCRIPTION: Dyer RTS 3rd year Operating Assistance: 3rd year of Dyer RTS operations
FUNDING CATEGORY: CAT 5 CMAQ, CAT 3 LC
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt
VOC (Kg/Day): 3.38 CO (Kg/Day): 68.691
NOX (Kg/Day): 5.17 PM 10 (Kg/Day): 1.55

PROJECT HISTORY:
Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$1,538,029
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$1,538,029**

Cost of Approved Phases: **$1,538,029**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	5	CMAQ	$911,887	$0	$0	$227,972	$0	$1,139,859
Cat	3LC	Local Contribution	$0	$0	$0	$0	$398,170	$398,170
		Fund by Share	**$911,887**	**$0**	**$0**	**$227,972**	**$398,170**	**$1,538,029**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-574**	N/A	T	El Paso	Sun Metro	**$1,917,592**

TIP PROJECT NAME: **Montana RTS 1st year Operating Assistance**
LIMITS FROM: Downtown terminal - Santa Fe
LIMITS TO: Far East Terminal - RC Poe & Edgemere
TIP DESCRIPTION: Montana RTS 1st year Operating Assistance: 1st year of Montana RTS operations
REMARKS: Program D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2022. Exempt

REVISION DATE: 07/2020
MPO PROJECT ID: **T092X**
MTP REFERENCE: T092X
FUNDING CATEGORY: CAT 5 CMAQ
VOC (Kg/Day): 5.371 CO (Kg/Day): 110.234
NOX (Kg/Day): 8.313 PM 10 (Kg/Day): 2.522

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to update project name and description from Montana RTS 2nd Year Operating Assitance to Montana 1st Year Operating Assitance.-Exempt

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$1,917,592
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$1,917,592**

Cost of Approved Phases: **$1,917,592**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5	CMAQ	$1,534,074	$0	$0	$383,518	$0	$1,917,592
		$0	$0	$0	$0	$0	$0
	Fund by Share	**$1,534,074**	**$0**	**$0**	**$383,518**	**$0**	**$1,917,592**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
11/2019	2021	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to update project name and description from Montana RTS 2nd Year Operating Assitance to Montana 1st Year Operating Assitance.-Exempt
05/2020	2022	04/2020	Program D2045 MTP, D19-23 TIP, 19-22 STIP, in FY 2022. Exempt
07/2020	2022	05/2020	Program D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2022. Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-575**	N/A	T	El Paso	Sun Metro	**$1,300,000**

TIP PROJECT NAME: **Montana RTS 2nd year Operating Assistance**
LIMITS FROM: Downtown terminal - Santa Fe
LIMITS TO: Far East Terminal - RC Poe & Edgemere
TIP DESCRIPTION: Montana RTS 2nd year Operating Assistance: 2nd year of Montana RTS operations
REMARKS: Program D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2023. Exempt

REVISION DATE: 07/2020
MPO PROJECT ID: **T097X**
MTP REFERENCE: T097X
FUNDING CATEGORY: CAT 5 CMAQ, CAT 3 LC
VOC (Kg/Day): 5.191 CO (Kg/Day): 108.402
NOX (Kg/Day): 7.719 PM 10 (Kg/Day): 2.588

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to update project name and description from Montana RTS 3rd Year Operating Assitance to Montana 2nd Year Operating Assitance.-Exempt

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$1,300,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$1,300,000**

Cost of Approved Phases: **$1,300,000**

Authorized Funding by Category/Share

		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5	CMAQ	$1,040,000	$0	$0	$260,000	$0	$1,300,000
		$0	$0	$0	$0	$0	$0
	Fund by Share	**$1,040,000**	**$0**	**$0**	**$260,000**	**$0**	**$1,300,000**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
11/2019	2022	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to update project name and description from Montana RTS 3rd Year Operating Assitance to Montana 2nd Year Operating Assitance.-Exempt
5/2020	2023	04/2020	Amend D2045 MTP, D19-23 TIP, 19-22 STIP to reprogram from FY 2022 to FY 2023 - Exempt
7/2020	2023	05/2020	Program D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2024. Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-541**	N/A	T	El Paso	Sun Metro	**$4,423,490**

TIP PROJECT NAME: **Montana RTS 3rd year service operating assistance**

LIMITS FROM: Five Points Terminal - 2830 Montana
LIMITS TO: Far East Terminal - R.C. Poe - Edgemere
TIP DESCRIPTION: Montana RTS 3rd year service operating assistance: 3rd year of Montana BRT-RTS operations.
REMARKS: Program in the D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2023

REVISION DATE: 07/2020
MPO PROJECT ID: **T093X**
MTP REFERENCE: T093X
FUNDING CATEGORY: CAT 5 CMAQ, CAT 3 LC
VOC (Kg/Day): 5.553 CO (Kg/Day): 100.325
NOX (Kg/Day): 2.929 PM 10 (Kg/Day): 1.629

PROJECT HISTORY:
Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to update project name and description from Montana RTS 1st Year Operating Assitance to Montana 3rd Year Operating Assitance and deprogram from FY 2020 and move to FY 2029.

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$4,423,490
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$4,423,490**

Cost of Approved Phases: **$4,423,490**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5	CMAQ		$1,600,000	$0	$0	$400,000	$0	$2,000,000
Cat 3LC	Local Contribu tion		$0	$0	$0	$0	$2,423,490	$2,423,490
	Fund by Share		**$1,600,000**	**$0**	**$0**	**$400,000**	**$2,423,490**	**$4,423,490**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
02/2017	2020	10/2016	Amend H2040 MTP, H17-20 TIP, 17-20 STIP to program in FY 2020 EXEMPT
07/2018	2020	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2020.
11/2019	2029	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to update project name and description from Montana RTS 1st Year Operating Assitance to Montana 3rd Year Operating Assitance and change from FY 2020 to FY 2029.
7/2020	2023	05/2020	Program in the D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2023

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

DISTRICT	COUNTY	CSJ	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	**0924-06-610**	N/A	T	El Paso	Sun Metro	**$3,280,176**

TIP PROJECT NAME: **Park and Ride Far West**

LIMITS FROM: Loop 375 Westside
LIMITS TO: Desert Boulevard
TIP DESCRIPTION: Park and Ride Far West: Create a Park and Ride site in Far West El Paso in the area of I-10 and Transmountain
REMARKS: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

REVISION DATE: 07/2020
MPO PROJECT ID: **T106**
MTP REFERENCE: T106
FUNDING CATEGORY: CAT 5
VOC (Kg/Day): 1.264 CO (Kg/Day): 18.715
NOX (Kg/Day): 0.535 PM 10 (Kg/Day): 0.632

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$3,280,176
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$3,280,176**

Cost of Approved Phases: **$3,280,176**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 5	CMAQ		$2,624,141	$0	$0	$656,035	$0	$3,280,176
	Fund by Share		**$2,624,141**	**$0**	**$0**	**$656,035**	**$0**	**$3,280,176**

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

'STIP Rev Date(s)' also refers to TIP Administrative Amendment (Local Revision) Date

New Mexico Highway / Transit Projects[3]

[3] NM 2020-2023 STIP

DISTRICT	COUNTY	CSJ/CN	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
NM DIST. 1	DA	**E100202**	IH 10	C	Anthony	NMDOT	**$19,091,351**

TIP PROJECT NAME: **NM 404/I-10 Bridge Replacement**

LIMITS FROM: At I-10 & NM 404 Interchange

LIMITS TO:

TIP DESCRIPTION: Bridge Replacement at NM 404/I-10 Interchange

REMARKS: Admin amend Destino 2045 MTP and Destino 2019-2023 TIP to add $1 of Coordinated Border Infrastructure Program funds (CBIP), add $10,750 of Border State Infrastructure (SBSI) funds, add $3,014,079 of State Legislative Funds, and reduce National Highway Performance Program (NHPP) funds to $1,597,932 for a total funding of $19,901,351 in Fiscal Year (FY) 2021.

REVISION DATE: 07/2020
MPO PROJECT ID: **B607X**
MTP REFERENCE: B607X
FUNDING CATEGORY: State Legislative Funds, SBSI Border, NHPP, CMAQ, STP-L, STP-F, STLE, CBIP
VOC (Kg/Day): 0.0339 CO (Kg/Day): 0.168
NOX (Kg/Day): 0.0097 PM 10 (Kg/Day): 0.0071

PROJECT HISTORY:
Amend D2045 MTP, D19-23 TIP, 20-23 STIP to reduce NHPP funds from $3,954,923 to $3,531,412, increase SBSI funds by $292,603 and add $127,908 of CBIP funds for a total funding of $18,000,000 in FY 2021.

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$18,971,351
Construction Engineering:	$120,000
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$19,091,351**

Cost of Approved Phases: **$19,091,351**

Authorized Funding by Category/Share

				Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	NM State Funds	State Legislative Funds		$0	$9,100,000	$0	$0	$0	$9,100,000
Cat	Other	SBSI Border		$2,580,091	$439,679	$0	$0	$0	$3,019,770
Cat	NM NHPP	NHPP		$1,365,273	$232,659	$0	$0	$0	$1,597,932
Cat	NM CMAQ	NM CMAQ Mandatory		$2,643,753	$450,527	$0	$0	$0	$3,094,280
Cat	NM STPL	NM STP Large Urban		$858,376	$146,278	$0	$0	$0	$1,004,654
Cat	NM STPF	NM STP Flex		$774,078	$131,912	$0	$0	$0	$905,990
Cat	NM STLE	NM STPL-Exempt		$205,753	$35,063	$0	$0	$0	$240,816
Cat	Other	CBIP		$102,327	$25,582	$0	$0	$0	$127,909
			Fund by Share	**$8,529,651**	**$10,561,700**	**$0**	**$0**	**$0**	**$19,091,351**

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 18-21 STIP, in FY 2021.
08/2019	2021	07/2019	Amend D2045 MTP, D19-23 TIP, 20-23 STIP to add $9,181,923 of State legislative funds, add $3,301,661 to the already existing $2,800,000 of NHPP for a total of $6,101,661, add $16,416 to the already existing $2,700,000 of SBSI for a total of $2,716,416, and remove $3,000,000 of STP-Flex for a total funding of $18,000,000 in FY 2021.
02/2020	2021	02/2020	Admin Amend D2045 MTP, D19-23 TIP and 20-23 STIP to reduce Contruction cost from $18,000,000 to $17,880,000 and increase Construction Engineering by $120,000 for a Total project cost of $18,000,000.
03/2020	2021	03/2020	Amend D2045 MTP, D19-23 TIP, 20-23 STIP to add $3,094,280 of CAT 5 CMAQ, reduce State Legislative funds from $9,181,923 to $6,085,921, reduce NHPP funds from $6,101,661 to $3,951,923, add $1,004,654 of STP-Large Urban, $240,816 of STP-Large Urban Exempt and $905,990 of STP-F for a total funding of $18,000,000 in FY 2021.
07/2020	2021	05/2020	Program in to D2045 MTP, D21-24, TIP, 20-23 STIP, in FY 2021
06/2020	2021	05/2020	Amend Destino 2045 MTP and Destino 2019-2023 TIPto reduce National Highway Performance Program (NHPP) funds from $3,951,923 to $3,531,412, increase Border State Infrastructure (SBSI) funds by $292,603 and add $127,908 of Coordinated Border Infrastructure Program (CBIP) funds for a total funding of $18,000,000 in Fiscal Year (FY) 2021.
07/2020	2021	07/2020	Admin amend Destino 2045 MTP and Destino 2019-2023 TIP to add $1 of Coordinated Border Infrastructure Program funds (CBIP), add $10,750 of Border State Infrastructure (SBSI) funds, add $3,014,079 of State Legislative Funds, and reduce National Highway Performance Program (NHPP) funds to $1,597,932 for a total funding of $19,901,351 in Fiscal Year (FY) 2021.

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ/CN	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
NM DIST. 1	DA	**E100360**		E	Sunland Park	Sunland Park	**$109,500**

TIP PROJECT NAME: **Rio Grande Trail Phase I**

LIMITS FROM: Racetrack Drive
LIMITS TO: 1,450-ft west of Sunland Park Drive
TIP DESCRIPTION: 12-ft wide paved multi-purpose levee trail (PE Phase)
REMARKS: Amend D2045 MTP, D 19-23 TIP, 20-23 STIP to program using $42,619 Transportation Alternatives Program (TAP) funds and $66,881 Category 3 Local Contribution funds in FY 2021

REVISION DATE: 12/2020
MPO PROJECT ID: **M644A**
MTP REFERENCE: M644A
FUNDING CATEGORY: TAP, 3 LC

Total Project Cost Information:

Preliminary Engineering:	$109,500
Right Of Way:	$0
Construction:	$476,972
Construction Engineering:	$10,000
Contingencies:	$73,045
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$669,517**

Cost of Approved Phases: **$109,500**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 9TAP	TAP		$36,414	$0	$0	$6,205	$0	$42,619
Cat 3LC	Local Contribution		$0	$0	$0	$0	$66,881	$66,881
	Fund by Share		**$36,414**	**$0**	**$0**	**$6,205**	**$66,881**	**$109,500**

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
12/2020	2021	11/2020	Amend D2045 MTP, D 19-23 TIP, 20-23 STIP to program using $42,619 Transportation Alternatives Program (TAP) funds and $66,881 Category 3 Local Contribution funds in FY 2021

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ/CN	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
NM DIST. 1	DA	**E100350**		C	Other	NMDOT	**$800,000**

TIP PROJECT NAME: Booth Road Widening-Operational Improvements

LIMITS FROM: End of route (MP 0)
LIMITS TO: Intersection with Binational Way (MP 0.136)
TIP DESCRIPTION: Pavement reconstruction and roadway widening
REMARKS: Amend D2045 MTP, D2045 MTP, D 19-23 TIP, D 21-24 TIP. 20-23 STIP to program using $800,000 of SBSI in FY 2022

REVISION DATE: 12/2020
MPO PROJECT ID: M643X
MTP REFERENCE: M643X
FUNDING CATEGORY: SBSI

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$800,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$800,000**

Cost of Approved Phases: **$800,000**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	NM State Funds	SBSI	$683,520	$116,480	$0	$0	$0	$800,000
	Fund by Share		**$683,520**	**$116,480**	**$0**	**$0**	**$0**	**$800,000**

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
12/2020	2022	10/2020	Amend D2045 MTP, D2045 MTP, D 19-23 TIP, D 21-24 TIP. 20-23 STIP to program using $800,000 of SBSI in FY 2022

NM DIST. 1	DA	**E100203**	NM 404	C	Dona Ana County	NMDOT	**$42,773,000**

TIP PROJECT NAME: NM 404 Widening Project

LIMITS FROM: NM 404: I-10
LIMITS TO: NM 404: NM 213 Intersection
TIP DESCRIPTION: NM 404 Widening Project: Widen NM 404 from I-10 to NM 213 from 2 lanes to 4 lanes
REMARKS: Amend D2045 MTP, D19-23 TIP, 20-23 STIP to increase construction cost from $29,340,688 to $42,773,000 reduce State Legislative funds from $11,914,079 to $8,818,077, increase National Highway Performance Program (NHPP) funds from $10,481,139 to $20,836,101, increase Surface Transportation Program (STP) Large Urban funds from $1,245,470 to $2,490,940, increase STP Flex funds from $3,000,000 to $5,995,050 and increase Border State Infrastructure (SBSI) funds from $2,700,000 to $4,632,832 for a total funding of $42,773,000 in Fiscal Year (FY) 2022.

REVISION DATE: 09/2020
MPO PROJECT ID: P620X-CAP
MTP REFERENCE: P620X-CAP
FUNDING CATEGORY: State Legislative Funds, NHPP, STP-Flex, SBSI, STP-L, STPLE

*Project Sponsor paying for PE and/or ROW Costs, if any.

PROJECT HISTORY:
Amend D2045 MTP, D19-23 TIP, 20-23 STIP to increase construction cost from $26,500,000 to $29,340,688, increase State Legislative funds to $11,914,079, reduce NHPP to $10,481,139, add $1,004,654 of STP-Large Urban and $240,816 of STP-L Exempt in FY 2022.

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$273,000
Construction:	$42,500,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$42,773,000**

Cost of Approved Phases: **$42,773,000**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	NM State Funds	State Legislative Funds	$0	$8,818,077	$0	$0	$0	$8,818,077
Cat	NM NHPP	NHPP	$17,802,364	$3,033,737	$0	$0	$0	$20,836,101
Cat	NM STPF	STP Flex	$5,122,171	$872,879	$0	$0	$0	$5,995,050
Cat	NM State Funds	SBSI	$3,958,292	$674,540	$0	$0	$0	$4,632,832
Cat	NM STPL	NM STP-Large Urban	$1,716,752	$292,556	$0	$0	$0	$2,009,308
Cat	NM STLE	NM STPL-Exempt	$411,506	$70,126	$0	$0	$0	$481,632
	Fund by Share		**$29,011,085**	**$13,761,915**	**$0**	**$0**	**$0**	**$42,773,000**

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
08/2019	2022	07/2019	Program D2045 MTP, D19-22 TIP, 20-23 STIP, in FY 2022.
03/2020	2022	03/2020	Amend D2045 MTP, D19-23 TIP, 20-23 STIP to increase construction cost from $26,500,000 to $29,340,688, increase State Legislative funds from $8,818,077 to $11,914,079, reduce NHPP from $11,981,923 to $10,481,139, add $1,004,654 of STP-Large Urban and $240,816 of STP-Large Urban Exempt for a total funding of $29,340,688 in FY 2022.
07/2020	2022	05/2020	Program in to D2045 MTP, D21-24, TIP, 20-23 STIP, in FY 2022.
09/2020	2022	09/2020	Amend D2045 MTP, D19-23 TIP, 20-23 STIP to increase cost from $29,340,688 to $42,773,000 reduce State Legislative funds from $11,914,079 to $8,818,077, increase National Highway Performance Program (NHPP) funds from $10,481,139 to $20,836,101, increase Surface Transportation Program (STP) Large Urban funds from $1,245,470 to $2,490,940, increase STP Flex funds from $3,000,000 to $5,995,050 and increase Border State Infrastructure (SBSI) funds from $2,700,000 to $4,632,832 for a total funding of $42,773,000 in Fiscal Year (FY) 2022.

C=Construction, E=Engineering, R=Right-Of-Way (ROW), T=Transfer, YOE=Year Of Expenditure, CSJ:Control Section Job

DISTRICT	COUNTY	CSJ/CN	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
NM DIST. 1	DA	**E100360**		C	Sunland Park	Sunland Park	**$560,017**

TIP PROJECT NAME: **Rio Grande Trail Phase II**

LIMITS FROM: Racetrack Drive
LIMITS TO: 1,450-ft west of Sunland Park Drive
TIP DESCRIPTION: 12-ft wide paved multi-purpose levee trail
REMARKS: Amend D2045 MTP, D 19-23 TIP, 20-23 STIP to program using $42,619 Transportation Alternatives Program (TAP) funds and $517,398 Category 3 Local Contribution funds in FY 2022.

REVISION DATE: 12/2020
MPO PROJECT ID: **M644B**
MTP REFERENCE: M644B
FUNDING CATEGORY: TAP, 3 LC

Total Project Cost Information:

Preliminary Engineering:	$109,500
Right Of Way:	$0
Construction:	$476,972
Construction Engineering:	$10,000
Contingencies:	$73,045
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$669,517**

Cost of Approved Phases: **$560,017**

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat 9TAP	TAP		$36,414	$0	$0	$6,205	$0	$42,619
Cat 3LC	Local Contribution		$0	$0	$0	$0	$517,398	$517,398
	Fund by Share		**$36,414**	**$0**	**$0**	**$6,205**	**$517,398**	**$560,017**

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
12/2020	2022	11/2020	Amend D2045 MTP, D 19-23 TIP, 20-23 STIP to program using $42,619 Transportation Alternatives Program (TAP) funds and $517,398 Category 3 Local Contribution funds in FY 2022.

DISTRICT	COUNTY	CSJ/CN	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
NM DIST. 1	DA	**E100321**	NM 213	C	Dona Ana County	NMDOT	**$9,000,000**

TIP PROJECT NAME: **NM 213 Widening Project**
LIMITS FROM: Intersection with NM 404 (MP 0)
LIMITS TO: TX State Line (MP 3)
TIP DESCRIPTION: Widen NM 213 from 2 to 4 lanes
REMARKS: Program in to D2045 MTP, D21-24, TIP, 20-23 STIP, in FY 2023

REVISION DATE: 07/2020
MPO PROJECT ID: **P621X-CAP**
MTP REFERENCE: P621X-CAP
FUNDING CATEGORY: NHPP, SBSI

PROJECT HISTORY:
Program D2045 MTP, D19-22 TIP, 20-23 STIP, in FY 2023

Total Project Cost Information:

Preliminary Engineering:	$0
Right Of Way:	$0
Construction:	$9,000,000
Construction Engineering:	$0
Contingencies:	$0
Indirects:	$0
Bond Financing:	$0
Potential Change Order:	$0
Total Project Cost:	**$9,000,000**

Cost of Approved Phases:
$9,000,000

Authorized Funding by Category/Share

			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Cat	NM NHPP	NHPP	$5,368,694	$914,890	$0	$0	$0	$6,283,584
Cat	NM State Funds	SBSI	$2,320,906	$395,510	$0	$0	$0	$2,716,416
	Fund by Share		**$7,689,600**	**$1,310,400**	**$0**	**$0**	**$0**	**$9,000,000**

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
08/2019	2023	07/2019	Program D2045 MTP, D19-22 TIP, 20-23 STIP, in FY 2023
07/2020	2023	05/2020	Program in to D2045 MTP, D21-24, TIP, 20-23 STIP, in FY 2023

Transit Projects FTA & Other Funds

Transit projects are included in this TIP. This public notice and time established for public review and comments satisfies FTA Program of Projects (POP) and public participation requirements.

FY 2021 TRANSIT PROJECT DESCRIPTIONS

EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2021-2024

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3H**
Project Name:	ADA ParaTransit
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	Provide ADA Para Transit Service
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$1,352,786
State (TXDOT) Funds:	$0
Other Funds:	$338,196
Fiscal Year Cost:	**$1,690,982**
Construction: $1,690,982 PE: $0	ROW: $0
Total Project Cost:	**$1,690,982**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3C**
Project Name:	Capital Maintenance
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	Capital Maintenance
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$11,125,064
State (TXDOT) Funds:	$0
Other Funds:	$2,781,266
Fiscal Year Cost:	**$13,906,330**
Construction: $13,906,330 PE: $0	ROW: $0
Total Project Cost:	**$13,906,330**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	EPMPO
MPO ID:	**T011**
Project Name:	FTA 5310 Enhanced Mobility for Seniors and Individuals with Disabilities
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	FTA 5310 Enhanced Mobility for Seniors and Individuals with Disabilities Program. Project for financial allocation demonstration. Fed. Distribution of $650,000 for Capital and Operating, for FFY 2020 funds for use in FY 2021.
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5310 - Seniors & People w/Disabilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$650,000
State (TXDOT) Funds:	$0
Other Funds:	$0
Fiscal Year Cost:	**$650,000**
Construction: $650,000	PE: $0 ROW: $0
Total Project Cost:	**$650,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3I-8**
Project Name:	FY 2021 FTA 5339 Funding for Bus & Bus Facilities
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	FY 2021 FTA 5339 Funding: For the purchase of buses and facility enhancements incl. equipment such a ADP hardware/software and security related needs, ticket vending machines and sales related software. Capitalized maintenance incl rebuilds, bus shelters & amenities.
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$1,120,000
State (TXDOT) Funds:	$0
Other Funds:	$280,000
Fiscal Year Cost:	**$1,400,000**
Construction: $1,400,000	PE: $0 ROW: $0
Total Project Cost:	**$1,400,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

FY 2021 TRANSIT PROJECT DESCRIPTIONS

EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2021-2024

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T2A**
Project Name:	JARC
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	Short-range Planning
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$160,000
State (TXDOT) Funds:	$0
Other Funds:	$40,000
Fiscal Year Cost:	**$200,000**
Construction: $200,000 PE: $0 ROW: $0	
Total Project Cost:	**$200,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3B**
Project Name:	Other Capital Program Items (5339)
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	Computer hardware/software
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$80,000
State (TXDOT) Funds:	$0
Other Funds:	$20,000
Fiscal Year Cost:	**$100,000**
Construction: $100,000 PE: $0 ROW: $0	
Total Project Cost:	**$100,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

District: TX DIST. 24 YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3A**
Project Name:	Planning
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	Short-range Planning
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$832,402
State (TXDOT) Funds:	$0
Other Funds:	$208,100
Fiscal Year Cost:	**$1,040,502**
Construction: $1,040,502 PE: $0 ROW: $0	
Total Project Cost:	**$1,040,502**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3E**
Project Name:	Security Equipment
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	Security Program
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$139,760
State (TXDOT) Funds:	$0
Other Funds:	$34,940
Fiscal Year Cost:	**$174,700**
Construction: $174,700 PE: $0 ROW: $0	
Total Project Cost:	**$174,700**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3F**
Project Name:	Support Vehicles/Bus Rehab (5339)
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	Support Vehicles/Bus Rehab
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$429,287
State (TXDOT) Funds:	$0
Other Funds:	$107,322
Fiscal Year Cost:	**$536,609**
Construction: $536,609 PE: $0 ROW: $0	
Total Project Cost:	**$536,609**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

FY 2021 TRANSIT PROJECT DESCRIPTIONS

EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2021-2024

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3G**
Project Name:	Transit Enhancements (5339)
Apportionment Year:	2021
Project Phase:	N/A
Brief Project Description:	Transit Enhancements
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$800,000
State (TXDOT) Funds:	$0
Other Funds:	$200,000
Fiscal Year Cost:	**$1,000,000**
Construction: $1,000,000 PE: $0	ROW: $0
Total Project Cost:	**$1,000,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

District: TX DIST. 24 YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3H**
Project Name:	ADA ParaTransit
Apportionment Year:	2022
Project Phase:	N/A
Brief Project Description:	Provide ADA Para Transit Service
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$1,366,313
State (TXDOT) Funds:	$0
Other Funds:	$341,578
Fiscal Year Cost:	**$1,707,891**
Construction: $1,707,891 PE: $0	ROW: $0
Total Project Cost:	**$1,707,891**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3C**
Project Name:	Capital Maintenance
Apportionment Year:	2022
Project Phase:	N/A
Brief Project Description:	Capital Maintenance
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$11,236,314
State (TXDOT) Funds:	$0
Other Funds:	$2,809,079
Fiscal Year Cost:	**$14,045,393**
Construction: $14,045,393 PE: $0	ROW: $0
Total Project Cost:	**$14,045,393**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3D**
Project Name:	Curb Cuts ADA Improvements (5339)
Apportionment Year:	2022
Project Phase:	N/A
Brief Project Description:	Curb Cuts ADA Improvements
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$800,000
State (TXDOT) Funds:	$0
Other Funds:	$200,000
Fiscal Year Cost:	**$1,000,000**
Construction: $1,000,000 PE: $0	ROW: $0
Total Project Cost:	**$1,000,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2020.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

