



RMS 2023-2026

# TRANSPORTATION IMPROVEMENT PROGRAM

MARCH 25, 2022



El Paso Metropolitan Planning Organization

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# RMS 2023-2026 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)



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### PUBLIC COMMENT/INVOLVEMENT PERIOD

January 24<sup>th</sup> - March 9<sup>th</sup>, 2022

### PUBLIC MEETING DATES

February 3<sup>rd</sup> - February 21<sup>st</sup>, 2022



## 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  
Sun Metro, Mass Transit provider

Prepared by:

El Paso Metropolitan Planning Organization

Adopted by:

Transportation Policy Board (TPB), XX/XX/XXXX

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. Since 1988, the El Paso Metropolitan Planning Organization (EPMPO) is the organization designated by the Governor of Texas as being responsible, together with the State, for carrying out the provisions of federal regulations regarding Metropolitan Transportation Planning and Programming.

The El Paso's Transportation Policy Board (TPB) is responsible for transportation planning and programming for the EPMPO. The TPB directs MPO staff through the Executive Director of the MPO. 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 EPMPO 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.

## 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, Sun Metro as well as other members. The TPB receives recommendation for approval from the Transportation Project Advisory Committee (TPAC) for project selection, and technical issues for planning and programming transportation projects in the region.

## 3. COMMITTEES OF THE MPO

The MPO has two standing committees; the Executive Committee (EC) and the Transportation Project Advisory Committee (TPAC). The EC's roles and responsibilities include review of the business aspect of the MPO, review of the Executive Director, review of contracts and other documents, and other assignments for recommendations to the TPB. The TPAC develops and makes recommendations to the TPB on projects with regards to the MTP and TIP, project selection process criteria, and special transportation planning studies.

## 4. PURPOSE OF THE TRANSPORTATION IMPROVEMENT PROGRAM

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 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. The EPMPO



produces a fiscally constrained TIP covering a period of four years.

Before adoption by the TPB, the draft TIP is reviewed by NMDOT and TxDOT, and is presented for public involvement for at least 30 days. Local officials, TxDOT, NMDOT, 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 Regional Mobility Strategy (RMS) 2023-2026 TIP is consistent with the EPMPO's RMS 2050 MTP. The EPMPO's RMS documents were produced through a Comprehensive, Cooperative, and Continuing transportation planning process carried out by the MPO in consultation with TxDOT, NMDOT, local governments 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 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. Process for amendments can be found in the EPMPO's Public Participation Plan (PPP) which is available in the EPMPO website at [www.elpasompo.org/PublicParticipationPlan](http://www.elpasompo.org/PublicParticipationPlan).

## 5. RELATIONSHIP BETWEEN TIP AND MTP

In metropolitan areas, the Metropolitan Transportation Plan (MTP) is the statement of the ways the region plans to invest in the transportation system. Per the federal regulations, the plan shall "include both long-range and short-range program strategies/actions that lead to the development of an integrated intermodal transportation system that facilitates the efficient movement of people and goods.

More specifically in the TIP, the EPMPO identifies the transportation projects and strategies from the MTP that it plans to undertake over the next four years. The TIP is the region's way of allocating its limited transportation resources among the various capital and operating needs of the area, based on a clear set of short-term transportation priorities.

## 6. DEFINITION OF AREA

The EPMPO Planning Area includes the entirety of El Paso County, Texas, as well as portions of Doña Ana and Otero Counties in New Mexico. Within this boundary, the urbanized area has a population of over 200,000, and is therefore classified as a Transportation Management Area (TMA). The TMA designation applies to the overall metropolitan planning area, which includes the following governmental jurisdictions and agencies:

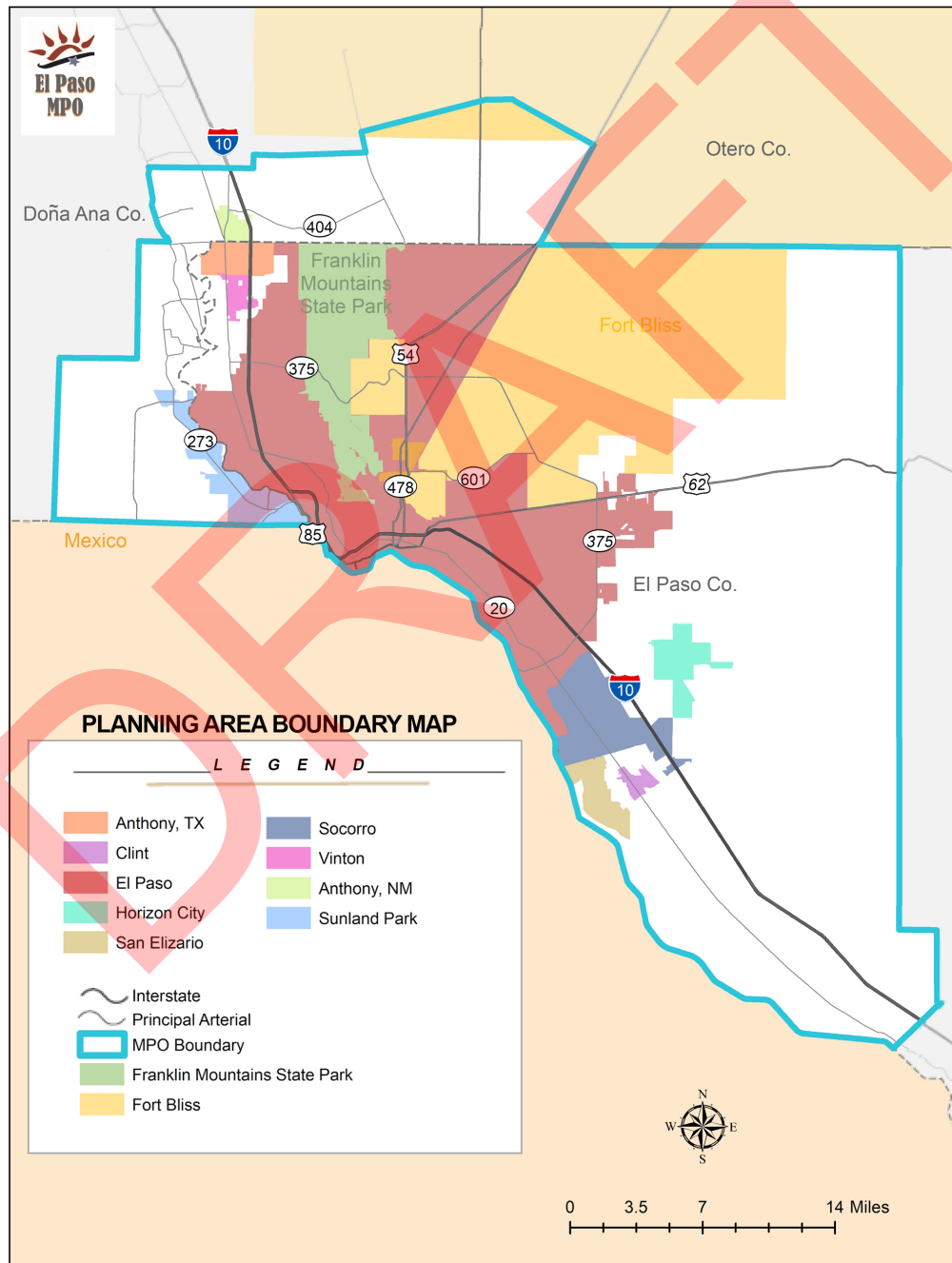
- City of El Paso, TX
- City of San Elizario, TX
- City of Socorro, TX
- El Paso County, TX
- Town of Anthony, TX
- Town of Clint, TX





**RMS 2023-2026**  
**TIP**

- Town of Horizon City, TX
- Village of Vinton, TX
- TXDOT-El Paso District 24
- City of Anthony, NM
- City of Sunland Park, NM
- Doña Ana County, NM
- Otero County, NM
- NMDOT-District 1
- NMDOT-District 2



## 7. PUBLIC PARTICIPATION PLAN

The intent of the Public Participation Plan (PPP) for the EPMPO 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. 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 are accessible, as well as locations in the vicinity of transit lines or routes. Ideally the meetings will be held in person however, if under certain circumstances an in-person meeting may not be feasible, the MPO will hold virtual public meeting(s).

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 the EPMPO's Social Media pages.

The PPP applies to the MTP, TIP and may be utilized—with appropriate modifications—for any other MPO documents requiring public involvement. All documents have, as a minimum, 30 days of continuing public review and comment periods, except the PPP itself, which requires 45 days of public review. Specific PPP measures are described as they relate to specific documents including, but not limited to the Metropolitan Transportation Plan (MTP), Transportation Improvement Program (TIP) and amendments to adopted EPMPO documents

For a complete copy of the EPMPO's Public Participation Plan, please contact the MPO at (915) 212-0258 or visit the EPMPO's web page at [www.elpasompo.org/PublicParticipationPlan](http://www.elpasompo.org/PublicParticipationPlan).

## 8. AMERICANS WITH DISABILITIES ACT (ADA)

The Americans with Disabilities Act of 1990 (ADA) stipulates involving the community, particularly those with disabilities, in the development and improvement of services. EPMPO fully complies with these requirements through its ADA plan and policies by making meeting room facilities accessible with wheelchair ramps, and restrooms and elevators that are wheelchair accessible. EPMPO facilitates public participation in transportation activities by people with disabilities using the guidelines found in the PPP. Additionally, TIP projects must comply with ADA requirements for accessibility.

## 9. TITLE VI

The EPMPO is required by the FHWA to implement Title VI of the Civil Rights Act of 1964 (42 U.S.C 2000d-1). Title VI declares it to be the policy of the United States that discrimination on the ground of race, color, or national origin shall not occur in connection with programs and activities receiving Federal financial assistance, and authorizes and directs the involved Federal departments and agencies to take action to carry out this policy. Title VI prohibits discrimination: whether intentional or where the unintended effect is unduly burdensome.

The EPMPO, as a recipient of Federal financial assistance and under Title VI of the Civil Rights Act of 1964, ensures that no person shall on the grounds of race, color and national origin be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any EPMPO programs or activities.

## 10. PROJECT SELECTION PROCESS

The selection of projects for the RMS 2050 MTP and RMS 2023-2026 TIP consisted of; evaluating the projects ability to achieve the FAST Act National Performance Goals, identifying project strategies included in the EPMPO's 2019 Congestion Management Process, and incorporating the Regional Mobility Strategy efforts. The purpose of the Regional Mobility Strategy was to understand future transportation needs and start a cooperative process to identify local and regional priorities. Priority projects and initiatives were selected through this cooperative process and adopted by the TPB as part of the RMS 2020. Projects identified in the RMS 2020 were prioritized for the available funding in the RMS 2023-2026 TIP.

## 11. PERFORMANCE MEASURES

Performance measures are quantifiable indicators of progress towards achieving the goals and objectives set forth in the RMS 2050 MTP. The United States Department of Transportation (USDOT) has enumerated several performance measures that the EPMPO will report progress towards in order 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. EPMPO adopts targets established by the Texas and New Mexico DOTs for progress tracking purposes. The RMS 2050 MTP and the RMS 2023-2026 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 it 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 RMS 2050 MTP (**Table 1**) 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 RMS 2050 MTP 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 (POEs).

**TABLE 1: GOALS AND PERFORMANCE MEASURES**

GOALS	ALTERNATIVES EVALUATION PERFORMANCE MEASURES
<b>Safety</b>	Number of projects that include safety enhancements located near crash hotspots
<b>Maintenance &amp; Operations</b>	Number of projects that repair or replace deficient bridges or pavements
<b>Mobility</b>	<ul style="list-style-type: none"> <li>• Travel Time Index (Actual Travel Time Divided by Non-Congested Travel Time)</li> <li>• Annual hours of delay (millions)</li> <li>• Commute times from Environmental Justice Zones (min)</li> </ul>
<b>Accessibility &amp; Travel Choice</b>	<ul style="list-style-type: none"> <li>• Percentage of jobs, key destinations, and population within ½ mile of high-quality, rapid transit</li> <li>• Average trip costs</li> </ul>
<b>Sustainability</b>	<ul style="list-style-type: none"> <li>• Total Vehicle Miles Traveled (VMT)</li> <li>• VMT per capita (regional)</li> </ul>
<b>Economic Vitality</b>	<ul style="list-style-type: none"> <li>• Annual hours of delay along major freight corridors</li> <li>• Average wait times by mode at POEs</li> <li>• Number of projects that improve operations or multimodal access at current or future POEs</li> </ul>
<b>Quality of Life</b>	The indicator for this goal is a summary of performance on each goal for each alternative relative to the other alternatives.
<b>Implementation</b>	Number of projects ready for implementation based on the Project Readiness Report

## 12. TIP FUNDING SOURCES

**TABLE 2: THE 12 TRADITIONAL FEDERAL FUNDING SOURCES USED IN TEXAS AND OTHER USED FUNDING CATEGORIES**

CATEGORY	DESCRIPTION
<b>1-Preventive Maintenance and Rehabilitation.</b>	Category 1 addresses preventive maintenance and rehabilitation of the existing state highway system, including pavement, signs, traffic signals, and other infrastructure assets.
<b>2 – Metropolitan and Urban Area Corridor Projects</b>	Category 2 addresses mobility and added capacity projects on urban corridors to mitigate traffic congestion, as well as traffic safety and roadway maintenance or rehabilitation. Projects must be located on the state highway system.
<b>3 -Non-Traditionally Funded Transportation Projects</b>	Category 3 is for transportation projects that qualify for funding from sources not traditionally part of the State Highway Fund, including state bond financing (such as Proposition 12 and Proposition 14), the Texas Mobility Fund, passthrough financing, regional revenue and concession funds, and local funding. Category 3 also contains funding for the development costs of design-build projects. (Design-build construction costs are covered by other UTP categories)
<b>4 – Statewide Connectivity Corridor Projects</b>	Category 4 addresses mobility on major state highway system corridors, which provide connectivity between urban areas and other statewide corridors. Projects must be located on the designated highway connectivity network
<b>5 – CMAQ</b>	Category 5 addresses attainment of National Ambient Air Quality Standard in non-attainment areas (currently the Dallas-Fort Worth, Houston, San Antonio, and El Paso metro areas). Each project is evaluated to quantify its air quality improvement benefits. Funds cannot be used to add capacity for single-occupancy vehicles
<b>6 – Structures Replacement and Rehabilitation (Bridge)</b>	Category 6 addresses bridge improvements through the following sub-programs:  Highway Bridge Program, Bridge Maintenance and Improvement Program, Bridge System Safety Program
<b>7 – Metropolitan Mobility and Rehabilitation</b>	Category 7 addresses transportation needs within the boundaries of MPOs with populations of 200,000 or greater — known as transportation management areas (TMAs). This funding can be used on any roadway with a functional classification greater than a local road or rural minor collector

CATEGORY	DESCRIPTION
<b>8 – Safety</b>	<p>Category 8 addresses highway safety improvements through the sub-programs listed below. Common Category 8 project types include medians, turn lanes, intersections, traffic signals, and rumble strips.</p> <p>Highway Safety Improvement Program (HSIP) Systemic Widening Program (SSW) Road to Zero (RTZ)</p>
<b>9– Transportation Alternatives Set-Aside Program (TASA)</b>	<p>Category 9 handles the federal Transportation Alternatives (TA) Set-Aside Program. These funds may be awarded for the following activities:</p> <p>Construction of sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic-calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act</p>
<b>10 – Supplemental Transportation Programs</b>	<p>Category 10 addresses a variety of transportation improvements through the following sub-programs:</p> <p>Coordinated Border Infrastructure (CBI) Supplemental Transportation Projects (Federal) Federal Lands Access Program (FLAP) Texas Parks and Wildlife Department (TPWD) Green Ribbon Program Americans with Disabilities Act (ADA) Landscape Incentive Awards Railroad Grade Crossing and Replanking Program Railroad Signal Maintenance Program</p>
<b>11 – District Discretionary</b>	<p>Category 11 addresses TxDOT district transportation needs through the sub-programs listed below. Common Category 11 project types include roadway maintenance or rehabilitation, added passing lanes (Super 2), and roadway widening (non-freeway).</p> <p>District Discretionary Energy Sector Border Infrastructure</p>

CATEGORY	DESCRIPTION
<b>12 – Strategic Priority</b>	<p>Category 12 addresses projects with specific importance to the state, including those that improve Congestion and connectivity, Economic opportunity, Energy sector access, Border and port connectivity, Efficiency of military deployment routes or retention of military assets in response to the Federal Military Base Realignment and Closure Report, the ability to respond to both man-made and natural emergencies</p> <p>Common project types include roadway widening (both freeway and non-freeway), interchange improvements, and new-location roadways</p>
<b>Proposition 1 (TXDOT)</b>	Allocates money from the rainy day fund to State Highway Fund for construction, maintenance and rehabilitation.
<b>Proposition 7 (TXDOT)</b>	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.
<b>FTA Section 5307</b>	Mass Transit apportionment to urbanized areas based on population and operating performance.
<b>FTA Section 5309</b>	Funding for major transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit.
<b>FTA Section 5339</b>	Mass Transit discretionary funds for capital projects only.
<b>FTA Section 5310</b>	Provides federal funds to private nonprofit entities for the transportation of elderly and/or disabled persons.
<b>FTA Section 5311</b>	Rural Transit Program
<b>Federal Highway-CMAQ (NMDOT)</b>	Congestion Mitigation and Air Quality
<b>Federal Highway-HSIP (NMDOT)</b>	Highway Safety Improvement Program
<b>Federal Highway-NHPP (NMDOT)</b>	National Highway Performance Program
<b>Federal Highway-STP (NMDOT)</b>	Surface Transportation Block Grant Program
<b>Federal Highway-TAP (NMDOT)</b>	Transportation Alternatives Program
<b>NM State Funds (NMDOT)</b>	New Mexico State funds

### 13. AIR QUALITY

The EPMPO requested that the Texas Commission on Environmental Quality (TCEQ) petition the United States Environmental Protection Agency (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 EPMPO was operating under a motor vehicle emission budget of 29.66 tons/day. The 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 paving 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 require street sweeping at regular intervals to help the City of El Paso achieve goals on dust emissions. In New Mexico, Doña Ana County implemented 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, TCEQ developed a Natural Events Action Plan (NEAP) for El Paso County. 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. On August 17, 2021, the TCEQ executive director approved initiation of a redesignation request and maintenance SIP revision for the El Paso PM10 nonattainment area. The adoption date is tentatively planned for late July 2022, so it is not expected to impact the PM10 MVEB used for this conformity demonstration.

On November 30, 2021 EPA published the final action revising the initial air quality designations for two counties associated with two nonattainment areas. In response to the D.C. Circuit Court of Appeals issued, the EPA re-evaluated the designations for the remanded counties by applying a uniform, nationwide analytical approach and interpretation of the designation provisions of the Clean Air Act (CAA) in considering the specific facts and circumstances of the areas using only data and information available at the time of the original designations. In the final action, the EPA revised the boundaries of two nonattainment areas, affecting the designation status of two counties in two separate states (Colorado and Texas). A portion of Doña Ana County near Sunland Park, NM and El Paso County (El Paso-Las Cruces, Texas-New Mexico) were designated marginal non-attainment for 2015 Ozone NAAQS (Effective on December 30, 2021).

As previously mentioned, the EPMPO boundary expands 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. NMDOT and their consultants may prepare a qualitative analysis of roadway projects that fall within the non-attainment area. A small portion of Doña Ana County (Sunland Park) was designated non-attainment under 2015 Ozone (O3) NAAQS on June 4, 2018 (Effective August 3, 2018) (83 FR 25776). The Sunland Park baseline





emissions inventory and emissions statement SIP Revision and Certification was submitted to EPA by the New Mexico Environmental Department (NMED) on September 10, 2020 and approved October 15, 2021 (86 FR 57388). NMED's nonattainment new source review (NNSR) permitting requirements (20.2.79 NMAC; Permit-Nonattainment Areas) SIP Revision was amended by the Environmental Improvement Board on June 25, 2021 and submitted to EPA July 30, 2021 for approval in meeting the 2015 O3 NAAQS. Please note that adoption of Reasonably Available Control Technologies (RACT) is not required for marginal ozone nonattainment areas and NMED has not included these in our SIP Revisions. The emission inventories SIP does not include a Motor Vehicle Emissions Budget.

Before the TIP is given final approval by 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 TXDOT, 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 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 NMED, and the New Mexico FHWA State Division office.

The RMS 2023-2026 TIP is part of the RMS 2050 MTP. Transportation Conformity for the RMS 2023-2026 TIP will be determined as part of

the conforming RMS 2050 MTP. The conformity statement is evaluated according to the amount of particulate matter (PM-10), volatile organic components (VOCs) and oxides of nitrogen (NOx) 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 PM-10, VOC and NOx, and the no-greater-than-baseline year interim emission test for O3 (NOx and VOC) for the portion of Doña Ana County near Sunland Park, NM non-attainment area.

MOVES 2014b, an emissions modeling tool that can help determine the amount of emissions produced by vehicles, was to be used for the RMS 2050 MTP and RMS 2023-2026 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 MTP and TIP. The EPA listed certain categories of projects as being exempt from conformity requirements in the Federal Register.

El Paso County, southern Doña Ana County, and a small portion of Otero County 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 PM-10, VOC and NOx 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. A small portion of Doña Ana County near Sunland Park required an interim

conformity test no-greater-than-baseline year as appropriate for marginal O3 nonattainment area.

Once the RMS 2023-2026 TIP receives final approval by the TPB, it will be included in New Mexico & Texas STIP's, and the document will be available for distribution upon request.

## 14. GROUPED DOCUMENTATION

Under 23 CFR 450.326(h) 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 EPA transportation conformity requirements (40 CFR Part 93, subpart A).

The EPMPO is participating by grouping some projects in the TIP that are covered in the Texas STIP. The Texas STIP can be found 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](https://www.dot.state.nm.us/content/nmdot/en/POD_Pubs.html). Financial accountability for these projects are the responsibility of the State(s), and therefore are not accounted for in the Financial Summary for the EPMPO 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 3: GROUPED PROJECTS CATEGORIES (TXDOT)**

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 (See Note 3).
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.

PROPOSED CSJ (TXDOT)	GROUPED PROJECT CATEGORY	DEFINITION
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	Projects including bicycle and pedestrian lanes, paths and facilities. (e.g., sidewalks, shared use paths, side paths, bicycle boulevards, curb extensions, bicycle parking facilities, bikeshare facilities, etc.) Safe Routes to School non-infrastructure related activities (e.g. enforcement, tools and education programs).
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 and Programs	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, preventive maintenance of transit vehicles and facilities, 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 4].
5000-00-919	Recreational Trails Program	Off-Highway Vehicle (OHV), Equestrian, Recreational Water/ Padding Trails and related facilities; Recreational Trails related education and safety programs.

Note 1: Projects eligible for grouping include associated project phases (Preliminary Engineering, Right-Of-Way and Construction)

Note 2: Projects funded with Congestion Mitigation Air Quality funding require a Federal eligibility determination, and are not approved to be grouped.

Note 3: Passing lanes include "SUPER 2" lanes consistent with TxDOT's Roadway Design Manual

Note 4: 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.

Note 5: Projects funded as part of the Recreational Trails Program (RTP) and Transportation Alternatives (TA) Program consistent with the revised grouped project category definitions may be grouped. RTP or TA 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). Road diet projects may not be grouped.

## 15. MPO GLOSSARY – PROJECT SECTION

TABLE 4: GLOSSARY

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: <ul style="list-style-type: none"> <li>• Interstate</li> <li>• Other Urban Freeways and Expressways</li> <li>• Other Principal Arterials</li> </ul>
FED PROG	Federal Funding	<p>PM&amp;R: Preventive Maintenance and Rehabilitation</p> <p>Metro ACP: Metropolitan Area (TMA) Corridor Projects</p> <p>Urban ACP: Urban Area (Non-TMA) Corridor Projects</p> <p>State CCP: Statewide Connectivity Corridor Projects</p> <p>CMAQ: Congestion Mitigation and Air Quality Improvement</p> <p>CSREHAB: Consolidated Structure Rehabilitation</p> <p>STP-MM: Surface Transportation Program- Metro-Mobility</p> <p>SAFE: Safety Projects</p> <p>ENHAN: Enhancement Projects</p> <p>MISC: Miscellaneous</p> <p>Dist Discret: District Discretionary</p> <p>STRATEGIC: Strategic Priority</p> <p>FTA: Federal Transit Administration</p> <p>STP-L: New Mexico, Surface Transportation Program Large Urban</p> <p>STP-FLEX: New Mexico, Surface Transportation Program- Flexible</p> <p>STP-TPS: New Mexico, Surface Transportation Program- Safety</p> <p>BOR/COR: Borders and Corridors</p>
PHASE	Project Phase for Federal Funding	<p>T- Transfers</p> <p>C – Construction</p> <p>E- Preliminary Engineering</p> <p>R- Right of Way Acquisition</p>

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**TEXAS HIGHWAY PROJECTS FHWA & OTHER FUNDS<sup>1</sup>**

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<sup>1</sup> 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	3451-01-040	FM 1281	C	Horizon	TXDOT	\$6,000,000
<b>TIP PROJECT NAME: Horizon at Darrington Intersection Imp.</b>					REVISION DATE:	07/2022	
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 TMA	
REMARKS: Program in to RMS 2050 MTP and RMS 23-26 TIP in FY 2023							

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

PROJECT HISTORY:  
Admin Amend to move from FY 2022 to FY 2023

Total Project Cost Information:		Cost of Approved Phases:	Cat	2M	TMA	Authorized Funding by Category/Share					
						Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$360,000					\$4,800,000	\$1,200,000	\$0	\$0	\$0	\$6,000,000
Right Of Way:	\$0										
Construction:	\$6,000,000										
Construction Engineering:	\$0										
Contingencies:	\$0	\$6,000,000									
Indirects:	\$0										
Bond Financing:	\$0										
Potential Change Order:	\$0										
<b>Total Project Cost:</b>	<b>\$6,360,000</b>					<b>\$4,800,000</b>	<b>\$1,200,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,000,000</b>

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 Amended D2045 MTP, D21-24 TIP, and 21-24 STIP in FY 2022
01/2022	2023	01/2022	Admin Amend to move from FY 2022 to FY 2023
07/2022	2023	03/2022	Program in to RMS 2050 MTP and RMS 23-26 TIP in FY 2023

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

DISTRICT	COUNTY	CSJ	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST. 24	EP	0924-06-619	C,E	El Paso	COEP	\$18,000,000
<b>TIP PROJECT NAME: ITS Infra. @Zaragoza/BOTA POE (OFF-SYS)</b>					REVISION DATE:	07/2022
LIMITS FROM: At Bridge of the Americas, 1 mile north, south, east, and west of I-10 at US 54 interchange					MPO PROJECT ID:	S501X
LIMITS TO: At Zaragoza Port of Entry, along I-10, 1 mile east and west of Loop 375 interchange, along Loop375 from Padres Drive to 1 mile north of I-10 interchange.					MTP REFERENCE:	S501X
TIP DESCRIPTION: ITS Infra. @Zaragoza/BOTA POE (OFF-SYS): The Design, Construction, and Installation of Intelligent Transportation Systems (ITS) at the Bridge of the Americas (BOTA) and Zaragoza Ports of Entry					FUNDING CATEGORY:	CAT 3 TMF
REMARKS: Program in to RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - Exempt						

PROJECT HISTORY:  
Amend D2045 MTP, Amended D2045 MTP, D21-24 TIP and 21-24 STIP to program in FY 2023 - Exempt

Total Project Cost Information:		Cost of Approved Phases:	Cat	3TMF	Texas Mobility Fund	Authorized Funding by Category/Share					
						Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$2,650,000					\$0	\$18,000,000	\$0	\$0	\$0	\$18,000,000
Right Of Way:	\$0										
Construction:	\$15,254,000										
Construction Engineering:	\$0										
Contingencies:	\$0	\$18,000,000									
Indirects:	\$96,000										
Bond Financing:	\$0										
Potential Change Order:	\$0										
<b>Total Project Cost:</b>	<b>\$18,000,000</b>					<b>\$0</b>	<b>\$18,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$18,000,000</b>

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
11/2021	2023	08/2021	Amend D2045 MTP, Amended D2045 MTP, D21-24 TIP and 21-24 STIP to program in FY 2022 - Exempt
07/2022	2023	03/2022	Program in to RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - Exempt

'State(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	\$12,000,000
<b>TIP PROJECT NAME: John Hayes (Darrington/Berryville)(Construction Phase 1)</b>					REVISION DATE:	07/2022	
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 2-lane roadway (1 lane in each direction with raised median)				FUNDING CATEGORY:	CAT 7 STP-MM, CAT 3 LC	
REMARKS:	Program in to RMS 2050 MTP and RMS 23-26 TIP In FY 2023						

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

PROJECT HISTORY:  
Amend to add CAT 7 CRRSAA funds, reduce CAT 7 STP MM funds, and move from FY 2022 to FY 2023

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share								
Item	Amount		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share			
Preliminary Engineering:	\$2,555,280	<b>\$12,000,000</b>	Cat 7	STP-MM	\$7,053,535	\$0	\$0	\$1,763,384	\$0	\$8,816,919	
Right Of Way:	\$0		Cat 7	CRRSA A	\$3,183,081	\$0	\$0	\$0	\$0	\$3,183,081	
Construction:	\$30,000,000		<b>Fund by Share</b>		<b>\$10,236,616</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,763,384</b>	<b>\$0</b>	<b>\$12,000,000</b>	
Construction Engineering:	\$1,500,000										
Contingencies:	\$3,000,000										
Indirects:	\$0										
Bond Financing:	\$0										
Potential Change Order:	\$0										
<b>Total Project Cost:</b>	<b>\$37,055,280</b>										

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2022	05/2020	Program into the Amended D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2022
01/2022	2023	12/2020	Amend to add CAT 7 CRRSAA funds, reduce CAT 7 STP MM funds, and move from FY 2022 to FY 2023
07/2022	2023	03/2022	Program in to RMS 2050 MTP and RMS 23-26 TIP 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	0924-06-587	CS	C,E,R	Horizon	Horizon	\$14,971,000
<b>TIP PROJECT NAME: N. Darrington Reconstruction</b>					REVISION DATE:	07/2022	
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, SWPE	
REMARKS:	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023						

PROJECT HISTORY:  
Admin Amend to to add CAT 7 CRRSAA funds, reduce CAT 7 STP MM funds, and move from FY 2022 to FY 2023

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share								
Item	Amount		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share			
Preliminary Engineering:	\$3,260,000	<b>\$14,971,000</b>	Cat 7	STP-MM	\$7,453,535	\$0	\$0	\$1,863,384	\$0	\$9,316,919	
Right Of Way:	\$1,070,000		Cat	SBPE SWPE	\$0	\$2,471,000	\$0	\$0	\$0	\$2,471,000	
Construction:	\$15,310,000		Cat 7	CRRSA A	\$3,183,081	\$0	\$0	\$0	\$0	\$3,183,081	
Construction Engineering:	\$3,050,000		<b>Fund by Share</b>		<b>\$10,636,616</b>	<b>\$2,471,000</b>	<b>\$0</b>	<b>\$1,863,384</b>	<b>\$0</b>	<b>\$14,971,000</b>	
Contingencies:	\$2,090,000										
Indirects:	\$0										
Bond Financing:	\$0										
Potential Change Order:	\$0										
<b>Total Project Cost:</b>	<b>\$24,780,000</b>										

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
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 amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022.
01/2021	2022	09/2021	Administratively ame D2045 MTP, Amended D2045 MTP, D21-24 TIP and 21-24 STIP to replace \$2,471,000 of CAT 3 with SWPE funds in FY 2022
01/2022	2023	12/2021	Admin Amend to to add CAT 7 CRRSAA funds, reduce CAT 7 STP MM funds, and move from FY 2022 to FY 2023
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP 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	0924-06-613	N/A	T	El Paso	County EP	\$2,245,213
<b>TIP PROJECT NAME: Regional Transit Start-up assistance for FY23</b>					REVISION DATE:	07/2022	
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 amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023				VOC (Kg/Day):	2.784	CO (Kg/Day): 44.015
					NOX (Kg/Day):	2.182	PM 10 (Kg/Day): 1.041

Total Project Cost Information:		Authorized Funding by Category/Share								
		Cost of Approved Phases:	Cat	Share	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$0		5	CMAQ	\$1,796,170	\$0	\$0	\$449,043	\$0	\$2,245,213
Right Of Way:	\$0									
Construction:	\$4,139,859									
Construction Engineering:	\$0									
Contingencies:	\$0	\$2,245,213								
Indirects:	\$0									
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$4,139,859</b>				<b>\$1,796,170</b>	<b>\$0</b>	<b>\$0</b>	<b>\$449,043</b>	<b>\$0</b>	<b>\$2,245,213</b>

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2023	05/2020	Program amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - 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	0924-06-611	CS	C,E	El Paso	COEP	\$20,659,189
<b>TIP PROJECT NAME: Sean Haggerty Dr Extension</b>					REVISION DATE:	07/2022	
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, SWPE	
REMARKS:	Admin Amend to add \$1,303,838 of CRRSAA funds, and reduce CAT 7 STP funds to \$17,945,351 in FY 2023						

PROJECT HISTORY:  
Program into the RMS 2050 MTP, RMS 23-26 TIP and 23-26 STIP in FY 2023

Total Project Cost Information:		Authorized Funding by Category/Share								
		Cost of Approved Phases:	Cat	Share	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$2,031,152		7	STP-MM	\$14,356,281	\$0	\$0	\$3,589,070	\$0	\$17,945,351
Right Of Way:	\$0									
Construction:	\$16,811,519		7	CRRSA A	\$1,303,838	\$0	\$0	\$0	\$0	\$1,303,838
Construction Engineering:	\$2,437,670									
Contingencies:	\$0	\$20,659,189								
Indirects:	\$288,738									
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$21,569,079</b>				<b>\$15,660,119</b>	<b>\$1,410,000</b>	<b>\$0</b>	<b>\$3,589,070</b>	<b>\$0</b>	<b>\$20,659,189</b>

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2023	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023
09/2021	2023	09/2021	Admin amed D2045 MTP, Amended D2045 MTP, D21-24 TIP and 21-24 STIP to replace \$1,410,000 of CAT 3 with SWPE funds in FY 2023
01/2022	2023	12/2021	Admin Amend to add \$1,303,838 of CRRSAA funds, and reduce CAT 7 STP funds to \$17,945,351 in FY 2023
07/2022	2023	03/2022	Program into the RMS 2050 MTP, RMS 23-26 TIP and 23-26 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
<b>TIP PROJECT NAME: SH 178 OPERATIONAL IMPROVEMENTS</b>					REVISION DATE:	07/2022	
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 in to RMS 2050 MTP and RMS 23-26 TIP in FY 2023						

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

PROJECT HISTORY:  
Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023

Total Project Cost Information:		Authorized Funding by Category/Share							
Item	Amount	Cat	Priority	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$9,481,500								
Right Of Way:	\$0								
Construction:	\$193,500,000	Cat 12	Strategic Priority	\$154,800,000	\$38,700,000	\$0	\$0	\$0	\$193,500,000
Construction Engineering:	\$0								
Contingencies:	\$0								
Indirects:	\$0								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$202,981,500</b>			<b>Fund by Share \$154,800,000</b>	<b>\$38,700,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$193,500,000</b>

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2023	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023
07/2022	2023	03/2022	Program in to RMS 2050 MTP and RMS 23-26 TIP 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	0665-02-002	SS320	C	El Paso	TXDOT	\$20,497,532
<b>TIP PROJECT NAME: Spur 320 PH I (BU 54 to Railroad Dr)</b>					REVISION DATE:	07/2022	
LIMITS FROM:	BU 54 (Dyer Street)				MPO PROJECT ID:	P201B-CAP	
LIMITS TO:	Railroad Drive				MTP REFERENCE:	P201B-CAP	
TIP DESCRIPTION:	Spur 320 PH I (BU 54 to Railroad Dr): SS320 Borderland Expressway Phase I: Construct Frontage Roads and Intersections between BU54 (Dyer) to Railroad Drive				FUNDING CATEGORY:	CAT 2M, CAT 11B	
REMARKS:	Amend D2045MTP, Amended D2045MTP, D21-24 TIP to program in FY 2023						

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

Total Project Cost Information:		Authorized Funding by Category/Share							
Item	Amount	Cat	Priority	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$2,500,000								
Right Of Way:	\$2,520,000								
Construction:	\$20,479,532	Cat 2M	CAT 2	\$8,398,026	\$2,099,506	\$0	\$0	\$0	\$10,497,532
Construction Engineering:	\$0	Cat 11	Rider 11 B	\$8,000,000	\$2,000,000	\$0	\$0	\$0	\$10,000,000
Contingencies:	\$0								
Indirects:	\$0								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$25,499,532</b>			<b>Fund by Share \$16,398,026</b>	<b>\$4,099,506</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$20,497,532</b>

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
11/2021	2023	10/2021	Amend D2045MTP, Amended D2045MTP, D21-24 TIP to program in FY 2023
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP 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	\$3,669,976
<b>TIP PROJECT NAME: Traffic Management Center Upgrade Phase 2</b>					REVISION DATE:	07/2022	
LIMITS FROM:	City of El Paso city limits				MPO PROJECT ID:	S301E	
LIMITS TO:	City of El Paso city limits				MTP REFERENCE:	S301E	
TIP DESCRIPTION:	TMCUPhase2 Construction: The project includes the upgrade of the City of El Paso TMC&Traffic Signal controller equipment city wide. P1 is the design phase. P2-5 are the implementation&construction of the design.				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	
REMARKS:	Program in to RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT						

PROJECT HISTORY:  
Amend to remove PE phase and reduce CAT 5 CMAQ funding to \$3,669,976

Total Project Cost Information:		Authorized Funding by Category/Share								
				Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share	
Preliminary Engineering:	\$5,360,329									
Right Of Way:	\$0									
Construction:	\$17,122,380									
Construction Engineering:	\$3,021,596									
Contingencies:	\$0									
Indirects:	\$319,404									
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$25,823,709</b>									
		<b>Cost of Approved Phases:</b>								
			Cat 5	CMAQ	\$2,935,981	\$0	\$0	\$733,995	\$0	\$3,669,976
				<b>Fund by Share</b>	<b>\$2,935,981</b>	<b>\$0</b>	<b>\$0</b>	<b>\$733,995</b>	<b>\$0</b>	<b>\$3,669,976</b>

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2023	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023
02/2022	2023	01/2022	Amend to remove PE phase and reduce CAT 5 CMAQ funding to \$3,669,976
07/2022	2023	03/2022	Program in to RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - 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	0924-06-609	CS	C,E	El Paso	COEP	\$1,869,824
<b>TIP PROJECT NAME: Border Highway West Shared Use Path</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Racetrack (2) interchange				MPO PROJECT ID:	E112X	
LIMITS TO:	Executive Center (2) interchange				MTP REFERENCE:	E112X	
TIP DESCRIPTION:	Border Highway West Shared Use Path: Project includes installation of an 11-foot asphalt pavement hike and bike trail with irrigated landscaping.				FUNDING CATEGORY:	CAT 5	
REMARKS:	Program into RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT				VOC (Kg/Day): 0.221	CO (Kg/Day): 2.964	
					NOX (Kg/Day): 0.164	PM 10 (Kg/Day): 0.014	

PROJECT HISTORY:  
Amend D2045 MTP, AmendedD2045MTP, D21-24TIP and 21-24STIP to change project name to Border Highway West Shared Use Path

Total Project Cost Information:		Authorized Funding by Category/Share							
		Cat 5	CMAQ	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$343,264			\$1,495,859	\$0	\$0	\$373,965	\$0	\$1,869,824
Right Of Way:	\$0								
Construction:	\$1,112,000								
Construction Engineering:	\$414,560								
Contingencies:	\$0								
Indirects:	\$22,898								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$1,892,722</b>			<b>\$1,495,859</b>	<b>\$0</b>	<b>\$0</b>	<b>\$373,965</b>	<b>\$0</b>	<b>\$1,869,824</b>

PROJECT AMENDMENT HISTORY

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2024	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024
11/2021	2024	07/2021	Amend D2045 MTP, AmendedD2045MTP, D21-24TIP and 21-24STIP to change project name to Border Highway West Shared Use Path
07/2022	2024	03/2022	Program into RMS 2050 MTP and RMS 23-26 TIP 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	0924-06-570	CS	C,E	El Paso	COEP	\$2,572,079
<b>TIP PROJECT NAME: Downtown Bicycle Improvements Phase I</b>					REVISION DATE:	07/2022	
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 in to RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT						

PROJECT HISTORY:  
Admin Amend to move from FY 2022 to FY 2024 - EXEMPT

Total Project Cost Information:		Cost of Approved Phases:	Cat	5	CMAQ	Authorized Funding by Category/Share				
						Federal Share	State Share	Regional Share	Local Share	Lcl Contribution
Preliminary Engineering:	\$428,357				\$2,057,663	\$0	\$0	\$514,416	\$0	\$2,572,079
Right Of Way:	\$0									
Construction:	\$2,143,722									
Construction Engineering:	\$0									
Contingencies:	\$0	\$2,572,079								
Indirects:	\$0									
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$2,572,079</b>				<b>\$2,057,663</b>	<b>\$0</b>	<b>\$0</b>	<b>\$514,416</b>	<b>\$0</b>	<b>\$2,572,079</b>

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 amended 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
01/2021	2024	12/2021	Admin Amend to move from FY 2022 to FY 2024 - 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
07/2022	2024	03/2022	Program in to RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - 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	0924-06-607	CS	C	Socorro	Socorro	\$14,971,134
<b>TIP PROJECT NAME: Nuevo Hueco Tanks Extension (FM 76 to SH20) - Construction</b>					REVISION DATE:	07/2022	
LIMITS FROM:	FM 76 North Loop Dr				MPO PROJECT ID:	A527X-CAP-1	
LIMITS TO:	SH 20 - Alameda Avenue				MTP REFERENCE:	A527X-CAP-1	
TIP DESCRIPTION:	Nuevo Hueco Tanks Extension (FM 76 to SH20) - Construction: Build 4 lane roadway and shared-use path				FUNDING CATEGORY:	CAT 7, CAT 3 LC	
REMARKS:	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024						

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

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share						
Item	Amount		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share	
Preliminary Engineering:	\$3,415,820								
Right Of Way:	\$1,500,000								
Construction:	\$11,518,378								
Construction Engineering:	\$1,727,756								
Contingencies:	\$1,725,000	\$14,971,134							
Indirects:	\$0								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$19,886,954</b>								

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
7/2020	2024	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024
07/2022	2024	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024

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

DISTRICT	COUNTY	CSJ	VA	PHASE	CITY	PROJECT SPONSOR	YOE COST
TX DIST: 24	EP	0924-06-567	VA	C	El Paso	COEP	\$5,000,000
<b>TIP PROJECT NAME: Traffic Management Center Upgrade Phase 3</b>					REVISION DATE:	07/2022	
LIMITS FROM:	City of El Paso city limits				MPO PROJECT ID:	S301F	
LIMITS TO:	City of El Paso city limits				MTP REFERENCE:	S301F	
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. P2-5 are the implementation&construction of the design.				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
REMARKS:	Program into amended RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT						