FY 2022 TRANSIT PROJECT DESCRIPTIONS

EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2021-2024

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	EPMPO
MPO ID:	**T011**
Project Name:	FTA 5310 Enhanced Mobility for Seniors and Individuals with Disabilities
Apportionment Year:	2022
Project Phase:	N/A
Brief Project Description:	FTA 5310 Enhanced Mobility for Seniors and Individuals with Disabilities Program. Project for financial allocation demonstration. Fed. Distribution of $650,000 for Capital and Operating, for FFY 2021 funds for use in FY 2022.
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5310 - Seniors & People w/Disabilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$650,000
State (TXDOT) Funds:	$0
Other Funds:	$0
Fiscal Year Cost:	**$650,000**
Construction: $650,000	PE: $0 ROW: $0
Total Project Cost:	**$650,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3I-9**
Project Name:	FY 2022 FTA 5339 Funding
Apportionment Year:	2022
Project Phase:	N/A
Brief Project Description:	FY 2022 FTA 5339 Funding: For the purchase of buses and facility enhancements incl. equipment such a ADP hardware/software and security related needs, ticket vending machines and sales related software. Capitalized maintenance incl rebuilds, bus shelters & amenities.
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$1,148,000
State (TXDOT) Funds:	$0
Other Funds:	$287,000
Fiscal Year Cost:	**$1,435,000**
Construction: $1,435,000	PE: $0 ROW: $0
Total Project Cost:	**$1,435,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3B**
Project Name:	Other Capital Program Items (5339)
Apportionment Year:	2022
Project Phase:	N/A
Brief Project Description:	Computer hardware/software
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$84,000
State (TXDOT) Funds:	$0
Other Funds:	$21,000
Fiscal Year Cost:	**$105,000**
Construction: $105,000 PE: $0 ROW: $0	
Total Project Cost:	**$105,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3A**
Project Name:	Planning
Apportionment Year:	2022
Project Phase:	N/A
Brief Project Description:	Short-range Planning
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$840,726
State (TXDOT) Funds:	$0
Other Funds:	$210,181
Fiscal Year Cost:	**$1,050,907**
Construction: $1,050,907 PE: $0 ROW: $0	
Total Project Cost:	**$1,050,907**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3E**
Project Name:	Security Equipment
Apportionment Year:	2022
Project Phase:	N/A
Brief Project Description:	Security Program
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$143,254
State (TXDOT) Funds:	$0
Other Funds:	$35,814
Fiscal Year Cost:	**$179,068**
Construction: $179,068 PE: $0 ROW: $0	
Total Project Cost:	**$179,068**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

FY 2022 TRANSIT PROJECT DESCRIPTIONS

EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2021-2024

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3F**
Project Name:	Support Vehicles/Bus Rehab (5339)
Apportionment Year:	2022
Project Phase:	N/A
Brief Project Description:	Support Vehicles/Bus Rehab
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$443,120
State (TXDOT) Funds:	$0
Other Funds:	$110,780
Fiscal Year Cost:	**$553,900**
Construction: $553,900	PE: $0 ROW: $0
Total Project Cost:	**$553,900**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

District: TX DIST. 24 YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3H**
Project Name:	ADA ParaTransit
Apportionment Year:	2023
Project Phase:	T
Brief Project Description:	Provide ADA Para Transit Service
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$1,379,976
State (TXDOT) Funds:	$0
Other Funds:	$344,994
Fiscal Year Cost:	**$1,724,970**
Construction: $1,724,970 PE: $0 ROW: $0	
Total Project Cost:	**$1,724,970**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3C**
Project Name:	Capital Maintenance
Apportionment Year:	2023
Project Phase:	T
Brief Project Description:	Capital Maintenance
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$11,188,678
State (TXDOT) Funds:	$0
Other Funds:	$2,797,169
Fiscal Year Cost:	**$13,985,847**
Construction: $13,985,847 PE: $0 ROW: $0	
Total Project Cost:	**$13,985,847**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3I-10**
Project Name:	FY 2023 FTA 5339 Funding for Bus & Bus Facilities
Apportionment Year:	2023
Project Phase:	N/A
Brief Project Description:	FY 2023 FTA 5339 Funding: For the purchase of buses and facility enhancements incl. equipment such a ADP hardware/software and security related needs, ticket vending machines and sales related software. Capitalized maintenance incl rebuilds, bus shelters & amenities.
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$1,176,700
State (TXDOT) Funds:	$0
Other Funds:	$294,175
Fiscal Year Cost:	**$1,470,875**
Construction: $1,470,875 PE: $0 ROW: $0	
Total Project Cost:	**$1,470,875**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

FY 2023 TRANSIT PROJECT DESCRIPTIONS

EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2021-2024

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T2A**
Project Name:	JARC
Apportionment Year:	2023
Project Phase:	N/A
Brief Project Description:	Short-range Planning
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$160,000
State (TXDOT) Funds:	$0
Other Funds:	$40,000
Fiscal Year Cost:	**$200,000**
Construction: $200,000 PE: $0	ROW: $0
Total Project Cost:	**$200,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3B**
Project Name:	Other Capital Program Items (5339)
Apportionment Year:	2023
Project Phase:	N/A
Brief Project Description:	Computer hardware/software
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program D2045 MTP, 21-24 TIP, 21-24 STIP, in FY 2023.

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$88,200
State (TXDOT) Funds:	$0
Other Funds:	$22,050
Fiscal Year Cost:	**$110,250**
Construction: $110,250 PE: $0	ROW: $0
Total Project Cost:	**$110,250**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2023	05/2020	Program D2045 MTP, 21-24 TIP, 21-24 STIP, in FY 2023.

District: TX DIST. 24 YOE = Year of Expenditure

General Project Information

Project Sponsor: Sun Metro
MPO ID: **T3A**
Project Name: Planning
Apportionment Year: 2023
Project Phase: N/A
Brief Project Description: Short-range Planning
Sec5309 ID:
Amend Date: 07/2020
Remarks/Amend Action: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

Funding Information (YOE)

Fed. Fundig Category: **Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:
Federal (FTA) Funds: $849,133
State (TXDOT) Funds: $0
Other Funds: $212,283
Fiscal Year Cost: $1,061,416
Construction: $1,061,416 PE: $0 ROW: $0
Total Project Cost: $1,061,416
TDC Amount Requested: $0
TDC Awarded Date & Amount: $0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

General Project Information

Project Sponsor: Sun Metro
MPO ID: **T3E**
Project Name: Security Equipment
Apportionment Year: 2023
Project Phase: N/A
Brief Project Description: Security Program
Sec5309 ID:
Amend Date: 07/2020
Remarks/Amend Action: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

Funding Information (YOE)

Fed. Fundig Category: **Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:
Federal (FTA) Funds: $146,835
State (TXDOT) Funds: $0
Other Funds: $36,709
Fiscal Year Cost: $183,544
Construction: $183,544 PE: $0 ROW: $0
Total Project Cost: $183,544
TDC Amount Requested: $0
TDC Awarded Date & Amount: $0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

General Project Information

Project Sponsor: Sun Metro
MPO ID: **T3F**
Project Name: Support Vehicles/Bus Rehab (5339)
Apportionment Year: 2023
Project Phase: N/A
Brief Project Description: Support Vehicles/Bus Rehab
Sec5309 ID:
Amend Date: 07/2020
Remarks/Amend Action: Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

Funding Information (YOE)

Fed. Fundig Category: **Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:
Federal (FTA) Funds: $447,551
State (TXDOT) Funds: $0
Other Funds: $111,888
Fiscal Year Cost: $559,439
Construction: $559,439 PE: $0 ROW: $0
Total Project Cost: $559,439
TDC Amount Requested: $0
TDC Awarded Date & Amount: $0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2023	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

General Project Information

Project Sponsor: Sun Metro
MPO ID: **T3G**
Project Name: Transit Enhancements (5339)
Apportionment Year: 2023
Project Phase: N/A
Brief Project Description: Transit Enhancements
Sec5309 ID:
Amend Date: 07/2020
Remarks/Amend Action: Program D2045 MTP, 21-24 TIP,21-24 STIP, in FY 2023.

Funding Information (YOE)

Fed. Fundig Category: **Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:
Federal (FTA) Funds: $800,000
State (TXDOT) Funds: $0
Other Funds: $200,000
Fiscal Year Cost: $1,000,000
Construction: $1,000,000 PE: $0 ROW: $0
Total Project Cost: $1,000,000
TDC Amount Requested: $0
TDC Awarded Date & Amount: $0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2020	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

FY 2024 TRANSIT PROJECT DESCRIPTIONS

EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2021-2024

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3H**
Project Name:	ADA ParaTransit
Apportionment Year:	2024
Project Phase:	T
Brief Project Description:	Provide ADA Para Transit Service
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$1,393,776
State (TXDOT) Funds:	$0
Other Funds:	$348,444
Fiscal Year Cost:	**$1,742,220**
Construction: $1,742,220 PE: $0	ROW: $0
Total Project Cost:	**$1,742,220**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3C**
Project Name:	Capital Maintenance
Apportionment Year:	2024
Project Phase:	T
Brief Project Description:	Capital Maintenance
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$11,461,041
State (TXDOT) Funds:	$0
Other Funds:	$2,865,260
Fiscal Year Cost:	**$14,326,301**
Construction: $14,326,301 PE: $0	ROW: $0
Total Project Cost:	**$14,326,301**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3D**
Project Name:	Curb Cuts ADA Improvements (5339)
Apportionment Year:	2024
Project Phase:	T
Brief Project Description:	Curb Cuts ADA Improvements
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$800,000
State (TXDOT) Funds:	$0
Other Funds:	$200,000
Fiscal Year Cost:	**$1,000,000**
Construction: $1,000,000 PE: $0	ROW: $0
Total Project Cost:	**$1,000,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3I-11**
Project Name:	FY 2024 FTA 5339 Funding for Bus & Bus Facilities
Apportionment Year:	2024
Project Phase:	N/A
Brief Project Description:	FY 2024 FTA 5339 Funding: For the purchase of buses and facility enhancements incl. equipment such a ADP hardware/software and security related needs, ticket vending machines and sales related software. Capitalized maintenance incl rebuilds, bus shelters & amenities.
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$1,206,118
State (TXDOT) Funds:	$0
Other Funds:	$301,529
Fiscal Year Cost:	**$1,507,647**
Construction: $1,507,647	PE: $0 ROW: $0
Total Project Cost:	**$1,507,647**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3B**
Project Name:	Other Capital Program Items (5339)
Apportionment Year:	2024
Project Phase:	N/A
Brief Project Description:	Computer hardware/software
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$92,610
State (TXDOT) Funds:	$0
Other Funds:	$23,153
Fiscal Year Cost:	**$115,763**
Construction: $115,763	PE: $0 ROW: $0
Total Project Cost:	**$115,763**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

FY 2024 TRANSIT PROJECT DESCRIPTIONS

EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2021-2024

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3A**
Project Name:	Planning
Apportionment Year:	2024
Project Phase:	N/A
Brief Project Description:	Short-range Planning
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$857,624
State (TXDOT) Funds:	$0
Other Funds:	$214,406
Fiscal Year Cost:	**$1,072,030**
Construction: $1,072,030 PE: $0	ROW: $0
Total Project Cost:	**$1,072,030**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3E**
Project Name:	Security Equipment
Apportionment Year:	2024
Project Phase:	N/A
Brief Project Description:	Security Program
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5307 - Urbanized Formula >200K**
OtherFTASection:	
Federal (FTA) Funds:	$150,506
State (TXDOT) Funds:	$0
Other Funds:	$37,627
Fiscal Year Cost:	**$188,133**
Construction: $188,133 PE: $0	ROW: $0
Total Project Cost:	**$188,133**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T3F**
Project Name:	Support Vehicles/Bus Rehab (5339)
Apportionment Year:	2024
Project Phase:	N/A
Brief Project Description:	Support Vehicles/Bus Rehab
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Sec. 5339 - Bus & Bus Facilities >200K**
OtherFTASection:	
Federal (FTA) Funds:	$452,026
State (TXDOT) Funds:	$0
Other Funds:	$113,007
Fiscal Year Cost:	**$565,033**
Construction: $565,033 PE: $0	ROW: $0
Total Project Cost:	**$565,033**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

FTA from FHWA Transfer Transit Projects

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T096X**
Project Name:	Alameda RTS 3rd year Operating Assistance
Apportionment Year:	2021
Project Phase:	T
Brief Project Description:	Alameda RTS 3rd year Operating Assistance: 3rd year of Alameda RTS operations
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Regionally Significant or Other (incl FHWA transfers)**
OtherFTASection:	**FHWA CAT 5 - CMAQ Transfer to FTA**
Federal (FTA) Funds:	$911,887
State (TXDOT) Funds:	$0
Other Funds:	$1,376,655
Fiscal Year Cost:	**$2,288,542**
Construction: $2,288,542	PE: $0 ROW: $0
Total Project Cost:	**$2,288,542**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T095X**
Project Name:	Dyer RTS 3rd year Operating Assistance
Apportionment Year:	2021
Project Phase:	T
Brief Project Description:	Dyer RTS 3rd year Operating Assistance: 3rd year of Dyer RTS operations.
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Regionally Significant or Other (incl FHWA transfers)**
OtherFTASection:	**FHWA CAT 5 - CMAQ Transfer to FTA**
Federal (FTA) Funds:	$911,887
State (TXDOT) Funds:	$0
Other Funds:	$626,142
Fiscal Year Cost:	**$1,538,029**
Construction: $1,538,029	PE: $0 ROW: $0
Total Project Cost:	**$1,538,029**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2021-Exempt

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T092X**
Project Name:	Montana RTS 1st year Operating Assistance
Apportionment Year:	2022
Project Phase:	T
Brief Project Description:	Montana RTS 1st year Operating Assistance: 1st year of Montana RTS operations.
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Regionally Significant or Other (incl FHWA transfers)**
OtherFTASection:	**FHWA CAT 5 - CMAQ Transfer to FTA**
Federal (FTA) Funds:	$1,534,074
State (TXDOT) Funds:	$0
Other Funds:	$383,518
Fiscal Year Cost:	**$1,917,592**
Construction: $1,917,592	PE: $0 ROW: $0
Total Project Cost:	**$1,917,592**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2021	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2021.
11/2019	2021	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to update project name and description to 1st year.
07/2020	2021	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T097X**
Project Name:	Montana RTS 2nd year Operating Assistance
Apportionment Year:	2023
Project Phase:	T
Brief Project Description:	Montana RTS 2nd year Operating Assistance: 2nd year of Montana RTS operations.
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Regionally Significant or Other (incl FHWA transfers)**
OtherFTASection:	**FHWA CAT 5 - CMAQ Transfer to FTA**
Federal (FTA) Funds:	$1,040,000
State (TXDOT) Funds:	$0
Other Funds:	$260,000
Fiscal Year Cost:	**$1,300,000**
Construction: $1,300,000	PE: $0 ROW: $0
Total Project Cost:	**$1,300,000**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2018	2022	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2022.
11/2019	2022	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to update project name and description to 2nd year.
07/2020	2022	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T093X**
Project Name:	Montana RTS 3rd year service operating assistance
Apportionment Year:	2024
Project Phase:	T
Brief Project Description:	Montana RTS 3rd year service operating assistance: 3rd year of Montana BRT-RTS operations.
Sec5309 ID:	1539
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Regionally Significant or Other (incl FHWA transfers)**
OtherFTASection:	**FHWA CAT 5 - CMAQ Transfer to FTA**
Federal (FTA) Funds:	$1,600,000
State (TXDOT) Funds:	$0
Other Funds:	$2,823,490
Fiscal Year Cost:	**$4,423,490**
Construction: $4,423,490	PE: $0 ROW: $0
Total Project Cost:	**$4,423,490**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

AMENDMENT HISTORY

History STIP Rev Date	History FY	History Date	History Note/Amendment
11/2016	2020	10/2016	Amend H2040 MTP, H17-20 TIP, 17-20 STIP to program in FY 2020 EXEMPT
07/2018	2020	05/2018	Program D2045 MTP, D19-22 TIP, 19-22 STIP, in FY 2020.
11/2019	2020	10/2019	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to deprogram in 2020, move in to FY 2029 and update project name and description to 3rd year.
07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

General Project Information

Project Sponsor:	Sun Metro
MPO ID:	**T106**
Project Name:	Park and Ride Far West
Apportionment Year:	2024
Project Phase:	C
Brief Project Description:	Create a Park and Ride site in Far West El Paso in the area of I-10 and Transmountain
Sec5309 ID:	
Amend Date:	07/2020
Remarks/Amend Action:	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Funding Information (YOE)

Fed. Fundig Category:	**Regionally Significant or Other (incl FHWA transfers)**
OtherFTASection:	**FHWA CAT 5 - CMAQ Transfer to FTA**
Federal (FTA) Funds:	$2,624,141
State (TXDOT) Funds:	$0
Other Funds:	$656,035
Fiscal Year Cost:	**$3,280,176**
Construction: $3,280,176	PE: $0 ROW: $0
Total Project Cost:	**$3,280,176**
TDC Amount Requested:	$0
TDC Awarded Date & Amount:	$0

07/2020	2024	05/2020	Program into D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt

Financial Section

Funding by Category

Wednesday, January 13, 2021

		FY 2021		FY 2022		FY 2023		FY 2024		Total FY 2021 - 2024	
Category	Description	Programmed	Authorized	Programmed	Authorized	Programmed	Authorized	Programmed	Authorized	Programmed	Authorized
1	Preventive Maintenance & Rehabilitation	$33,817,518	$33,817,518	$37,283,610	$37,283,610	$30,716,484	$30,716,484	$35,543,103	$35,543,103	$137,360,715	$137,360,715
2M or 2U	Urban Area (Non- TMA) Corridor Projects	$5,000,000	$5,000,000	$209,742,472	$209,742,472	$0	$0	$0	$0	$214,742,472	$214,742,472
3	Non-Traditionally Funded Transportation Project (Includes Prop 12v1, Prop 12v2, Prop 14, Lcl funds)	$1,956,853	$1,956,853	$4,316,000	$4,316,000	$1,410,000	$1,410,000	$20,173,490	$20,173,490	$27,856,343	$27,856,343
4	Statewide Connectivity Corridor Projects	$0	$0	$27,979,725	$27,979,725	$0	$0	$0	$0	$27,979,725	$27,979,725
5	CMAQ	$8,784,787	$8,784,787	$8,911,093	$8,911,093	$9,039,917	$9,039,917	$9,171,259	$9,171,259	$35,907,056	$35,907,056
5 Flex	Map21 Flex	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	Structures	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	Metro Mobility & Rehab	$18,266,000	$20,447,479	$20,741,516	$20,741,516	$21,041,630	$21,041,630	$12,000,000	$21,347,354	$72,049,146	$83,577,979
8	Safety	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Transportation Enhancements	$0	$0	$3,761,928	$3,761,928	$0	$0	$0	$0	$3,761,928	$3,761,928
9 Flex	TAP	$2,063,990	$2,903,307	$756,780	$1,398,351	$0	$1,398,351	$0	$1,398,351	$2,820,770	$7,098,360
10	Supplemental Transportation Projects (Includes:Earmark, GR, CBI, KTXB)	$6,628,645	$6,628,645	$0	$0	$0	$0	$0	$0	$6,628,645	$6,628,645
11	District Discretionary	$0	$3,570,000	$10,000,000	$13,570,000	$0	$3,560,000	$0	$3,560,000	$10,000,000	$24,260,000
12	Strategic Priority	$0	$0	$0	$0	$193,500,000	$193,500,000	$0	$0	$193,500,000	$193,500,000
12C	Strategic Priority RECON (CMAQ)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
12S	Strategic Priority RECON (STP)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SBPE	Strategy Budget PE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SB 102	Strategy 102 Budget	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Total	$76,517,793	$83,108,589	$323,493,124	$327,704,695	$255,708,031	$260,666,382	$76,887,852	$91,193,557	$732,606,800	$762,673,223

Funding Participation Source

Source	FY 2021	FY 2022	FY 2023	FY 2024	Total
Federal	$59,648,751	$255,541,691	$203,438,424	$45,371,489	$564,000,355
State	$8,463,504	$57,001,161	$44,843,297	$7,108,621	$117,416,582
Local Match	$6,448,685	$6,434,272	$5,567,267	$4,234,252	$22,684,476
CAT 3 - Local/State Contributions	$1,956,853	$4,516,000	$1,859,043	$20,173,490	$28,505,386
Total	$76,517,793	$323,493,124	$255,708,031	$76,887,852	$732,606,800

EL PASO MPO - New Mexico District 1 & 2

2020-2023 NM State Transportation Improvement Program

Destino 2021-2024 TIP

Funding by Category

Wednesday, January 13, 2021

	FY 2021		FY 2022		FY 2023		FY 2024		Total FY 2021 - 2023	
Description	**Programmed**	**Authorized**	**Programmed**	**Authorized**	**Programmed**	**Authorized**	**Programmed**	**Authorized**	**Programmed**	**Authorized**
CBIP (Coordinated Border Infrastructure Prog.)	$127,909	$127,909	$0	$0	$0	$0	$0	$0	$127,909	$127,909
City of Sunland Park, N.M.	$66,881	$66,881	$517,398	$517,398	$0	$0	$0	$0	$584,279	$584,279
CAQ (CMAQ Mandatory)	$3,094,280	$3,094,280	$0	$0	$0	$0	$0	$0	$3,094,280	$3,094,280
NHPP (National Highway Performance Program)	$1,597,932	$1,597,932	$20,836,101	$20,836,101	$6,283,584	$6,283,584	$0	$0	$28,717,617	$28,717,617
NM State Funds	$9,100,000	$9,100,000	$13,450,909	$13,450,909	$2,716,416	$2,716,416	$0	$0	$25,267,325	$25,267,325
Other	$3,019,770	$3,019,770	$0	$0	$0	$0	$0	$0	$3,019,770	$3,019,770
Other State Fund	$0	$0	$800,000	$800,000	$0	$0	$0	$0	$800,000	$800,000
STLE (Surface Transp Prog Large Urban - Exempt)	$240,816	$240,816	$481,632	$481,632	$0	$0	$0	$0	$722,448	$722,448
STPF (Surface Transp Prog Flexible)	$905,990	$905,990	$5,995,050	$5,995,050	$0	$0	$0	$0	$6,901,040	$6,901,040
STPL (Surface Transp Prog Large Urban >200K)	$1,004,654	$1,004,654	$2,009,308	$2,009,308	$0	$0	$0	$0	$3,013,962	$3,013,962
TAPL (Transp. Alternative Prog Large Urban >200K)	$42,619	$42,619	$42,619	$42,619	$0	$0	$0	$0	$85,238	$85,238
Total	**$19,200,851**	**$19,200,851**	**$44,133,017**	**$44,133,017**	**$9,000,000**	**$9,000,000**	**$0**	**$0**	**$72,333,868**	**$72,333,868**

Funding Participation Source

Source	FY 2021	FY 2022	FY 2023	FY 2024	Total
Federal Participation	$8,566,066	$29,731,021	$7,689,600	$0	$45,986,687
State Participation	$10,561,699	$13,878,393	$1,310,400	$0	$25,750,492
Local Participation	$6,205	$6,205	$0	$0	$12,410
Local/State Contributions	$66,881	$517,398	$0	$0	$584,279
Total	**$19,200,851**	**$44,133,017**	**$9,000,000**	**$0**	**$72,333,868**

Transit Financial Summary

El Paso MPO - TXDOT District 24

FY 2021 - 2024 Transportation Improvement Program

All Figures in Year of Expenditure (YOE) Dollars

Thursday, May 07, 2020

	Transit Program	FY 2021			FY 2022			FY 2023		
		Federal	Match	Total	Federal	Match	Total	Federal	Match	Total
1	Sec. 5307 - Urbanized Formula >200K	$13,610,012	$3,402,502	$17,012,514	$13,586,607	$3,396,652	$16,983,259	$14,524,622	$3,631,155	$18,155,777
2	Sec. 5307 - Urbanized Formula <200K	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	Sec. 5309 - Fixed Guideway Investment	$0	$0	$0	$0	$0	$0	$0	$0	$0
4	Sec. 5337 - State of Good Repair	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	Sec. 5339 - Bus & Bus Facilities >200K	$2,429,287	$607,322	$3,036,609	$2,475,120	$618,780	$3,093,900	$1,712,451	$428,113	$2,140,564
6	Sec. 5310 - Seniors & People w/Disabilities >200K	$650,000	$0	$650,000	$650,000	$0	$650,000	$0	$0	$0
7	Sec. 5316 - JARC >200K	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	Sec. 5317 - New Freedom >200K	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Other FTA	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	Regionally Significant or Other (incl FHWA transfers)	$1,823,774	$2,002,797	$3,826,571	$1,534,074	$383,518	$1,917,592	$1,040,000	$260,000	$1,300,000
	Total Funds	**$18,513,073**	**$6,012,621**	**$24,525,694**	**$18,245,801**	**$4,398,950**	**$22,644,751**	**$17,277,073**	**$4,319,268**	**$21,596,341**
	Transportation Development Credits									
	Requested			$0			$0			$0
	Awarded			$0			$0			$0

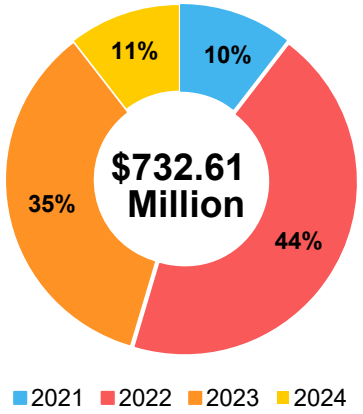
All Figures in Year of Expenditure (YOE) Dollars

	Transit Program	FY 2024			TOTAL		
		Federal	State/Other	Total	Federal	State/Other	Total
1	Sec. 5307 - Urbanized Formula >200K	$13,862,947	$3,465,737	$17,328,684	$55,584,188	$13,896,045	$69,480,233
2	Sec. 5307 - Urbanized Formula <200K	$0	$0	$0	$0	$0	$0
3	Sec. 5309 - Fixed Guideway Investment	$0	$0	$0	$0	$0	$0
4	Sec. 5337 - State of Good Repair	$0	$0	$0	$0	$0	$0
5	Sec. 5339 - Bus & Bus Facilities >200K	$2,550,754	$637,689	$3,188,443	$9,167,612	$2,291,904	$11,459,516
6	Sec. 5310 - Seniors & People w/Disabilities >200K	$0	$0	$0	$1,300,000	$0	$1,300,000
7	Sec. 5316 - JARC >200K	$0	$0	$0	$0	$0	$0
8	Sec. 5317 - New Freedom >200K	$0	$0	$0	$0	$0	$0
9	Other FTA	$0	$0	$0	$0	$0	$0
10	Regionally Significant or Other (incl FHWA transfers)	$4,224,141	$3,479,525	$7,703,666	$8,621,989	$6,125,840	$14,747,829
	Total Funds	**$20,637,843**	**$7,582,950**	**$28,220,793**	**$74,673,789**	**$22,313,789**	**$96,987,578**
	Transportation Development Credits						
	Requested			$0			$0
	Awarded			$0			$0

Analyses Section

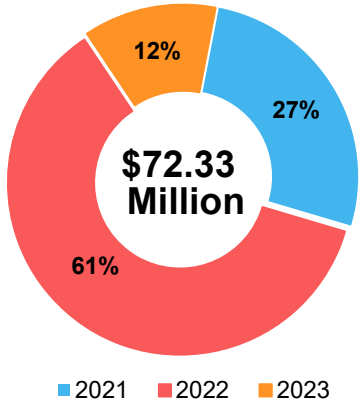
The illustrations below show a summary of the Total Costs per Fiscal Year for Texas Highway FHWA/Local Funds, New Mexico Highway/Transit Funds, and Texas Transit FTA/Local Funds.