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

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share						
Item	Amount		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share	
Preliminary Engineering:	\$5,360,329								
Right Of Way:	\$0								
Construction:	\$17,122,380								
Construction Engineering:	\$3,021,596								
Contingencies:	\$0	\$5,000,000							
Indirects:	\$319,404								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$25,823,709</b>								

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2024	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024
07/2022	2024	03/2022	Program into amended RMS 2050 MTP and RMS 23-26 TIP 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	0924-06-606	CS	C	Vinton	Vinton	\$7,500,000
<b>TIP PROJECT NAME: VALLEY CHILE RD RECONSTRUCTION</b>					REVISION DATE:	07/2022	
LIMITS FROM:	SH 20 (DONIPHAN DR)				MPO PROJECT ID:	A137X	
LIMITS TO:	IH -10				MTP REFERENCE:	A137X	
TIP DESCRIPTION:	VALLEY CHILE RD RECONSTRUCTION: RECONSTRUCTION OF ROADWAY TO INCLUDE SIDEWALKS, DRAINAGE, LIGHTING AND ILLUMINATION, LANDSCAPING, AND IRRIGATION				FUNDING CATEGORY:	CAT 7 STP-MM	
REMARKS:	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024						

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

PROJECT HISTORY:  
Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024

Total Project Cost Information:		Authorized Funding by Category/Share								
				Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share	
Preliminary Engineering:	\$1,000,000									
Right Of Way:	\$500,000									
Construction:	\$7,000,000									
Construction Engineering:	\$350,000									
Contingencies:	\$700,000									
Indirects:	\$0									
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$9,550,000</b>									
		<b>Cost of Approved Phases:</b>								
			<b>Cat 7</b>	<b>STP-MM</b>	<b>\$6,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,500,000</b>	<b>\$0</b>	<b>\$7,500,000</b>
			<b>Fund by Share</b>	<b>\$6,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,500,000</b>	<b>\$0</b>	<b>\$7,500,000</b>	

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2024	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024
07/2022	2024	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP 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			C,E,R	Horizon City	Horizon	\$6,184,474
<b>TIP PROJECT NAME: Dilley Road and Delake Street Construction</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Darrington Road				MPO PROJECT ID:	M408X	
LIMITS TO:	Rodman Street				MTP REFERENCE:	M408X	
TIP DESCRIPTION:	Dilley Road and Delake Street Construction: Construction of two roadways, each with two lanes, enhanced pedestrian facilities, bike lanes and illumination to provide access to the Horizon City Transit Oriented Town Center.				FUNDING CATEGORY:	CAT 3 TRZ	
REMARKS:	Program to the RMS 2050 MTP and the RMS 23-26 TIP in FY 2025						

Total Project Cost Information:			Authorized Funding by Category/Share						
		Cost of Approved Phases:	Cat	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$1,089,055		3TRZ TRZ	\$0	\$0	\$0	\$0	\$6,184,474	\$6,184,474
Right Of Way:	\$738,138								
Construction:	\$3,006,518								
Construction Engineering:	\$621,364		<b>Fund by Share</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,184,474</b>	<b>\$6,184,474</b>
Contingencies:	\$729,399	<b>\$6,184,474</b>							
Indirects:	\$0								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$6,184,474</b>								

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2025	03/2022	Program to the RMS 2050 MTP and the RMS 23-26 TIP in FY 2025

'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		BU 54-A	C,E	El Paso	COEP	\$1,816,229
<b>TIP PROJECT NAME: Dyer Pedestrian and Parkway Improvements</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Gateway Boulevard North				MPO PROJECT ID:	E201X	
LIMITS TO:	Hercules Ave				MTP REFERENCE:	E201X	
TIP DESCRIPTION:	Dyer Pedestrian and Parkway Improvements: Project includes improvements to pedestrian connectivity and accessibility on Dyer St from Gateway to Hercules Ave. Improves access to BRIO stations at Dyer and Hercules.				FUNDING CATEGORY:	CAT 5 CMAQ	
					VOC (Kg/Day): 0.028	CO (Kg/Day): 0.388	
					NOX (Kg/Day): 0.036	PM 10 (Kg/Day): 0.001	
REMARKS:	Program into RMS 2050 MTP and RMS 23-26 TIP in FY 2025-EXEMPT						

Total Project Cost Information:			Authorized Funding by Category/Share						
		Cost of Approved Phases:	Cat	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$328,229		5 CMAQ	\$1,452,983	\$0	\$0	\$363,246	\$0	\$1,816,229
Right Of Way:	\$0								
Construction:	\$1,200,000		<b>Fund by Share</b>	<b>\$1,452,983</b>	<b>\$0</b>	<b>\$0</b>	<b>\$363,246</b>	<b>\$0</b>	<b>\$1,816,229</b>
Construction Engineering:	\$288,000								
Contingencies:	\$0	<b>\$1,816,229</b>							
Indirects:	\$22,860								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$1,839,089</b>								

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2025	03/2022	Program into RMS 2050 MTP and RMS 23-26 TIP in FY 2025-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		00	C,E,R	Horizon City	Horizon	\$3,198,138
<b>TIP PROJECT NAME: Horizon City Transit Plaza</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Bordered by Darrington Road (west) and Rodman Street (east)				MPO PROJECT ID:	T410X	
LIMITS TO:	Bordered by Horizon Boulevard (south)				MTP REFERENCE:	T410X	
TIP DESCRIPTION:	Horizon City Transit Plaza: Development of Transit Plaza with parking within the Horizon Country Club Estates Subdivision(s)				FUNDING CATEGORY:	CAT 3 TRZ	
REMARKS:	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2025						

Total Project Cost Information:		Cost of Approved Phases:	Cat	HWY	Authorized Funding by Category/Share					Lcl Contribution	Total Share
Item	Amount				Federal Share	State Share	Regional Share	Local Share			
Preliminary Engineering:	\$483,881										
Right Of Way:	\$283,776										
Construction:	\$1,731,270										
Construction Engineering:	\$329,777										
Contingencies:	\$369,434	\$3,198,138									
Indirects:	\$0										
Bond Financing:	\$0										
Potential Change Order:	\$0										
<b>Total Project Cost:</b>	<b>\$3,198,138</b>										

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2025	03/2022	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2025

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

DISTRICT	COUNTY	2121-02-167	IH 10	C	El Paso	TxDOT	\$16,475,973
<b>TIP PROJECT NAME: I-10 FR Ext PH I (Executive to Sunland Park)</b>					REVISION DATE:	07/2022	
LIMITS FROM:	EXECUTIVE CENTER BLVD				MPO PROJECT ID:	I061X-CAP-1	
LIMITS TO:	SUNLAND PARK DR				MTP REFERENCE:	I061X-CAP-1	
TIP DESCRIPTION:	I-10 FR Ext PH I (Executive to Sunland Park)-Construct 2-lane Westbound Frontage Road and Ramp Improvements				FUNDING CATEGORY:	CAT 2-TMA	
REMARKS:	Program to RMS 2050 MTP and to RMS 23-26 TIP in FY 2025						

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

Total Project Cost Information:		Cost of Approved Phases:	Cat	HWY	Authorized Funding by Category/Share					Lcl Contribution	Total Share
Item	Amount				Federal Share	State Share	Regional Share	Local Share			
Preliminary Engineering:	\$807,323										
Right Of Way:	\$0										
Construction:	\$16,475,973										
Construction Engineering:	\$0										
Contingencies:	\$0	\$16,475,973									
Indirects:	\$0										
Bond Financing:	\$0										
Potential Change Order:	\$0										
<b>Total Project Cost:</b>	<b>\$17,283,296</b>										

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2025	03/2022	Program to RMS 2050 MTP and to RMS 23-26 TIP in FY 2025

'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	2121-03-146	IH 10	C	El Paso	TXDOT	\$16,820,000

**TIP PROJECT NAME: IH 10 Interchange at Pendale (Lee Trevino to FM659)**

LIMITS FROM: Lee Trevino  
LIMITS TO: East of FM 659 (Zaragoza Rd)

TIP DESCRIPTION: IH 10 Interchange at Pendale (Lee Trevino to FM659): CONSTRUCT INTERCHANGE  
REMARKS: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025

REVISION DATE: 07/2022  
MPO PROJECT ID: I006X-15A  
MTP REFERENCE: I006X-15A  
FUNDING CATEGORY: CAT 12

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

PROJECT HISTORY:  
Amend the amended D2045 MTP, D21-24 TIP and 21-24 STIP to deprogram from 2024 and reprogram in 2025

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share							
Item	Amount		Cat	Priority	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$824,180	\$16,820,000	Cat 12	Strategic Priority	\$13,456,000	\$3,364,000	\$0	\$0	\$0	\$16,820,000
Right Of Way:	\$0				\$0	\$0	\$0	\$0	\$0	\$0
Construction:	\$16,820,000				\$0	\$0	\$0	\$0	\$0	\$0
Construction Engineering:	\$0				\$0	\$0	\$0	\$0	\$0	\$0
Contingencies:	\$0				\$0	\$0	\$0	\$0	\$0	\$0
Indirects:	\$0				\$0	\$0	\$0	\$0	\$0	\$0
Bond Financing:	\$0				\$0	\$0	\$0	\$0	\$0	\$0
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$17,644,180</b>			<b>Fund by Share</b>	<b>\$13,456,000</b>	<b>\$3,364,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16,820,000</b>

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2024	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024
11/2020	2025	11/2020	Amend the amended D2045 MTP, D21-24 TIP and 21-24 STIP to deprogram from 2024 and reprogram in 2025
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025

'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	0924-06-565	CS	C	El Paso	El Paso County	\$18,000,000

**TIP PROJECT NAME: John Hayes (Darrington/Berryville)(Construction Phase 2)**

LIMITS FROM: Pellicano Dr.  
LIMITS TO: Montwood

TIP DESCRIPTION: John Hayes (Darrington/Berryville)(Construction Phase 2): Add 2 lanes in each direction with bike lanes  
REMARKS: Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2025

REVISION DATE: 07/2022  
MPO PROJECT ID: P004X-CAP-2  
MTP REFERENCE: P004X-CAP-2  
FUNDING CATEGORY: CAT 7 STP-MM

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

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share							
Item	Amount		Cat	Priority	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$2,555,280	\$18,000,000	Cat 7	STP-MM	\$14,400,000	\$0	\$0	\$3,600,000	\$0	\$18,000,000
Right Of Way:	\$0				\$0	\$0	\$0	\$0	\$0	
Construction:	\$30,000,000				\$0	\$0	\$0	\$0	\$0	
Construction Engineering:	\$1,500,000				\$0	\$0	\$0	\$0	\$0	
Contingencies:	\$3,000,000				\$0	\$0	\$0	\$0	\$0	
Indirects:	\$0				\$0	\$0	\$0	\$0	\$0	
Bond Financing:	\$0				\$0	\$0	\$0	\$0	\$0	
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$37,055,280</b>			<b>Fund by Share</b>	<b>\$14,400,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,600,000</b>	<b>\$0</b>	<b>\$18,000,000</b>

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2025	03/2022	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2025

'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	0924-06-568	VARIOUS	C	El Paso	COEP	\$5,180,000
<b>TIP PROJECT NAME: Traffic Management Center Upgrade Phase 4</b>					REVISION DATE:	07/2022	
LIMITS FROM:	City of El Paso City Limits				MPO PROJECT ID:	S301G	
LIMITS TO:	City of El Paso City Limits				MTP REFERENCE:	S301G	
TIP DESCRIPTION:	Traffic Management Center Upgrade Phase 4: The project included the upgrade of the COEP Traffic Management Center and Traffic Signal controller equipment citywide. Ph. 1 is the design phase. Ph. 2-5 are implementation and construction phases.				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
REMARKS:	Program to 23-26 TIP and RMS 2050 MTP in FY 2025						

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

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share						
			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share	
Preliminary Engineering:	\$5,360,329								
Right Of Way:	\$0								
Construction:	\$17,122,380								
Construction Engineering:	\$3,021,596								
Contingencies:	\$0	\$5,180,000							
Indirects:	\$319,404								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$25,823,709</b>								

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2025	03/2022	Program to 23-26 TIP and RMS 2050 MTP in FY 2025

'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	0167-01-122	US 54	C	El Paso	TXDOT	\$39,169,068
<b>TIP PROJECT NAME: US54 (PATRIOT FWY) MAINLANES (KENWORTHY TO FM2529) AND RAMP RECONFIGURATION</b>					REVISION DATE:	07/2022	
LIMITS FROM:	KENWORTHY				MPO PROJECT ID:	F001B-15A	
LIMITS TO:	FM 2529 (MCCOMBS)				MTP REFERENCE:	F001B-15A	
TIP DESCRIPTION:	US54 (PATRIOT FWY) MAINLANES (KENWORTHY TO FM2529) AND RAMP RECONFIGURATION: BUILD 4 LANE DIVIDED HWY AND GRADE SEPARATIONS AND RAMP RECONFIGURATION				FUNDING CATEGORY:	CAT 2 TMA, CAT 11	
REMARKS:	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025						

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

PROJECT HISTORY:  
Amend the amended D2045 MTP, D21-24 TIP and 21-24 STIP to deprogram from FY 2023 and reprogram to FY 2025

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share						
			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share	
Preliminary Engineering:	\$2,158,934								
Right Of Way:	\$0								
Construction:	\$39,169,068								
Construction Engineering:	\$0								
Contingencies:	\$0	\$39,169,068							
Indirects:	\$0								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$41,328,002</b>								

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2020	2023	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023
11/2020	2025	11/2020	Amend the amended D2045 MTP, D21-24 TIP and 21-24 STIP to deprogram from FY 2023 and reprogram to FY 2025
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025

'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	0924-06-665	CS	C,E	El Paso	COEP	\$4,856,898
<b>TIP PROJECT NAME: Buffalo Soldier Street Improvements</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Edgemere Blvd				MPO PROJECT ID:	R401X	
LIMITS TO:	Montana Ave				MTP REFERENCE:	R401X	
TIP DESCRIPTION:	Buffalo Soldier Street Improvements: Project includes complete roadway reconstruction, parkway improvements, sidewalks, bicycle facilities, street illumination, landscaping and irrigation, and striping.				FUNDING CATEGORY:	CAT 7 STP MM	
REMARKS:	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2026						

Total Project Cost Information:		Authorized Funding by Category/Share									
				Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share		
Preliminary Engineering:	\$822,185	<b>Cost of Approved Phases:</b>	Cat 7	STP MM	\$3,885,518	\$0	\$0	\$971,380	\$0	\$4,856,898	
Right Of Way:	\$0				<b>Fund by Share</b>	<b>\$3,885,518</b>	<b>\$0</b>	<b>\$0</b>	<b>\$971,380</b>	<b>\$0</b>	<b>\$4,856,898</b>
Construction:	\$3,551,386										
Construction Engineering:	\$483,326										
Contingencies:	\$0										
Indirects:	\$62,119										
Bond Financing:	\$0										
Potential Change Order:	\$0										
<b>Total Project Cost:</b>	<b>\$4,919,016</b>										

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2026	03/2022	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2026

'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	0924-06-666		C,E	El Paso	COEP	\$3,273,082
<b>TIP PROJECT NAME: Carolina Street Improvements</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Stiles Dr.				MPO PROJECT ID:	R501X	
LIMITS TO:	North Loop Dr				MTP REFERENCE:	R501X	
TIP DESCRIPTION:	Carolina Street Improvements: Project includes complete roadway reconstruction, parkway improvements, bicycle facilities, street illumination, and striping on Carolina Dr from Stiles Dr to North Loop Dr.				FUNDING CATEGORY:	Cat. 7 STP MM	
REMARKS:	Amend the RMS 2050 MTP and RMS 23-26 TIP to program in FY 2026-EXEMPT						

Total Project Cost Information:		Authorized Funding by Category/Share									
				Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share		
Preliminary Engineering:	\$610,760	<b>Cost of Approved Phases:</b>	Cat 7	STP MM	\$2,618,466	\$0	\$0	\$654,616	\$0	\$3,273,082	
Right Of Way:	\$0				<b>Fund by Share</b>	<b>\$2,618,466</b>	<b>\$0</b>	<b>\$0</b>	<b>\$654,616</b>	<b>\$0</b>	<b>\$3,273,082</b>
Construction:	\$2,375,310										
Construction Engineering:	\$287,012										
Contingencies:	\$0										
Indirects:	\$41,004										
Bond Financing:	\$0										
Potential Change Order:	\$0										
<b>Total Project Cost:</b>	<b>\$3,314,086</b>										

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2026	02/2022	Amend the RMS 2050 MTP and RMS 23-26 TIP to program in FY 2026-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	0924-06-625	CS	C,E	El Paso	COEP	\$14,856,000
<b>TIP PROJECT NAME: Railroad Dr. Widening and Reconstruction</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Purple Heart Highway				MPO PROJECT ID:	P219X-CAP	
LIMITS TO:	Shrub Oak Drive				MTP REFERENCE:	P219X-CAP	
TIP DESCRIPTION:	Railroad Dr. Widening and Reconstruction: Addition of 1 In. in each dir. from Purple Heart Hwy. to Shrub Oak Dr. to increase capacity from 2 to 4 In. Project includes road rehab and reconstruction of existing road from Purple Heart Hwy. to Shrub Oak Dr.				FUNDING CATEGORY:	CAT 7 STPMM, CAT 3 LCL	
REMARKS:	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2026						

Total Project Cost Information:			Authorized Funding by Category/Share							
		Cost of Approved Phases:			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$1,500,000		Cat 7	STP MM	\$10,192,000	\$0	\$0	\$2,548,000	\$0	\$12,740,000
Right Of Way:	\$0		Cat 3LC	LCL	\$0	\$0	\$0	\$0	\$2,116,000	\$2,116,000
Construction:	\$12,100,000		<b>Fund by Share</b>		<b>\$10,192,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,664,000</b>	<b>\$2,116,000</b>	<b>\$14,856,000</b>
Construction Engineering:	\$1,256,000	\$14,856,000								
Contingencies:	\$0									
Indirects:	\$200,340									
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$15,056,340</b>									

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2026	03/2022	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2026

'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	0924-06-569	VARIOUS	C	El Paso	COEP	\$6,294,000
<b>TIP PROJECT NAME: Traffic Management Center Upgrade Phase 5</b>					REVISION DATE:	07/2022	
LIMITS FROM:	City of El Paso City Limits				MPO PROJECT ID:	S301H	
LIMITS TO:	City of El Paso City Limits				MTP REFERENCE:	S301H	
TIP DESCRIPTION:	Traffic Management Center Upgrade Phase 5: The project included the upgrade of the COEP Traffic Management Center and Traffic Signal controller equipment citywide. Ph. 1 is the design phase. Ph. 2-5 are implementation and construction phases.				FUNDING CATEGORY:	CMAQ	
					VOC (Kg/Day): 17.51	CO (Kg/Day): 340.135	
					NOX (Kg/Day): 44.538	PM 10 (Kg/Day): 50.758	
REMARKS:	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2026						

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

Total Project Cost Information:			Authorized Funding by Category/Share							
		Cost of Approved Phases:			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$5,360,329		Cat 5	CMAQ	\$4,800,000	\$0	\$0	\$1,200,000	\$0	\$6,000,000
Right Of Way:	\$0		Cat 3LC	LCL	\$0	\$0	\$0	\$0	\$294,000	\$294,000
Construction:	\$17,122,380		<b>Fund by Share</b>		<b>\$4,800,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,200,000</b>	<b>\$294,000</b>	<b>\$6,294,000</b>
Construction Engineering:	\$3,021,596	\$6,294,000								
Contingencies:	\$0									
Indirects:	\$319,404									
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$25,823,709</b>									

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2026	03/2022	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2026

'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	0374-02-100	US 62	C	El Paso	TxDOT	\$146,583,776
<b>TIP PROJECT NAME: US 62/180 (Montana Ave.) Expressway &amp; Frontage Roads, Phase II</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Global Reach Dr.				MPO PROJECT ID:	F407B-CAP	
LIMITS TO:	Zaragoza Rd. (FM 659)				MTP REFERENCE:	F407B-CAP	
TIP DESCRIPTION:	US 62/180 (Montana Ave.) Expressway & Frontage Roads, Phase II-Construct 6 lane expy. and build 2 lane FRs from Tierra Este Rd. to Zaragoza Rd. Reconst. 6 lane main lanes from Global Reach to Lee Trevino. Reconst. FR from Global Reach to Tierra Este.				FUNDING CATEGORY:	CAT 2 TMA, CAT 4U	
REMARKS:	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2026						

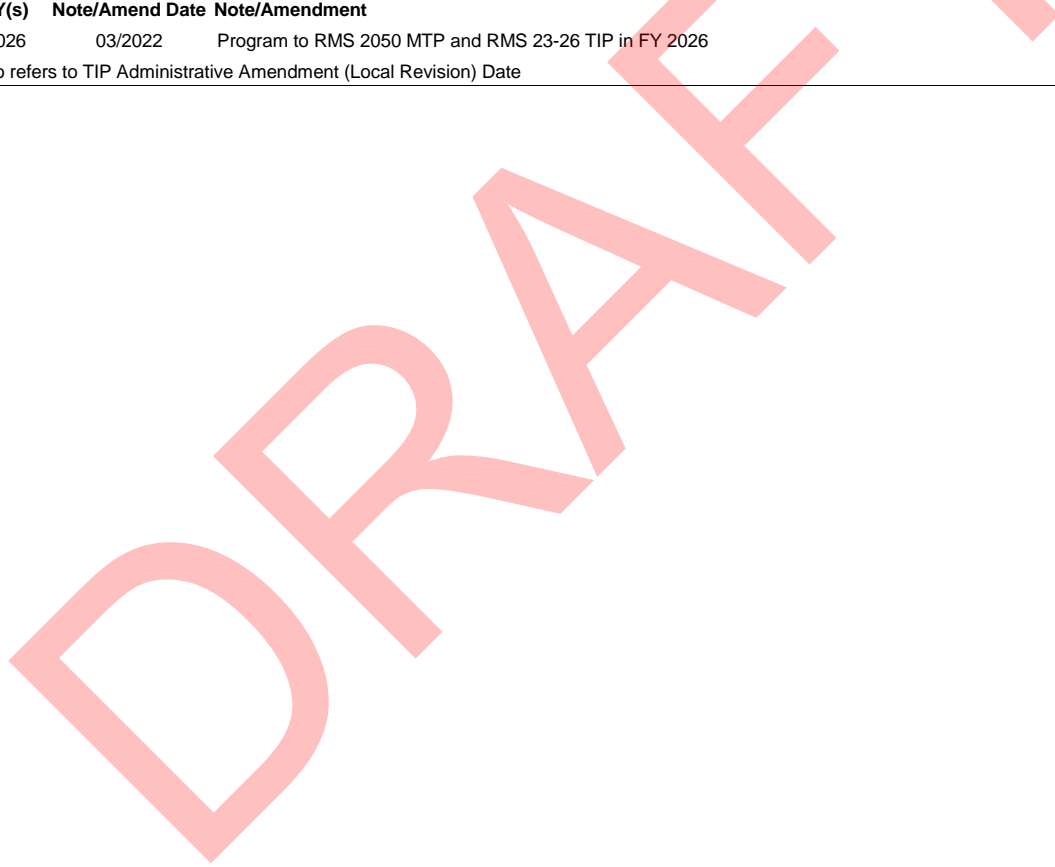
\*Project Sponsor paying for PE and/or ROW Costs, if any.