TX Hwy FHWA & State/Local Funds



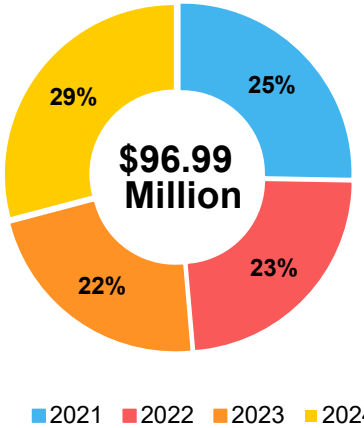
Fiscal Year	Cost (Millions)
2021	$76.52
2022	$323.49
2023	$255.71
2024	$76.89
Total	**$732.61**

NM Hwy Funds (NM STIP 2020-2023)



Fiscal Year	Cost (Millions)
2021	$19.20
2022	$44.13
2023	$9.00
Total	**$72.33**

TX Transit FTA/Local Funds

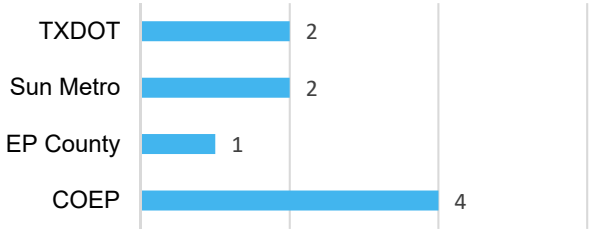


Fiscal Year	Cost (Millions)
2021	$24.53
2022	$22.64
2023	$21.60
2024	$28.22
Total	**$96.99**

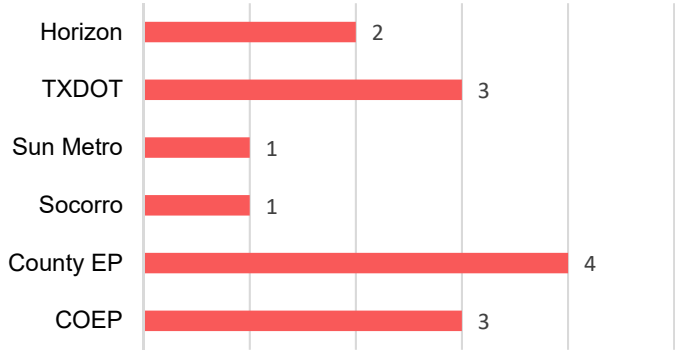
TX FHWA & State/Local Funds

Fiscal Year	Total YOE	Total Projects
2021	$76,517,793	9
2022	$323,493,124	14
2023	$255,708,031	5
2024	$76,887,852	6
	$732,606,800	34

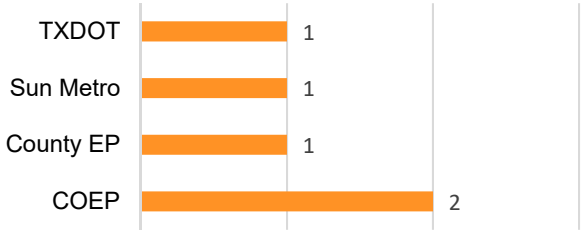
FY 2021



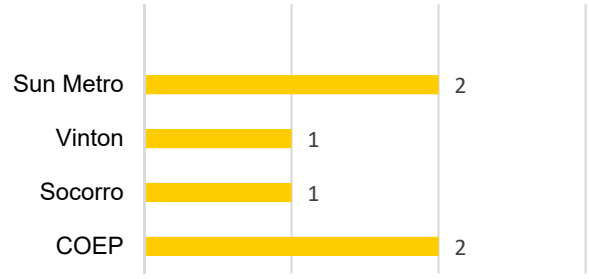
FY 2022



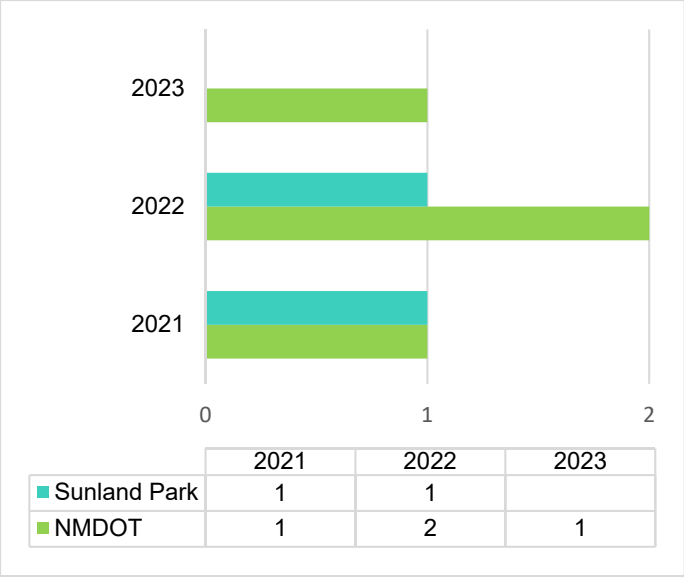
FY 2023



FY 2024

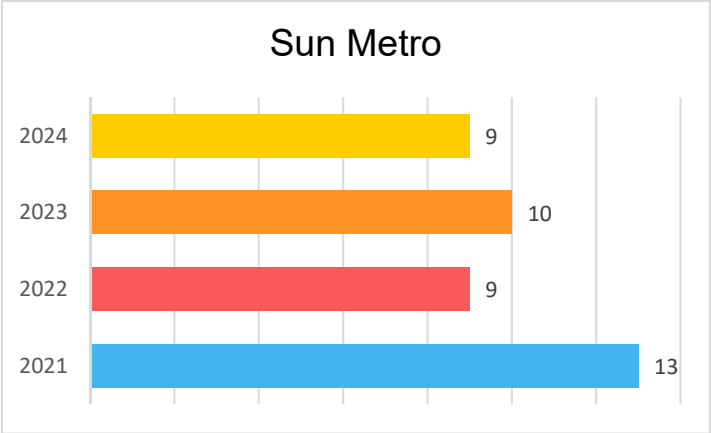


NM Hwy/Transit Funds



Fiscal Year	Total YOE	Total Projects
2021	$19,200,851	2
2022	$44,133,017	3
2023	$9,000,000	1
	$72,333,868	6

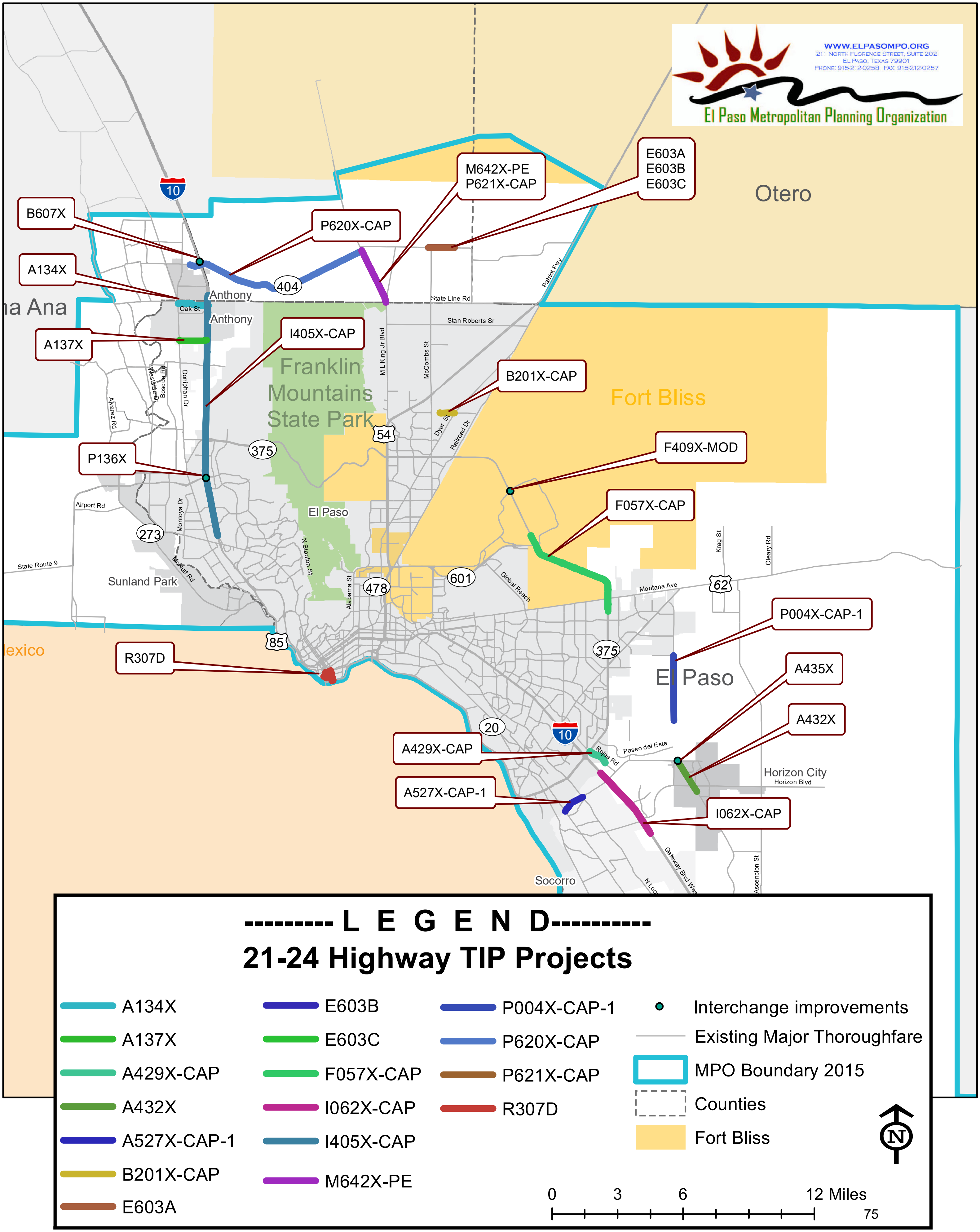
TX Transit FTA/Local Funds

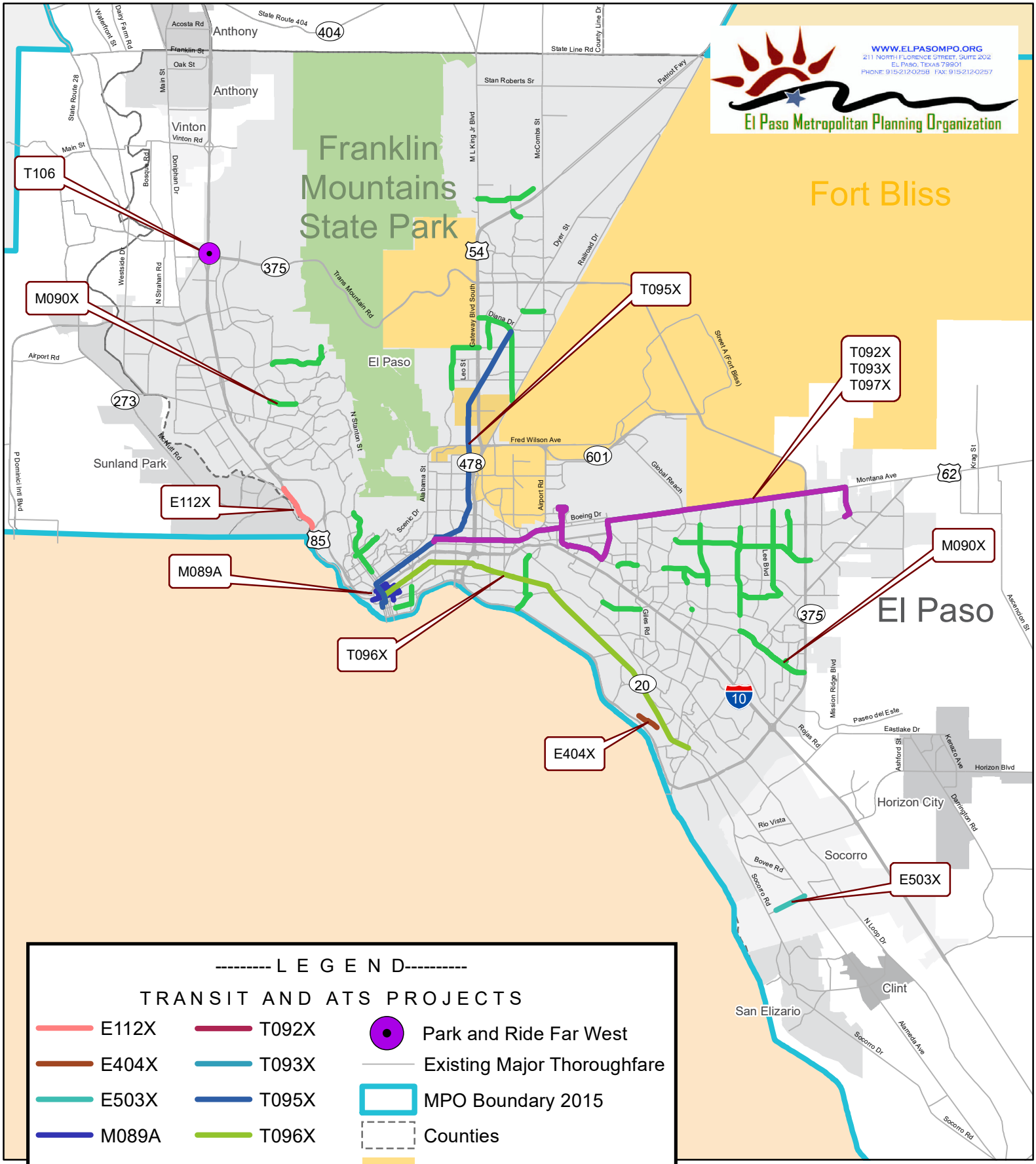


Fiscal Year	Total YOE	Total Projects
2021	$24,525,694	13
2022	$22,644,751	9
2023	$21,596,341	10
2024	$28,220,793	9
	$96,987,578	41

Map Section[4]

[4] Map may not contain all projects in this document, only map-able projects will be illustrated.


WWW.ELPASOMPO.ORG
211 North Florence Street, Suite 202
El Paso, Texas 79901
Phone: 915-212-0258 Fax: 915-212-0257
El Paso Metropolitan Planning Organization
Otero
Anthony
Franklin Mountains State Park
Fort Bliss
El Paso
Sunland Park
Horizon City
Socorro
B607X
A134X
A137X
P136X
P620X-CAP
M642X-PE
P621X-CAP
E603A
E603B
E603C
I405X-CAP
B201X-CAP
F409X-MOD
F057X-CAP
P004X-CAP-1
A435X
A432X
R307D
A429X-CAP
A527X-CAP-1
I062X-CAP
State Line Rd
Stan Roberts Sr
Patriot Fwy
Montana Ave
Paseo del Este
Horizon Blvd
Airport Rd
State Route 9
---------- L E G E N D ----------
21-24 Highway TIP Projects
A134X
A137X
A429X-CAP
A432X
A527X-CAP-1
B201X-CAP
E603A
E603B
E603C
F057X-CAP
I062X-CAP
I405X-CAP
M642X-PE
P004X-CAP-1
P620X-CAP
P621X-CAP
R307D
Interchange improvements
Existing Major Thoroughfare
MPO Boundary 2015
Counties
Fort Bliss
0 3 6 12 Miles


WWW.ELPASOMPO.ORG
211 North Florence Street, Suite 202
El Paso, Texas 79901
Phone: 915-212-0258 Fax: 915-212-0257
El Paso Metropolitan Planning Organization
Franklin Mountains State Park
Fort Bliss
El Paso
Anthony
Vinton
Sunland Park
Horizon City
Socorro
San Elizario
Clint
T106
M090X
T095X
T092X
T093X
T097X
E112X
M089A
T096X
E404X
E503X
M090X
---------L E G E N D----------
TRANSIT AND ATS PROJECTS
E112X
E404X
E503X
M089A
M090X
T092X
T093X
T095X
T096X
T097X
Park and Ride Far West
Existing Major Thoroughfare
MPO Boundary 2015
Counties
Fort Bliss
0
2.25
4.5
9 Miles

MPO Self-Certification

MPO SELF-CERTIFICATION

In accordance with 23 CFR Part 450.336 and 450.220 of the Fixing America's Surface Transportation Act (FAST Act):, the Texas Department of Transportation, and the El Paso Metropolitan Planning Organization for the El Paso urbanized area(s) hereby certify that the transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

1. 23 U.S.C. 134, 49 U.S.C. 5303, and this subpart;
2. In nonattainment and maintenance areas, sections 174 and 176(c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506(c) and (d)) and 40 CFR part 93
3. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
4. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
5. Section 1101(b) of the FAST Act (Pub. L. 114-357) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in DOT funded projects;
6. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
7. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101*et seq.*) and 49 CFR parts 27, 37, and 38 ;
8. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
9. Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and
10. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

DocuSigned by:
836C5CF53D844FE...
District
Texas Department of Transportation

Tomas Trevino, P.E.
District Engineer
6/1/2020
Date

Metropolitan Planning Organization
Policy Board Chairperson

Vincent Perez
Chairperson
5/22/2020
Date

MPO SELF-CERTIFICATION FOR NON-ATTAINMENT AREAS CERTIFICATION STATEMENT

The following information provides a summary of policies, procedures, and planning activities of the El Paso Metropolitan Planning Organization (MPO) and its Transportation Policy Board set forth to meet the requirements of federal transportation and air quality planning regulations in carrying out the FY 2020 and FY 2021 Unified Planning Work Program for Regional Transportation Planning and biennial development of the Transportation Improvement Program.

Metropolitan Planning: 23 U.S.C. 134, 49 U.S.C 5303, and implementing regulations;

The El Paso MPO's planning process is based on using state-of-the-art procedures, encompassing accurate data and methodologies, applied in a professional and unbiased manner. This planning process is carried out through an open approach that includes all local, state and federal transportation and air quality related agencies and organization, local elected officials and the public in the decision-making process. The continued focus of the MPO planning process is on the use of innovative techniques, as well as facilitating communication and partnerships as key mechanisms for improving mobility and air quality.

This process is carried out through the implementation of the Unified Planning Work Program through Performance Based Planning and the development of a financial and fiscally constrained long-range multi-modal transportation plan for the region; the biennial development of the Transportation Improvement Program; the development and adoption of the Metropolitan Transportation Plan every four years; the ongoing implementation of the region's Congestion Management Process focusing on the Travel Demand Management (TDM), Transportation Systems Management (TSM), and Intelligent Transportation System (ITS) technology; working closely with transportation providers throughout the region to conduct major investment and corridor feasibility studies which serve to evaluate, refine, and select transportation options for implementation; and ensuring that policies, programs, and projects when implemented will result in improved air quality for the region through the air quality conformity process.

Statewide Planning: U.S.C. Title 23, Sec. 135, U.S.C. Title 49, Ch. 53, Secs 5307-5311 and 5323(l); and 23 CFR Part 450.220

El Paso MPO works closely with TXDOT-El Paso District Office, the TXDOT Transportation Planning and Programming Division, and the Texas Transportation Commission to support the planning, funding, and implementation of transportation improvements. Whenever called upon, planning assistance is provided to assist TXDOT in meeting Statewide Planning requirements. The MPO and the State share financial information to carry out the financial constraint requirements of the planning process.

Clean Air Act: Air Pollution Prevention and Control: In non-attainment and maintenance area, section 174 and 176 © and (d) of the Clean Air Act, as amended (42, U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93;

It is the policy of the El Paso MPO and its Transportation Policy Board that the continuing, cooperative, and comprehensive transportation planning process carried out by the MPO shall be done in coordination with the transportation-air quality planning process carried out by the State of Texas. Furthermore, it is the policy of the El Paso MPO and its Transportation Policy Board to not adopt a Metropolitan Transportation Plan or a Transportation Improvement Program until each plan or program has been demonstrated to be in conformity with the State Implementation Plan for Air Quality, including the air quality conformity requirements as set forth in the Clean Air Act Amendments of 1990. Resources are allocated biennially as part of the Unified Planning Work Program to ensure the coordination of the El Paso MPO transportation and air quality planning activities, and support determination of the air quality conformity process of the Metropolitan Transportation Plan and the Transportation Improvement Program. The El Paso MPO is an active partner with state and federal agencies as a member of the Air Quality Conformity Consultation Process.

Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CRF part 21; The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the bases of age in programs or activities receiving Federal financial assistance; and Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender;

The El Paso MPO is committed throughout the development of its plans and programs to ensure that no person on the grounds of age, gender, race color or national origin is excluded from participation in, denied the benefits of, or subjected to discrimination under any program receiving federal financial assistance. No plans, programs or policies developed or implemented by the El Paso MPO will have a disproportionately high adverse human health or environmental effect on minority and low-income populations. The El Paso MPO plans continue to work on improving the accessibility of employment to the identified protected populations. Further, many of the current MPO public meetings are held in minority and low-income communities in the region and are located near accessible public transit facilities. Funding is allocated as part of the Unified Planning Work Program for a Title VI Plan to maintain an analytical approach that produces procedures that meet Title VI requirements by ensuring that federally-funded transportation projects adequately consider effects on low-income and minority segments of the population.

Disadvantaged Business Enterprises (DBE) in planning projects: 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex or age in employment business opportunity; and Section 1101 (b) of the SAFETEA-LU (Pub. L. 109-59) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects; 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;

The El Paso MPO follows the City of El Paso's Disadvantaged Business Enterprise which in turn follows the TXDOT DBE Plan. Funding is allocated as part of the Unified Planning Work Program to maintain an analytical approach that produces procedures that meet Environmental Justice requirements by ensuring that federally-funded transportation projects adequately consider effects on low-income and minority segments of the population.

Americans with Disabilities Act of 1990: The provision of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR parts 27, 37, and 38; and Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

It is the policy of the El Paso MPO to ensure that all agency programs and services are accessible to people with disabilities and are in compliance with the applicable regulations as a condition of receiving Federal financial assistance from the Department of Transportation. The El Paso MPO will make reasonable accommodations to a qualified individual with a disability who attends on-site meetings and meeting facilities meet this requirement. Every effort is made to ensure that meeting facilities off-site are ADA accessible. A notice is published in advance of all MPO public meetings that reasonable accommodations will be provided for meeting locations on and off-site with a phone number and contact persons listed to provide assistance if needed. In addition, the El Paso MPO staff is actively involved in various ADA-related initiatives which are being carried out as part of the Unified Planning Work Program including Elderly and Disabled Planning, the Job Access/Reverse Commute Program, and the review of ADA compliance documents developed by the region's transit and paratransit agencies, all of which focus on ensuring that transportation program and services across the region are accessible to those citizens with disabilities.

Restrictions on influencing certain federal activities: CFR 29, Part 20;

It is the policy of the El Paso MPO that no state or federal funds received by the agencies shall be paid to any person for the purpose of influencing the award of a federal contract, grant, or loan or the entering into of a cooperative agreement. NO state or federal funds received by the agencies shall be used directly or indirectly to influence any member of Congress, any member of the State Legislature, or any local elected official to favor or oppose the adoption of any prosed legislation pending before any federal, state, or local legislative body.

Acronyms

ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
BACM	Best Available Control Measures
CFR	Code of Federal Regulations
CMAQ	Congestion, Mitigation, & Air Quality
CMP	Congestion Management Process
CO	Carbon Monoxide
DBE	Disadvantaged Business Enterprises
EPA	U.S. Environmental Protection Agency
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HOV	High Occupancy Vehicle
ITS	Intelligent Transportation System
IVHS	Intelligent Vehicle Highway System
MAP-21	Moving Ahead for Progress in the 21st Century
MOVES	Motor Vehicle Emission Simulator
MPO	Metropolitan Planning Organization: City of El Paso
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NEAP	Natural Events Action Plan
NM	New Mexico
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environment Department
NOx	Nitrogen Oxide
PM-10	Particulate Matter 10 Microns or Less
POE	Port of Entry
PPP	Public Participation Plan
PSP	Project Selection Process
RACT	Reasonably Available Control Technologies
ROW	Right of Way
RTP	Recreational Trails Program
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users
SIP	State Implementation Plan
SOV	Single Occupancy Vehicle
STIP	Statewide Transportation Improvement Program
STP-MM	Surface Transportation Program – Metro-Mobility
TAC	Texas Administrative Code
TAP	Transportation Alternatives Program
TASA	Transportation Alternatives Set-Aside
TCEQ	Texas Commission on Environmental Quality
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program
TMA	Transportation Management Area

TPAC	Transportation Project Advisory Committee
TPB	Transportation Policy Board
TPWD	Texas Parks and Wildlife Department
TRZ	Transportation Reinvestment Zone
TSM	Transportation System Management
TTI	Texas Transportation Institute
TXDOT	Texas Department of Transportation
UPWP	Unified Planning Work Program
UTEP	University of Texas at El Paso
UTP	Unified Transportation Program
VMT	Vehicles Miles Traveled
VOC	Volatile Organic Compound
YOE	Year of Expenditure

Appendix A
CMAQ Analyses

Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Bicycle Infrastructure Citywide

January 2021

Prepared for

By

Texas A&M Transportation Institute

Task Summary

The Texas A&M Transportation Institute (TTI) was tasked by the City of El Paso to perform a mobile source emissions analysis for a proposed project in the El Paso metropolitan region. The city is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ) to help implement the project.

The project will construct 13.0 miles of citywide bicycle infrastructure improvements in the City of El Paso.

Individual Project Analysis

The emissions analysis for the project is presented below. The project name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ applications, but more time and effort would increase the accuracy of the emissions benefits. As a result, this analysis should not be used for conformity purposes.

Bicycle Infrastructure Citywide

The Bicycle Infrastructure Citywide project will install 13.0 miles of bicycle lane improvements along 9 roadways in the El Paso region. The project will serve the City of El Paso by increasing its regional bike infrastructure coupled with existing transit projects, educational centers, and commercial developments. Bicycle facilities will support and provide connectivity to existing bicycle facilities citywide with connection to mass transit centers and facilities and provide an alternative method of transportation. The infrastructure will be installed within City right-of-way and no property acquisition is anticipated.

The project will construct bicycle facilities citywide to include: buffered bike lanes, conventional bike lanes, bicycle boulevards, shared lane markings, and protected bicycle lanes. The project will include associated signage, wayfinding, striping, and intersection treatments.

The limits of the improvements involve several roadways:

1. High Ridge, from Resler to Franklin Hills
2. Ojo de Agua, from Westwind to Via Descanso
3. Montwood, from Yarbrough to Lee Trevino
4. Lomaland, from Montwood to Trawood
5. Pellicano, from George Dieter to Loop 375
6. Peter Cooper, from Pellicano to Missy Yvette
7. George Dieter, from Vista del Sol to Montwood
8. Pebble Hills, from George Dieter to Lisa Scherr
9. Sean Haggerty, from Aaron St. to US 54 (Patriot Freeway)

The components of the project are part of the August 2016 City of El Paso Bike Plan.