Total Project Cost Information:		Authorized Funding by Category/Share								
				Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share	
Preliminary Engineering:	\$7,182,458									
Right Of Way:	\$0									
Construction:	\$146,583,776	<b>Cost of Approved Phases:</b>	Cat 2M	TMA	\$94,556,000	\$23,639,000	\$0	\$0	\$0	\$118,195,000
Construction Engineering:	\$0		Cat 4	Urban Connectivity	\$22,711,021	\$5,677,755	\$0	\$0	\$0	\$28,388,776
Contingencies:	\$0									
Indirects:	\$0	<b>\$146,583,776</b>								
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$153,766,234</b>			<b>Fund by Share</b>	<b>\$117,267,021</b>	<b>\$29,316,755</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$146,583,776</b>

**PROJECT AMENDMENT HISTORY**

STIP Rev Date(s)	FY(s)	Note/Amend Date	Note/Amendment
07/2022	2026	03/2022	Program to RMS 2050 MTP and RMS 23-26 TIP in FY 2026

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



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**FHWA TO FTA FUNDS TRANSFER PROJECTS<sup>2</sup>**

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<sup>2</sup> 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	0924-06-574	N/A	T	El Paso	Sun Metro	\$1,917,592
<b>TIP PROJECT NAME: Montana RTS 1st year Operating Assistance</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Downtown terminal - Santa Fe				MPO PROJECT ID:	T092X	
LIMITS TO:	Far East Terminal - RC Poe & Edgemere				MTP REFERENCE:	T092X	
TIP DESCRIPTION:	Montana RTS 1st year Operating Assistance: 1st year of Montana RTS operations				FUNDING CATEGORY:	CAT 5 CMAQ	
REMARKS:	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT				VOC (Kg/Day):	5.371	CO (Kg/Day): 110.234
					NOX (Kg/Day):	8.313	PM 10 (Kg/Day): 2.522

PROJECT HISTORY:  
Admin Amend to move from FY 2022 to FY 2023 - Exempt

Total Project Cost Information:		Authorized Funding by Category/Share							
		Cat		Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$0	5	CMAQ	\$1,534,074	\$0	\$0	\$383,518	\$0	\$1,917,592
Right Of Way:	\$0			\$0	\$0	\$0	\$0	\$0	\$0
Construction:	\$1,917,592								
Construction Engineering:	\$0								
Contingencies:	\$0								
Indirects:	\$0								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$1,917,592</b>		<b>Fund by Share</b>	<b>\$1,534,074</b>	<b>\$0</b>	<b>\$0</b>	<b>\$383,518</b>	<b>\$0</b>	<b>\$1,917,592</b>

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 Assistance.-Exempt
5/2020	2022	04/2020	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP to reprogram from FY 2021 to FY 2022 - Exempt
07/2020	2022	05/2020	Program Amended D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2022. Exempt
01/2022	2023	10/2021	Admin Amend to move from FY 2022 to FY 2023 - Exempt
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - 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
<b>TIP PROJECT NAME: Montana RTS 2nd year Operating Assistance</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Downtown terminal - Santa Fe				MPO PROJECT ID:	T097X	
LIMITS TO:	Far East Terminal - RC Poe & Edgemere				MTP REFERENCE:	T097X	
TIP DESCRIPTION:	Montana RTS 2nd year Operating Assistance: 2nd year of Montana RTS operations				FUNDING CATEGORY:	CAT 5 CMAQ,	
REMARKS:	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT				VOC (Kg/Day): 5.191	CO (Kg/Day): 108.402	
					NOX (Kg/Day): 7.719	PM 10 (Kg/Day): 2.588	

PROJECT HISTORY:  
Admin Amend to move from FY 2023 to FY 2024 - Exempt

Total Project Cost Information:		Authorized Funding by Category/Share							
		Cat 5	CMAQ	Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$0			\$1,040,000	\$0	\$0	\$260,000	\$0	\$1,300,000
Right Of Way:	\$0			\$0	\$0	\$0	\$0	\$0	\$0
Construction:	\$1,300,000			\$0	\$0	\$0	\$0	\$0	\$0
Construction Engineering:	\$0								
Contingencies:	\$0								
Indirects:	\$0								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$1,300,000</b>			<b>\$1,040,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$260,000</b>	<b>\$0</b>	<b>\$1,300,000</b>

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	2022	04/2020	Amend the D2045 MTP, D19-23 TIP, 19-22 STIP reprogram from FY 2022 to FY 2023 - Exempt
7/2020	2023	05/2020	Program Amended D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2023. Exempt
01/2022	2024	10/2021	Admin Amend to move from FY 2023 to FY 2024 - Exempt
07/2022	2024	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP 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
<b>TIP PROJECT NAME: Montana RTS 3rd year service operating assistance</b>					REVISION DATE:	07/2022	
LIMITS FROM:	Five Points Terminal - 2830 Montana				MPO PROJECT ID:	T093X	
LIMITS TO:	Far East Terminal - R.C. Poe - Edgemere				MTP REFERENCE:	T093X	
TIP DESCRIPTION:	Montana RTS 3rd year service operating assistance: 3rd year of Montana BRT-RTS operations.				FUNDING CATEGORY:	CAT 5 CMAQ, CAT 3 LC	
REMARKS:	Program in the amended D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2025				VOC (Kg/Day): 5.553	CO (Kg/Day): 100.325	
					NOX (Kg/Day): 2.929	PM 10 (Kg/Day): 1.629	

PROJECT HISTORY:

Amend to move from FY 2024 to FY 2025 - Exempt

Total Project Cost Information:		Authorized Funding by Category/Share								
				Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share	
Preliminary Engineering:	\$0	<b>Cost of Approved Phases:</b>	Cat 5	CMAQ	\$1,600,000	\$0	\$0	\$400,000	\$0	\$2,000,000
Right Of Way:	\$0		Cat 3LC	Local Contribution	\$0	\$0	\$0	\$0	\$2,423,490	\$2,423,490
Construction:	\$4,423,490									
Construction Engineering:	\$0									
Contingencies:	\$0									
Indirects:	\$0									
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$4,423,490</b>		<b>Fund by Share</b>		<b>\$1,600,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$400,000</b>	<b>\$2,423,490</b>	<b>\$4,423,490</b>

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 amended D2045 MTP, D21-24 TIP, 21-24 STIP, in FY 2023
01/2022	2025	10/2021	Amend to move from FY 2024 to FY 2025 - Exempt
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

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

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**NEW MEXICO HIGHWAY / TRANSIT PROJECTS<sup>3</sup>**

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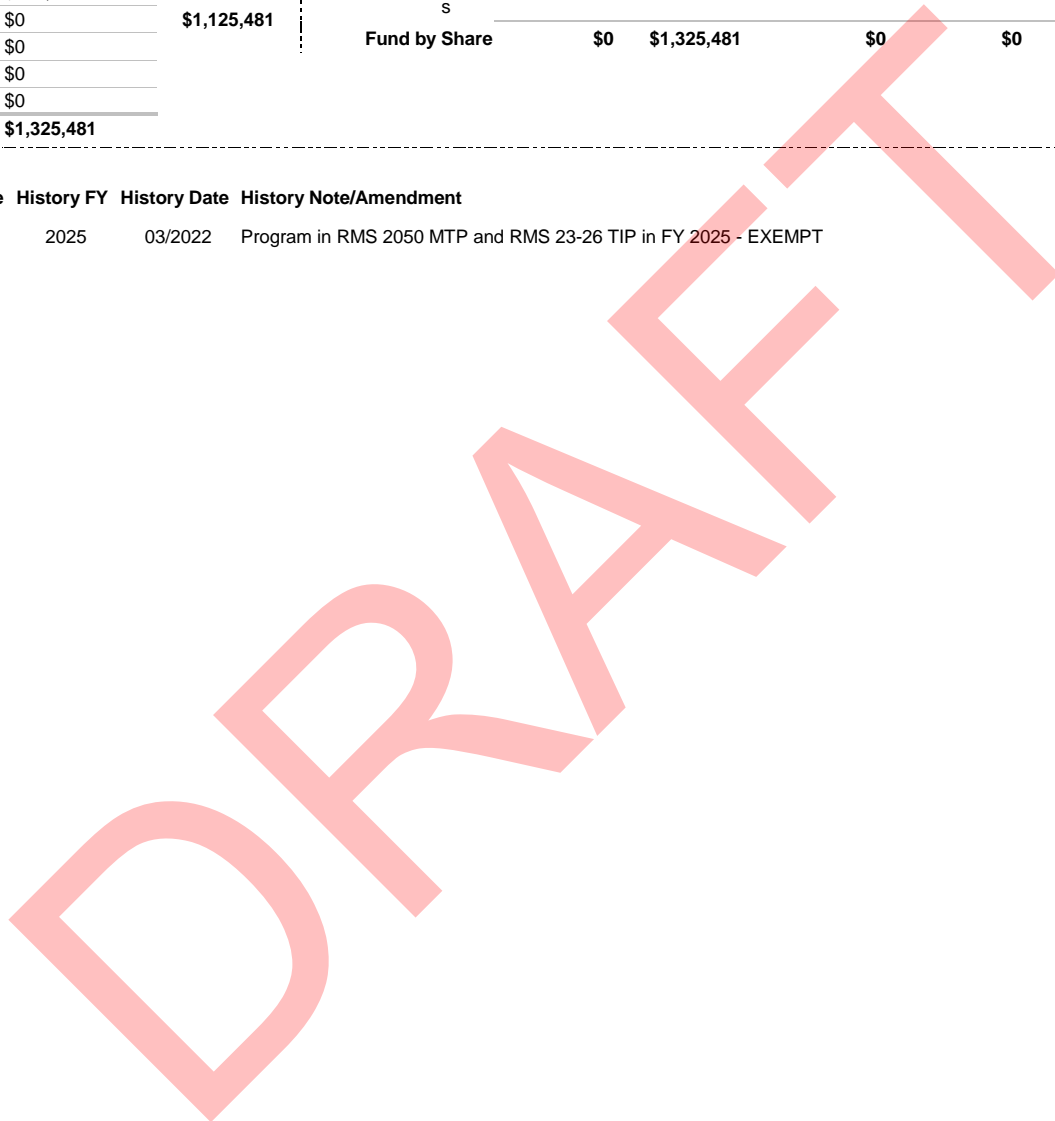
<sup>3</sup> NM 2022-2025 STIP

DISTRICT	COUNTY	CSJ/CN	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
NM DIST. 1	DA	E100380	00	C,E	Sunland Park, NM	NMDOT	\$1,325,481
<b>TIP PROJECT NAME: NM 273/Airport Road Signals</b>					REVISION DATE:	06/2022	
LIMITS FROM: NM 273 (McNutt Road)/Airport Road Intersection					MPO PROJECT ID:	S601X	
LIMITS TO:					MTP REFERENCE:	S601X	
TIP DESCRIPTION: Install traffic signals at intersection NM 273/Airport Road					FUNDING CATEGORY:	TBD	
REMARKS: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT							

Total Project Cost Information:		Authorized Funding by Category/Share							
				Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share
Preliminary Engineering:	\$125,481								
Right Of Way:	\$0								
Construction:	\$1,000,000								
Construction Engineering:	\$200,000								
Contingencies:	\$0								
Indirects:	\$0								
Bond Financing:	\$0								
Potential Change Order:	\$0								
<b>Total Project Cost:</b>	<b>\$1,325,481</b>			<b>\$0</b>	<b>\$1,325,481</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,325,481</b>

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
06/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT



Fed FY 2026 (Oct - Sept)

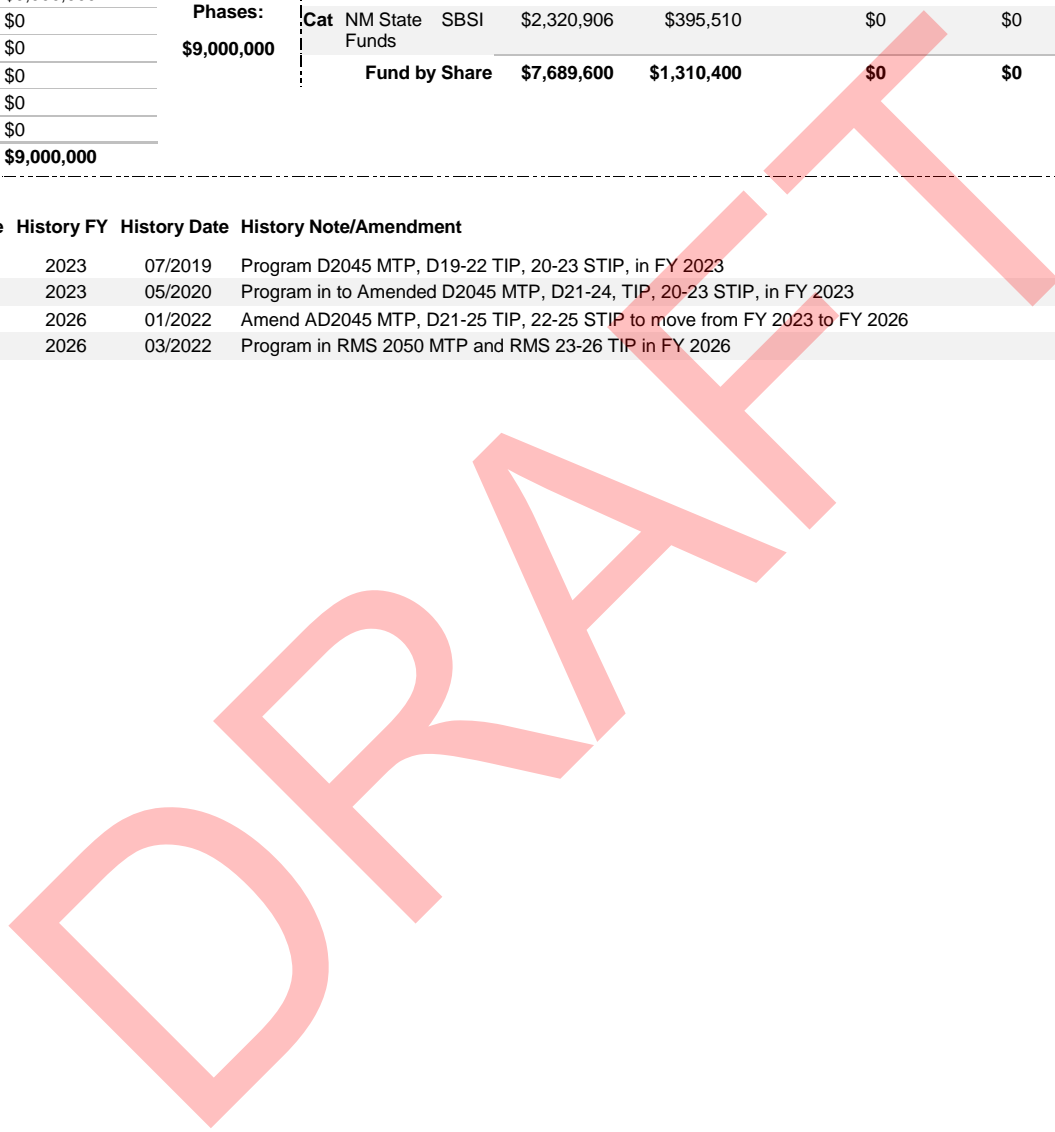
DISTRICT	COUNTY	CSJ/CN	HWY	PHASE	CITY	PROJECT SPONSOR	YOE COST
NM DIST. 1	DA	E100321	NM 213	C	Dona Ana County	NMDOT	\$9,000,000
<b>TIP PROJECT NAME: NM 213 Widening Project</b>						REVISION DATE:	06/2022
LIMITS FROM:		Intersection with NM 404 (MP 0)				MPO PROJECT ID:	P621X-CAP
LIMITS TO:		TX State Line (MP 3)				MTP REFERENCE:	P621X-CAP
TIP DESCRIPTION:		Widen NM 213 from 2 to 4 lanes				FUNDING CATEGORY:	NHPP, SBSI
REMARKS:		Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026					

PROJECT HISTORY:  
Amend AD2045 MTP, D21-25 TIP, 22-25 STIP to move from FY 2023 to FY 2026

Total Project Cost Information:		Cost of Approved Phases:	Authorized Funding by Category/Share							
			Federal Share	State Share	Regional Share	Local Share	Lcl Contribution	Total Share		
Preliminary Engineering:	\$0	Cat	NM NHPP	NHP	\$5,368,694	\$914,890	\$0	\$0	\$0	\$6,283,584
Right Of Way:	\$0									
Construction:	\$9,000,000	Cat	NM State Funds	SBSI	\$2,320,906	\$395,510	\$0	\$0	\$0	\$2,716,416
Construction Engineering:	\$0									
Contingencies:	\$0									
Indirects:	\$0									
Bond Financing:	\$0									
Potential Change Order:	\$0									
<b>Total Project Cost:</b>	<b>\$9,000,000</b>		<b>Fund by Share</b>		<b>\$7,689,600</b>	<b>\$1,310,400</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,000,000</b>

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 Amended D2045 MTP, D21-24, TIP, 20-23 STIP, in FY 2023
03/2022	2026	01/2022	Amend AD2045 MTP, D21-25 TIP, 22-25 STIP to move from FY 2023 to FY 2026
06/2022	2026	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026





DRRAFT

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**TRANSIT PROJECTS FTA & OTHER FUNDS**

DRAFT

Transit projects are included in this TIP. Public notice of public participation activities and time established for public review of and comments on the TIP will satisfy the Program of Projects (POP) requirements.



**FY 2023 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Tue Jan 18, 2022

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: ADA ParaTransit: Provide ADA Para Transit Service  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
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 amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP 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: Capital Maintenance  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
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 amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

**General Project Information**

Project Sponsor: Project Amistad  
MPO ID: T011-21  
Project Name: FTA Section 5310 El Paso Urbanized Area Grant 2021 - Project Amistad dba Amistad  
Apportionment Year: 2021  
Project Phase: C  
Brief Project Description: FTA Section 5310 El Paso Urbanized Area Grant 2021 - Project Amistad dba Amistad: Funding for the purchase of four ADA-compliant vehicles and operational funding for 5310 program  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Amend D2045 MTP, Amended D2045 MPT, D21-24 TIP and 21-24 STIP to update project description, project sponsor, project funding, requested TDCs and FY in FY 2023 -Exempt

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5310 - Seniors & People w/Disabilities >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$623,535  
State (TXDOT) Funds: \$0  
Other Funds: \$0  
**Fiscal Year Cost: \$623,535**  
Construction: \$623,535 PE: \$0 ROW: \$0  
**Total Project Cost: \$623,535**  
TDC Amount Requested: \$56,470  
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 amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt
11/2021	2023	06/2021	Amend D2045 MTP, Amended D2045 MPT, D21-24 TIP and 21-24 STIP to update project description, project sponsor, project funding, requested TDCs and FY in FY 2023 -Exempt
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT



**FY 2023 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Tue Jan 18, 2022

District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

**Funding Information (YOE)**

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: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMP

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
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 amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

**General Project Information**

**Funding Information (YOE)**

Project Sponsor: Sun Metro  
MPO ID: **T2A**  
Project Name: JARC  
Apportionment Year: 2023  
Project Phase: N/A  
Brief Project Description: JARC: Short-range Planning  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
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 amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

**General Project Information**

**Funding Information (YOE)**

Project Sponsor: Sun Metro  
MPO ID: **T3B**  
Project Name: Other Capital Program Items (5339)  
Apportionment Year: 2023  
Project Phase: N/A  
Brief Project Description: Other Capital Program Items (5339): Computer hardware/software  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
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 Amended D2045 MTP, 21-24 TIP, 21-24 STIP, in FY 2023.
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT



EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3A
Project Name: Planning
Apportionment Year: 2023
Project Phase: N/A
Brief Project Description: Planning: Short-range Planning

Fed. Funding Category: Sec. 5307 - Urbanized Formula >200K
Other FTA Section:
Federal (FTA) Funds: \$849,133
State (TXDOT) Funds: \$0
Other Funds: \$212,283
Fiscal Year Cost: \$1,061,416

Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

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

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Contains two rows of amendment history.

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3E
Project Name: Security Equipment
Apportionment Year: 2023
Project Phase: N/A
Brief Project Description: Security Equipment: Security Program

Fed. Funding Category: Sec. 5307 - Urbanized Formula >200K
Other FTA Section:
Federal (FTA) Funds: \$146,836
State (TXDOT) Funds: \$0
Other Funds: \$36,709
Fiscal Year Cost: \$183,545

Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

Construction: \$183,545 PE: \$0 ROW: \$0
Total Project Cost: \$183,545
TDC Amount Requested: \$0
TDC Awarded Date & Amount: \$0

AMENDMENT HISTORY

History STIP Rev Date History FY History Date History Note/Amendment

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Contains two rows of amendment history.

General Project Information

Funding Information (YOE)

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 (5339): Support Vehicles/Bus Rehab

Fed. Funding Category: Sec. 5339 - Bus & Bus Facilities >200K
Other FTA Section:
Federal (FTA) Funds: \$447,551
State (TXDOT) Funds: \$0
Other Funds: \$111,888
Fiscal Year Cost: \$559,439

Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

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

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Contains two rows of amendment history.



**FY 2023 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Tue Jan 18, 2022

District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

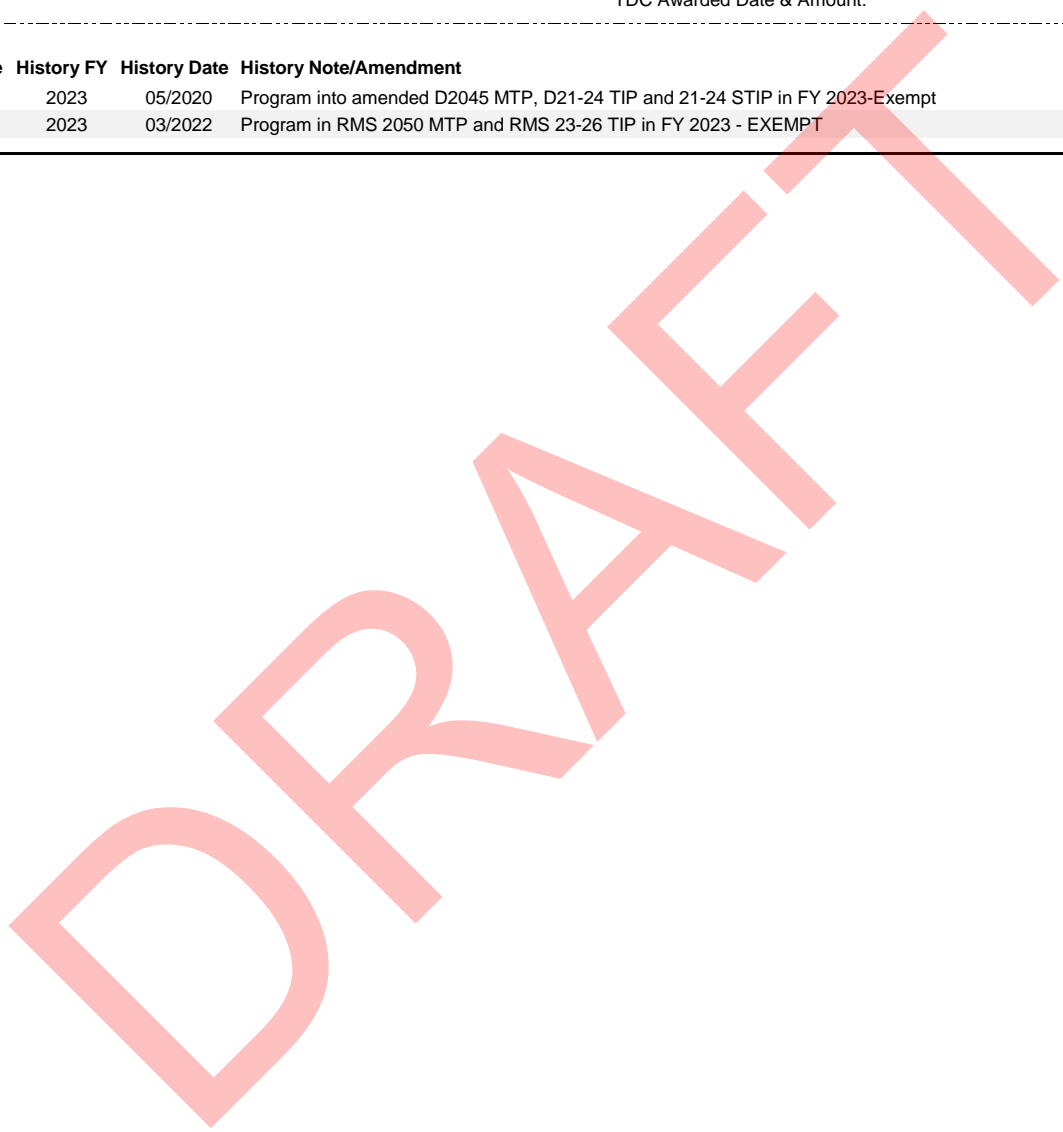
Project Sponsor: Sun Metro  
MPO ID: **T3G**  
Project Name: Transit Enhancements (5339)  
Apportionment Year: 2023  
Project Phase: N/A  
Brief Project Description: Transit Enhancements (5339): Transit Enhancements  
  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
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	2023	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT





EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3H
Project Name: ADA ParaTransit
Apportionment Year: 2024
Project Phase: T
Brief Project Description: ADA ParaTransit: Provide ADA Para Transit Service
Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT

Fed. Funding Category: Sec. 5307 - Urbanized Formula >200K
Other FTA Section:
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

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Contains two rows of amendment history.

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3C
Project Name: Capital Maintenance
Apportionment Year: 2024
Project Phase: T
Brief Project Description: Capital Maintenance: Capital Maintenance
Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT

Fed. Funding Category: Sec. 5307 - Urbanized Formula >200K
Other FTA Section:
Federal (FTA) Funds: \$11,462,164
State (TXDOT) Funds: \$0
Other Funds: \$2,865,541
Fiscal Year Cost: \$14,327,705
Construction: \$14,327,705 PE: \$0 ROW: \$0
Total Project Cost: \$14,327,705
TDC Amount Requested: \$0
TDC Awarded Date & Amount: \$0

AMENDMENT HISTORY

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Contains two rows of amendment history.

General Project Information

Funding Information (YOE)

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: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT

Fed. Funding Category: Sec. 5339 - Bus & Bus Facilities >200K
Other FTA Section:
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

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Contains two rows of amendment history.



EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3B
Project Name: Other Capital Program Items (5339)
Apportionment Year: 2024
Project Phase: N/A
Brief Project Description: Other Capital Program Items (5339): Computer hardware/software
Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT

Fed. Funding Category: Sec. 5339 - Bus & Bus Facilities >200K
Other FTA Section:
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

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Rows show amendments from 07/2020 and 07/2022.

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3A
Project Name: Planning
Apportionment Year: 2024
Project Phase: N/A
Brief Project Description: Planning: Short-range Planning
Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT

Fed. Funding Category: Sec. 5307 - Urbanized Formula >200K
Other FTA Section:
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

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Rows show amendments from 07/2020 and 07/2022.

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3E
Project Name: Security Equipment
Apportionment Year: 2024
Project Phase: N/A
Brief Project Description: Security Equipment: Security Program
Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT

Fed. Funding Category: Sec. 5307 - Urbanized Formula >200K
Other FTA Section:
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

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Rows show amendments from 07/2020 and 07/2022.





**FY 2024 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Tue Jan 18, 2022

District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

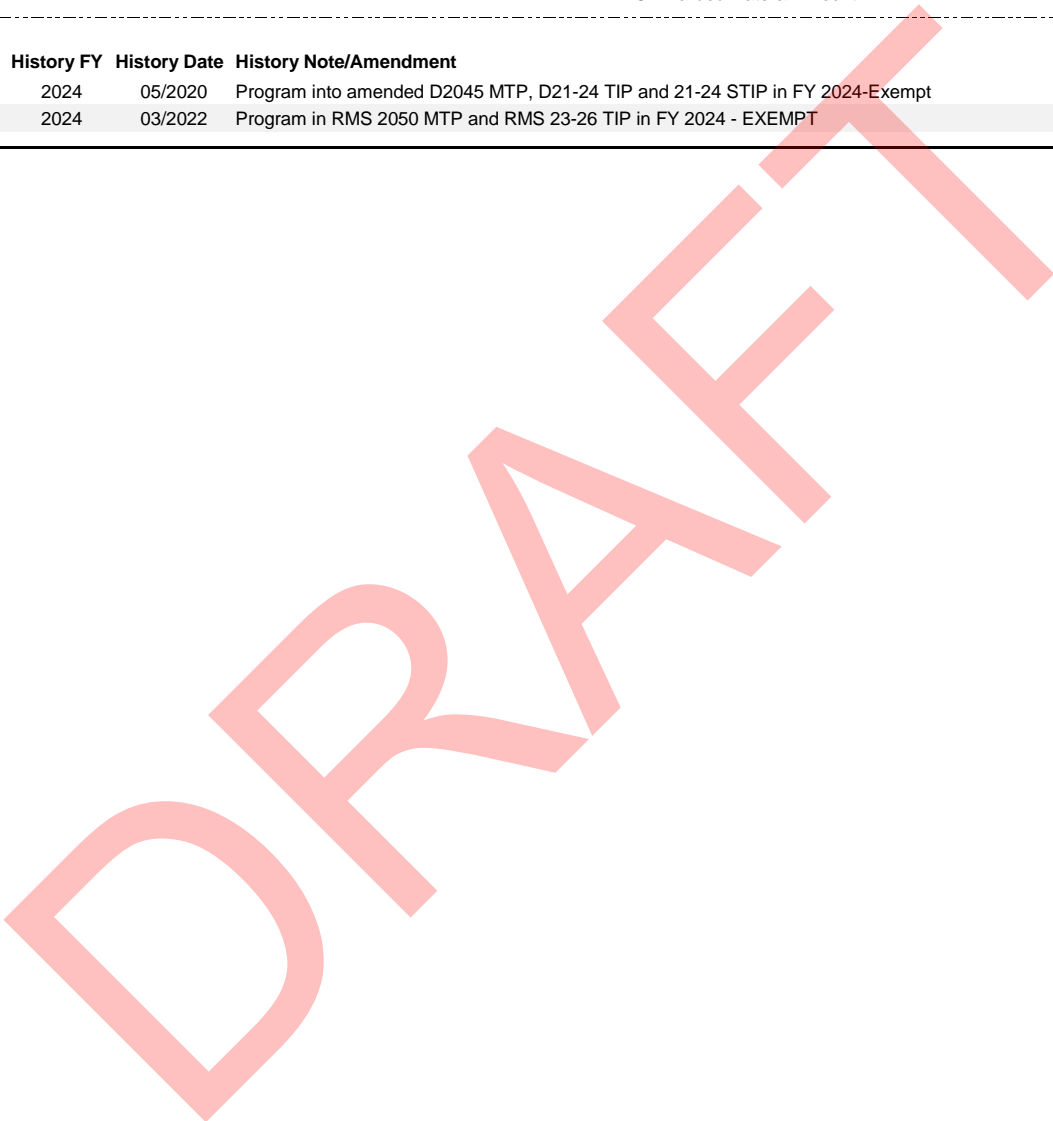
Project Sponsor: Sun Metro  
MPO ID: T3F  
Project Name: Support Vehicles/Bus Rehab (5339)  
Apportionment Year: 2024  
Project Phase: N/A  
Brief Project Description: Support Vehicles/Bus Rehab (5339): Support Vehicles/Bus Rehab  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
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 amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt
07/2022	2024	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT





**FY 2025 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Tue Jan 18, 2022

District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

Project Sponsor: Sun Metro  
MPO ID: T3H  
Project Name: ADA ParaTransit  
Apportionment Year: 2025  
Project Phase: T  
Brief Project Description: ADA ParaTransit: Provide ADA Para Transit Service  
  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$1,407,713  
State (TXDOT) Funds: \$0  
Other Funds: \$351,929  
**Fiscal Year Cost: \$1,759,642**  
Construction: \$1,759,642 PE: \$0 ROW: \$0  
**Total Project Cost: \$1,759,642**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**General Project Information**

Project Sponsor: Sun Metro  
MPO ID: T3C  
Project Name: Capital Maintenance  
Apportionment Year: 2025  
Project Phase: T  
Brief Project Description: Capital Maintenance: Capital Maintenance  
  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$11,416,786  
State (TXDOT) Funds: \$0  
Other Funds: \$2,854,196  
**Fiscal Year Cost: \$14,270,982**  
Construction: \$14,270,982 PE: \$0 ROW: \$0  
**Total Project Cost: \$14,270,982**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**General Project Information**

Project Sponsor: Sun Metro  
MPO ID: T3I-12  
Project Name: FY 2025 FTA 5339 Funding for Bus & Bus Facilities  
Apportionment Year: 2025  
Project Phase: N/A  
Brief Project Description: FY 2025 FTA 5339 Funding: For the purchase of buses and facility enhancements incl. equipment such as 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: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$1,236,270  
State (TXDOT) Funds: \$0  
Other Funds: \$309,068  
**Fiscal Year Cost: \$1,545,338**  
Construction: \$1,545,338 PE: \$0 ROW: \$0  
**Total Project Cost: \$1,545,338**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT



**FY 2025 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Tue Jan 18, 2022

District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

**Funding Information (YOE)**

Project Sponsor: Sun Metro  
MPO ID: T2A  
Project Name: JARC  
Apportionment Year: 2025  
Project Phase: N/A  
Brief Project Description: JARC: Short-range Planning

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$160,000  
State (TXDOT) Funds: \$0  
Other Funds: \$40,000  
**Fiscal Year Cost: \$200,000**

Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

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
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**General Project Information**

**Funding Information (YOE)**

Project Sponsor: Sun Metro  
MPO ID: T3B  
Project Name: Other Capital Program Items (5339)  
Apportionment Year: 2025  
Project Phase: T  
Brief Project Description: Other Capital Program Items (5339): Computer hardware/software

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$97,241  
State (TXDOT) Funds: \$0  
Other Funds: \$24,310  
**Fiscal Year Cost: \$121,551**

Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

Construction: \$121,551 PE: \$0 ROW: \$0  
**Total Project Cost: \$121,551**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**General Project Information**

**Funding Information (YOE)**

Project Sponsor: Sun Metro  
MPO ID: T3A  
Project Name: Planning  
Apportionment Year: 2025  
Project Phase: N/A  
Brief Project Description: Planning: Short-range Planning

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$866,201  
State (TXDOT) Funds: \$0  
Other Funds: \$216,550  
**Fiscal Year Cost: \$1,082,751**

Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

Construction: \$1,082,751 PE: \$0 ROW: \$0  
**Total Project Cost: \$1,082,751**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**General Project Information**

**Funding Information (YOE)**

Project Sponsor: Sun Metro  
MPO ID: T3E  
Project Name: Security Equipment  
Apportionment Year: 2025  
Project Phase: N/A  
Brief Project Description: Security Equipment: Security Program

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$154,270  
State (TXDOT) Funds: \$0  
Other Funds: \$38,567  
**Fiscal Year Cost: \$192,837**

Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

Construction: \$192,837 PE: \$0 ROW: \$0  
**Total Project Cost: \$192,837**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT



**FY 2025 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Tue Jan 18, 2022

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YOE = Year of Expenditure

**General Project Information**

Project Sponsor: Sun Metro  
MPO ID: **T3F**  
Project Name: Support Vehicles/Bus Rehab (5339)  
Apportionment Year: 2025  
Project Phase: N/A  
Brief Project Description: Support Vehicles/Bus Rehab (5339): Support Vehicles/Bus Rehab  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$456,547  
State (TXDOT) Funds: \$0  
Other Funds: \$114,137  
**Fiscal Year Cost: \$570,684**  
Construction: \$570,684 PE: \$0 ROW: \$0  
**Total Project Cost: \$570,684**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**General Project Information**

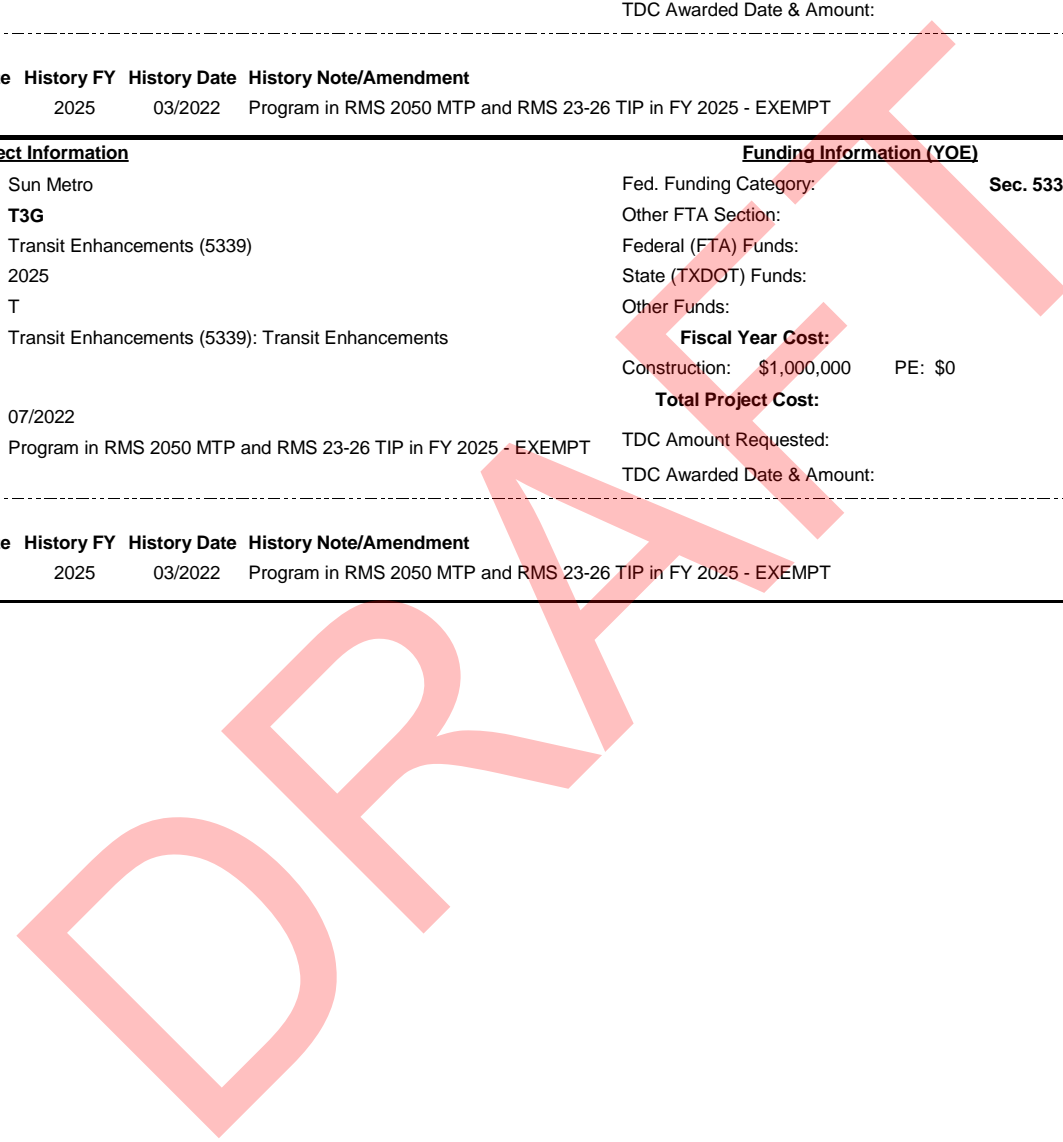
Project Sponsor: Sun Metro  
MPO ID: **T3G**  
Project Name: Transit Enhancements (5339)  
Apportionment Year: 2025  
Project Phase: T  
Brief Project Description: Transit Enhancements (5339): Transit Enhancements  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
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
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT





EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026

District: TX DIST. 24

YOE = Year of Expenditure

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3H
Project Name: ADA ParaTransit
Apportionment Year: 2026
Project Phase: T
Brief Project Description: ADA ParaTransit: Provide ADA Para Transit Service
Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

Fed. Funding Category: Sec. 5307 - Urbanized Formula >200K
Other FTA Section:
Federal (FTA) Funds: \$1,421,791
State (TXDOT) Funds: \$0
Other Funds: \$355,447
Fiscal Year Cost: \$1,777,238
Construction: \$1,777,238 PE: \$0 ROW: \$0
Total Project Cost: \$1,777,238
TDC Amount Requested: \$0
TDC Awarded Date & Amount: \$0

AMENDMENT HISTORY

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Row: 07/2022, 2026, 03/2022, Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3C
Project Name: Capital Maintenance
Apportionment Year: 2026
Project Phase: T
Brief Project Description: Capital Maintenance: Capital Maintenance
Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

Fed. Funding Category: Sec. 5307 - Urbanized Formula >200K
Other FTA Section:
Federal (FTA) Funds: \$11,692,554
State (TXDOT) Funds: \$0
Other Funds: \$2,923,138
Fiscal Year Cost: \$14,615,692
Construction: \$14,615,692 PE: \$0 ROW: \$0
Total Project Cost: \$14,615,692
TDC Amount Requested: \$0
TDC Awarded Date & Amount: \$0