Data Sources

The City of El Paso provided the project description and scope, along with project information and data for the analysis. These resources provided the research team with a better understanding of the proposed project and potential emissions benefits. In addition, TTI researchers reviewed emissions results from the *Update Air Quality Analysis for the Bicycle Infrastructure Citywide and Downtown Bicycle Improvements Phase I* report submitted to the City in 2019.

The technical report *2017 On-Road Mobile Source Annual, Summer Weekday and Winter Workday Emissions Inventories: El Paso Area, TTI, August 2019* describes development of 2017 analysis year El Paso MOVES2014-based actual on-road inventories, which were the basis for these MOVES runs, with respect to MOVES modeling procedures and MOVES input data. MOVES modeling set-ups and input data combinations are described starting on Page 33 of the report, in the section "Estimation of Seasonal Weekday Emissions Rates". Tables 21 through 30 and surrounding text contain the details. The MOVES modeling part of the process and the local/default input data combinations as described (Table 24) were used, updated where appropriate for model version (MOVES2014a versus MOVES2014) and for analysis year (CMAQ years 2030 versus 2017).

The actual fuel formulation sulfur values were adjusted to reflect "expected" future year values in place of actual average sulfur level values (i.e., to maintain consistency with the Tier 3 gasoline standard implemented in January 2017 and for consistency with Ultra Low Sulfur Diesel). It is also noteworthy that the age distributions and AVFT input data from the 2017 analysis were used, since these are based on the latest available TxDMV vehicle registrations data.

TTI staff used American Community Survey data to compute a bicycle mode share for El Paso, along with a future growth rate for the mode in the region.

Analysis Methods

TTI staff used the analysis method provided in the August 2008 version of the MOSERs Guide, Equation 11.1 – *Bicycle and Pedestrian Lanes or Paths*.

Stated in words, the average annual daily traffic (AADT) of the corridor is multiplied by the percentage of drivers shifting to bicycle mode, multiplied by the bike facility length, multiplied by the speed-based running exhaust emission factor for participants' trip before utilizing the bike lane.

The detailed equation is provided below in Strategy Equation.

The analysis year used is 2030. *For planning purposes, the emissions benefit of a static program will decline over time.* Without the increased use of the bike lanes over the project lifetime, any benefits accrued by the mode shift to bicycles may be negated by the increased emissions from potential higher traffic volumes in the corridor over time.

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10.
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs), gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- Running exhaust and evaporative emissions, start emissions, and brake wear and tire wear rates were calculated. (Process ID 1, 2, 9, 10, 11, 12, 13, 15, 16)
- Considering the project area and the type of trips reduced through the strategy, emissions on Road Type 5, urban unrestricted access were analyzed.
- Overall average speed in the seven roadways is assumed to be 30 mph (Speed bin 7).
- The analysis period is from 7:00 a.m. to 7:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10. Use of the bicycle lanes can occur throughout the day, but the greatest impact on emissions will occur with any peak hour or daytime mode shift.
- The vehicle-miles traveled (VMT) reduced as a result of the mode shift to bicycle were distributed proportionally across the 12 hours and by vehicle types and fuel types in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects. TTI staff determined a valid percentage mode shift from automobile to

bicycle by participants in El Paso region. The characteristics of this new facilities may provide impetus for significant mode shift, but planners should use available data.

The following assumptions were made for the project:

- Light-duty passenger vehicle and light-duty passenger truck 2030 AADT of 102,396 is estimated. This figure is based on the 2014, 2018, and 2019 ADT traffic counts from the City of El Paso. AADT is estimated based on the data plus a professional estimate of traffic growth and an averaging of the counts. It assumes 80% of the daily traffic along the roadways occurs in the 12-hour daytime period under analysis. It assumes 86% of the traffic is passenger vehicles.
- The current percent bicycle mode share for the El Paso region is estimated to be 2.0% and can serve as an optimistic mode share increase for the new bike facilities.
- The 0.02 increase in mode share represents new cyclists (vehicle trips replaced).
- Bike lane facility length of 13.0 miles is computed.

The emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Equation 11.1, Bicycle and Pedestrian Lanes or Paths

Daily Emission Reduction = AADT * PMS * L * EF_B

The average annual daily traffic of the corridor multiplied by the percentage of drivers shifting to bike/pedestrian multiplied by the average bicycle trip length multiplied by the speed-based running exhaust emission factor for participants' trip before participating in the bike/pedestrian program.

Final unit of measure: grams/day
Source: Capitol Area MPO (CAMPO)

Variables: **AADT:** Average annual daily traffic in corridor (vehicles/day)

EF_B: Speed-based running exhaust emission factor for participants' trip before participating in the bike/pedestrian program (NO_x, VOC, or CO) (grams/mile)

L: Length of facility (miles)

PMS: Percentage mode shift from driving to bike/pedestrian (decimal)

Analysis

Results

Daily Emission Reduction = AADT * PMS * L * EF_B

Note: Due to the large amount of data generated by the MOVES model and the required off-model computations, for presentation purposes the individual emissions rates are not provided in the results below.

For CO:

102,396 * 0.02 * 13.0 * EF_B = 28,049.829 grams/day

Daily emission reduction is equal to 28.050 kg/day

For NOx:

102,396 * 0.02 * 13.0 * EF_B = 1,508.280 grams/day

Daily emission reduction is equal to 1.508 kg/day

For VOC:

102,396 * 0.02 * 13.0 * EF_B = 877.730 grams/day

Daily emission reduction is equal to 0.878 kg/day

For PM-10:

102,396 * 0.02 * 13.0 * EF_B = 1,457.812 grams/day

Daily emission reduction is equal to 1.458 kg/day

Summary of Results

The overall emissions analysis results for the project are shown in Table 1. The estimated emissions benefits from the new bike lanes are significant and are dependent on increased use of bicycles as a travel mode in the city and region, therefore an emissions benefit in the El Paso region can be expected from this project.

Table 1. Estimated Emissions Benefits from Bicycle Infrastructure Citywide

Pollutant	Emissions Reduction (kg/day)
CO	28.050
NOx	1.508
VOC	0.878
PM_{10}	1.458

Emissions Reduction Analysis
for
El Paso County Transit

EPC Transit Study Scenarios 3 and 6

Regional Transit Start-up assistance
for FY 21-23

March 2020

By

Texas A&M Transportation Institute

Task Summary

The Texas A&M Transportation Institute (TTI) El Paso office was tasked by El Paso County Transit to perform a mobile source emissions analysis for two potential service expansion scenarios in the El Paso nonattainment area. The transit agency is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ).

The analysis focuses on the air quality benefits of two service expansion scenarios identified and supported from a feasibility study on transit service in El Paso County.

Individual Project Analysis

The emissions analysis for the project is presented below. The strategy name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy equation.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ program submission, but this analysis should not be used for conformity purposes.

EPC Transit Study Scenarios 3 and 6

TTI was tasked by El Paso County Transit to conduct a feasibility study for potential service changes and expansion in its service area. The purpose of the study was to:

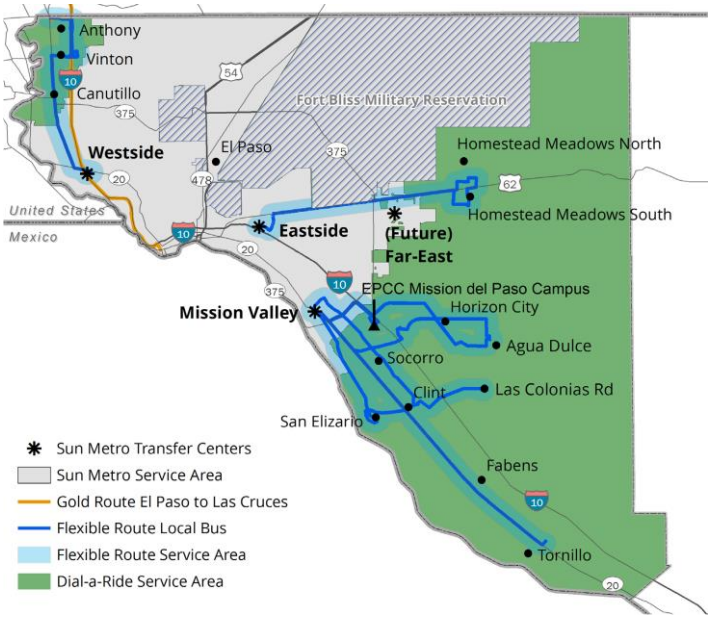
- Examine the feasibility of a seamless, countywide fixed-route transit system for all El Paso County
- Identify alternatives for transit within travel corridors throughout El Paso County
    - Service design
    - Organizational structure
    - Funding
- Assess potential to improve transit service for access to jobs, education, medical, shopping, personal business

Stakeholders involved in the study chose two service expansion scenarios for further study, including the potential air quality benefits for the region. These are identified in the study as Scenario 3: Flexible-Route Local Bus and Rural Dial-a-Ride and Scenario 6: Increased Flexible-Route Local Bus and Rural/Urban Dial-a-Ride.

El Paso County Transit currently provides service on six county bus routes, the Gold Route intercity bus between Las Cruces, NM, and El Paso, TX, and the Vamonos Vanpool program. The six county bus routes operate along established routes with set schedules, and passengers can get on and off the bus by flagging the bus driver. The county bus routes link communities throughout El Paso County, and all routes connect to a Sun Metro transfer center.

Scenario 3: Flexible-Route Local Bus and Rural Dial-a-Ride provides service to almost all currently served areas. Some routes will have increased frequency and hours of service. All routes are designed to serve passengers traveling in either direction along the route and are scheduled to improve transfers between routes. Dial-a-ride serves rural areas outside the flexible-route service area. The Gold Route and Vamonos Vanpool program continue unchanged.

Scenario 6: Increased Flexible-Route Local Bus and Rural/Urban Dial-a-Ride provides service to almost all currently served areas. Some routes will have increased frequency and hours of service. All routes are designed to serve passengers traveling in either direction along the route and are scheduled to improve transfers between routes. Dial-a-Ride serves all areas of the county outside the flexible-route service area. The Gold Route and Vamonos Vanpool program continue unchanged.



Data Sources

The TTI team utilized several sources for the analysis: El Paso County *Transit Study Scenarios* section of the feasibility study that provided details of each scenario and current service, the El Paso County Transit Title VI Plan (April 2017), and internal route data.

The technical report *2017 On-Road Mobile Source Annual, Summer Weekday and Winter Workday Emissions Inventories: El Paso Area* (TTI, August 2019) describes development of 2017 analysis year El Paso MOVES2014-based actual on-road inventories, which were the basis for these MOVES runs, with respect to MOVES modeling procedures and MOVES input data. MOVES modeling set-ups and input data combinations are described starting on Page 33 of the report, in the section "Estimation of Summer and Winter Weekday Emissions Factors." Tables 22 through 33 and surrounding text contain the details. The MOVES modeling part of the process and the local/default input data combinations as described (Table 24) was used, updated where appropriate for model version and for analysis year. The MOVES inputs for this analysis are consistent with the El Paso County 2017 AERR inventories analysis, with updates as needed (e.g., expected future year values for fuel properties). VMT hourly factors are consistent with the El Paso 2017 AERR inventories analyses; the vehicle type VMT mix estimate was developed consistent with the methodology as described in the El Paso 2017 AERR report, but for 2025 analysis year.

Transit passenger characteristics were derived from the American Public Transportation Association report *A Profile of Public Transportation Passenger Demographics and Travel Characteristics Reported in On-Board Surveys* published in May 2007 and the passenger characteristics information in the agency's Title VI plan.

Analysis Methods

TTI staff used the analysis method provided in the August 2008 version of the MOSERs Guide, equation 3.1 - *System/Service Expansion*. The detailed equation is provided below in Strategy Equation.

Stated in words, the equation measures the reduction in start emissions and running exhaust emissions from a change in mode during the operating period and subtracting any additional emissions from the transit vehicles. The benefit is derived through attracting single occupant passenger vehicle drivers to utilize transit as their mode of travel.

The analysis year used is 2025. *For planning purposes, the emissions benefit of a static program will decline over time.*

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs) vehicle types, gasoline and diesel-fueled, and transit buses are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- Transit vehicle (source type 43) emission rates were included. Sourcetypeid 43 is composed of four MOVES regclass IDs: 41, 42, 46, and 47. Regclassid 41 rates output were selected as most representative of the County Transit vehicle rates.
- Running exhaust, running evaporative, brake wear, tire wear, and start emissions (Process ID 1, 2, 9, 10, 11, 12, 13, 15, 16)
- Considering the project area and the type of trips reduced through the strategy, primarily, freeway commuting, emissions on Road Type 4, urban restricted access, was used for the passenger vehicles. Road Type 5, urban unrestricted access, was used for the transit vehicles.
- Passenger vehicle replaced average speed during operating hours (peak and off-peak) is assumed 30 mph (speed bin 7).
- Average transit vehicle speed is assumed 25 mph (speed bin 6) based on data received from Sun Metro.
- The analysis period is 6:00 a.m. to 8:00 p.m. on a winter weekday for CO; the same period on a summer weekday for NOx, VOC, and PM-10.
- The vehicle trips reduced (VT_R) and vehicle-miles travelled reduced (VMT_R) were distributed proportionally across the 14 hours of model analysis and by vehicle type and fuel type in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

- Based on the available ridership data, factoring in 25% of the increased ridership will be previous riders, an average new, former single occupant vehicle daily ridership of 1,097 for Scenario 3 and 2,997 for Scenario 6 was assumed.
- Scenario 3 shows 20.5 additional hours of service; Scenario 6 shows 56 additional hours.
- Additional bus mileage for Scenario 3, based on acquisition of 3 new transit vehicles, is 193 miles per day; additional bus mileage for Scenario 6, based on acquisition of 6 new transit vehicles, is 1,025 miles per day
- An average trip length replaced of 18 miles was assumed based agency route maps. The trip lengths were distributed evenly in the reduced VMT.

The final estimated emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Note: Due to the extensiveness of the MOVES model output data and to help presentation of results, the individual start rates and emission rates per distance (**TEF_{AUTO}** and **EF_B**) per vehicle type computed are not presented but are available for review, if needed.

3.1 System/Service Expansion

Daily Emission Reduction (for each pollutant) = A + B – C – D

$A = VT_R * TEF_{AUTO}$

Reduction in auto start emissions from trips reduced

$B = VMT_R * EF_B$

Reduction in auto running exhaust emissions from VMT reductions

$C = VT_{BUS} * TEF_{BUS}$

Increase in emissions from additional bus starts

$D = VMT_{BUS} * EF_{BUS}$

Increase in emissions from additional bus running exhaust emissions

Where

$VT_R = N_{TR} * F_{T,\ SOV}$

Number of new transit riders multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = VT_R * TL_W$

Number of vehicle trips reduced multiplied by the average auto trip length

Final unit of measure: grams/day
Source: Texas A&M Transportation Institute

Variables:

EF_B: Speed-based running exhaust emission factor for affected roadway before implementation (NO_x, VOC, or CO) (grams/mile)

EF_{BUS}: Speed-based running exhaust emission factor for transit vehicle (NO_x, VOC, or CO) (grams/mile)

$F_{T, SOV}$: Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)

N_{TR}: New transit ridership

TEF_{AUTO}: Auto trip-end emission factor (NO_x, VOC, or CO) (grams/trip)

TEF_{BUS}: Bus (or other transit vehicle) trip-end emission factor (NO_x, VOC, or CO) (grams/trip)

TL_W: Average auto trip length (miles)

VMT_{BUS}: VMT by transit vehicle

VMT_R: Reduction in daily automobile VMT

VT_{BUS}: Daily vehicle trips by transit vehicle

VT_R: Reduction in number of daily automobile vehicle trips

Analysis

For presentation purposes, the MOVES calculation results and extensive results from the equation calculations are not presented in the results below.

Scenario 3

$VT_R = (1{,}464 * 2) * 0.75 = 2{,}196$ trips/day

Number of transit riders multiplied by 2 multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = 2{,}196 * 18 = 39{,}528$ vehicle-miles/day

Number of vehicle trips reduced multiplied by the average auto trip length

Scenario 6

$VT_R = (3{,}996 * 2) * 0.75 = 5{,}994$ trips/day

Number of transit riders multiplied by 2 multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = 5{,}994 * 18 = 107{,}892$ vehicle-miles/day

Number of vehicle trips reduced multiplied by the average auto trip length

Summary of Results

The emissions analysis results for the scenarios is shown in Table 1. There are significant emissions benefits for all four pollutants. The results indicate an estimated air quality benefit from both scenarios if implemented.

Table 1. EPC Transit Study Scenarios 3 and 6 Emission Reductions

Pollutant	Scenario 3 Reductions (kg/day)	Scenario 6 Reductions (kg/day)
CO	44.015	103.979
NOx	2.182	4.733
VOC	2.784	6.162
PM_{10}	1.041	2.300

Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Downtown Bicycle Improvements Phase I

October 2019

Prepared for

By

Texas A&M Transportation Institute

Task Summary

The Texas A&M Transportation Institute (TTI) was tasked by the City of El Paso to perform a mobile source emissions analysis for a proposed project in the El Paso metropolitan region. The city is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ) to help implement the project.

The project will construct 3.5 miles of bike lane infrastructure improvements in the City downtown area.

Individual Project Analysis

The emissions analysis for the project is presented below. The project name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ applications, but more time and effort would increase the accuracy of the emissions benefits. As a result, this analysis should not be used for conformity purposes.

Downtown Bicycle Improvements - Phase I

The Downtown Bicycle Improvements - Phase I project will install 3.5 miles of bicycle lane improvements along 10 roadways in the El Paso downtown region. The project will serve the City of El Paso by increasing its regional bike infrastructure coupled with existing transit projects, educational centers, and commercial developments. Bicycle facilities will support and provide connectivity to existing bicycle facilities citywide with connection to mass transit centers and facilities and provide an alternative method of transportation. The infrastructure will be installed within City right-of-way and no property acquisition is anticipated.

The project will construct bicycle facilities downtown to include: buffered bike lanes, conventional bike lanes, bicycle boulevards, shared lane markings, and protected bicycle lanes. The project will include road diets, associated signage, wayfinding, striping, and intersection treatments.

The limits of the improvements involve several roadways:

Limit from:
Campbell from Missouri; El Paso from Sheldon; Main from Oregon; Mills from Sheldon; Missouri from Santa Fe; Myrtle from Stanton; San Antonio from Anthony; Sheldon from Santa Fe; Virginia to Mills; Magoffin from San Antonio

Limit to:
Campbell to Paisano; El Paso to Overland; Main to Campbell; Mills to Virginia; Missouri to Campbell; Myrtle to Campbell; San Antonio to Virginia; Sheldon to El Paso; Virginia to San Antonio; Magoffin to Virginia

The components of the project are part of the August 2016 City of El Paso Bike Plan.

Data Sources

The City of El Paso provided the project description and scope, along with project information and data for the analysis. These resources provided the research team with a better understanding of the proposed project and potential emissions benefits.

The technical report *2017 On-Road Mobile Source Annual, Summer Weekday and Winter Workday Emissions Inventories: El Paso Area, TTI, August 2019* describes development of 2017 analysis year El Paso MOVES2014-based actual on-road inventories, which were the basis for these MOVES runs, with respect to MOVES modeling procedures and MOVES input data. MOVES modeling set-ups and input data combinations are described starting on Page 33 of the report, in the section "Estimation of Seasonal Weekday Emissions Rates". Tables 21 through 30 and surrounding text contain the details. The MOVES modeling part of the process and the local/default input data combinations as described (Table 24) were used, updated where appropriate for model version (MOVES2014a versus MOVES2014) and for analysis year (CMAQ years 2030 versus 2017).

The actual fuel formulation sulfur values were adjusted to reflect "expected" future year values in place of actual average sulfur level values (i.e., to maintain consistency with the Tier 3 gasoline standard implemented in January 2017 and for consistency with Ultra Low Sulfur Diesel). It is also

noteworthy that the age distributions and AVFT input data from the 2017 analysis were used, since these are based on the latest available TxDMV vehicle registrations data.

TTI staff used American Community Survey data to compute a bicycle mode share for El Paso, along with a future growth rate for the mode in the region.

Analysis Methods

TTI staff used the analysis method provided in the August 2008 version of the MOSERs Guide, Equation 11.1 – *Bicycle and Pedestrian Lanes or Paths*.

Stated in words, the average annual daily traffic (AADT) of the corridor is multiplied by the percentage of drivers shifting to bicycle mode, multiplied by the bike facility length, multiplied by the speed-based running exhaust emission factor for participants' trip before utilizing the bike lane.

The detailed equation is provided below in Strategy Equation.

The analysis year used is 2030. *For planning purposes, the emissions benefit of a static program will decline over time.* Without the increased use of the bike lanes over the project lifetime, any benefits accrued by the mode shift to bicycles may be negated by the increased emissions from potential higher traffic volumes in the corridor over time.

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10.
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs), gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- Running exhaust and evaporative emissions, start emissions, and brake wear and tire wear rates were calculated. (Process ID 1, 2, 9, 10, 11, 12, 13, 15, 16)
- Considering the project area and the type of trips reduced through the strategy, emissions on Road Type 5, urban unrestricted access were analyzed.
- Overall average speed in the seven roadways is assumed to be 30 mph (Speed bin 7).
- The analysis period is from 7:00 a.m. to 7:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10. Use of the bicycle lanes can occur throughout the day, but the greatest impact on emissions will occur with any peak hour or daytime mode shift.
- The vehicle-miles traveled (VMT) reduced as a result of the mode shift to bicycle were distributed proportionally across the 12 hours and by vehicle types and fuel types in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects. TTI staff determined a valid percentage mode shift from automobile to bicycle by participants in El Paso region. The characteristics of this new facilities may provide impetus for significant mode shift, but planners should use available data.

The following assumptions were made for the project:

- Light-duty passenger vehicle and light-duty passenger truck 2030 AADT of 51,228 is estimated. This figure is based on 2014 ADT traffic counts from the City of El Paso. AADT is estimated based on the data plus a professional estimate of traffic growth and an averaging of the counts. It assumes 80% of the daily traffic along the roadways occurs in the 12-hour daytime period under analysis. It assumes 86% of the traffic is passenger vehicles.
- The current percent bicycle mode share for the El Paso region is estimated to be 2.0% and can serve as an optimistic mode share increase for the new bike facilities.
- The 0.02 increase in mode share represents new cyclists (vehicle trips replaced).
- Bike lane facility length of 3.5 miles is computed.

The emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Equation 11.1, Bicycle and Pedestrian Lanes or Paths

Daily Emission Reduction = AADT * PMS * L * EF_B

The average annual daily traffic of the corridor multiplied by the percentage of drivers shifting to bike/pedestrian multiplied by the average bicycle trip length multiplied by the speed-based running exhaust emission factor for participants' trip before participating in the bike/pedestrian program.

Final unit of measure: grams/day
Source: Capitol Area MPO (CAMPO)

Variables: **AADT:** Average annual daily traffic in corridor (vehicles/day)

EF_B: Speed-based running exhaust emission factor for participants' trip before participating in the bike/pedestrian program (NO_x, VOC, or CO) (grams/mile)

L: Length of facility (miles)

PMS: Percentage mode shift from driving to bike/pedestrian (decimal)

Analysis

Results

Daily Emission Reduction = AADT * PMS * L * EF_B

Note: Due to the large amount of data generated by the MOVES model and the required off-model computations, for presentation purposes the individual emissions rates are not provided in the results below.

For CO:

51,228 * 0.02 * 3.5 * EF_B = 3,778.188 grams/day

Daily emission reduction is equal to 3.778 kg/day

For NOx:

51,228 * 0.02 * 3.5 * EF_B = 118.226 grams/day

Daily emission reduction is equal to 0.118 kg/day

For VOC:

51,228 * 0.02 * 3.5 * EF_B = 203.159 grams/day

Daily emission reduction is equal to 0.203 kg/day

For PM-10:

51,228 * 0.02 * 3.5 * EF_B = 196.361 grams/day

Daily emission reduction is equal to 0.196 kg/day

Summary of Results

The overall emissions analysis results for the project are shown in Table 1. The estimated emissions benefits from the new bike lanes are significant and are dependent on increased use of bicycles as a travel mode in the city and region, therefore an emissions benefit in the El Paso region can be expected from this project.

Table 1. Estimated Emissions Benefits from Downtown Bicycle Improvements – Phase I

Pollutant	Emissions Reduction (kg/day)
CO	3.778
NOx	0.118
VOC	0.203
PM_{10}	0.196

Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Traffic Management Center Upgrade – Phase 1

February 2018

Prepared for

By

Texas A&M Transportation Institute

Task Summary

The Texas A&M Transportation Institute (TTI) was tasked by the City of El Paso to perform a mobile source emissions analysis for a proposed project in the El Paso metropolitan region. The city is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ) for the design phase to help implement the project.

The project will design and implement a citywide traffic signalization improvement program.

Individual Project Analysis

The emissions analysis for the project is presented below. The project name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ applications, but more time and effort would increase the accuracy of the emissions benefits. As a result, this analysis should not be used for conformity purposes.

Traffic Management Center Upgrade – Phase 1

The City of El Paso proposes a citywide traffic signal improvement program. The project includes the upgrade of the City of El Paso Traffic Management Center and Traffic Signal controller equipment city wide. This first phase is the design of the traffic signal upgrades to include evaluating latest technology used to control and communicate with traffic signal lights, adaptive technology, emergency preemption and mass transit priority. Field investigations will be necessary to evaluate any new construction needs to accommodate the new equipment footprint.

Phases 2-5 is the construction and implementation of the design for the upgraded signalized intersections throughout the City of El Paso.

Data Sources

The City of El Paso provided the project description and scope project information and data for the analysis. These resources provided the research team with a better understanding of the proposed project and potential emissions benefits.

The technical report *2014 On-Road Mobile Source Annual, Summer Weekday and Winter Workday Emissions Inventories: El Paso Area, TTI, August 2015* describes development of 2014 analysis year El Paso MOVES2014-based actual on-road inventories, which were the basis for these MOVES runs, with respect to MOVES modeling procedures and MOVES input data. MOVES modeling set-ups and input data combinations are described starting on Page 29 of the report, in the section "Estimation of Summer and Winter Weekday Emissions Factors". Tables 19 through 22 and surrounding text contain the details. The MOVES modeling part of the process and the local/default input data combinations as described (Table 22) was used, updated where appropriate for model version (MOVES2014a versus MOVES2014) and for analysis year (CMAQ years 2021 versus 2014).

In particular, the actual fuel formulation sulfur values were adjusted to reflect "expected" future year values in place of 2014 actual average sulfur level values (i.e., to maintain consistency with the Tier 3 gasoline standard implemented in January 2017 and for consistency with Ultra Low Sulfur Diesel). It is also noteworthy that the age distributions and AVFT input data from the 2014 analysis were used, since these are based on the mid-year 2014 TxDMV vehicle registrations data, which is currently still "latest available".

Traffic data for the city roadways was garnered from 2012 and 2016 TxDOT traffic count data for the El Paso District available online, along with El Paso MPO data. A growth rate was estimated and applied to the numbers.