AMENDMENT HISTORY

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Row: 07/2022, 2026, 03/2022, Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

General Project Information

Funding Information (YOE)

Project Sponsor: Sun Metro
MPO ID: T3D
Project Name: Curb Cuts ADA Improvements (5339)
Apportionment Year: 2026
Project Phase: T
Brief Project Description: Curb Cuts ADA Improvements (5339): Curb Cuts ADA Improvements
Sec5309 ID:
Amend Date: 07/2022
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

Fed. Funding Category: Sec. 5339 - Bus & Bus Facilities >200K
Other FTA Section:
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

Table with 4 columns: History STIP Rev Date, History FY, History Date, History Note/Amendment. Row: 07/2022, 2026, 03/2022, Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT



**FY 2026 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Tue Jan 18, 2022

District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

**Funding Information (YOE)**

Project Sponsor: Sun Metro  
MPO ID: **T3I-13**  
Project Name: FY 2026 FTA 5339 Funding for Bus & Bus Facilities  
Apportionment Year: 2026  
Project Phase: N/A  
Brief Project Description: FY 2026 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: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$1,267,177  
State (TXDOT) Funds: \$0  
Other Funds: \$316,794  
**Fiscal Year Cost: \$1,583,971**  
Construction: \$1,583,971 PE: \$0 ROW: \$0  
**Total Project Cost: \$1,583,971**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2026	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

**General Project Information**

**Funding Information (YOE)**

Project Sponsor: Sun Metro  
MPO ID: **T3B**  
Project Name: Other Capital Program Items (5339)  
Apportionment Year: 2026  
Project Phase: T  
Brief Project Description: Other Capital Program Items (5339): Computer hardware/software  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$102,102  
State (TXDOT) Funds: \$0  
Other Funds: \$25,526  
**Fiscal Year Cost: \$127,628**  
Construction: \$127,628 PE: \$0 ROW: \$0  
**Total Project Cost: \$127,628**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2026	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

**General Project Information**

**Funding Information (YOE)**

Project Sponsor: Sun Metro  
MPO ID: **T3A**  
Project Name: Planning  
Apportionment Year: 2026  
Project Phase: N/A  
Brief Project Description: Planning: Short-range Planning  
Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$874,862  
State (TXDOT) Funds: \$0  
Other Funds: \$218,716  
**Fiscal Year Cost: \$1,093,578**  
Construction: \$1,093,578 PE: \$0 ROW: \$0  
**Total Project Cost: \$1,093,578**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2026	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT



**FY 2026 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Tue Jan 18, 2022

District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

Project Sponsor: Sun Metro  
MPO ID: T3E  
Project Name: Security Equipment  
Apportionment Year: 2026  
Project Phase: N/A  
Brief Project Description: Security Equipment: Security Program

**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5307 - Urbanized Formula >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$158,126  
State (TXDOT) Funds: \$0  
Other Funds: \$39,532  
**Fiscal Year Cost: \$197,658**  
Construction: \$197,658 PE: \$0 ROW: \$0  
**Total Project Cost: \$197,658**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2026	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

**General Project Information**

Project Sponsor: Sun Metro  
MPO ID: T3F  
Project Name: Support Vehicles/Bus Rehab (5339)  
Apportionment Year: 2026  
Project Phase: N/A  
Brief Project Description: Support Vehicles/Bus Rehab (5339): Support Vehicles/Bus Rehab

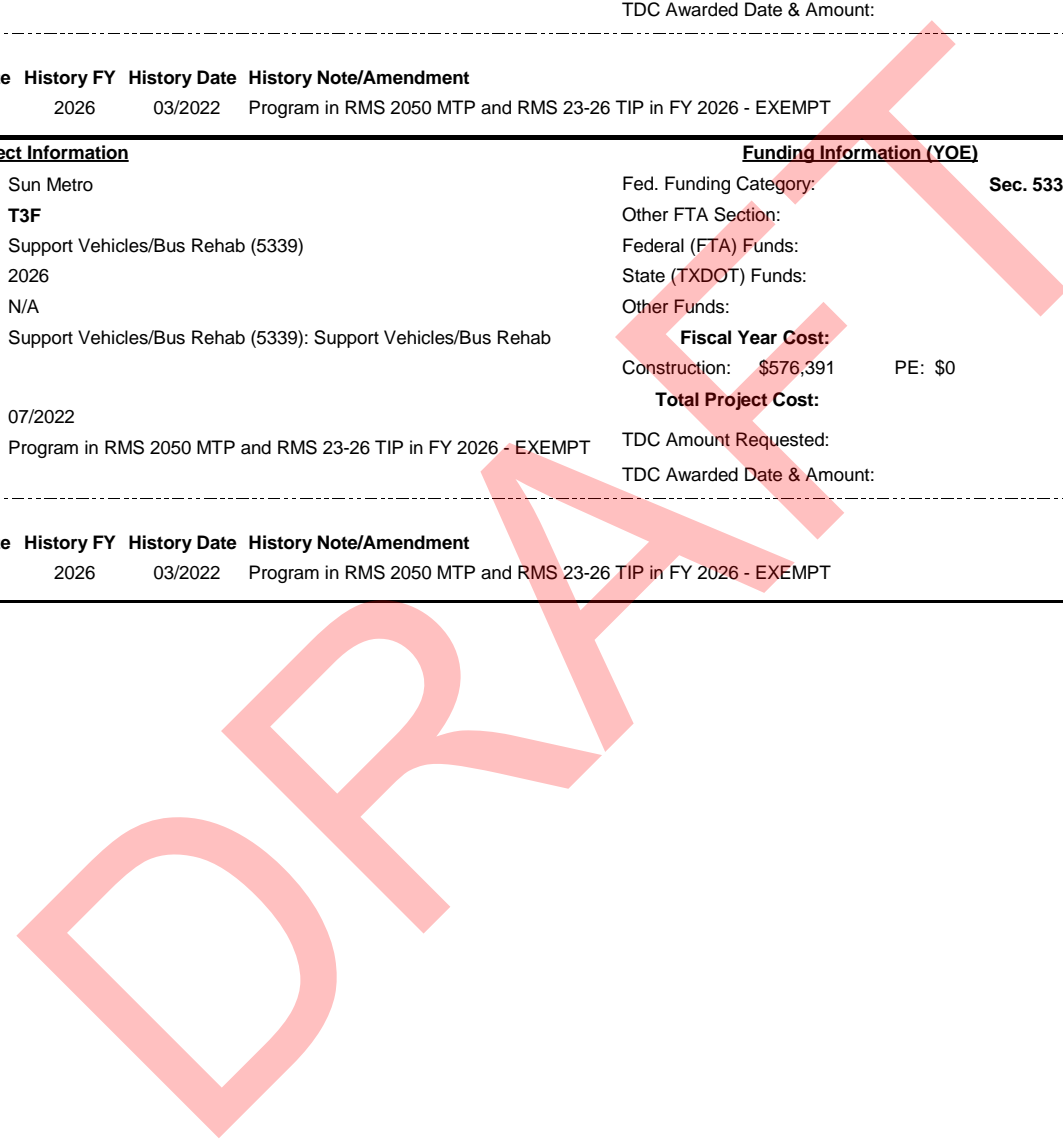
**Funding Information (YOE)**

Fed. Funding Category: **Sec. 5339 - Bus & Bus Facilities >200K**  
Other FTA Section:  
Federal (FTA) Funds: \$461,113  
State (TXDOT) Funds: \$0  
Other Funds: \$115,278  
**Fiscal Year Cost: \$576,391**  
Construction: \$576,391 PE: \$0 ROW: \$0  
**Total Project Cost: \$576,391**  
TDC Amount Requested: \$0  
TDC Awarded Date & Amount: \$0

Sec5309 ID:  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT

**AMENDMENT HISTORY**

History STIP Rev Date	History FY	History Date	History Note/Amendment
07/2022	2026	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2026 - EXEMPT



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**FTA FROM FHWA TRANSFER TRANSIT PROJECTS**

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**FY 2023 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

Thu Dec 30, 2021

District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

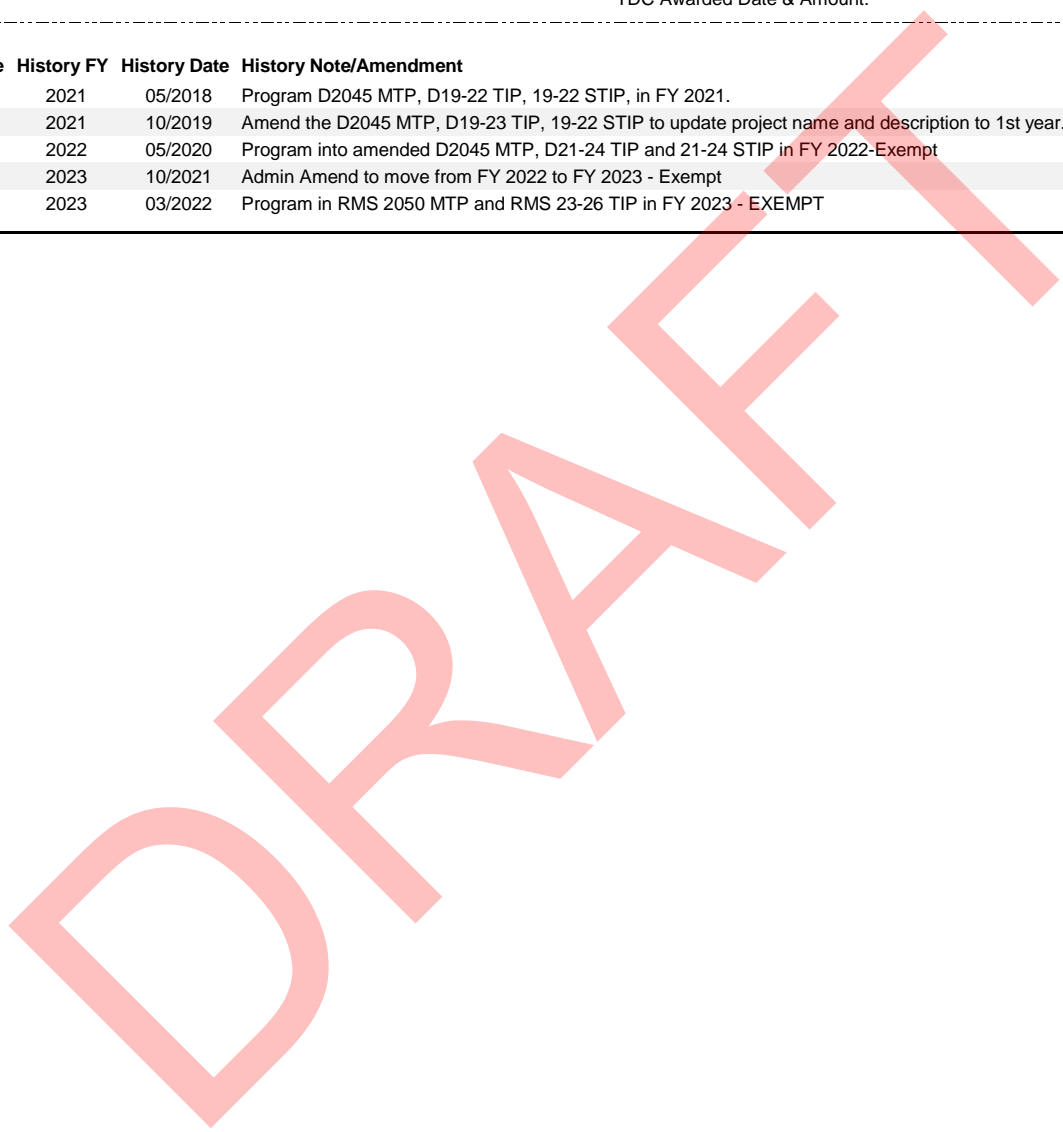
Project Sponsor: Sun Metro  
 MPO ID: **T092X**  
 Project Name: Montana RTS 1st year Operating Assistance  
 Apportionment Year: 2023  
 Project Phase: T  
 Brief Project Description: Montana RTS 1st year Operating Assistance: 1st year of Montana RTS operations.  
 Sec5309 ID:  
 Amend Date: 07/2022  
 Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Regionally Significant or Other (incl FHWA transfers)**  
 Other FTA Section: **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	2022	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2022-Exempt
01/2022	2023	10/2021	Admin Amend to move from FY 2022 to FY 2023 - Exempt
07/2022	2023	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2023 - EXEMPT





**FY 2024 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

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District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

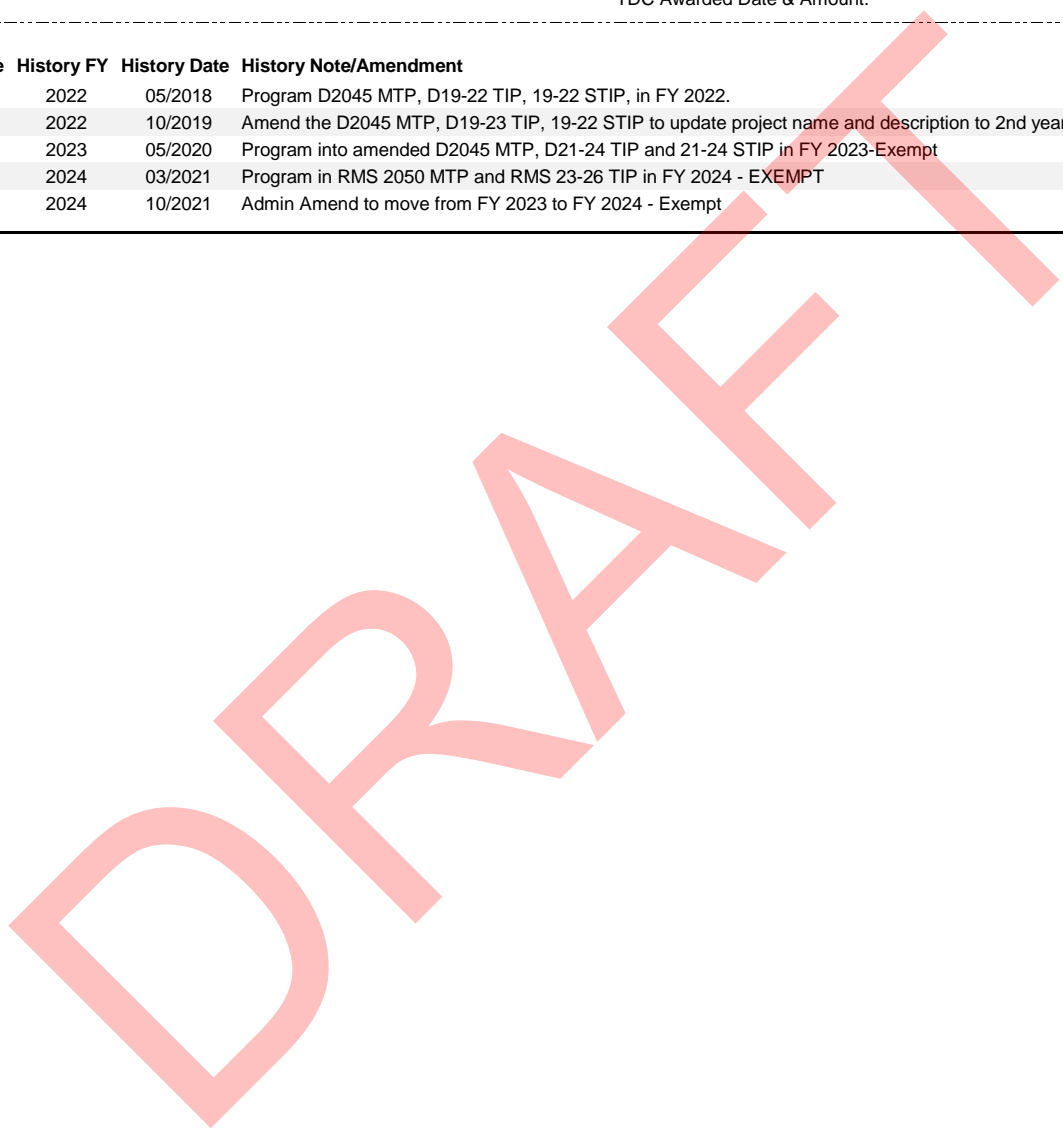
Project Sponsor: Sun Metro  
 MPO ID: **T097X**  
 Project Name: Montana RTS 2nd year Operating Assistance  
 Apportionment Year: 2024  
 Project Phase: T  
 Brief Project Description: Montana RTS 2nd year Operating Assistance: 2nd year of Montana RTS operations.  
 Sec5309 ID:  
 Amend Date: 07/2022  
 Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Regionally Significant or Other (incl FHWA transfers)**  
 Other FTA Section: **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	2023	05/2020	Program into amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2023-Exempt
07/2022	2024	03/2021	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2024 - EXEMPT
01/2022	2024	10/2021	Admin Amend to move from FY 2023 to FY 2024 - Exempt





**FY 2025 TRANSIT PROJECT DESCRIPTIONS**  
**EL PASO MPO TRANSPORTATION IMPROVEMENT PROGRAM (TIP) 2023-2026**

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District: TX DIST. 24

YOE = Year of Expenditure

**General Project Information**

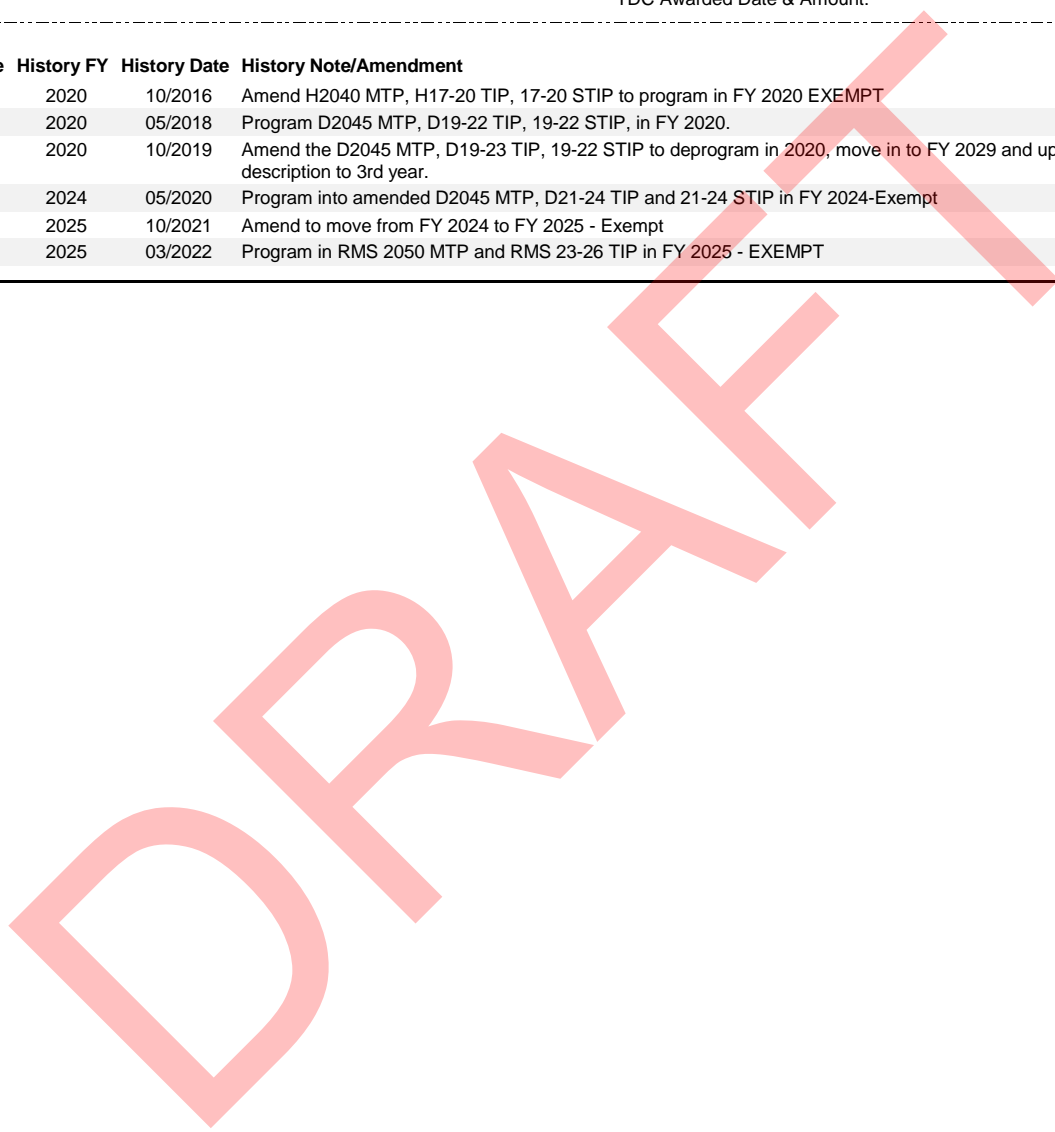
Project Sponsor: Sun Metro  
MPO ID: **T093X**  
Project Name: Montana RTS 3rd year service operating assistance  
Apportionment Year: 2025  
Project Phase: T  
Brief Project Description: Montana RTS 3rd year service operating assistance: 3rd year of Montana BRT-RTS operations.  
Sec5309 ID: 1539  
Amend Date: 07/2022  
Remarks/Amend Action: Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT

**Funding Information (YOE)**

Fed. Funding Category: **Regionally Significant or Other (incl FHWA transfers)**  
Other FTA Section: **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 amended D2045 MTP, D21-24 TIP and 21-24 STIP in FY 2024-Exempt
01/2022	2025	10/2021	Amend to move from FY 2024 to FY 2025 - Exempt
07/2022	2025	03/2022	Program in RMS 2050 MTP and RMS 23-26 TIP in FY 2025 - EXEMPT



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**FINANCIAL SECTION**

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**EL PASO MPO - District 24**  
**FY 2023 - 2026 Transportation Improvement Program**  
**JULY 2022 REVISION**

Friday, January 21, 2022

**Funding by Category**

Category	Description	FY 2023		FY 2024		FY 2025		FY 2026		Total FY 2023 - 2026	
		Programmed	Authorized	Programmed	Authorized	Programmed	Authorized	Programmed	Authorized	Programmed	Authorized
1	Preventive Maintenance & Rehabilitation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2M or 2U	Urban Area (Non- TMA) Corridor Projects	\$16,497,532	\$16,497,532	\$0	\$0	\$52,815,973	\$52,815,973	\$118,195,000	\$118,195,000	\$187,508,505	\$187,508,505
3	Non-Traditionally Funded Transportation Project (Includes Prop 12v1, Prop 12v2, Prop 14, Lcl funds)	\$18,000,000	\$18,000,000	\$12,721,134	\$12,721,134	\$12,743,694	\$12,743,694	\$2,410,000	\$2,410,000	\$45,874,828	\$45,874,828
4	Statewide Connectivity Corridor Projects	\$0	\$0	\$0	\$0	\$0	\$0	\$28,388,776	\$28,388,776	\$28,388,776	\$28,388,776
5	CMAQ	\$7,832,781	\$9,717,981	\$7,991,903	\$9,638,016	\$8,058,637	\$9,746,984	\$6,000,000	\$9,843,936	\$29,883,321	\$38,946,917
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	\$43,749,189	\$50,833,355	\$12,500,000	\$22,817,538	\$18,000,000	\$23,075,579	\$20,869,980	\$23,305,106	\$95,119,169	\$120,031,578
8	Safety	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	Transportation Enhancements	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9 Flex	TAP	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	Supplemental Transportation Projects (Includes:Earmark, GR, CBI, KTXB)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
11	District Discretionary	\$10,000,000	\$10,000,000	\$0	\$10,000,000	\$2,829,068	\$10,000,000	\$0	\$10,000,000	\$12,829,068	\$40,000,000
12	Strategic Priority	\$193,500,000	\$193,500,000	\$0	\$0	\$16,820,000	\$16,820,000	\$0	\$0	\$210,320,000	\$210,320,000
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
SWPE	Statewide Budget PE	\$3,881,000	\$3,881,000	\$0	\$0	\$0	\$0	\$0	\$0	\$3,881,000	\$3,881,000
SB 102	Strategy 102 Budget	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>		<b>\$293,460,502</b>	<b>\$302,429,868</b>	<b>\$33,213,037</b>	<b>\$55,176,688</b>	<b>\$111,267,372</b>	<b>\$125,202,230</b>	<b>\$175,863,756</b>	<b>\$192,142,818</b>	<b>\$613,804,667</b>	<b>\$674,951,604</b>

**Funding Participation Source**

Source	FY 2023	FY 2024	FY 2025	FY 2026	Total
<b>Federal</b>	\$218,797,602	\$16,393,522	\$78,818,940	\$138,763,005	\$452,773,069
<b>State</b>	\$43,999,506	\$0	\$14,493,010	\$29,316,755	\$87,809,271
<b>Local Match</b>	\$8,782,394	\$4,098,381	\$5,211,728	\$5,373,996	\$23,466,499
CAT 3 - Local/State Contributions	\$0	\$12,721,134	\$3,361,082	\$2,410,000	\$18,492,216
CAT 3 - Texas Mobility Funds	\$18,000,000	\$0	\$0	\$0	\$18,000,000
Cat 3 - TRZ	\$0	\$0	\$9,382,612	\$0	\$9,382,612
Other - Strategy PE Budget	\$3,881,000	\$0	\$0	\$0	\$3,881,000
<b>Total</b>	<b>\$293,460,502</b>	<b>\$33,213,037</b>	<b>\$111,267,372</b>	<b>\$175,863,756</b>	<b>\$613,804,667</b>

Note 1: FY 2023 Category 7 STP MM Authorized amount Includes FY 2022 Balance of \$27,826,026

FY 2022 CAT 7 STP Metro Mobility & Rehab	
Authorized	\$30,279,172
Programmed	\$2,453,146
<b>Balance</b>	<b>\$27,826,026</b>



EL PASO MPO - New Mexico District 1 & 2  
 2022-2025 NM State Transportation Improvement Program  
 RMS 2023-2026 TIP

Thursday, December 30, 2021

Funding by Category

Description	FY 2023		FY 2024		FY 2025		FY 2026		Total FY 2023 - 2026	
	Programmed	Authorized	Programmed	Authorized	Programmed	Authorized	Programmed	Authorized	Programmed	Authorized
NHPP (National Highway Performance Program)	\$0	\$0	\$0	\$0	\$0	\$0	\$6,283,584	\$6,283,584	\$6,283,584	\$6,283,584
NM State Funds	\$0	\$0	\$0	\$0	\$1,325,481	\$1,325,481	\$2,716,416	\$2,716,416	\$4,041,897	\$4,041,897
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,325,481</b>	<b>\$1,325,481</b>	<b>\$9,000,000</b>	<b>\$9,000,000</b>	<b>\$10,325,481</b>	<b>\$10,325,481</b>

Funding Participation Source

Source	FY 2023	FY 2024	FY 2025	FY 2026	Total
Federal Participation	\$0	\$0	\$0	\$7,689,600	\$7,689,600
State Participation	\$0	\$0	\$1,325,481	\$1,310,400	\$2,635,881
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,325,481</b>	<b>\$9,000,000</b>	<b>\$10,325,481</b>

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**Transit Financial Summary**  
**El Paso MPO - TXDOT District 24**  
**FY 2023 - 2026 Transportation Improvement Program**

All Figures in Year of Expenditure (YOE) Dollars

Tuesday, January 18, 2022

Transit Program		FY 2023			FY 2024			FY 2025		
		Federal	Match	Total	Federal	Match	Total	Federal	Match	Total
1	Sec. 5307 - Urbanized Formula >200K	\$13,724,623	\$3,431,155	\$17,155,778	\$13,864,070	\$3,466,018	\$17,330,088	\$14,004,970	\$3,501,242	\$17,506,212
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	\$2,512,451	\$628,113	\$3,140,564	\$2,550,754	\$637,689	\$3,188,443	\$2,590,058	\$647,515	\$3,237,573
6	Sec. 5310 - Seniors & People w/Disabilities >200K	\$692,817	\$0	\$692,817	\$0	\$0	\$0	\$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)	\$1,534,074	\$383,518	\$1,917,592	\$1,040,000	\$260,000	\$1,300,000	\$1,600,000	\$2,823,490	\$4,423,490
<b>Total Funds</b>		<b>\$18,463,965</b>	<b>\$4,442,786</b>	<b>\$22,906,751</b>	<b>\$17,454,825</b>	<b>\$4,363,706</b>	<b>\$21,818,531</b>	<b>\$18,195,028</b>	<b>\$6,972,247</b>	<b>\$25,167,275</b>
Transportation Development Credits Requested				\$56,470			\$0			\$0
Awarded				\$0			\$0			\$0

All Figures in Year of Expenditure (YOE) Dollars

Transit Program		FY 2026			TOTAL		
		Federal	Match	Total	Federal	State/Other	Total
1	Sec. 5307 - Urbanized Formula >200K	\$14,147,333	\$3,536,833	\$17,684,166	\$55,740,996	\$13,935,248	\$69,676,244
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	\$2,630,392	\$657,598	\$3,287,990	\$10,283,655	\$2,570,915	\$12,854,570
6	Sec. 5310 - Seniors & People w/Disabilities >200K	\$0	\$0	\$0	\$692,817	\$0	\$692,817
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)	\$0	\$0	\$0	\$4,174,074	\$3,467,008	\$7,641,082
<b>Total Funds</b>		<b>\$16,777,725</b>	<b>\$4,194,431</b>	<b>\$20,972,156</b>	<b>\$70,891,543</b>	<b>\$19,973,170</b>	<b>\$90,864,713</b>
Transportation Development Credits Requested				\$0			\$56,470
Awarded				\$0			\$0



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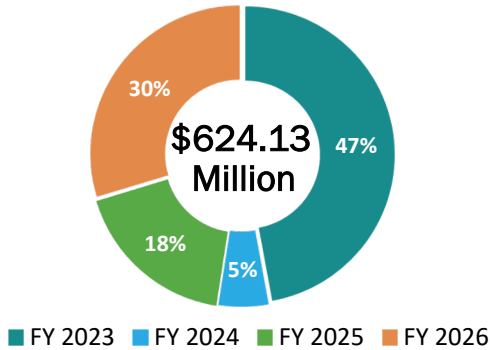
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**ANALYSES SECTION**

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.

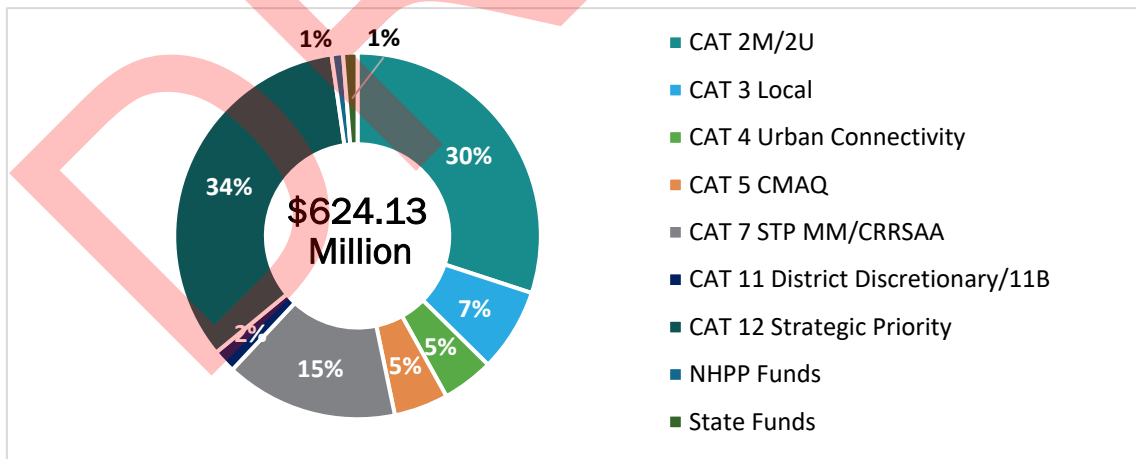
### HIGHWAY FUNDS YEAR OF EXPENDITURE (YOE) BY FISCAL YEAR



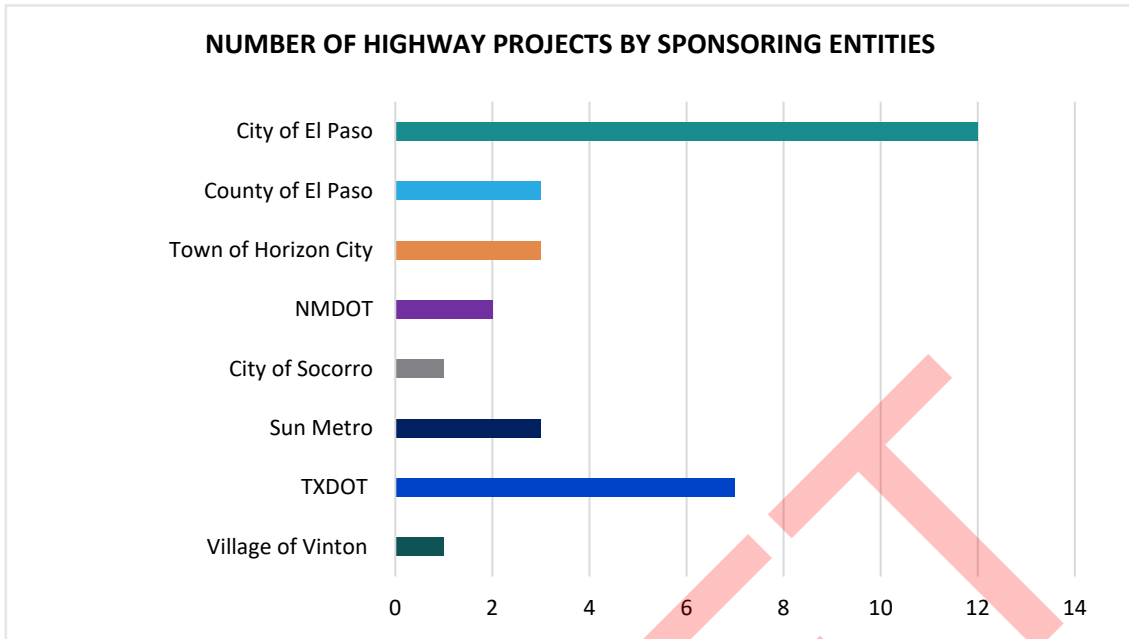
Fiscal Year	TX (YOE)	NM (YOE)	Total YOE
2023	\$ 293.46 M	-	\$ 293.46 M
2024	\$ 33.21 M	-	\$ 33.21 M
2025	\$ 111.27	\$ 1.33 M	\$ 112.59 M
2026	\$ 175.86 M	\$ 9.00 M	\$ 184.86 M
<b>Total</b>	<b>\$ 613.80 M</b>	<b>\$ 10.33 M</b>	<b>\$ 624.13 M</b>

### HIGHWAY FUNDS YEAR OF EXPENDITURE (YOE) BY FUNDING CATEGORY

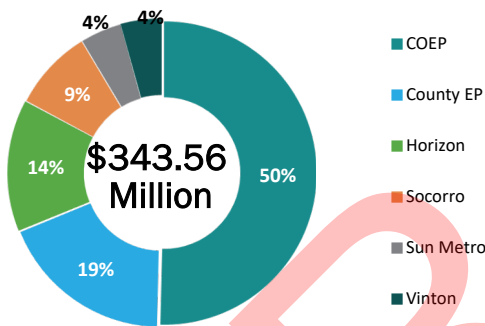
Funding Category	Millions	Percentage of Funds
CAT 2M/2U	\$187.51 M	30 %
CAT 3 Local Contribution/TMF	\$45.87 M	7 %
CAT 4 Urban Connectivity	\$28.39 M	5 %
CAT 5 CMAQ	\$29.88 M	5 %
CAT 7 STP MM/CRRSAA	\$95.12 M	15 %
CAT 11 District Discretionary/11B	\$12.83 M	2 %
CAT 12 Strategic Priority	\$210.32 M	34 %
NHPP Funds	\$6.28 M	1 %
State Funds (Texas and New Mexico)	\$4.04 M	1 %
<b>Total</b>	<b>\$ 624.13 M</b>	<b>100 %</b>



### NUMBER OF HIGHWAY PROJECTS BY SPONSORING ENTITIES

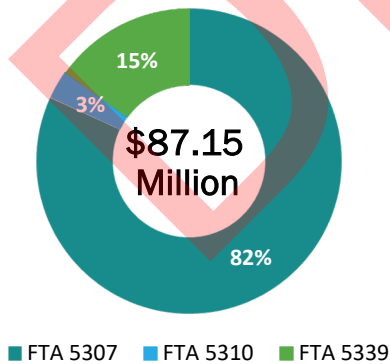


### LOCAL GOVERNMENTS HIGHWAY YOE COST BY SPONSOR



Local Government	YOE in Millions
COEP	\$ 88.05 M
County EP	\$ 32.25 M
Horizon	\$ 24.35 M
Socorro	\$ 14.97 M
Sun Metro	\$ 7.64 M
Vinton	\$ 7.50 M
<b>Total</b>	<b>\$ 343.56 M</b>

### TRANSIT FUNDS BY FUNDING CATEGORY



### TRANSIT YOE COST BY FISCAL YEAR

Fiscal Year	Total YOE
<b>2023</b>	\$ 20.99 M
<b>2024</b>	\$ 21.17 M
<b>2025</b>	\$ 21.39 M
<b>2026</b>	\$ 21.62 M
<b>Total</b>	<b>\$ 85.17 M</b>

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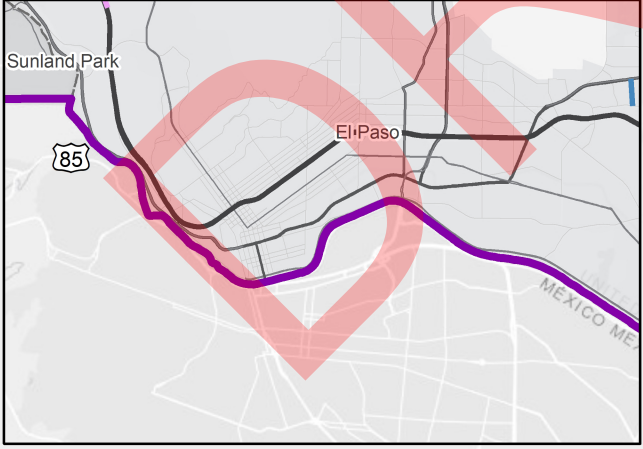
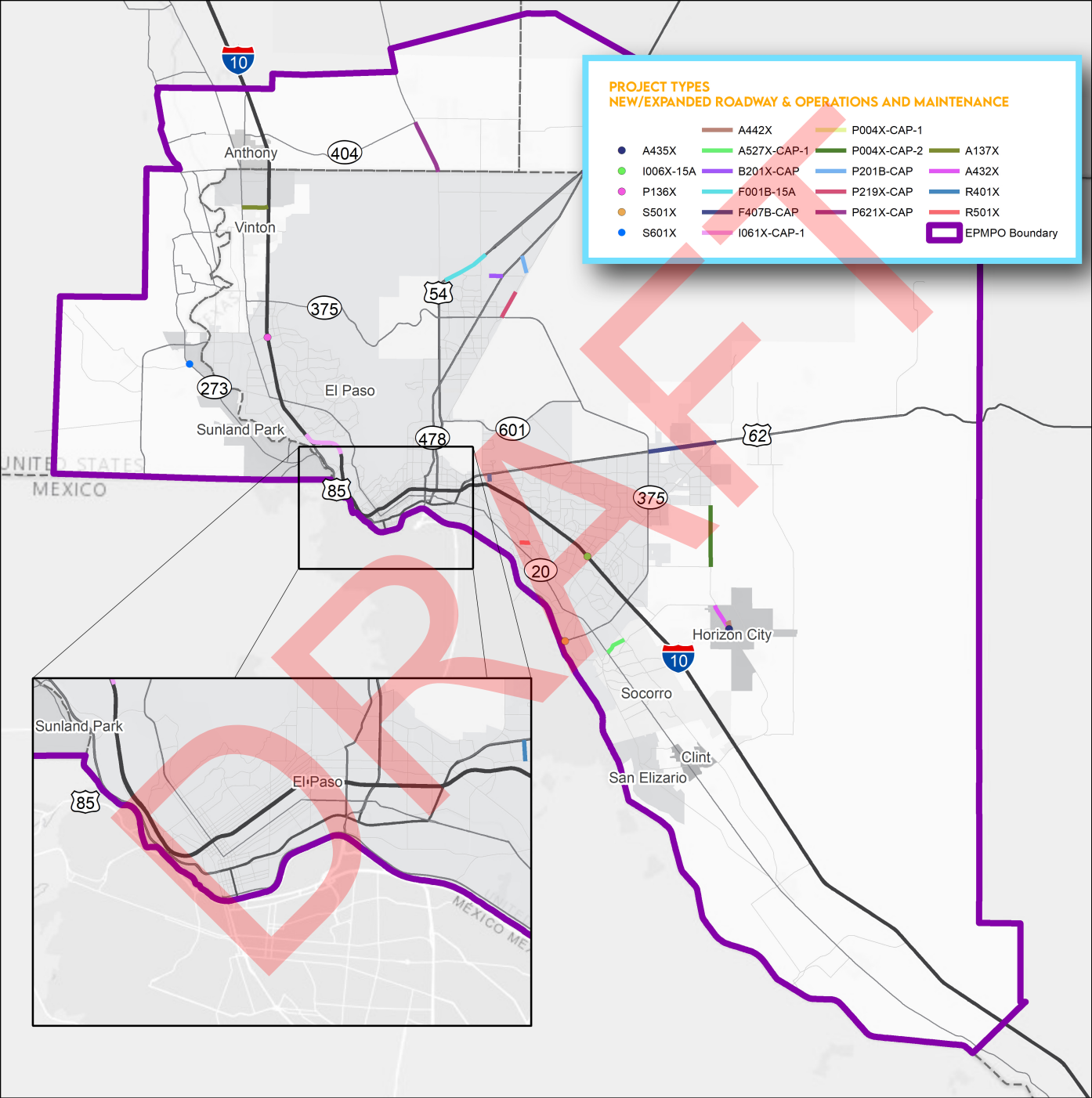
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**MAP SECTION<sup>4</sup>**

<sup>4</sup> Map may not contain all projects in this document, only map-able projects will be illustrated.