Analysis Methods

TTI staff used the analysis method provided in the August 2008 version of the MOSERs Guide, Equation 7.4 – *Intelligent Transportation Systems (ITS)*. The equation estimates the sum of each ITS link's change in running exhaust emissions resulting from improved traffic flow due to the ITS improvements. In this case, a link is an individual intersection. As the projects are inter-connected

with each other and, in some cases, are installed on the same roadways, it is more conducive to analyzed them as one large project then apportion the any emissions benefit to each component. The equation is provided below in Strategy Equation.

The equation is valid for CMAQ purposes but a more robust analysis that models the hundreds of individual intersections would provide a more accurate estimate of the emissions benefits derived from the improvements.

Since the requested finding is for the design phase, no direct emissions benefit will derive from the planning, testing, and design of the program. Phases 2 through 5 will provide the actual reductions. The Maricopa Association of Governments, with TTI, developed a method to allocate a small portion of the estimated total emissions reduction from the program to the planning phase of projects that qualify for CMAQ funding. The CMAQ program does allow for funding of plans, but funding applications should still provide and estimated benefit. This method is used for the analysis below.

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10.
- The analysis year is 2030.
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs), motorcycles, light commercial trucks, single unit short and long-haul trucks, and combination short and long-haul trucks, gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 11, 21, 31, 32, 41, 42, 43, 51, 52, 53, 54, 61, 62).
- Running exhaust and evaporative emissions, break wear and tire wear emissions rates were calculated.
- Considering the project area and the type of emissions reduced through the strategy, emissions on Road Type 5, urban unrestricted access were analyzed.
- An average city network speed improvement from 30 mph to 35 mph is assumed (speed bin 7 to speed bin 8) as a result of implementation.
- The analysis period is from 7:00 a.m. to 7:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10. The effects of the signalization program can occur throughout the day, but the greatest impact on emissions will occur with any peak hour or daytime activity.
- The emissions reduced as a result of project were distributed across the 12 hours and by vehicle types and fuel types in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

The following assumptions were made for the project:

- A 2030 average daily VMT of 21,500,000 is estimated for the roadway segments affected by installation of the equipment. Factoring in the disparate AADT and ADT numbers throughout the City, along with El Paso MPO regional VMT numbers, the estimate seems reasonable enough to capture the benefit from the project. Future VMT is estimated based on the estimated current number plus application of a 1.105 percent annual growth factor.

- Assumes 80% of the daily traffic along the roadways occurs in the 12-hour daytime period under analysis. It is also assumed that the traffic will be affected by 80% of the intersections in the City. Thus, projected 2030 citywide daily VMT affected by the program is 14,077,700.
- Total project length of 600 miles is computed.
- Five (5) percent of total estimate of emissions reduction applied to Phase 1.

The emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Equation 7.4, Intelligent Transportation Systems (ITS)

Daily Emission Reduction = $\sum_{i=1}^{n}[\mathbf{L}_i * \mathbf{ADT}_i * (\mathbf{EF}_B - \mathbf{EF}_A)_i]$

The sum of each ITS link's change in running exhaust emissions resulting from improved traffic flow.

Variables:

ADT_i: Average daily traffic for each affected roadway

EF_A: Speed-based running exhaust emission factor after implementation (NO_x and VOC) (grams/mile)

EF_B: Speed-based running exhaust emission factor before implementation (NO_x and VOC) (grams/mile)

L_i: Length of each freeway affected by signalization program (miles)

N: Number of affected corridors

For this analysis, the **L** and **ADT** are essentially the estimated VMT (14,077,770) affected by the project. The VMT was distributed through the 12-hour analysis period and multiplied by the result of the emission rate differences. This created a total estimated emissions reduction for the 2030 analysis year for the final, implemented project shown in the table below.

Pollutant	Emissions Reduction (kg/day)
CO	1,360.54
NOx	178.15
VOC	70.04
PM_{10}	203.03

Five percent of this total estimate was applied to Phase 1. The other 95 percent will be available for Phases 2-5 CMAQ applications.

Summary of Results

The emissions analysis results for the planning and design phase of the signalization project are shown in Table 1. As a reminder, for CMAQ application purposes, an emissions benefit should be shown for a project. Planning phases of projects create a dilemma for planners. The overall program is often built through implementation of individual phases. Planning and design phases do not create an emissions reduction in and of themselves. Only when constructed and operating do they begin to fulfill their role in emissions reductions. Five percent of the total estimated reductions for the traffic management center upgrade was applied to Phase 1. Nevertheless, the analysis shows a significant emissions benefit in the El Paso region can be expected from this project.

Table 1. Estimated Emissions Benefits from Traffic Management Center Upgrade – Phase 1

Pollutant	Emissions Reduction (kg/day)
CO	68.03
NOx	8.91
VOC	3.50
PM_{10}	10.15

Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Traffic Management Center Upgrade Phase 2 – Design and Construction

March 2020

Prepared for

By

Texas A&M Transportation Institute

Task Summary

The Texas A&M Transportation Institute (TTI) was tasked by the City of El Paso to perform a mobile source emissions analysis for a proposed project in the El Paso metropolitan region. The city is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ) to begin the phased implementation of improvements to the City's Traffic Management Center.

Individual Project Analysis

The emissions analysis for the project is presented below. The project name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. As a result, this analysis should not be used for conformity purposes.

Traffic Management Center Upgrade – Phase 2 – Design and Construction

The City of El Paso seeks to implement phased updates to the City's Traffic Management Center (TMC). The second phase of these improvements consists of the following:

Upgrades to Communications and Controllers

- Ethernet/IP-based communications to all traffic elements (fiber optic/wireless/ethernet-over-copper)
- Infrastructure to support next generation transportation technologies.
    - Connected Vehicles
    - Connected vehicle infrastructure
    - Autonomous vehicle
    - Internet of things

Data Sources

The City of El Paso provided items containing project information and data including project description and cost estimates. These resources provided the research team with a better understanding of the proposed project and potential emissions benefits.

Emission rates used in the analyses were obtained from the U.S. Environmental Protection Agency's MOVES2014a model. TTI staff created MOVES2014a output files using MOVES input parameters consistent with the latest TCEQ periodic emissions inventories, i.e., the 2017 AERR inventories for El Paso County documented in "*Development of 2017 On-Road Mobile Source Annual, Summer Work Weekday, and Winter Work Weekday Emissions Inventories for Specified Areas: El Paso Area*" (TTI, August 2019), with adjustments as needed for 2030 future analysis year. Local parameters include: meteorological, fuels, fuel fractions, age distributions, Inspection and Maintenance Program. The input files used to generate emission rates are consistent with those used for conformity analysis.

El Paso regional vehicle fleet mix fractions were derived from the TTI study *Production of Statewide Non-Link-Based, On-Road Emissions Inventories with the MOVES Model for the Eight-Hour Ozone Standard Attainment Demonstration Modeling*, conducted in August 2013.

Traffic data for the city roadways was garnered from TxDOT traffic count data for the El Paso District available online, along with El Paso MPO data. A growth rate was estimated and applied to the numbers.

Analysis Methods

TTI staff used the analysis method provided in the August 2008 version of the MOSERs Guide, Equation 7.4 – *Intelligent Transportation Systems (ITS)*. The equation estimates the sum of each ITS link's change in running exhaust emissions resulting from improved traffic flow due to the ITS improvements. In this case, a link is an individual intersection. As the projects are inter-connected with each other and, in some cases, are installed on the same roadways, it is more conducive to analyzed them as one large project then apportion the any emissions benefit to each component. The equation is provided below in Strategy Equation.

The equation is valid for CMAQ purposes but a more robust analysis that models the hundreds of individual intersections would provide a more accurate estimate of the emissions benefits derived from the improvements.

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10.
- The analysis year is 2030.
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs), motorcycles, light commercial trucks, single unit short and long-haul trucks, and combination short and long-haul trucks, gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 11, 21, 31, 32, 41, 42, 43, 51, 52, 53, 54, 61, 62).
- Running exhaust and evaporative emissions, break wear and tire wear emissions rates were calculated.
- Considering the project area and the type of emissions reduced through the strategy, emissions on Road Type 5, urban unrestricted access were analyzed.
- An average city network speed improvement from 30 mph to 35 mph is assumed (speed bin 7 to speed bin 8) as a result of implementation.
- The analysis period is from 6:00 a.m. to 6:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10. The effects of the signalization program can occur throughout the day, but the greatest impact on emissions will occur with any peak hour or daytime activity.
- The emissions reduced as a result of project were distributed across the 12 hours and by vehicle types and fuel types in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

The following assumptions were made for the project:

- A 2030 average daily VMT of 21,500,000 is estimated for the roadway segments affected by installation of the equipment. Factoring in the disparate AADT and ADT numbers throughout the City, along with El Paso MPO regional VMT numbers, the estimate seems reasonable enough to capture the benefit from the project. Future VMT is estimated based on the estimated current number plus application of a 1.105 percent annual growth factor.
- Assumes 80% of the daily traffic along the roadways occurs in the 12-hour daytime period under analysis. It is also assumed that the traffic will be affected by 80% of the intersections in the City. Thus, projected 2030 citywide daily VMT affected by the program is 14,077,700.
- Total project length of 600 miles is computed.
- Twenty-five (25) percent of total estimate of emissions reduction applied to Phase 2.

The emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Equation 7.4, Intelligent Transportation Systems (ITS)

Daily Emission Reduction = $\sum_{i=1}^{n}[\mathbf{L}_i * \mathbf{ADT}_i * (\mathbf{EF}_B - \mathbf{EF}_A)_i]$

The sum of each ITS link's change in running exhaust emissions resulting from improved traffic flow.

Variables:

ADT_i: Average daily traffic for each affected roadway

EF_A: Speed-based running exhaust emission factor after implementation (NO_x and VOC) (grams/mile)

EF_B: Speed-based running exhaust emission factor before implementation (NO_x and VOC) (grams/mile)

L_i: Length of each freeway affected by signalization program (miles)

N: Number of affected corridors

For this analysis, the **L** and **ADT** are essentially the estimated VMT (14,077,770) affected by the project. The VMT was distributed through the 12-hour analysis period and multiplied by the result of the emission rate differences. This created a total estimated emissions reduction for the 2030 analysis year for the final, implemented project shown in the table below.

Table 1. Total Estimated Emissions Reduction from Multi-Phase TMC Upgrade Project (2020 Update)

Pollutant	Emissions Reduction (kg/day)
CO	1,360.54
NOx	178.15
VOC	70.04
PM_{10}	203.03

Twenty-five percent of this total estimate was applied to Phase 2. Five percent was allocated to the previous Phase 1 design phase. The remaining 70 percent will be available for Phases 3-5 CMAQ applications.

Summary of Results

The emissions analysis results for the Phase 2 design and construction of the City's signalization project are shown in Table 2. The analysis shows a significant emissions benefit in the El Paso region can be expected from this project.

Table 2. Estimated Emissions Benefits from Traffic Management Center Upgrade – Phase 2 – Design and Construction

Pollutant	Emissions Reduction (kg/day)
CO	340.135
NOx	44.538
VOC	17.510
PM_{10}	50.758

Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Border Highway West Hike and Bike Trail (Racetrack to Executive Center)

March 2020

Prepared for

By

Texas A&M Transportation Institute

Task Summary

The Texas A&M Transportation Institute (TTI) was tasked by the City of El Paso to perform a mobile source emissions analysis for a proposed project in the El Paso metropolitan region. The city is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ) to help implement the project.

The project will construct 0.76 miles of hike and bike lane infrastructure improvements along Border Highway West.

Individual Project Analysis

The emissions analysis for the project is presented below. The project name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ applications, but more time and effort would increase the accuracy of the emissions benefits. As a result, this analysis should not be used for conformity purposes.

Border Highway West Hike and Bike Trail

The Border Highway West Hike and Bike Trail project will install 0.76 miles of pedestrian and bicycle lane improvements. These include an 11-foot asphalt pavement with irrigated landscaping. The limits of the improvements are from the racetrack interchange to the Executive Center Dr. interchange.

The project will serve the City of El Paso by increasing its regional infrastructure coupled with existing transit projects, educational centers, and commercial developments. Bicycle facilities support and provide connectivity to existing bicycle facilities Citywide with connection to mass transit centers and facilities, and also provide an alternative method of transportation.

The components of the project are consistent with the City of El Paso Bike Plan.

Data Sources

The City of El Paso provided the project description and scope. These resources provided the research team with a better understanding of the proposed project and potential emissions benefits.

The primary source for emission rates inputs and VMT factors (hourly factors and vehicle type VMT mix) for post-processing was the latest TCEQ periodic emissions inventories, i.e., the 2017 AERR inventories for El Paso County documented in *Development of 2017 On-Road Mobile Source Annual, Summer Work Weekday, and Winter Work Weekday Emissions Inventories for Specified Areas: El Paso Area* (TTI, August 2019). For VMT mix, the latest 2030 TxDOT El Paso District estimates were used.

TTI staff used American Community Survey data to compute a bicycle mode share for El Paso, along with a future growth rate for the mode in the region. Researchers reviewed Strava bicycle count data available online.

Analysis Methods

TTI staff used the analysis method provided in the August 2008 version of the MOSERs Guide, Equation 11.1 – *Bicycle and Pedestrian Lanes or Paths*.

Stated in words, the average annual daily traffic (AADT) of the corridor is multiplied by the percentage of drivers shifting to bicycle mode, multiplied by the bike facility length, multiplied by the speed-based running exhaust emission factor for participants' trip before utilizing the bike lane.

The detailed equation is provided below in Strategy Equation.

The analysis year used is 2030. *For planning purposes, the emissions benefit of a static program will decline over time.* Without the increased use of the bike lanes over the project lifetime, any benefits accrued by the mode shift to bicycles may be negated by the increased emissions from potential higher traffic volumes in the corridor over time.

Assumptions in the MOVES2014a output for the project included:

- Output created for CO, VOC, NOx, and PM-10.
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs), gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- Running exhaust, evaporative emissions, brake wear, tire wear, and start emissions rates were calculated. (Process ID 1, 2, 11, 12, 13, 15)
- Considering the project area and the type of trips reduced through the strategy, emissions on Road Type 5, urban unrestricted access were analyzed.
- Overall average speed in the seven roadways is assumed to be 30 mph (Speed bin 7).
- The analysis period is from 7:00 a.m. to 7:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10. Use of the bicycle lanes can occur throughout the day, but the greatest impact on emissions will occur with any peak hour or daytime mode shift.
- The vehicle-miles traveled (VMT) reduced as a result of the mode shift to bicycle were distributed proportionally across the 12 hours and by vehicle types and fuel types in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects. TTI staff determined a valid percentage mode shift from automobile to bicycle by participants in El Paso region. The characteristics of this new facility may provide impetus for significant mode shift, but planners should use available data.

The following assumptions were made for the project:

- Light-duty passenger vehicle and light-duty passenger truck AADT in the project area of 13,932 is estimated. This figure is based on AADT and ADT traffic counts from TxDOT and the City of El Paso. AADT is estimated based on the data plus a professional estimate of traffic growth and an averaging of the counts. It assumes 80% of the daily traffic along the roadways occurs in the 12-hour daytime period under analysis. It assumes 86% of the traffic is passenger vehicles.
- The current percent bicycle mode share for the El Paso region is estimated to be 2.0% and can serve as an optimistic mode share increase for the new bike facilities.
- The 0.02 increase in mode share represents new cyclists (vehicle trips replaced). Based on current Strava data along W. Paisano Dr. (US 85), this should be considered very optimistic.
- Bike lane facility length of 0.76 miles is computed.

The emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Equation 11.1, Bicycle and Pedestrian Lanes or Paths

Daily Emission Reduction = AADT * PMS * L * EF_B

The average annual daily traffic of the corridor multiplied by the percentage of drivers shifting to bike/pedestrian multiplied by the average bicycle trip length multiplied by the speed-based running exhaust emission factor for participants' trip before participating in the bike/pedestrian program.

Final unit of measure: grams/day
Source: Capitol Area MPO (CAMPO)

Variables: **AADT:** Average annual daily traffic in corridor (vehicles/day)

EF_B: Speed-based running exhaust and start emissions factor for participants' trip before participating in the bike/pedestrian program (NO_x, VOC, or CO) (grams/mile)

L: Length of facility (miles)

PMS: Percentage mode shift from driving to bike/pedestrian (decimal)

Analysis

Results

Daily Emission Reduction = AADT * PMS * L * EF_B

Note: Due to the large amount of data generated by the MOVES model and the required off-model computations, for presentation purposes the individual running and start emissions rates are not provided in the results below.

For CO:

13,932 * 0.02 * 0.76 * EF_B = 2.964 kg/day

For NOx:

13,932 * 0.02 * 0.76 * EF_B = 0.164 kg/day

For VOC:

13,932 * 0.02 * 0.76 * EF_B = 0.221 kg/day

For PM-10:

13,932 * 0.02 * 0.76 * EF_B = 0.221 kg/day

Summary of Results

The overall emissions analysis results for the project are shown in Table 1. The estimated emissions benefits from the pedestrian and bicycle facilities are modest and dependent on increased use of

bicycles as a travel mode in the city and region, however an emissions benefit in the El Paso region can be expected from this project.

Table 1. Estimated Emissions Benefits from Border Highway West Hike and Bike Trail

Pollutant	Emissions Reduction (kg/day)
CO	2.964
NOx	0.164
VOC	0.221
PM_{10}	0.014

Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Traffic Management Center Upgrade Phase 3 - Construction

March 2020

Prepared for

By

Texas A&M Transportation Institute

Task Summary

The Texas A&M Transportation Institute (TTI) was tasked by the City of El Paso to perform a mobile source emissions analysis for a proposed project in the El Paso metropolitan region. The city is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ) to begin the phased implementation of improvements to the City's Traffic Management Center.

Individual Project Analysis

The emissions analysis for the project is presented below. The project name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. As a result, this analysis should not be used for conformity purposes.

Traffic Management Center Upgrade – Phase 3 - Construction

The City of El Paso seeks to implement phased updates to the City's Traffic Management Center (TMC). The third phase of these improvements consists of the following:

Upgrades to Communications and Controllers

- Latest Advanced Traffic Management Systems (ATMS)
- Latest Advanced Transportation Controllers
- Adaptive Traffic Control Systems (ATCS)
- Multi-Modal Transportation Solutions, to include the following:
    - Transit signal priority for mass transit vehicles
    - Pre-emption for Emergency Vehicles
    - Bicyclists
    - Pedestrians
- Hybrid or high-resolution vehicle detection technologies (Radar, Video, microwave)
- Changeable Message Signs (CMS)

Data Sources

The City of El Paso provided items containing project information and data including project description and cost estimates. These resources provided the research team with a better understanding of the proposed project and potential emissions benefits.

Emission rates used in the analyses were obtained from the U.S. Environmental Protection Agency's MOVES2014a model. TTI staff created MOVES2014a output files using MOVES input parameters consistent with the latest TCEQ periodic emissions inventories, i.e., the 2017 AERR inventories for El Paso County documented in "*Development of 2017 On-Road Mobile Source Annual, Summer Work Weekday, and Winter Work Weekday Emissions Inventories for Specified Areas: El Paso Area*" (TTI, August 2019), with adjustments as needed for 2030 future analysis year. Local parameters include: meteorological, fuels, fuel fractions, age distributions, Inspection and Maintenance Program. The input files used to generate emission rates are consistent with those used for conformity analysis.

El Paso regional vehicle fleet mix fractions were derived from the TTI study *Production of Statewide Non-Link-Based, On-Road Emissions Inventories with the MOVES Model for the Eight-Hour Ozone Standard Attainment Demonstration Modeling*, conducted in August 2013.

Traffic data for the city roadways was garnered from TxDOT traffic count data for the El Paso District available online, along with El Paso MPO data. A growth rate was estimated and applied to the numbers.

Analysis Methods

TTI staff used the analysis method provided in the August 2008 version of the MOSERs Guide, Equation 7.4 – *Intelligent Transportation Systems (ITS)*. The equation estimates the sum of each ITS link's change in running exhaust emissions resulting from improved traffic flow due to the ITS

improvements. In this case, a link is an individual intersection. As the projects are inter-connected with each other and, in some cases, are installed on the same roadways, it is more conducive to analyzed them as one large project then apportion the any emissions benefit to each component. The equation is provided below in Strategy Equation.

The equation is valid for CMAQ purposes but a more robust analysis that models the hundreds of individual intersections would provide a more accurate estimate of the emissions benefits derived from the improvements.

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10.
- The analysis year is 2030.
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs), motorcycles, light commercial trucks, single unit short and long-haul trucks, and combination short and long-haul trucks, gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 11, 21, 31, 32, 41, 42, 43, 51, 52, 53, 54, 61, 62).
- Running exhaust and evaporative emissions, break wear and tire wear emissions rates were calculated.
- Considering the project area and the type of emissions reduced through the strategy, emissions on Road Type 5, urban unrestricted access were analyzed.
- An average city network speed improvement from 30 mph to 35 mph is assumed (speed bin 7 to speed bin 8) as a result of implementation.
- The analysis period is from 6:00 a.m. to 6:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10. The effects of the signalization program can occur throughout the day, but the greatest impact on emissions will occur with any peak hour or daytime activity.
- The emissions reduced as a result of project were distributed across the 12 hours and by vehicle types and fuel types in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

The following assumptions were made for the project:

- A 2030 average daily VMT of 21,500,000 is estimated for the roadway segments affected by installation of the equipment. Factoring in the disparate AADT and ADT numbers throughout the City, along with El Paso MPO regional VMT numbers, the estimate seems reasonable enough to capture the benefit from the project. Future VMT is estimated based on the estimated current number plus application of a 1.105 percent annual growth factor.
- Assumes 80% of the daily traffic along the roadways occurs in the 12-hour daytime period under analysis. It is also assumed that the traffic will be affected by 80% of the intersections in the City. Thus, projected 2030 citywide daily VMT affected by the program is 14,077,700.
- Total project length of 600 miles is computed.
- Twenty-five (25) percent of total estimate of emissions reduction applied to Phase 3.

The emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Equation 7.4, Intelligent Transportation Systems (ITS)

Daily Emission Reduction = $\sum_{i=1}^{n}[\mathbf{L}_i * \mathbf{ADT}_i * (\mathbf{EF}_B - \mathbf{EF}_A)_i]$

The sum of each ITS link's change in running exhaust emissions resulting from improved traffic flow.

Variables:

ADT_i: Average daily traffic for each affected roadway

EF_A: Speed-based running exhaust emission factor after implementation (NO_x and VOC) (grams/mile)

EF_B: Speed-based running exhaust emission factor before implementation (NO_x and VOC) (grams/mile)

L_i: Length of each freeway affected by signalization program (miles)

N: Number of affected corridors

For this analysis, the **L** and **ADT** are essentially the estimated VMT (14,077,770) affected by the project. The VMT was distributed through the 12-hour analysis period and multiplied by the result of the emission rate differences. This created a total estimated emissions reduction for the 2030 analysis year for the final, implemented project shown in Table 1 below.

Table 1. Total Estimated Emissions Reduction from Multi-Phase TMC Upgrade Project (2020 Update)

Pollutant	Emissions Reduction (kg/day)
CO	1,360.54
NOx	178.15
VOC	70.04
PM_{10}	203.03

Twenty-five percent of this total estimate was applied to Phase 2. Five percent was allocated to the previous Phase 1 design phase, 25 percent to the proposed Phase 2. The remaining 45 percent will be available for Phases 4-5 CMAQ applications.

Summary of Results

The emissions analysis results for the Phase 3 construction of the City's traffic signalization project are shown in Table 2. The analysis shows a significant emissions benefit in the El Paso region can be expected from this project.

Table 2. Estimated Emissions Benefits from Traffic Management Center Upgrade – Phase 3 Construction

Pollutant	Emissions Reduction (kg/day)
CO	340.135
NOx	44.538
VOC	17.510
PM_{10}	50.758

Emission Reduction Analysis for Sun Metro Proposed CMAQ Project

Alameda RTS Operations Assistance Phase 3 Update

December 2017

Prepared for

By

[This page was intentionally left blank]

Task Summary

The Texas A&M Transportation Institute (TTI) El Paso office was tasked by Sun Metro to perform an updated mobile source emissions analysis for a proposed project in the El Paso nonattainment area. The transit agency is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ).

The project is operational assistance for the third phase of the Rapid Transit Service, BRIO, in the Alameda corridor in east El Paso region. The agency requested an update of the analysis using 2021 as the analysis year instead of the original 2020 data.

Individual Project Analysis

The emissions analysis for the project is presented below. The strategy name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy equation.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ program submission, but *this analysis should not be used for conformity purposes*.

Alameda RTS Operations Assistance - Phase 3

Sun Metro transit agency is proposing operational assistance for the future 14.9-mile BRIO line in the Alameda corridor in northeast El Paso. The RTS line begins at the Downtown Transfer Center and ends at the Mission Valley Transfer Center. Fourteen buses will operate along the route with 29 stations.

Data Sources

Sun Metro provided several data sources to the TTI team for the original analysis: a map of the proposed route, previous emissions analysis for the route, the mileage, hours of operation, and operating costs for the route.

The technical report *2014 On-Road Mobile Source Annual, Summer Weekday and Winter Workday Emissions Inventories: El Paso Area, TTI, August 2015* describes development of 2014 analysis year El Paso MOVES2014-based actual on-road inventories, which were the basis for these MOVES runs, with respect to MOVES modeling procedures and MOVES input data. MOVES modeling set-ups and input data combinations are described starting on Page 29 of the report, in the section "Estimation of Summer and Winter Weekday Emissions Factors". Tables 19 through 22 and surrounding text contain the details. The MOVES modeling part of the process and the local/default input data combinations as described (Table 22) was used, updated where appropriate for model version (MOVES2014a versus MOVES2014) and for analysis year (CMAQ years 2021 versus 2014).

In particular, the actual fuel formulation sulfur values were adjusted to reflect "expected" future year values in place of 2014 actual average sulfur level values (i.e., to maintain consistency with the Tier 3 gasoline standard implemented in January 2017 and for consistency with Ultra Low Sulfur Diesel). It is also noteworthy that the age distributions and AVFT input data from the 2014 analysis were used, since these are based on the mid-year 2014 TxDMV vehicle registrations data, which is currently still "latest available".

Transit passenger characteristics were derived from the American Public Transportation Association report *A Profile of Public Transportation Passenger Demographics and Travel Characteristics Reported in On-Board Surveys* published in May 2007.

Analysis Methods

TTI staff used an analysis method provided in the August 2008 version of the MOSERs Guide, equation 3.2 - *System/Service Operational Improvements*. The detailed equation is provided below in Strategy Equation.

Stated in words, the equation measures the reduction in start emissions and running exhaust emissions from a change in mode during the operating period and subtracting any additional emissions from the transit vehicles. The benefit is derived through attracting single occupant passenger vehicle drivers to utilize transit as their mode of travel.

The analysis year used is 2021. *For planning purposes, the emissions benefit of a static program will decline over time.*

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs) vehicle types, gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- The project is assumed to be implemented in the analysis; therefore, no transit vehicle emissions are included in the analysis.
- Considering the project area and the type of trips reduced through the strategy, primarily, freeway commuting, emissions on Road Type 4, urban restricted access was used.
- Average speed on IH-10 during RTS operating hours (peak and off-peak) is assumed 30 mph.
- The analysis period is AM peak hours of 6:00-9:00 a.m., off-peak daytime hours from 9:00 a.m.-3:00 p.m. and PM peak hours of 3:00-8:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10.
- The vehicle trips reduced (VT_R) and vehicle-miles travelled reduced (VMT_R) were distributed proportionally across the 14 hours of model analysis and by vehicle type and fuel type in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

- Based on ridership data provided by Sun Metro, an average daily ridership of 3,500 was assumed.
- APTA ridership survey reports show 55% of transit passengers to be commuting. The RTS project focuses on capturing new commute traffic, so 75% of riders are assumed to be traveling to work and back totaling 2,625 per day.
- The analysis assumes 35% of these commute passengers are former single occupant vehicle (SOV) drivers. This translates to 26.25% of all passengers. This should be considered optimistic. The APTA survey report showed 14.3% of transit roadway passengers would drive alone as an alternative if no transit service was available. However, this new service actively seeks SOV commuters.
- An average trip length of 14.9 miles was computed based on data provided by Sun Metro. The trip lengths were distributed evenly in the reduced VMT.

The final estimated emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Note: Due to the extensiveness of the MOVES model output data and to help presentation of results, the individual start rates and emission rates per distance (**TEF_{AUTO}** and **EF_B**) per vehicle type computed are not presented but are available for review if needed. Also, the project is assumed implemented by phase 3 thus transit vehicle emissions (parts C and D) are not included in this analysis.

3.2 System/Service Operational Improvements

Daily Emission Reduction (for each pollutant) = A + B

$A = VT_R * TEF_{AUTO}$

Reduction in auto start emissions from trips reduced

$B = VMT_R * EF_B$

Reduction in auto running exhaust emissions from VMT reductions

Where

$VT_R = N_{TR} * F_{T, SOV}$

Number of new transit riders multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = VT_R * TL_W$

Number of vehicle trips reduced multiplied by the average auto trip length

Final unit of measure: grams/day
Source: Texas A&M Transportation Institute

Variables:

EF_B:	Speed-based running exhaust emission factor for affected roadway before implementation (NO_x, VOC, or CO) (grams/mile)
$F_{T, SOV}$:	Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)
N_{TR}:	New transit ridership
TEF_{AUTO}:	Auto trip-end emission factor (NO_x, VOC, or CO) (grams/trip)
TL_W:	Average auto trip length (miles)

VMT_R: Reduction in daily automobile VMT

VT_R: Reduction in number of daily automobile vehicle trips

Analysis

$VT_R = (3{,}500 * 2) * 0.35 = 2{,}450$ trips/day

Number of transit riders multiplied by 2 multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = 2{,}450 * 14.9 = 36{,}505$ vehicle-miles/day

Number of vehicle trips reduced multiplied by the average auto trip length

Summary of Results

The emissions analysis result for the project is shown in Table 1. There are significant emissions benefits for all four pollutants. The results indicate an estimated air quality benefit from the Alameda RTS Phase 3 operational assistance project.

Table 1. Alameda RTS Operational Assistance – Phase 3 Emission Reductions

Pollutant	Emissions Reduction (kg/day)
CO	81.523
NOx	6.188
VOC	3.842
PM_{10}	1.948

Emission Reduction Analysis for Sun Metro Proposed CMAQ Project

Dyer RTS Operations Assistance Phase 3 Update

December 2017

Prepared for

By

[This page was intentionally left blank]

Task Summary

The Texas A&M Transportation Institute (TTI) El Paso office was tasked by Sun Metro to perform an updated mobile source emissions analysis for a proposed project in the El Paso nonattainment area. The transit agency is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ).

The project is operational assistance for the third phase of the Rapid Transit Service, BRIO, in the Dyer corridor in east El Paso region. The agency requested an update of the analysis using 2021 as the analysis year instead of the original 2020 data.

Individual Project Analysis

The emissions analysis for the project is presented below. The strategy name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy equation.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ program submission, but *this analysis should not be used for conformity purposes*.

Dyer RTS Operations Assistance - Phase 3

Sun Metro transit agency is proposing operational assistance for the future 12-mile BRIO line in the Dyer corridor in northeast El Paso. The RTS line begins at the Downtown Transfer Center and ends at the future Northeast Transfer Center. Eight buses will operate along the route with 22 stations.

Data Sources

Sun Metro provided several data sources to the TTI team for the original analysis: a map of the proposed route, previous emissions analysis for the route, the mileage, hours of operation, and operating costs for the route.

The technical report *2014 On-Road Mobile Source Annual, Summer Weekday and Winter Workday Emissions Inventories: El Paso Area, TTI, August 2015* describes development of 2014 analysis year El Paso MOVES2014-based actual on-road inventories, which were the basis for these MOVES runs, with respect to MOVES modeling procedures and MOVES input data. MOVES modeling set-ups and input data combinations are described starting on Page 29 of the report, in the section "Estimation of Summer and Winter Weekday Emissions Factors". Tables 19 through 22 and surrounding text contain the details. The MOVES modeling part of the process and the local/default input data combinations as described (Table 22) was used, updated where appropriate for model version (MOVES2014a versus MOVES2014) and for analysis year (CMAQ years 2021 versus 2014).

In particular, the actual fuel formulation sulfur values were adjusted to reflect "expected" future year values in place of 2014 actual average sulfur level values (i.e., to maintain consistency with the Tier 3 gasoline standard implemented in January 2017 and for consistency with Ultra Low Sulfur Diesel). It is also noteworthy that the age distributions and AVFT input data from the 2014 analysis were used, since these are based on the mid-year 2014 TxDMV vehicle registrations data, which is currently still "latest available".

Transit passenger characteristics were derived from the American Public Transportation Association report *A Profile of Public Transportation Passenger Demographics and Travel Characteristics Reported in On-Board Surveys* published in May 2007.

Analysis Methods

TTI staff used an analysis method provided in the August 2008 version of the MOSERs Guide, equation 3.2 - *System/Service Operational Improvements*. The detailed equation is provided below in Strategy Equation.

Stated in words, the equation measures the reduction in start emissions and running exhaust emissions from a change in mode during the operating period and subtracting any additional emissions from the transit vehicles. The benefit is derived through attracting single occupant passenger vehicle drivers to utilize transit as their mode of travel.

The analysis year used is 2021. *For planning purposes, the emissions benefit of a static program will decline over time.*

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs) vehicle types, gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- The project is assumed to be implemented in the analysis; therefore, no transit vehicle emissions are included in the analysis.
- Considering the project area and the type of trips reduced through the strategy, primarily, freeway commuting, emissions on Road Type 4, urban restricted access was used.
- Average speed on IH-10 during RTS operating hours (peak and off-peak) is assumed 30 mph.
- The analysis period is AM peak hours of 6:00-9:00 a.m., off-peak daytime hours from 9:00 a.m.-3:00 p.m. and PM peak hours of 3:00-8:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10.
- The vehicle trips reduced (VT_R) and vehicle-miles travelled reduced (VMT_R) were distributed proportionally across the 14 hours of model analysis and by vehicle type and fuel type in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

- Based on ridership data provided by Sun Metro, an average daily ridership of 3,450 was assumed.
- APTA ridership survey reports show 55% of transit passengers to be commuting. The RTS project focuses on capturing new commute traffic, so 75% of riders are assumed to be traveling to work and back totaling 2,588 per day.
- The analysis assumes 35% of these commute passengers are former single occupant vehicle (SOV) drivers. This translates to 26.25% of all passengers. This should be considered optimistic. The APTA survey report showed 14.3% of transit roadway passengers would drive alone as an alternative if no transit service was available. However this new service actively seeks SOV commuters.
- An average trip length of 12.0 miles was computed based on data provided by Sun Metro. The trip lengths were distributed evenly in the reduced VMT.

The final estimated emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Note: Due to the extensiveness of the MOVES model output data and to help presentation of results, the individual start rates and emission rates per distance (**TEF_{AUTO}** and **EF_B**) per vehicle type computed are not presented but are available for review if needed. Also, the project is assumed implemented by phase 3 thus transit vehicle emissions (parts C and D) are not included in this analysis.

3.2 System/Service Operational Improvements

Daily Emission Reduction (for each pollutant) = A + B

$A = VT_R * TEF_{AUTO}$

Reduction in auto start emissions from trips reduced

$B = VMT_R * EF_B$

Reduction in auto running exhaust emissions from VMT reductions

Where

$VT_R = N_{TR} * F_{T, SOV}$

Number of new transit riders multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = VT_R * TL_W$

Number of vehicle trips reduced multiplied by the average auto trip length

Final unit of measure: grams/day
Source: Texas A&M Transportation Institute

Variables:

EF_B:	Speed-based running exhaust emission factor for affected roadway before implementation (NO_x, VOC, or CO) (grams/mile)
$F_{T, SOV}$:	Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)
N_{TR}:	New transit ridership
TEF_{AUTO}:	Auto trip-end emission factor (NO_x, VOC, or CO) (grams/trip)
TL_W:	Average auto trip length (miles)

VMT_R: Reduction in daily automobile VMT

VT_R: Reduction in number of daily automobile vehicle trips

Analysis

$VT_R = (3,450 * 2) * 0.35 = 2,415$ trips/day

Number of new transit riders multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = 2,415 * 12.0 = 28,980$ vehicle-miles/day

Number of vehicle trips reduced multiplied by the average auto trip length

Summary of Results

The emissions analysis result for the project is shown in Table 1. There are significant daily emissions benefits for all four pollutants. The results indicate an estimated air quality benefit from the Dyer RTS Phase 3 operational assistance project.

Table 1. Dyer RTS Operational Assistance – Phase 3 Emission Reductions

Pollutant	Emissions Reduction (kg/day)
CO	68.691
NOx	5.170
VOC	3.380
PM_{10}	1.550

Emission Reduction Analysis for Sun Metro Proposed CMAQ Project

Montana RTS Operations Assistance Phase 1

March 2020

Prepared for

By

Task Summary

The Texas A&M Transportation Institute (TTI) El Paso office was tasked by Sun Metro to perform a mobile source emissions analysis for a proposed project in the El Paso nonattainment area. The transit agency is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ).

The project is operational assistance for the first phase of the Rapid Transit Service, BRIO, in the Montana corridor in east-central El Paso region.

Individual Project Analysis

The emissions analysis for the project is presented below. The strategy name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy equation.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ program submission, but this analysis should not be used for conformity purposes.

Montana RTS Operations Assistance - Phase 1

Sun Metro transit agency is proposing operations assistance for the first phase of the 16.8-mile BRIO line in the Montana corridor in east El Paso region. The RTS line begins at the Five Points Terminal and ends at the future Far East Transfer Center. Fourteen buses will operate along the route with 25 stations.

Data Sources

Sun Metro provided several data sources to the TTI team for the analysis: a map of the proposed route, previous emissions analysis for the route, the mileage, hours of operation, and operating costs for the route.

The technical report *2017 On-Road Mobile Source Annual, Summer Weekday and Winter Workday Emissions Inventories: El Paso Area* (TTI, August 2019) describes development of 2017 analysis year El Paso MOVES2014-based actual on-road inventories, which were the basis for these MOVES runs, with respect to MOVES modeling procedures and MOVES input data. MOVES modeling set-ups and input data combinations are described starting on Page 33 of the report, in the section "Estimation of Summer and Winter Weekday Emissions Factors." Tables 22 through 33 and surrounding text contain the details. The MOVES modeling part of the process and the local/default input data combinations as described (Table 24) was used, updated where appropriate for model version and for analysis year.

In particular, the actual fuel formulation sulfur values were adjusted to reflect "expected" future year values in place of 2017 actual average sulfur level values (i.e., to maintain consistency with the Tier 3 gasoline standard and for consistency with Ultra Low Sulfur Diesel). It is also noteworthy that the age distributions and AVFT input data from the 2017 analysis were used, since these are based on the mid-year 2014 TxDMV vehicle registrations data, which is currently still "latest available".

Transit passenger characteristics were derived from the American Public Transportation Association report *A Profile of Public Transportation Passenger Demographics and Travel Characteristics Reported in On-Board Surveys* published in May 2007.

Analysis Methods

TTI staff used the analysis method provided in the August 2008 version of the MOSERs Guide, equation 3.1 - *System/Service Expansion*. The detailed equation is provided below in Strategy Equation.

Stated in words, the equation measures the reduction in start emissions and running exhaust emissions from a change in mode during the operating period and subtracting any additional emissions from the transit vehicles. The benefit is derived through attracting single occupant passenger vehicle drivers to utilize transit as their mode of travel.

The analysis year used is 2022. *For planning purposes, the emissions benefit of a static program will decline over time.*

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs) vehicle types, gasoline and diesel-fueled, and transit buses are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- Transit vehicle (source type 42) emission rates were included as this will be a new service.
- Running exhaust, running evaporative, and start emissions (Process ID 1, 2, 11, 12, 13, 15)
- Considering the project area and the type of trips reduced through the strategy, primarily, freeway commuting, emissions on Road Type 4, urban restricted access, was used for the passenger vehicles. Road type 5, urban unrestricted access, was used for the transit vehicles.
- Average speed on IH-10 during operating hours (peak and off-peak) is assumed 30 mph.
- Average transit vehicle speed is assumed 20 mph (speed bin 5) based on data received from Sun Metro.
- The analysis period is AM peak hours of 6:00-9:00 a.m., off-peak daytime hours from 9:00 a.m.-3:00 p.m. and PM peak hours of 3:00-8:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10.
- The vehicle trips reduced (VT_R) and vehicle-miles travelled reduced (VMT_R) were distributed proportionally across the 14 hours of model analysis and by vehicle type and fuel type in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

- Based on ridership data provided by Sun Metro, an average daily ridership of 3,300 was assumed.
- APTA ridership survey reports show 52% of transit passengers to be commuting. The RTS project focuses on capturing new commute traffic, so 75% of riders are assumed to be traveling to work and back totaling 2,775 per day.
- The analysis assumes 35% of these commute passengers are former single occupant vehicle (SOV) drivers. This translates to 26.25% of all passengers. This should be considered optimistic. The APTA survey report showed 14.3% of transit roadway passengers would drive alone as an alternative if no transit service was available. However, this new service actively seeks SOV commuters.
- An average trip length of 12.6 miles was computed based on data provided by Sun Metro. The trip lengths were distributed evenly in the reduced VMT.

The final estimated emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Note: Due to the extensiveness of the MOVES model output data and to help presentation of results, the individual start rates and emission rates per distance ($\mathbf{TEF}_{AUTO}$ and $\mathbf{EF}_{B}$) per vehicle type computed are not presented but are available for review, if needed.

3.1 System/Service Expansion

Daily Emission Reduction (for each pollutant) = A + B – C – D

$A = VT_R * TEF_{AUTO}$

Reduction in auto start emissions from trips reduced

$B = VMT_R * EF_B$

Reduction in auto running exhaust emissions from VMT reductions

$C = VT_{BUS} * TEF_{BUS}$

Increase in emissions from additional bus starts

$D = VMT_{BUS} * EF_{BUS}$

Increase in emissions from additional bus running exhaust emissions

Where

$VT_R = N_{TR} * F_{T, SOV}$

Number of new transit riders multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = VT_R * TL_W$

Number of vehicle trips reduced multiplied by the average auto trip length

Final unit of measure: grams/day
Source: Texas A&M Transportation Institute

Variables:

EF_B:	Speed-based running exhaust emission factor for affected roadway before implementation (NO_x, VOC, or CO) (grams/mile)
EF_{BUS}:	Speed-based running exhaust emission factor for transit vehicle (NO_x, VOC, or CO) (grams/mile)
$F_{T, SOV}$:	Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)
N_{TR}:	New transit ridership

TEF_{AUTO}: Auto trip-end emission factor (NO_x, VOC, or CO) (grams/trip)

TEF_{BUS}: Bus (or other transit vehicle) trip-end emission factor (NO_x, VOC, or CO) (grams/trip)

TL_W: Average auto trip length (miles)

VMT_{BUS}: VMT by transit vehicle

VMT_R: Reduction in daily automobile VMT

VT_{BUS}: Daily vehicle trips by transit vehicle

VT_R: Reduction in number of daily automobile vehicle trips

Analysis

For presentation purposes, the MOVES calculation results and extensive results from the equation calculations are not presented in the results below.

$VT_R = (3{,}300 * 2) * 0.52 = 3{,}432$ trips/day

Number of transit riders multiplied by 2 multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = 3{,}432 * 12.6 = 43{,}243$ vehicle-miles/day

Number of vehicle trips reduced multiplied by the average auto trip length

Summary of Results

The emissions analysis result for the project is shown in Table 1. There are significant emissions benefits for all four pollutants. The results indicate an estimated air quality benefit from the Montana RTS operations assistance project.

Table 1. Montana RTS Operations Assistance Emission Reductions

Pollutant	Emissions Reduction (kg/day)
CO	100.325
NOx	2.929
VOC	5.553
PM_{10}	1.629

Emission Reduction Analysis for Sun Metro Proposed CMAQ Project

Montana RTS Operations Assistance Phase 2

March 2020

Prepared for

By

Task Summary

The Texas A&M Transportation Institute (TTI) El Paso office was tasked by Sun Metro to perform a mobile source emissions analysis for a proposed project in the El Paso nonattainment area. The transit agency is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ).

The project is operational assistance for the second phase of the Rapid Transit Service, BRIO, in the Montana corridor in east-central El Paso region.

Individual Project Analysis

The emissions analysis for the project is presented below. The strategy name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy equation.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ program submission, but this analysis should not be used for conformity purposes.

Montana RTS Operations Assistance - Phase 2

Sun Metro transit agency is proposing operations assistance for the second phase of the 16.8-mile BRIO line in the Montana corridor in east El Paso region. The RTS line begins at the Five Points Terminal and ends at the future Far East Transfer Center. Twelve buses will operate along the route with 26 stations.

Data Sources

Sun Metro provided several data sources to the TTI team for the original analysis: a map of the proposed route, previous emissions analysis for the route, the mileage, hours of operation, and operating costs for the route.

The technical report *2017 On-Road Mobile Source Annual, Summer Weekday and Winter Weekday Emissions Inventories: El Paso County* (TTI, August 2019) describes development of 2017 analysis year El Paso MOVES2014a-based actual on-road inventories, which were the basis for these MOVES runs, with respect to MOVES modeling procedures and MOVES input data. MOVES modeling set-ups and input data combinations are described starting on Page 33 of the report, in the section "Estimation of Seasonal Weekday Emission Rates". Tables 22 through 33 and surrounding text contain the details. The MOVES modeling part of the process and the local/default input data combinations as described (Table 24) were used, but for the CMAQ analysis years 2023 and 2025 (versus 2017 inventory year). In particular, for summer season the actual fuel formulation RVP level, sulfur content, and benzene content values were modified to reflect "expected" future year values in place of the summer 2017, local survey-based actual average RVP and sulfur and benzene level values (i.e., to consistency with state and federal standards). (Appropriate MOVES winter default formulations were used in absence of local, winter survey data.) The age distributions and AVFT input data from the 2017 analysis were used (although still based on the mid-year 2014 TxDMV vehicle registrations data, which is currently still "latest available").

Transit passenger characteristics were derived from the American Public Transportation Association report *A Profile of Public Transportation Passenger Demographics and Travel Characteristics Reported in On-Board Surveys* published in May 2007.

Analysis Methods

TTI staff used an analysis method provided in the August 2008 version of the MOSERs Guide, equation 3.2 - *System/Service Operational Improvements*. The detailed equation is provided below in Strategy Equation.

Stated in words, the equation measures the reduction in start emissions and running exhaust emissions from a change in mode during the operating period and subtracting any additional emissions from the transit vehicles. The benefit is derived through attracting single occupant passenger vehicle drivers to utilize transit as their mode of travel.

The analysis year used is 2023. *For planning purposes, the emissions benefit of a static program will decline over time.*

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs) vehicle types, gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- The project is assumed to be implemented in the analysis; therefore, no transit vehicle emissions are included in the analysis.
- Considering the project area and the type of trips reduced through the strategy, primarily, freeway commuting, emissions on Road Type 4, urban restricted access was used.
- Average speed on IH-10 during RTS operating hours (peak and off-peak) is assumed 30 mph (Speed bin 7).
- The analysis period is AM peak hours of 6:00-9:00 a.m., off-peak daytime hours from 9:00 a.m.-3:00 p.m. and PM peak hours of 3:00-8:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10.
- The vehicle trips reduced (VT_R) and vehicle-miles travelled reduced (VMT_R) were distributed proportionally across the 14 hours of model analysis and by vehicle type and fuel type in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

- Based on ridership data provided by Sun Metro and factoring in ridership growth, an average daily ridership of 3,600 was assumed.
- APTA ridership survey reports show 52% of transit passengers to be commuting. The RTS project focuses on capturing new commute traffic, so 75% of riders are assumed to be traveling to work and back totaling 2,700 per day.
- The analysis assumes 35% of these commute passengers are former single occupant vehicle (SOV) drivers. This translates to 26.25% of all passengers. This should be considered optimistic. The APTA survey report showed 14.3% of transit roadway passengers would drive alone as an alternative if no transit service was available. However, this new service actively seeks SOV commuters.
- An average trip length of 12.6 miles was computed based on data provided by Sun Metro. The trip lengths were distributed evenly in the reduced VMT.

The final estimated emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Note: Due to the extensiveness of the MOVES model output data and to help presentation of results, the individual start rates and emission rates per distance ($\mathbf{TEF}_{AUTO}$ and $\mathbf{EF}_{B}$) per vehicle type computed are not presented but are available for review if needed. Also, the project is assumed implemented by phase 2 thus transit vehicle emissions (parts C and D) are not included in this analysis.

3.2 System/Service Operational Improvements

Daily Emission Reduction (for each pollutant) = A + B

$A = VT_R * TEF_{AUTO}$

Reduction in auto start emissions from trips reduced

$B = VMT_R * EF_B$

Reduction in auto running exhaust emissions from VMT reductions

Where

$VT_R = N_{TR} * F_{T, SOV}$

Number of new transit riders multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = VT_R * TL_W$

Number of vehicle trips reduced multiplied by the average auto trip length

Final unit of measure: grams/day
Source: Texas A&M Transportation Institute

Variables:

EF_B:	Speed-based running exhaust emission factor for affected roadway before implementation (NO_x, VOC, or CO) (grams/mile)
$F_{T, SOV}$:	Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)
N_{TR}:	New transit ridership
TEF_{AUTO}:	Auto trip-end emission factor (NO_x, VOC, or CO) (grams/trip)
TL_W:	Average auto trip length (miles)
VMT_R:	Reduction in daily automobile VMT
VT_R:	Reduction in number of daily automobile vehicle trips

Analysis

$VT_R = (3{,}600 * 2) * 0.52 = 3{,}744$ trips/day

Number of transit riders multiplied by 2 multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = 3{,}744 * 12.6 = 47{,}174$ vehicle-miles/day

Number of vehicle trips reduced multiplied by the average auto trip length

Summary of Results

The emissions analysis result for the project is shown in Table 1. There are significant daily emissions benefits for all four pollutants. The results indicate an estimated air quality benefit from the Montana RTS Phase 2 operational assistance project.

Table 1. Montana RTS Operational Assistance – Phase 2 Emission Reductions

Pollutant	Emissions Reduction (kg/day)
CO	99.211
NOx	6.635
VOC	4.688
PM_{10}	2.513

Emission Reduction Analysis for Sun Metro Proposed CMAQ Project

Montana RTS Operations Assistance Phase 3

March 2020

Prepared for

By

Task Summary

The Texas A&M Transportation Institute (TTI) El Paso office was tasked by Sun Metro to perform a mobile source emissions analysis for a proposed project in the El Paso nonattainment area. The transit agency is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ).

The project is operational assistance for the third phase of the Rapid Transit Service, BRIO, in the Montana corridor in east-central El Paso region.

Individual Project Analysis

The emissions analysis for the project is presented below. The strategy name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy equation.

It is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ program submission, but *this analysis should not be used for conformity purposes*.

Montana RTS Operations Assistance - Phase 3

Sun Metro transit agency is proposing operations assistance for the third phase of the 16.8-mile BRIO line in the Montana corridor in east El Paso region. The RTS line begins at the Five Points Terminal and ends at the future Far East Transfer Center. Twelve buses will operate along the route with 26 stations.

Data Sources

Sun Metro provided several data sources to the TTI team for the original analysis: a map of the proposed route, previous emissions analysis for the route, the mileage, hours of operation, and operating costs for the route.

The technical report *2017 On-Road Mobile Source Annual, Summer Weekday and Winter Weekday Emissions Inventories: El Paso County* (TTI, August 2019) describes development of 2017 analysis year El Paso MOVES2014a-based actual on-road inventories, which were the basis for these MOVES runs, with respect to MOVES modeling procedures and MOVES input data. MOVES modeling set-ups and input data combinations are described starting on Page 33 of the report, in the section "Estimation of Seasonal Weekday Emission Rates". Tables 22 through 33 and surrounding text contain the details. The MOVES modeling part of the process and the local/default input data combinations as described (Table 24) were used, but for the CMAQ analysis years 2023 and 2025 (versus 2017 inventory year). In particular, for summer season the actual fuel formulation RVP level, sulfur content, and benzene content values were modified to reflect "expected" future year values in place of the summer 2017, local survey-based actual average RVP and sulfur and benzene level values (i.e., to consistency with state and federal standards). (Appropriate MOVES winter default formulations were used in absence of local, winter survey data.) The age distributions and AVFT input data from the 2017 analysis were used (although still based on the mid-year 2014 TxDMV vehicle registrations data, which is currently still "latest available").

Transit passenger characteristics were derived from the American Public Transportation Association report *A Profile of Public Transportation Passenger Demographics and Travel Characteristics Reported in On-Board Surveys* published in May 2007.

Analysis Methods

TTI staff used an analysis method provided in the August 2008 version of the MOSERs Guide, equation 3.2 - *System/Service Operational Improvements*. The detailed equation is provided below in Strategy Equation.

Stated in words, the equation measures the reduction in start emissions and running exhaust emissions from a change in mode during the operating period and subtracting any additional emissions from the transit vehicles. The benefit is derived through attracting single occupant passenger vehicle drivers to utilize transit as their mode of travel.

The analysis year used is 2025. *For planning purposes, the emissions benefit of a static program will decline over time.*

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs) vehicle types, gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- The project is assumed to be implemented in the analysis; therefore, no transit vehicle emissions are included in the analysis.
- Considering the project area and the type of trips reduced through the strategy, primarily, freeway commuting, emissions on Road Type 4, urban restricted access was used.
- Average speed on IH-10 during RTS operating hours (peak and off-peak) is assumed 30 mph (Speed bin 7).
- The analysis period is AM peak hours of 6:00-9:00 a.m., off-peak daytime hours from 9:00 a.m.-3:00 p.m. and PM peak hours of 3:00-8:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NOx, VOC, and PM-10.
- The vehicle trips reduced (VT_R) and vehicle-miles travelled reduced (VMT_R) were distributed proportionally across the 14 hours of model analysis and by vehicle type and fuel type in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

- Based on ridership data provided by Sun Metro and factoring in ridership growth, an average daily ridership of 3,700 was assumed.
- APTA ridership survey reports show 52% of transit passengers to be commuting. The RTS project focuses on capturing new commute traffic, so 75% of riders are assumed to be traveling to work and back totaling 2,775 per day.
- The analysis assumes 35% of these commute passengers are former single occupant vehicle (SOV) drivers. This translates to 26.25% of all passengers. This should be considered optimistic. The APTA survey report showed 14.3% of transit roadway passengers would drive alone as an alternative if no transit service was available. However, this new service actively seeks SOV commuters.
- An average trip length of 12.6 miles was computed based on data provided by Sun Metro. The trip lengths were distributed evenly in the reduced VMT.

The final estimated emission reductions are presented in kilograms per day (kg/day) in accordance to CMAQ project reporting requirements.

Strategy Equation

Note: Due to the extensiveness of the MOVES model output data and to help presentation of results, the individual start rates and emission rates per distance ($\mathbf{TEF}_{AUTO}$ and $\mathbf{EF}_{B}$) per vehicle type computed are not presented but are available for review if needed. Also, the project is assumed implemented by phase 3 thus transit vehicle emissions (parts C and D) are not included in this analysis.

3.2 System/Service Operational Improvements

Daily Emission Reduction (for each pollutant) = A + B

$A = VT_R * TEF_{AUTO}$

Reduction in auto start emissions from trips reduced

$B = VMT_R * EF_B$

Reduction in auto running exhaust emissions from VMT reductions

Where

$VT_R = N_{TR} * F_{T, SOV}$

Number of new transit riders multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = VT_R * TL_W$

Number of vehicle trips reduced multiplied by the average auto trip length

Final unit of measure: grams/day
Source: Texas A&M Transportation Institute

Variables:

EF_B:	Speed-based running exhaust emission factor for affected roadway before implementation (NO_x, VOC, or CO) (grams/mile)
$F_{T, SOV}$:	Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)
N_{TR}:	New transit ridership
TEF_{AUTO}:	Auto trip-end emission factor (NO_x, VOC, or CO) (grams/trip)
TL_W:	Average auto trip length (miles)
VMT_R:	Reduction in daily automobile VMT
VT_R:	Reduction in number of daily automobile vehicle trips

Analysis

$VT_R = (3{,}700 * 2) * 0.52 = 3{,}848$ trips/day

Number of transit riders multiplied by 2 multiplied by the percentage of riders shifting from single-occupant auto use

$VMT_R = 3{,}848 * 12.6 = 48{,}485$ vehicle-miles/day

Number of vehicle trips reduced multiplied by the average auto trip length

Summary of Results

The emissions analysis result for the project is shown in Table 1. There are significant, continued daily emissions benefits for all four pollutants. The results indicate an estimated air quality benefit from the Montana RTS Phase 3 operational assistance project.

Table 1. Montana RTS Operational Assistance – Phase 3 Emission Reductions

Pollutant	Emissions Reduction (kg/day)
CO	90.721
NOx	5.599
VOC	4.504
PM_{10}	2.569

Emission Reduction Analysis for Sun Metro Proposed CMAQ Project

Far West Park and Ride Lot

April 2020

Prepared for

By

Task Summary

The Texas A&M Transportation Institute (TTI) El Paso office was tasked by Sun Metro to perform a mobile source emissions analysis for a proposed project in the El Paso nonattainment area. The project is the design and construction of a park and ride lot in Far West El Paso. The transit agency is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ) to help implement it.

Individual Project Analysis

The emissions analysis for the project is presented below. The strategy name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equation used from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) is given for the strategy along with the variables of the equation and the equation itself. The results are then computed for the strategy equation.

Given the short time available to conduct these analyses, it is recommended that the agency conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for submission but more time available and effort would increase the accuracy of the emissions benefits. As a result, *this analysis should not be used for conformity purposes*.

Far West Park and Ride Lot

Sun Metro is planning to create a park-and-ride lot in Far West El Paso near the interchange of IH-10 and Transmountain Drive (Loop 375). The project involves land acquisition and construction of a single level parking area to include lighting, landscaping and accessibility for an expanding area that is currently underserved by transit. The expansion of service will provide the opportunity for economic development and the opportunity to reduce anticipated congestion in the far western portion of the El Paso region. The area continues to see increased development with new hospitals and businesses creating the need for connectivity to other areas of the region.

Data Sources

Sun Metro provided an estimated new daily ridership generated by the proposed facility, project description, and transit vehicle operating characteristics.

Emission rates used in the analyses were obtained from the U.S. Environmental Protection Agency's MOVES2014a model. The primary source for emission rates inputs and VMT factors (hourly factors and vehicle type VMT mix) for post-processing was the latest TCEQ periodic emissions inventories, i.e., the 2017 AERR inventories for El Paso County documented in "Development of 2017 On-Road Mobile Source Annual, Summer Work Weekday, and Winter Work Weekday Emissions Inventories for Specified Areas: El Paso Area" (TTI, August 2019). For VMT mix, which TTI develops in five-year increments by TxDOT district, the latest 2025 TxDOT El Paso District estimates were used.

Analysis Methods

TTI staff used a modified version of the analysis method provided in the August 2008 version of the MOSERs Guide, Park-and-Ride equation 8.1 – *New Facilities*. The detailed equation is provided below in Strategy Equation. Stated in words, the equation measures the reduction in running exhaust emissions from reduced VMT resulting from park and ride lot use by SOV commute drivers.

The analysis year used is 2027. *For planning purposes, the emissions benefit of a static program will decline over time.*

Assumptions in the MOVES2014a output for the project included:

- Output created for VOC, CO, NOx, and PM-10
- Light-duty passenger vehicles and light-duty passenger trucks (SUVs) vehicle types, gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type ID 21, 31)
- Running exhaust and running evaporative emissions (Process ID 1, 9, 10, 11, 12, 13, 15)
- Considering the project area and the type of trips reduced through the strategy, primarily commuter trips, emissions on Road Type 4, urban restricted access, were used.
- Average speed of the previous commute trip on surrounding highways during peak hours is assumed to be 40 mph (Speed Bin 9).
- The analysis period is the bus route operating hours 5:00 a.m. - 11:00 p.m. on a winter weekday for CO; the same period on a summer weekday for NOx, VOC, and PM-10.

- The vehicle-miles travelled (VMT) reduced were distributed proportionally across the operating hours for model analysis and by vehicle type and fuel type in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable assumptions about projects.

- The data provided by Sun Metro on estimated new daily ridership allowed the VMT reduction to be computed directly, instead of estimated using the first three variables of the MOSERS equation.
- 1,138 passengers increase in daily ridership was given. New ridership is 50% per Sun Metro data computes to 569 new transit riders.
- Based on the Sun Metro data for each transit center connection provided by the park-and-ride lot: 387 new passengers on the new lot to the Northgate Transfer Center; 182 new riders on the new lot to Westside Transfer Center.
- Using Google Maps, the trip length from the new lot to Northgate is 13.7 miles; the trip length from the new lot to Westside is 5.9 miles. Estimated additional trip length from the Transfer Centers to final destinations is 5 miles (commuter and local destinations from the Centers). Two daily trips per new rider is assumed.
- The assumptions lead to an estimated daily VMT reduction of 18,442.

The final estimated emission reductions are presented in kilograms per day (kg/day) in accordance with CMAQ project reporting requirements.

Strategy Equation

8.1 New Park and Ride Facilities

Daily Emission Reduction = $N_{PK} * U_P * (TL_W - TL_{PR}) * EF_B * 2$ trips/day

Reduction in running exhaust emissions from reduced VMT resulting from park and ride lot use

Final unit of measure: grams/day
Source: TTI

Variables:

EF_B: Speed-based running exhaust emission factor before implementation (NO_x , VOC, or CO) (grams/mile)

N_{PK}: Number of parking spaces

TL_{PR}: Average auto trip length from home to parking facility miles)

TL_W: Average auto work trip length (miles)

U_P: Parking lot utilization rate (estimate)

Analysis

Note: For presentation purposes, the individual emissions rates are not given in the results below.

The daily emissions reduction for each pollutant is:

For CO:

18,442 * EF_B = 18.715 kg/day

For NOx:

18,442 * EF_B = 0.535 kg/day

For VOC:

18,442 * EF_B = 1.264 kg/day

For PM-10:

18,442 * EF_B = 0.632 kg/day

Summary of Results

The emissions analysis result for the project is shown in Table 1. The results indicate an estimated air quality benefit for all four pollutants from the Far West Park and Ride lot.

Table 1. Estimated Emission Reductions for Far West Park and Ride Lot

Pollutant	Emissions Reduction (kg/day)
CO	18.715
NOx	0.535
VOC	1.264
PM_{10}	0.632

Emission Reduction Analysis for NMDOT Proposed CMAQ Project

NM 404 and IH-10 Interchange Improvements

February 2020

Prepared for

New Mexico DEPARTMENT OF TRANSPORTATION
MOBILITY FOR EVERYONE

By

Texas A&M Transportation Institute

Task Summary

The Texas A&M Transportation Institute (TTI) was tasked by the New Mexico Department of Transportation (NMDOT) to perform a mobile source emissions analysis for a proposed interchange improvement project in Dona Ana County in the El Paso metropolitan region. The department is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ) to help implement the project.

The project will construct 0.686 miles of traffic operational improvements at the interchange of NM 404 and IH-10 and will add a bike-ped path on the NM 404 and IH-10 bridge.

Individual Project Analysis

The emissions analyses for the project is presented below. The project name is given along with a brief description of the project. Data sources and analysis assumptions are provided. The equations selected for the strategies from the *Texas Guide to Accepted Mobile Source Emission Reduction Strategies* (MOSERs Guide) are given along with the equation variables. The strategy results are then computed.

Given the short time available to conduct this analysis, it is recommended that the department conduct a more detailed emissions study of the project as it develops further. The results presented below are valid for CMAQ applications, but more time and effort would increase the accuracy of the emissions benefits. As a result, this analysis should not be used for conformity purposes.

NM 404 and IH-10 Interchange Improvements

NMDOT is proposing to implement operational improvements at the interchange of NM 404 and IH-10 in Dona Ana County in the El Paso metropolitan region. The project limits are from mile post 0.460 to mile post 1.136 along NM 404. The purpose of this project is replacement of the IH-10 bridge, roadway widening and reconstruction, ramp widening, and intersection reconstruction. The overall project includes the construction of curb & gutter, sidewalks/multi-use path, ADA ramps, drainage structures & storm drain, traffic signals & lighting, permanent signing & striping, and traffic control. The improvements are estimated to be completed by 2023.

Data Sources

NMDOT and their consultant provided several items containing project information and data for the analysis: the *NM 404 Capacity & Safety Study*, along with the relevant pages from the December 2019 PS&E study.

TTI developed emission rates using U.S. Environmental Protection Agency's MOVES2014a model[1]. Since the proposed interchange improvement project is in Dona Ana County in the El Paso

[1] Note that TTI used the November 2016 MOVES2014a release, which produces on-road mobile source emission rates consistent with and the equivalent of MOVES2014b results. MOVES2014a was released November 2015,

metropolitan region, TTI staff created MOVES2014a inputs for El Paso County for the year 2023 and estimated both idling and running emission rates required for this project. The input files used to generate emission rates are consistent with those currently in use by TTI in support of the El Paso MPO's (EPMPO) Destino 2045 MTP conformity analyses, required in El Paso County, Texas and in Sunland Park in Dona Ana County, New Mexico.

El Paso regional vehicle fleet mix fractions were also derived from the TTI emissions analyses in support of the EPMPO's Destino 2045 MTP conformity analyses (*El Paso Metropolitan Planning Organization Transportation Conformity Report, 2015 Ozone National Ambient Air Quality Standard Newly Designated Sunland Park, New Mexico Nonattainment Area*, EPMPO, June 2019).

TTI staff used 2009 American Community Survey data to compute a bicycle mode share for El Paso, along with a future growth rate for the mode in the region.

Analysis Methods

TTI researchers reviewed in detail all project information provided by NMDOT with the goal of identifying potential emissions reductions from the project. At this time, NMDOT does not anticipate any additional commercial, residential, or other developments in the project area before the build date. The Dona Ana Branch Community College is making a small addition to their campus but not large enough that greater traffic volumes are anticipated.

The improved connectivity of NM 404 and IH-10 should provide an increased average speed in peak and non-peak hours as vehicles move through the project area with greater efficiency. Modest increases in speed on this type of roadway will usually provide lower emissions rates in the MOVES model (i.e., 25 to 30 mph) at the same traffic volume. However, no projected speed data was available for the current roadways or proposed improvements. The project has a design speed of 45 mph, but that does not necessarily reflect actual future average speeds.

The implication of increased average speed through the interchange is enhanced by the future planned signalization and turning movements. These should decrease the amount of vehicle delay in the project area. Idling emissions reductions from this improvement are included in the analysis.

The project will also construct sidewalks and a multi-use paths (bike lanes) through the interchange. The extension of the bridge to accommodate the bike-ped path is crucial as currently there is no means to connect the commuters to the current bus stop in Dona Ana Branch Community College. However, little to no development is expected in the immediate area of the interchange nor do the sidewalks and bike lanes connect with an existing network. The emissions reductions from potential shifts to bicycles is expected to be minimal.

TTI staff used a modified version of the analysis method provided in the August 2008 version of the MOSERs Guide, Equation 7.2 - *Traffic Operations* along with Equation 11.1 – *Bicycle and Pedestrian Lanes or Paths*. Equation 7.2 attempts to estimate the improvements in idling emissions and speed

then updated December 2015, November 2016, and December 2017. The December 2017 MOVES2014a release only corrected a non-road mobile post-processing script. MOVES2014b was released August 2018. MOVES2014b improves the non-road component and updates chemical mechanism outputs, neither of which apply to on-road mobile emission rates

changes as a result of operational improvements. For this particular project, focus was placed on the changes in idling emissions and delay reduction. In Equation 11.1, the average annual daily traffic (AADT) of the corridor is multiplied by the percentage of drivers shifting to bicycle mode, multiplied by the bike facility length, multiplied by the speed-based running exhaust emission factor estimated for participants' trips before utilizing the bike lane.

The detailed equations are provided below in the Strategy Equations section.

The analysis year is 2023. *For planning purposes, the emissions benefit of a static program will decline over time.* Without the increased use of the bike lanes over the project lifetime, any benefits accrued by the mode shift to bicycles may be negated by the increased emissions from potential higher traffic volumes in the corridor over time.

Assumptions in the MOVES2014a output for the project included:

- Four MOVES2014a runs were conducted for this analysis, a) two for estimating idling emission rates for summer and winter seasons; b) two for estimating running emission rates for summer and winter seasons.
- Emission rates for VOC and NOx were estimated using summer season MOVES2014a outputs and winter outputs were used for estimating CO and PM10 emission rates.
- For traffic operations improvements, light-duty passenger vehicles and light-duty passenger trucks (pick-ups and SUVs), motorcycles, light commercial trucks, single unit short and long-haul trucks, and combination short and long-haul trucks, gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type IDs 11, 21, 31, 32, 52, 53, 61, 62).
- For the bike lanes. motorcycles, light-duty passenger vehicles and light-duty passenger trucks (SUVs), gasoline and diesel-fueled, are included according to a projected regional VMT fleet mix (Source Type IDs 11, 21, 31, 32)
- Running exhaust and evaporative emissions, brake wear, and tire wear emissions rates were calculated.
- Considering the project area and the type of trips reduced through the strategy, emissions on Road Type 3, rural unrestricted access were analyzed.
- Overall average speed in the roadways is assumed to be 45 mph (Speed bin 10).
- Idling operating mode in MOVES2014a includes speeds ranging from 0 to 1 mph.
- The analysis period is from 7:00 a.m. to 7:00 p.m. on a winter weekday for CO and PM10; the same period on a summer weekday for NOx and VOCPM10. Use of the bicycle lanes can occur throughout the day, but the greatest impact on emissions will occur with any peak hour or daytime hours mode shift.
- The estimated idling emissions reduced as a result of the project were distributed across the 12 hours and by vehicle types and fuel types in line with the vehicle fleet mix in the El Paso region.
- The vehicle-miles traveled (VMT) reduced as a result of the mode shift to bicycle was distributed proportionally across the 12 hours and by passenger vehicle types and fuel types in line with the vehicle fleet mix in the El Paso region.

TTI staff reviewed the project information to determine values for the individual variables in the MOSERs equation. The MOSERS Guide encourages planners to make conservative, justifiable

assumptions about projects. TTI staff determined a valid delay reduction and a percentage mode shift from automobile to bicycle by participants in the El Paso region. The characteristics of this new facility may provide impetus for significant mode shift, but planners should use available data.

The following assumptions were made for the operational improvements:

- In reviewing the data and information provided, the primary emissions benefit from the operational improvements will result from the reduction in idling emissions from the improved traffic signalization at the interchange.
- Projected 2023 average daily traffic (ADT) of 7,860 is estimated through the roadway segment. These figures are derived from the PS&E project plans. Researchers assumed 80% of the daily traffic along the roadways occurs in the 12-hour daytime period under analysis, equaling 6,288 ADT.
- El Paso region hourly VMT factors were used to estimate peak and off-peak ADT. The peak period ADT was estimated to be 61% (3,836) of 12-hour daytime period ADT used for the analysis and off-peak period ADT is estimated at 39% (2,452).
- Average delay reduction is estimated to be 15 seconds in peak hours and 5 seconds in off-peak hours.

The following assumptions were made for the bike lanes:

- Light-duty passenger vehicle and light-duty passenger truck 2023 ADT of 5,219 is estimated for the 12-hour analysis period on NM 404 in both directions. This figure is based on the provided build scenario traffic projection at the project area. Researchers then assumed 80% of the projected ADT along the roadway occurs in the 12-hour daytime period under analysis. Based on NMDOT PS&E fleet mix data, researchers then assumed 83% of the traffic is passenger vehicles.
- The current percent bicycle mode share for the El Paso region is estimated to be 2.0% and can serve as an optimistic mode share increase for the new bike facilities. However, this project is not integrating the bike lanes with an existing network. There is also little current or future development in the four quadrants of the interchange. A mode shift to bicycle and pedestrian of 0.005 is more reasonable.
- The 0.005 increase in mode share represents new cyclists (vehicle trips replaced).
- Bike lane facility length of 0.686 miles is computed.

The emission reductions are presented in kilograms per day (kg/day) in accordance with CMAQ project reporting requirements.

Strategy Equations

Equation 7.2, Traffic Operations (modified)

Daily Emission Reduction = $(I_P + I_{OP}) * EF_I$

Change in idling exhaust emissions from improved traffic flow during the peak and off-peak periods

Where

$I_P = (N_{PH} * V_{H,P} * DR_P)/3600$ seconds per hour

$I_{OP} = (N_{OPH} * V_{H,\,OP} * DR_{OP})/3600$ seconds per hour

Reduction of idling in the peak and off-peak period

Final unit of measure: grams/day
Source: Texas A&M Transportation Institute (modified from CARB and FHWA Southern Resource Center)

Variables:

DR_P:	Estimated delay reduction during peak period (seconds)
DR_{OP}:	Estimated delay reduction during off-peak period (seconds)
EF_I:	Idling emission factor (grams/hour)
I_P:	Peak hour reduction in idling emissions (vehicle-hours)
I_{OP}:	Off-peak hour reduction in idling emissions (vehicle-hours)
N_{PH}:	Number of peak hours
N_{OPH}:	Number of off-peak hours
$V_{H,\,P}$:	Number of vehicles that pass through the intersection per hour during the peak period
$V_{H,\,OP}$:	Number of vehicles that pass through the intersection per hour during the off-peak period

Analysis

Daily Emission Reduction = $(I_P + I_{OP}) * EF_I$

Note: For presentation purposes, the individual emissions rates are not given in the results below.

Where

$I_P = (3{,}836 * 15)/3600$ seconds per hour
$I_{OP} = (2{,}452 * 5)/3600$ seconds per hour

(15.98 + 3.41) = 19.39

For CO:

19.39 * 7.206 = 139.71 grams/day

Daily emission reduction is equal to 0.140 kg/day

For NOx:

19.39 * 4.837 = 93.79 grams/day

Daily emission reduction is equal to 0.094 kg/day

For VOC:

19.39 * 1.703 = 33.01 grams/day

Daily emission reduction is equal to 0.033 kg/day

For PM10:

19.39 * 0.359 = 6.97 grams/day

Daily emission reduction is equal to 0.007 kg/day

Equation 11.1, Bicycle and Pedestrian Lanes or Paths

Daily Emission Reduction = AADT * PMS * L * EF_B

The average annual daily traffic of the corridor multiplied by the percentage of drivers shifting to bike/pedestrian multiplied by the average bicycle trip length multiplied by the speed-based running exhaust emission factor for participants' trip before participating in the bike/pedestrian program.

Final unit of measure: grams/day
Source: Capitol Area MPO (CAMPO)

Variables: **AADT:** Average annual daily traffic in corridor (vehicles/day)

EF_B: Speed-based running exhaust emission factor for participants' trips before participating in the bike/pedestrian program (NO_x, VOC, or CO) (grams/mile)

L: Length of facility (miles)

PMS: Percentage mode shift from driving to bike/pedestrian (decimal)

Analysis

Daily Emission Reduction = AADT * PMS * L * EF_B

Note: For presentation purposes, the individual emission rates generated for the speed, hour, and each pollutant (**EF_B**) are not shown in the equations below.

For CO:

5,219 * 0.005 * 0.686* 1.583= 28.34 grams/day

Daily emission reduction is equal to 0.028 kg/day

For NOx:

5,219 * 0.005 * 0.686* 0.167 = 2.989 grams/day

Daily emission reduction is equal to 0.003 kg/day

For VOC:

5,219 * 0.005 * 0.686* 0.051 = 0.913 grams/day

Daily emission reduction is equal to 0.0009 kg/day

For PM10:

5,219 * 0.005 * 0.686* 0.005 = 0.090 grams/day

Daily emission reduction is equal to 0.00009 kg/day

Summary of Results

The overall emissions analysis results for the project are shown in Table 1. The estimated emissions benefits from the new bike lanes are modest and are dependent on increased use of bicycles as a travel mode in the city and region, but an emissions benefit in the El Paso region can be expected from this project.

Table 1. Estimated Emissions Benefits from NM 404 and IH-10 Traffic Improvements

Pollutant	Emissions Reduction (kg/day)
CO	0.140
NOx	0.094
VOC	0.033
PM_{10}	0.007

Table 2. Estimated Emissions Benefits from NM 404 and IH-10 Bike Lanes

Pollutant	Emissions Reduction (kg/day)
CO	0.028
NOx	0.003
VOC	0.0009
PM10	0.00009

Table 3. Total Estimated Emissions Benefits from NM 404 and IH-10 Operational Improvements

Pollutant	Emissions Reduction (kg/day)
CO	0.1680
NOx	0.0097
VOC	0.0339
PM10	0.0071

Appendix B
Performance Based Planning and Programming

The Moving Ahead for Progress (MAP-21) federal transportation bill instituted performance measurement to provide greater accountability and transparency to achieve the most efficient and effective investment of transportation resources. Performance measurement requirements were refined in the Fixing America's Surface Transportation (FAST) Act. State DOTs and Metropolitan Planning Organizations (MPOs) are required to move towards a performance-based planning process with an emphasis on project selection based on specific planning factors.

Under Map-21, States are required to set annual safety performance targets (PM1). The annual measures States set targets for include:

1. Number of Fatalities,
2. Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT),
3. Number of Serious Injuries,
4. Rate of Serious Injuries per 100 million VMT, and
5. Number of Non- Motorized Fatalities and Non-Motorized Serious Injuries

The Texas Department of Transportation (TXDOT) established their statewide targets. Once the state set their safety targets, MPOs were required to either adopt the state's targets or set their own that would help achieve the statewide target. The El Paso MPO chose to adopt the state's targets. These statewide targets are:

TXDOT:

- Total Traffic Fatalities Per Calendar Year: 3,703.8
- Rate of Traffic Fatalities Per 100M VMT: 1.432
- Number of Serious Injuries: 17,565.4
- Rate of Serious Injuries Per 100M VMT: 6.740
- Number of Non-Motorized Fatalities and Serious Injuries: 2,150.6

Here are how the projects will assist in achieving the PM1 Target for Texas:

- Projects expected to achieve reduction in traffic fatalities and serious injuries for all modes of transportation;
- Projects expected to reduce severe traffic crashes;
- Projects are addressing the pedestrian/bicycle serious injury and fatality performance target by providing multimodal accommodations that currently do not exist;

Under Map-21, States are required to set four-year Pavement and Bridge (PM2) and Freight and Air Quality (PM3) performance targets.

The four-year measures for PM2 include:

1. Percentage of Interstate pavements in Good condition,
2. Percentage of Interstate pavements in Poor condition,
3. Percentage of non-Interstate NHS pavements in Good condition,
4. Percentage of non-Interstate NHS pavements in Poor condition,
5. Percentage of NHS by deck area classified as in Good condition, and
6. Percentage of NHS by deck area classified as in Poor condition

The four-year measures for PM3 include:

1. National Highway System Travel Time Reliability Measures:
    a. Interstate Reliability
    b. Non-Interstate Reliability,
2. Freight Reliability Measure:
    a. Truck Travel Time Reliability, and
3. Congestion Mitigation and Air Quality (CMAQ):
    a. Total Emission Reduction Measure

The Texas Department of Transportation (TXDOT) established their statewide targets. Once the state set their PM2 and PM3 targets, MPOs were required to either adopt the state's targets or set their own that would help achieve the statewide target. The El Paso MPO chose to adopt the state's targets. These statewide targets are:

TXDOT PM2:

Performance Measure	2022 Target
Pavement on IH	
% in "good" condition	66.4%
% in "poor" condition	0.3%
Pavement on non-IH NHS	
% in "good" condition	52.3%
% in "poor" condition	14.3%
NHS Bridge Deck Condition	
% in "poor" condition	0.80%
% in "good" condition	50.42%

Here are how the projects will assist in achieving the PM2 Target for Texas:

- CoEP is reconstructing and rehabilitating the pavement on 6 downtown streets through our CBD IV project.
- County of El Paso is providing new pavement (concrete), base and sub-base. The current roadway condition of the non-interstate on the NHS is poor for its Pellicano Widening project; and
- John Hayes Construction Phase will be providing new pavement (concrete/HMAC), base and sub-base. No pavement exists, this will be a new roadway. There is no current roadway condition of the non-interstate on the NHS.
- TxDOT El Paso District's projects help by widening of main lanes at I-10, Loop 375, US 62/180 (Montana Ave.), and construction of frontage roads on LP 375 and US 62/180 (Montana Ave.); and additional bridge structure ramps at I-10 Connect and at Spur 601/Loop 375 Interchange. Improving pavement and bridge conditions.

TXDOT PM3:

Performance Measure	2022 Target
NHS Travel Time Reliability	
IH Level of Travel Time Reliability	56.6%
Non-IH Level of Travel Time Reliability	55.4%

Performance Measure	2022 Target
Truck Travel Time Reliability	1.79

Performance Measure		2022 Target
Total Emission Reduction		
El Paso	CO	891.11
	PM 10	13.71

Here are how the projects will assist in achieving the PM3 Target for Texas:

- Sun Metro's operating assistance projects are assisting the PM3 Target "Total Emission Reduction" by bus procurements and engine rebuilds and providing reliable transit service that reduces congestion and enhances air quality through the use of an alternative fuel-CNG.
- CoEP is improving bicycle facilities citywide through four bicycle connectivity and infrastructure projects and improving transit facilities with the Montana RTS project. These projects will address CMAQ Total Emission Reduction by providing a viable alternative to automobile travel;
- County of El Paso is providing additional lanes to reduce traffic congestion, reduce emissions by providing multi-model options and reduce truck travel time by providing additional lanes and protected lanes/deceleration lanes; and
- John Hayes Construction Phase will be providing a new roadway connection to Pellicano as an alternative roadway to Loop 375 and Zaragoza by the addition of 6 new lanes to reduce traffic congestion, reduce emissions by providing multi-model options and reduce truck travel time by providing additional lanes and protected lanes/ deceleration lanes.
- TxDOT El Paso District's projects help achieve the PM3 targets by improving safety, mobility, connectivity, reliability, and reducing emissions at our main corridors of I-10, Loop 375, US 62/180, and US 54 (I-10 Connect), specifically on freight routes connecting to the Ports of Entry and along I-10 and Loop 375. Air quality will also be addressed with operational improvement projects along US 62/180.

As part of the FAST Act, performance measures were incorporated for transit agencies, primarily through the Transit Asset Management (TAM) assessment and planning requirements. Sun Metro's TAM plan was developed to meet that requirement. Sun Metro continuously seeks grants through the regional MPO in order to supplement the competitive and formula funding grants available from the FTA. Primarily Sun Metro applies for FHWA Congestion Mitigation and Air Quality (CMAQ) and Surface Transportation Program (STP) funding through the MPO. Funding from these grants are crucial to the agency's State of Good Repair (SGR) program and the resulting Transit Asset Management Plan (TAM). CMAQ funds provide for new and replacement bus funding, to include vehicles needed for new and extended services. Funding also allows for new or enhancements of terminals and stops to include accessibility and passenger amenities if associated with new or extended services. STP provides similar funding but without the new or extended service requirements. This grant funding not only permits Sun Metro to provide efficient and dependable service but supplements funding from other sources necessary to maintain SGR standards. For FY's 2021-2024 CMAQ, the federal funding portion obtained through the regional MPO, will total approximately $12.6M for operating assistance (Dyer, Alameda, and Montana BRT's and Streetcar services) plus a Park and Ride Far West side project.


PLAZA

APPENDIX D: PERFORMANCE BASED PLANNING AND PROGRAMMING

UPDATES TO THE DESTINO 2045 MTP

On the following pages are the Performance Based Planning and Programming (PBPP) assumptions that were adopted by the El Paso MPO in the Original Destino 2045 MTP to include:

- Highway Safety Improvement Program, known as PM1
- Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program, known as PM2
- Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and On-road Mobile Source Emissions Targets for the Congestion Mitigation and Air Quality (CMAQ) program, known as PM3
- Transit Asset Management (TAM)

Targets for safety measures are set annually and 2020 safety targets start on the next page. PM 2 and TAM targets are the same as the original Destino 2045. PM 3 targets are the same with the exception of the CMAQ Targets. At the time the Destino 2045 MTP was being developed, the El Paso MPO was in coordination with TxDOT to update the 4-year targets for Particulate Matter-10 (PM10) and Carbon Monoxide (CO). The El Paso MPO was also in coordination with NMDOT to update the 4-year target for PM 10.

On September 18, 2020 the El Paso MPO's Transportation Policy Board (TPB) updated the 4-year PM-10 target to 21.96 kg/day and updated the CO target to 841.62 kg/day for the Texas portion of the El Paso MPO planning area. Also, the TPB updated the 4-year PM-10 target to 3.48 kg/day for the New Mexico portion of the El Paso MPO planning area. These targets will replace the original targets on the following pages.

Also, on September 18, 2020 the TPB adopted Sun Metro's Public Transportation Agency Safety Plan (PTASP), which includes Fixed Routes, Street Car and Paratransit targets. See PTASP presentation to the TPB and PTASP targets at the end of this section.

PERFORMANCE BASED PLANNING AND PROGRAMMING IN THE ORIGINAL DESTINO 2045 MTP

Measuring and tracking the performance of the region's transportation system is a fundamental component of the Metropolitan Transportation Plan (MTP) and the performance-based planning process. Federal legislation passed in 2012 introduced a new requirement to incorporate a performance-based approach into the transportation planning process. The legislation, the Moving Ahead for Progress in the 21st Century Act, known as MAP-21, requires state Departments of Transportation (DOT), Metropolitan Planning Organizations (MPO), and transit authorities to set coordinated targets, report on a required set of performance measures, and prioritize projects using a coordinated performance-based planning process. These performance requirements were continued and reinforced by the Fixing America's Surface Transportation (FAST) Act, which was signed into law in 2015. Four Transportation Performance Management final rules have been released by the Federal Highway Administration and the Federal Transit Administration, passed through standard rulemaking procedure, and are now effective. Each final rule lists required measures, data sources, and calculation procedures.

The final rules include:

- Highway Safety Improvement Program, known as PM1
- Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program, known as PM2
- Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program (CMAQ), known as PM3
- Transit Asset Management

Federal performance measure final rules establish deadlines for target setting and reporting for each of the required performance measures. For the measures identified in each final rule, MPOs are required to include adopted targets, baseline performance measures, and progress toward the targets in the Destino 2045 MTP adopted two years after the effective date of the final rule. The four performance measure final rules currently effective were established at different times, and therefore have different target-setting and implementation deadlines, as seen below:

Final Rule	Rule Effective Date	Target Setting Deadlines			Required to be Included in MTPs
		Provider	State DOT	MPO	
Safety (PM1)	4/14/2016	N/A	8/31/2017	2/16/2018	5/27/2018
Pavement and Bridge Condition (PM2)	5/20/2017	N/A	5/20/2018	11/16/2018	5/20/2019
System Performance/Freight/CMAQ (PM3)	5/20/2017	N/A	5/20/2018	11/16/2018	5/20/2019
Transit Asset Management	10/01/2016	1/01/2017	10/01/2017	9/21/2018	10/01/2018

***Safety (PM1) is updated yearly**

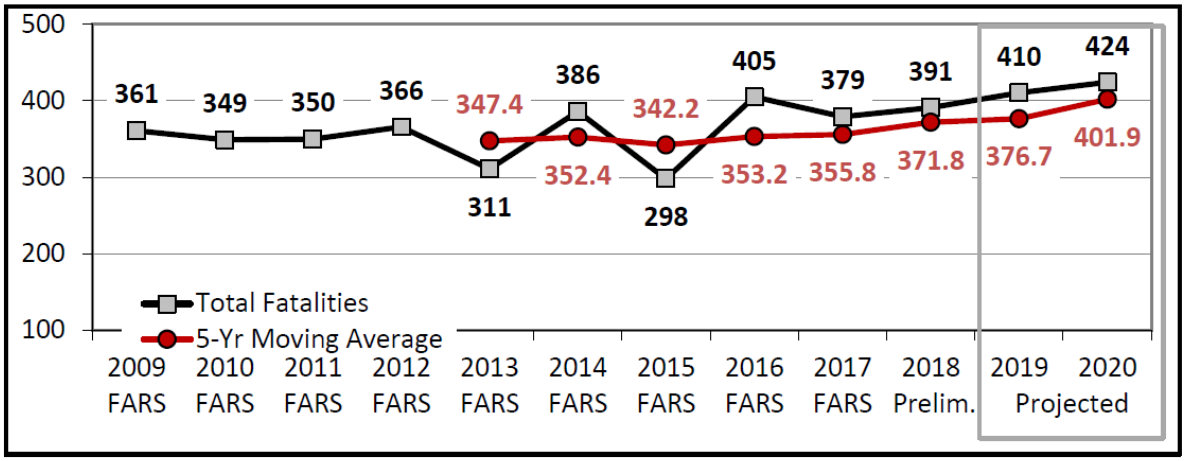
Safety (PM1):

On January 24, 2020 the El Paso MPO adopted the State of Texas Department of Transportation (TXDOT) and New Mexico Department of Transportation (NMDOT) targets for 5 Safety Performance measures based on five-year rolling averages for:

1. Number of Fatalities,
2. Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT),
3. Number of Serious Injuries,
4. Rate of Serious Injuries per 100 million VMT, and
5. Number of Non- Motorized Fatalities and Non-Motorized Serious Injuries

NMDOT PM 1 (Safety) 2020 Targets

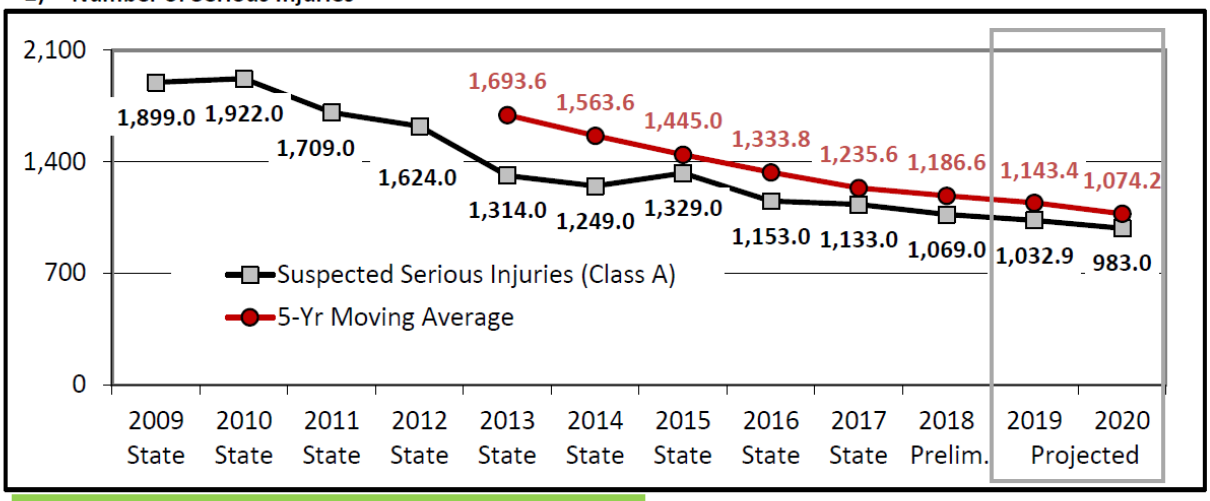
1) Number of Total Fatalities



NMDOT 2020 Target for Number of Total Fatalities: 401.9

NMDOT Justification: Although five-year average fatalities rose by a moderate 2.4 percent between 2013 and 2017, preliminary and projected data indicate that fatalities will increase by about 13 percent between 2017 and 2020. Fatalities involving SUVs, pickup trucks and pedestrians are increasing and in 2018, accounted for 51.4 percent of all crash fatalities. Given the prevalence of SUV and pickup truck ownership, and projected increase in fatalities overall, the five-year average projection of 401.9 is determined to be the 2020 target.

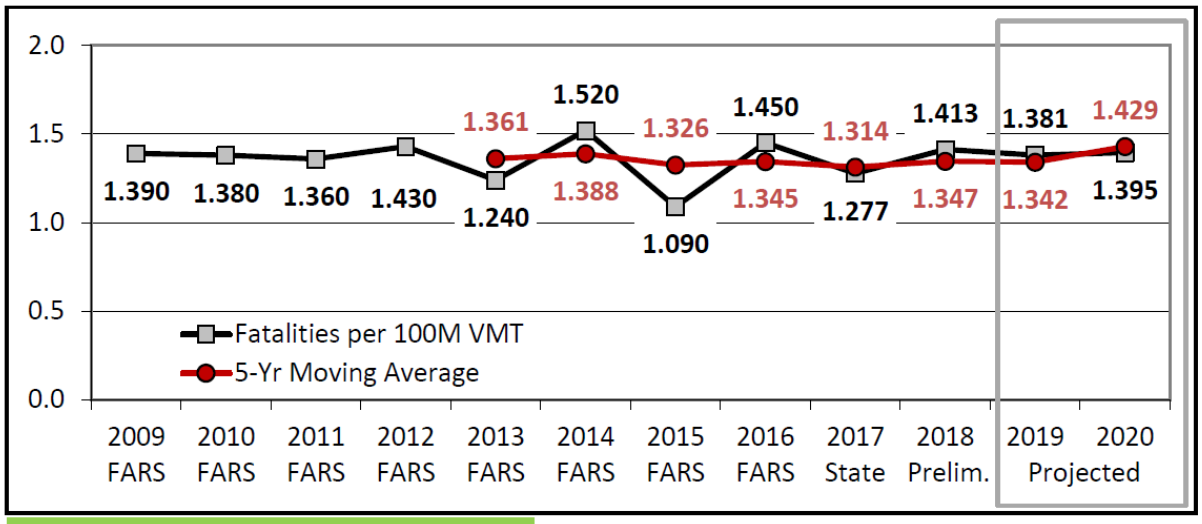
2) Number of Serious Injuries



NMDOT 2020 Target for Number of Serious Injuries: 1,074.2

NMDOT Justification: Five-year average serious injuries are projected to fall by about 7.5 percent between 2017 and 2019, and the State anticipates a continued reduction in serious injuries in 2020. The five-year average projection of 1,074.2 is the 2020 target.

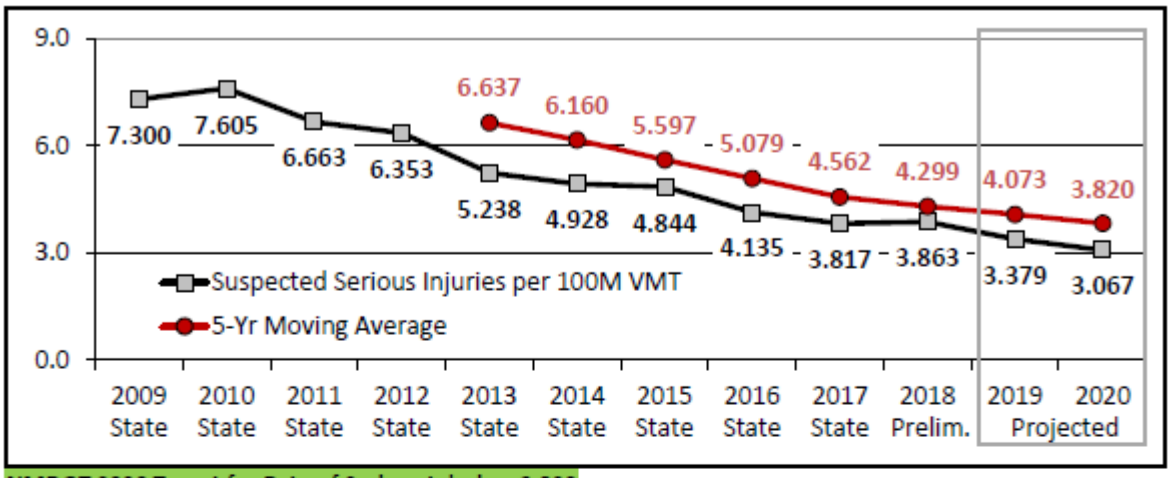
3) Rate of Fatalities



NMDOT 2020 Target for Rate of Fatalities: 1.429

NMDOT Justification: Although five-year average fatalities are expected to increase in 2020 from 2017, VMT is also expected to rise, thus the projected five-year average of 1.429 is the 2020 target.

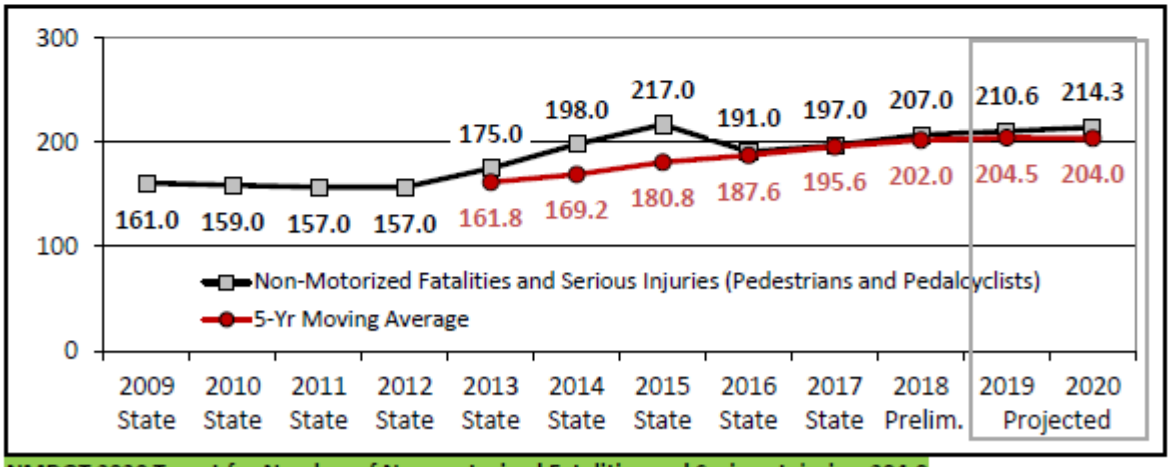
4) Rate of Serious Injuries



NMDOT 2020 Target for Rate of Serious Injuries: 3.820

NMDOT Justification: Justification: Five-year average serious injury rates are projected to continue falling, thus the five-year average projection of 3.820 is the 2020 target.

5) Number of Non-motorized Fatalities and Serious Injuries



NMDOT 2020 Target for Number of Non-motorized Fatalities and Serious Injuries: 204.0

NMDOT Justification: Five-year average non-motorized fatalities and serious injuries are projected to rise by about 5 percent over the next three years. The five-year average projection of 204.0 is the 2020 target.

TXDOT (PM1) TARGETS:

Target: Total number of traffic fatalities

2020 Target: To decrease the expected rise of fatalities to not more than a five-year average of 3,840 fatalities in 2020. The 2020 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2016	3,797	FARS
2017	3,722	ARF
2018	3,631	CRIS
2019	3,980	Target
2020	4,068	Target
2020 Target expressed as 5-year average		3,840

As noted in the table above, the calendar year target for 2020 would be 4,068 fatalities.

Target: Total number of serious injuries

2020 Target: To decrease the expected rise of serious injuries to not more than a five-year average of 17,533 serious injuries in 2020. The 2020 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2016	17,573	CRIS
2017	17,535	CRIS
2018	14,892	CRIS
2019	18,367	Target
2020	18,602	Target
2020 Target expressed as 5-year average		17,394

As noted in the table above, the calendar year target for 2020 would be 18,602 serious injuries.

Target: Fatalities per 100 million vehicle miles traveled

2020 Target: To decrease the expected rise of fatalities per 100 MVMT to not more than a five-year average of 1.406 fatalities per 100 MVMT in 2020. The 2020 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2016	1.40	FARS
2017	1.37	ARF
2018	1.31	CRIS
2019	1.47	Target
2020	1.48	Target
2020 Target expressed as 5-year average		1.406

As noted in the table above, the calendar year target for 2020 would be 1.48 fatalities per 100 MVMT.

Target: Serious Injuries per 100 million vehicle miles traveled

2020 Target: To decrease the serious injuries per 100 MVMT to not more than a five-year average of 6.286 serious injuries per 100 MVMT in 2020. The 2020 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2016	6.48	CRIS
2017	6.42	CRIS
2018	5.37	CRIS
2019	6.60	Target
2020	6.56	Target
2020 Target expressed as 5-year average		6.286

As noted in the table above, the calendar year target for 2020 would be 6.56 serious injuries per 100 MVMT.

Target: Total number of non-motorized fatalities and serious injuries

2020 Target: To decrease the expected rise of non-motorized fatalities and serious injuries to not more than a five year average of 2,285.0 non-motorized fatalities and serious injuries in 2020. The 2020 Target expressed as a 5-year average would be as follows:

Year	Target or Actual Data	Source
2016	2,304	FARS-CRIS
2017	2,146	ARF-CRIS
2018	2,104	CRIS
2019	2,394	Target
2020	2,477	Target
2020 Target expressed as 5-year average		2,285.0

As noted in the table above, the calendar year target for 2020 would be 2,477 non-motorized fatalities and serious injuries.

Pavement and Bridge (PM2):

On November 16, 2018 the El Paso MPO adopted the State of Texas Department of Transportation (TXDOT) and New Mexico Department of Transportation (NMDOT) targets for six Pavement and Bridge Performance measures:

1. Percentage of Interstate pavements in Good condition,
2. Percentage of Interstate pavements in Poor condition,
3. Percentage of non-Interstate NHS pavements in Good condition,
4. Percentage of non-Interstate NHS pavements in Poor condition,
5. Percentage of NHS by deck area classified as in Good condition, and
6. Percentage of NHS by deck area classified as in Poor condition

NMDOT PM2:

Performance Measure	4 Year (2021)
Percentage of bridges on the NHS in Good condition	30.0%
Percentage of bridges on the NHS in Poor condition	2.5%
Percentage of Interstate pavements on the NHS in Good condition	59.1%
Percentage of Interstate pavements on the NHS in Poor condition	5.0%
Percentage of Non-Interstate pavements on the NHS in Good condition	34.2%
Percentage of Non-Interstate pavements on the NHS in Poor condition	12.0%

TXDOT PM2:

Performance Measure	2022 Target
Pavement on IH	
% in "good" condition	66.4%
% in "poor" condition	0.3%
Pavement on non-IH NHS	
% in "good" condition	52.3%
% in "poor" condition	14.3%
NHS Bridge Deck Condition	
% in "poor" condition	0.80%
% in "good" condition	50.42%

Freight and Air Quality (PM3):

On November 16, 2018 the El Paso MPO adopted the State of Texas Department of Transportation (TXDOT) and New Mexico Department of Transportation (NMDOT) targets for the following Freight and Air Quality measures:

1. National Highway System Travel Time Reliability Measures:
    a. Interstate Reliability
    b. Non-Interstate Reliability,
2. Freight Reliability Measure:
    a. Truck Travel Time Reliability, and
3. Congestion Mitigation and Air Quality (CMAQ):
    a. Total Emission Reduction Measure

NMDOT PM3:

Performance Measure	2021 Target
NHS Travel Time Reliability	
IH Level of Travel Time Reliability	95.1%
Non-IH Level of Travel Time Reliability	90.4%
Performance Measure	2021 Target
Truck Travel Time Reliability	1.15
Performance Measure	2021 Target
Total Emission Reduction	
New Mexico PM 10	1.79 kg/day

On September 18, 2020 the El Paso MPO's Transportation Policy Board (TPB) updated the 4-year PM-10 target to 3.48 kg/day for the New Mexico portion of the El Paso MPO planning area.

TXDOT PM3:

Performance Measure		2022 Target
NHS Travel Time Reliability		
IH Level of Travel Time Reliability		56.6%
Non-IH Level of Travel Time Reliability		55.4%

Performance Measure	2022 Target
Truck Travel Time Reliability	1.79

Performance Measure		2022 Target
Total Emission Reduction		
El Paso	CO	891.11
	PM 10	13.71

On September 18, 2020 the El Paso MPO's Transportation Policy Board (TPB) updated the 4-year PM-10 target to 21.96 kg/day and updated the CO target to 841.62 kg/day for the Texas portion of the El Paso MPO planning area.

Transit Asset Management (TAM):

On September 21, 2018 the Transportation Policy Board approved two new MPO Planning Memorandums of Understanding (MOU), one for Texas and one for New Mexico. The MOU's outline the roles and responsibilities of the states, the MPO, and the mass transit provider, Sun Metro, in carrying out the metropolitan transportation planning process and associated performance measures. Based on the federal performance measure final rule on Transit Asset Management (TAM) issued in July 2016, MPOs are required to coordinate with transit providers to set performance targets and integrate individual transit providers' performance targets and TAM plans into planning documents. El Paso MPO reached out to the transit providers in the region to include Sun Metro the mass transit provider for the region and requested targets. The El Paso MPO Transportation Project Advisory Committee (TPAC) reviewed Sun Metro targets, the state of Texas, and the state of New Mexico targets and recommended that the El Paso MPO Transportation Policy Board (TPB) adopt the state of Texas' targets, as the targets for the El Paso MPO. Sun Metro may have agency-level targets that differ from the El Paso MPO adopted targets. These agency-level targets may better meet their needs in planning for state of good repair for Sun Metro. EPMPO will continue to coordinate with Sun Metro to report, track, and adjust the targets over time to meet the El Paso MPO targets.

El Paso MPO TAM 4 year targets

Performance Measure	Baseline	2020 Target	2022 Target
Transit Asset Management			
% revenue vehicles at or exceeding useful life benchmark			<15%
% service vehicles (non-revenue) at or exceeding useful life benchmark			<15%
% facilities rated below 3 on condition scale (TERM)			<15%
% track segments with performance restrictions			N/A

As part of the FAST Act, performance measures were incorporated for transit agencies, primarily through the Transit Asset Management (TAM) assessment and planning requirements. Sun Metro's TAM plan was developed to meet that requirement. Sun Metro continuously seeks grants through the regional MPO in order to supplement the competitive and formula funding grants available from the FTA. Primarily Sun Metro applies for FHWA Congestion Mitigation and Air Quality (CMAQ) and Surface Transportation Program (STP) funding through the MPO. Funding from these grants are crucial to the agency's State of Good Repair (SGR) program and the resulting Transit Asset Management Plan (TAM). CMAQ funds provide for new and replacement bus funding, to include vehicles needed for new and extended services. Funding also allows for new or enhancements of terminals and stops to include accessibility and passenger amenities if associated with new or extended services. STP provides similar funding but without the new or extended service requirements. This grant funding not only permits Sun Metro to provide efficient and dependable service but supplements funding from other sources necessary to maintain SGR standards. In FY2019 CMAQ, the federal funding portion obtained through the regional MPO, will total approximately $5.5M for operating assistance (Dyer and Alameda BRT's and Streetcar services) plus replacement funding for three buses. As of October 2018 Sun Metro had been awarded approximately $7.1M of funds for new revenue vehicles that were unspent or pending, including grants obtained through the CMAQ program and other grant programs.

Sun Metros Performance Measures
Fix Routes: Adopted by TPB 9/18/20

Performance Measures – Fix Route Per every 100,000 miles		Fiscal Year			
		2019	2020	2021	2022
FATALITIES		0	0	0	0
INJURIES		50	45	40	35
SAFETY EVENTS	Accidents	178	50	45	45
	Incidents		78	70	65
	Occurrences		50	45	45
SYSTEM RELIABILITY (Mean Distance Between Failures)		82864 Miles	90,000 Miles	95000 Miles	100,000 Miles

Sun Metros Performance Measures Streetcar: Adopted by TPB 9/18/20

Performance Measures – Streetcar Per every 100,000 miles		Fiscal Year			
		2019	2020	2021	2022
INJURIES		9	7	6	5
SAFETY EVENTS	Accidents	2	1	1	0
	Incidents	9	7	6	5
	Occurrences	9	7	6	5
SYSTEM RELIABILITY (Mean Distance Between Failures)		2879 hrs.	2900 hrs.	2950 hrs.	3000 hrs.

Sun Metros Performance Measures Paratransit: Adopted by TPB 9/18/20

Performance Measures – Paratransit Per every 100,000 miles		Fiscal Year			
		2019	2020	2021	2022
INJURIES		8	8	6	5
SAFETY EVENTS	Accidents	20	17	15	12
	Incidents	25	22	19	15
	Occurrences	32	25	23	20
SYSTEM RELIABILITY (Mean Distance Between Failures)		87019 miles	88000 miles	90,000 miles	91,000 miles