**PROJECT TYPES**  
**NEW/EXPANDED ROADWAY & OPERATIONS AND MAINTENANCE**

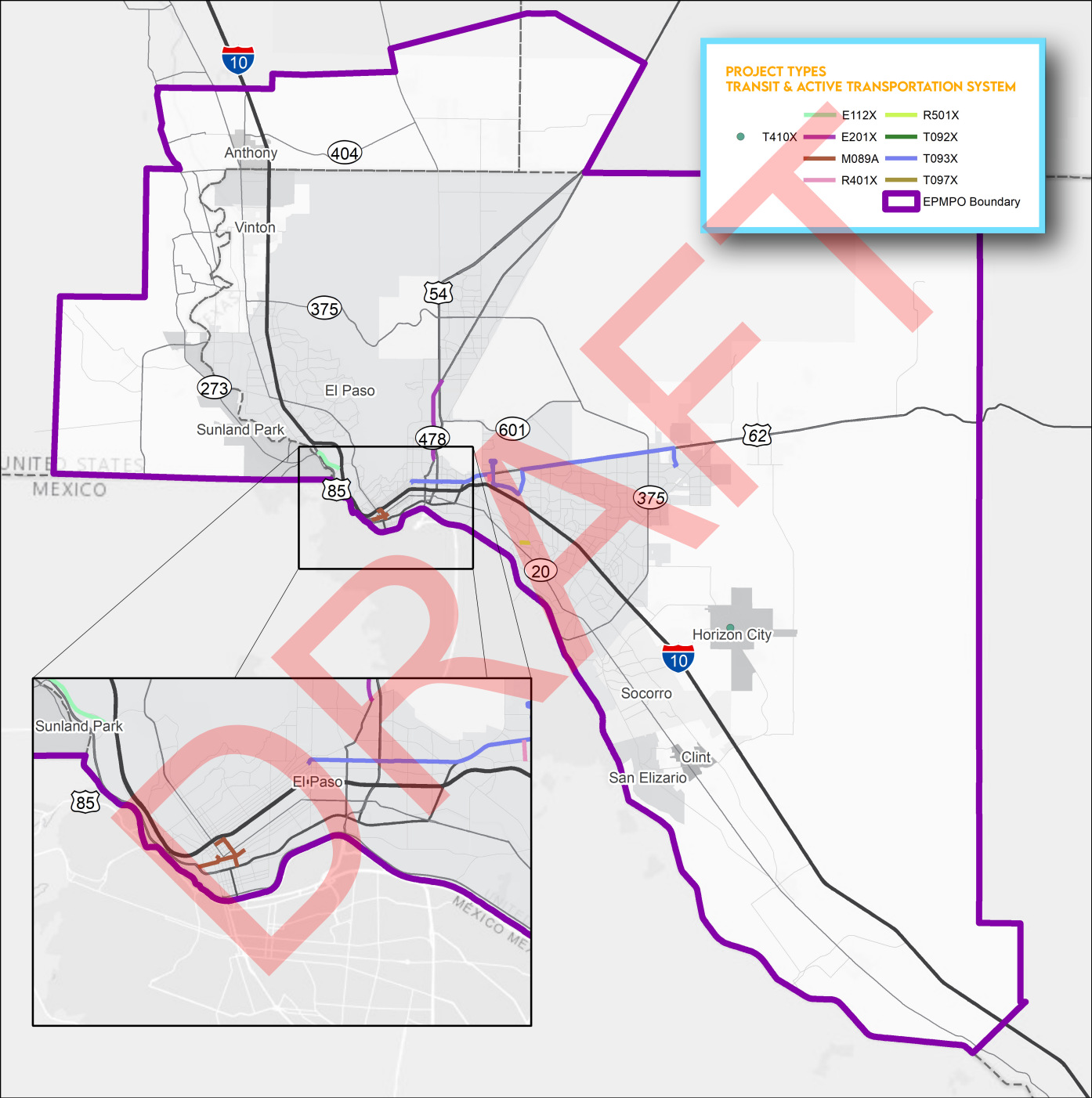
- |             |               |               |                   |
|-------------|---------------|---------------|-------------------|
| ● A435X     | — A442X       | — P004X-CAP-1 | — A137X           |
| ● I006X-15A | — A527X-CAP-1 | — P004X-CAP-2 | — A432X           |
| ● P136X     | — B201X-CAP   | — P201B-CAP   | — A432X           |
| ● S501X     | — F001B-15A   | — P219X-CAP   | — R401X           |
| ● S601X     | — F407B-CAP   | — P621X-CAP   | — R501X           |
|             | — I061X-CAP-1 |               |                   |
|             |               |               | — EPMPPO Boundary |





**PROJECT TYPES  
TRANSIT & ACTIVE TRANSPORTATION SYSTEM**

- E112X
- R501X
- T410X
- E201X
- T092X
- M089A
- T093X
- R401X
- T097X
- EPMPO Boundary



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**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. 12101et 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.

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District  
Texas Department of Transportation

Tomas Trevino, P.E.

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District Engineer

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Date

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Metropolitan Planning Organization  
Policy Board Chairperson

Walter L. Miller

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Chairperson

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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 2022 and FY 2023 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 EPMPO'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 organizations, 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(I); and 23 CFR Part 450.220

EPMPO 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 EPMPO 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 EPMPO 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 EPMPO 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 EPMPO 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 CFR 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 EPMPO 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 EPMPO will have a disproportionately high adverse human health or environmental effect on minority and low-income populations. The EPMPO 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 EPMPO 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 EPMPO 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 EPMPO 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. As direct recipients of FTA Section 5310 (Enhanced Mobility for Seniors and Individuals with Disabilities Program) funding, the EPMPO staff is actively involved in various ADA-related initiatives which are being carried out by the sub-recipients, and the review of ADA compliance documents developed by the region's transit and paratransit agencies, all of which focus on ensuring that transportation programs 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 EPMPO 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 proposed legislation before any federal, state, or local legislative body.

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## 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
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

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**APPENDIX A: CMAQ ANALYSES**

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# **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*



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## **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

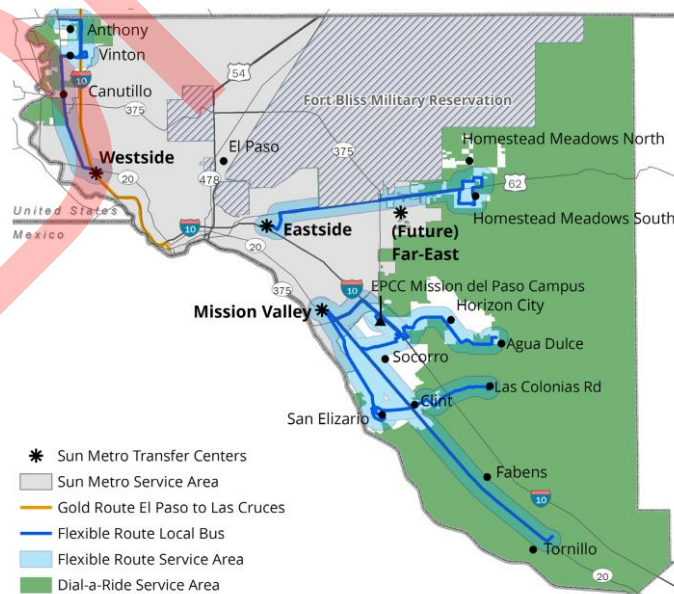
TTI was tasked by El Paso County Transit to conduct a feasibility study for potential service changes and expansion in its service area. The purpose of the study was to:

- 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

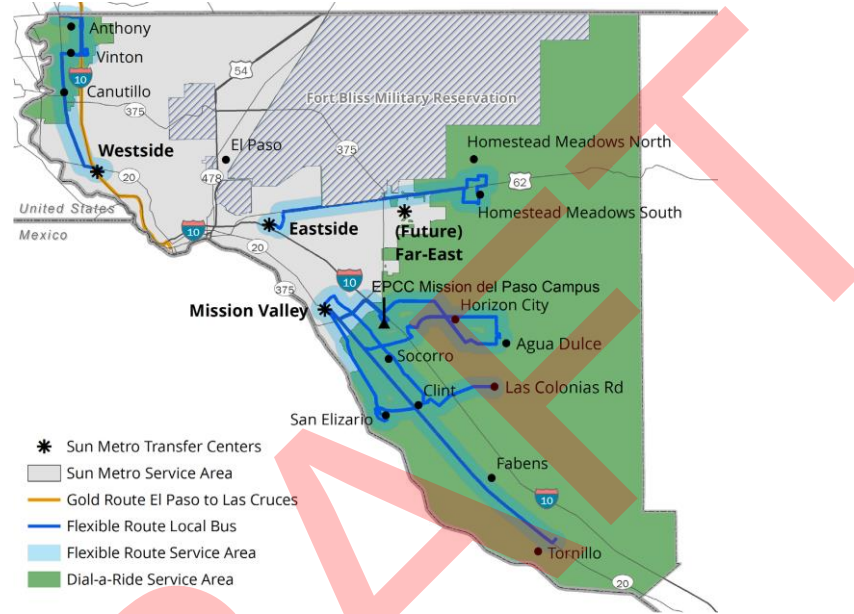
Stakeholders involved in the study chose two service expansion scenarios for further study, including the potential air quality benefits for the region. These are identified in the study as Scenario 3: Flexible-Route Local Bus and Rural Dial-a-Ride and Scenario 6: Increased Flexible-Route Local Bus and 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 Weekday 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, NO<sub>x</sub>, 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 NO<sub>x</sub>, 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

<b>Variables:</b>	<b>EF<sub>B</sub>:</b>	Speed-based running exhaust emission factor for affected roadway before implementation (NO <sub>x</sub> , VOC, or CO) (grams/mile)
	<b>EF<sub>BUS</sub>:</b>	Speed-based running exhaust emission factor for transit vehicle (NO <sub>x</sub> , VOC, or CO) (grams/mile)
	<b>F<sub>T,sov</sub>:</b>	Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)
	<b>N<sub>TR</sub>:</b>	New transit ridership
	<b>TEF<sub>AUTO</sub>:</b>	Auto trip-end emission factor (NO <sub>x</sub> , VOC, or CO) (grams/trip)
	<b>TEF<sub>BUS</sub>:</b>	Bus (or other transit vehicle) trip-end emission factor (NO <sub>x</sub> , VOC, or CO) (grams/trip)
	<b>TL<sub>W</sub>:</b>	Average auto trip length (miles)
	<b>VMT<sub>BUS</sub>:</b>	VMT by transit vehicle
	<b>VMT<sub>R</sub>:</b>	Reduction in daily automobile VMT
	<b>VT<sub>BUS</sub>:</b>	Daily vehicle trips by transit vehicle
	<b>VT<sub>R</sub>:</b>	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

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

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

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

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

### Scenario 6

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

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

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

*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**

<b>Pollutant</b>	<b>Scenario 3 Reductions (kg/day)</b>	<b>Scenario 6 Reductions (kg/day)</b>
CO	44.015	103.979
NO <sub>x</sub>	2.182	4.733
VOC	2.784	6.162
PM <sub>10</sub>	1.041	2.300

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# 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*





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## 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.

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## 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, NO<sub>x</sub>, 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 NO<sub>x</sub>, 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)

$$\text{Daily Emission Reduction} = \sum_{i=1}^n [L_i * ADT_i * (EF_B - EF_A)_i]$$

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

<b>Variables:</b>	<b>ADT<sub>i</sub>:</b>	Average daily traffic for each affected roadway
	<b>EF<sub>A</sub>:</b>	Speed-based running exhaust emission factor after implementation (NO <sub>x</sub> and VOC) (grams/mile)
	<b>EF<sub>B</sub>:</b>	Speed-based running exhaust emission factor before implementation (NO <sub>x</sub> and VOC) (grams/mile)
	<b>L<sub>i</sub>:</b>	Length of each freeway affected by signalization program (miles)
	<b>N:</b>	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
NO <sub>x</sub>	178.15
VOC	70.04
PM <sub>10</sub>	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
NO <sub>x</sub>	44.538
VOC	17.510
PM <sub>10</sub>	50.758

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# 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*





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## 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, NO<sub>x</sub>, 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 NO<sub>x</sub>, 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

$$\text{Daily Emission Reduction} = \text{AADT} * \text{PMS} * \text{L} * \text{EF}_B$$

*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<sub>B</sub>:** Speed-based running exhaust and start emissions factor for participants' trip before participating in the bike/pedestrian program (NO<sub>x</sub>, VOC, or CO) (grams/mile)
  - L:** Length of facility (miles)
  - PMS:** Percentage mode shift from driving to bike/pedestrian (decimal)

## Analysis

### Results

$$\text{Daily Emission Reduction} = \text{AADT} * \text{PMS} * \text{L} * \text{EF}_B$$

**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:**

$$13,932 * 0.02 * 0.76 * \text{EF}_B = 2.964 \text{ kg/day}$$

**For NO<sub>x</sub>:**

$$13,932 * 0.02 * 0.76 * \text{EF}_B = 0.164 \text{ kg/day}$$

**For VOC:**

$$13,932 * 0.02 * 0.76 * \text{EF}_B = 0.221 \text{ kg/day}$$

**For PM-10:**

$$13,932 * 0.02 * 0.76 * \text{EF}_B = 0.221 \text{ kg/day}$$

## 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**

<b>Pollutant</b>	<b>Emissions Reduction (kg/day)</b>
CO	2.964
NO <sub>x</sub>	0.164
VOC	0.221
PM <sub>10</sub>	0.014

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# Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Downtown Bicycle Improvements  
Phase I

October 2019

*Prepared for*



*By*





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## 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, NO<sub>x</sub>, 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 NO<sub>x</sub>, 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

$$\text{Daily Emission Reduction} = \text{AADT} * \text{PMS} * \text{L} * \text{EF}_B$$

*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<sub>B</sub>:** Speed-based running exhaust emission factor for participants' trip before participating in the bike/pedestrian program (NO<sub>x</sub>, VOC, or CO) (grams/mile)

**L:** Length of facility (miles)

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

## Analysis

### Results

$$\text{Daily Emission Reduction} = \text{AADT} * \text{PMS} * \text{L} * \text{EF}_B$$

**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:

$$51,228 * 0.02 * 3.5 * EF_B = 3,778.188 \text{ grams/day}$$

Daily emission reduction is equal to 3.778 kg/day

For NOx:

$$51,228 * 0.02 * 3.5 * EF_B = 118.226 \text{ grams/day}$$

Daily emission reduction is equal to 0.118 kg/day

For VOC:

$$51,228 * 0.02 * 3.5 * EF_B = 203.159 \text{ grams/day}$$

Daily emission reduction is equal to 0.203 kg/day

For PM-10:

$$51,228 * 0.02 * 3.5 * EF_B = 196.361 \text{ grams/day}$$

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 <sub>10</sub>	0.196

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# Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Traffic Management Center Upgrade  
Phase 3 - Construction

March 2020

*Prepared for*



*By*





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## 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.

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## 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 analyze 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, NO<sub>x</sub>, 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 NO<sub>x</sub>, 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)

$$\text{Daily Emission Reduction} = \sum_{i=1}^n [L_i * ADT_i * (EF_B - EF_A)_i]$$

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

<b>Variables:</b>	<b>ADT<sub>i</sub>:</b>	Average daily traffic for each affected roadway
	<b>EF<sub>A</sub>:</b>	Speed-based running exhaust emission factor after implementation (NO <sub>x</sub> and VOC) (grams/mile)
	<b>EF<sub>B</sub>:</b>	Speed-based running exhaust emission factor before implementation (NO <sub>x</sub> and VOC) (grams/mile)
	<b>L<sub>i</sub>:</b>	Length of each freeway affected by signalization program (miles)
	<b>N:</b>	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
NO <sub>x</sub>	178.15
VOC	70.04
PM <sub>10</sub>	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**

<b>Pollutant</b>	<b>Emissions Reduction (kg/day)</b>
CO	340.135
NO <sub>x</sub>	44.538
VOC	17.510
PM <sub>10</sub>	50.758

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# Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

## Dyer Street Pedestrian and Parkway Improvements

October 2021

*Prepared for*



*By*





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## 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 nonattainment area. The city is seeking funding from the Congestion Mitigation/Air Quality Improvement Program (CMAQ) to help implement the project.

The project will construct 0.2 miles of pedestrian infrastructure improvements along Dyer St.

## 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.*

## Dyer Street Pedestrian and Parkway Improvements

The Dyer Street Pedestrian and Parkway Improvements project will install 0.2 miles of pedestrian improvements. The project will serve the City of El Paso by addressing pedestrian safety issues and improve the multi-modal capacity of the roadway. These improvements include improved sidewalks, landscaping, irrigation, and striping along Dyer St. The project limits are from Gateway North to Hercules Ave.

### 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.

Emission rates used in the analyses were obtained from the U.S. Environmental Protection Agency's MOVES2014b model. TTI staff utilized recently updated emission rate lookup tables (ERLTs) of on-road mobile source emission rates for Texas regions (TTI, May 2021). The updated ERLTs incorporate changes such as updates to the U.S. Environmental Protection Agency's (EPA) motor vehicle emissions model (MOVES2014b, released August 2018, and the latest version of MOVES at the start of the ERLT development project), vehicle and fuel characteristics, weather characteristics, and vehicle miles traveled (VMT) mix. These ERLTs were developed for various TxDOT districts, including El Paso, for use in investigating air quality impacts of proposed transportation projects and mitigation strategies. The tables provide emission rates needed to convert quantities such as VMT, intersection delays, truck stop idling, and vehicle starts to total emissions.

TTI staff used American Community Survey data to compute an increased pedestrian 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 State of Texas 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 pedestrian mode, multiplied by the project length, multiplied by the speed-based running exhaust emission factor for participants' trip before utilizing the pedestrian facility.

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 sidewalks over the project lifetime, any benefits accrued by the mode shift to pedestrian will be negated by the increased emissions from potential higher traffic volumes in the corridor over time.

Assumptions in the MOVES2014b output for the project included:

- Output created for CO, VOC, NO<sub>x</sub>, 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, 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 NO<sub>x</sub>, VOC, and PM-10. Use of the sidewalks 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 pedestrian 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 pedestrian 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 14,104 is estimated. This figure is based on AADT 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 pedestrian mode share for the El Paso region is estimated to be 2.5% and can serve as an optimistic mode share increase for the improved pedestrian facilities.
- The 0.025 increase in mode share represents new pedestrians (vehicle trips replaced). This figure should be considered very optimistic.
- Pedestrian facility length of 0.2 miles is used.

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

$$\text{Daily Emission Reduction} = \text{AADT} * \text{PMS} * \text{L} * \text{EF}_B$$

*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<sub>B</sub>:** Speed-based running exhaust and start emissions factor for participants' trip before participating in the bike/pedestrian program (NO<sub>x</sub>, VOC, or CO) (grams/mile)
  - L:** Length of facility (miles)
  - PMS:** Percentage mode shift from driving to bike/pedestrian (decimal)

## Analysis

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:**

$$14,104 * 0.025 * 0.2 * \text{EF}_B = 0.388 \text{ kg/day}$$

**For NO<sub>x</sub>:**

$$14,104 * 0.025 * 0.2 * \text{EF}_B = 0.036 \text{ kg/day}$$

**For VOC:**

$$14,104 * 0.025 * 0.2 * \text{EF}_B = 0.028 \text{ kg/day}$$

**For PM-10:**

$$14,104 * 0.025 * 0.2 * \text{EF}_B = 0.001 \text{ kg/day}$$

## Summary of Results

The overall emissions analysis results for the project are shown in Table 1 below. The estimated emissions benefits from the pedestrian facilities are modest and dependent on increased use of the facilities as a travel mode in the city and region.

**Table 1. Estimated Emissions Benefits from Dyer Street Pedestrian and Parkway Improvements**

<b>Pollutant</b>	<b>Emissions Reduction (kg/day)</b>
CO	0.388
NO <sub>x</sub>	0.036
VOC	0.028
PM <sub>10</sub>	0.001

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# Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Traffic Management Center Upgrade  
Phase 4 - Construction

October 2021

*Prepared for*



*By*





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## 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 continue 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 4 - Construction

The City of El Paso seeks to implement phased updates to the City's Traffic Management Center (TMC). The TMC oversees the operation of the City's Transportation Management Center Computerized Signal System. The system includes the signal timing and coordination for approximately 658 traffic signals. The TMC primary objective is incident management, providing real-time response to incidents with the ability to remotely implement emergency signal timing to help ease traffic congestion due to traffic accidents, special events or construction closures. The Traffic Signal controllers are outdated and limit the response capabilities of the TMC. Upgrading the equipment will allow the TMC to mediate congestion and allow for more creative timing of the traffic signal lights for incident management to include adaptive timing.

The fourth phase of these improvements consists of the following:

- 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.

TTI researchers used MOVES2014b emission rates developed for El Paso using rates and data as described in "*Development of Emission Rate Lookup Tables: Final Report*" prepared for the Texas Department of Transportation by TTI (May 2021). Local input parameters include meteorological; fuels; fuel fractions; age distributions; Inspection and Maintenance Program. Weekday; 24-hour and fleet or sub-fleet composites of individual hourly gasoline and diesel vehicle rates were produced for the analyses using El Paso District fleet and hourly mixes.

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

## Analysis Methods

TTI staff used the analysis method provided in the State of Texas 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. 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 MOVES2014b output for the project included:

- Output created for VOC, CO, NO<sub>x</sub>, 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, brake wear and tire wear emissions rates were calculated. (Process ID 1, 9, 10, 11, 12, 13, 15)
- 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) resulting from implementation.
- The analysis period is from 6:00 a.m. to 7:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NO<sub>x</sub>, VOC, and PM-10. The effects of the signalization program can occur throughout the day, but the greatest impact on emissions will occur during any peak hours or daytime activity.
- The emissions reduced from the project were distributed across the 13 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 13-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.
- Twenty-five (25) percent of total estimate of emissions reduction applied to Phase 4.

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

## Strategy Equation

### Equation 7.4, Intelligent Transportation Systems (ITS)

$$\text{Daily Emission Reduction} = \sum_{i=1}^n [L_i * ADT_i * (EF_B - EF_A)_i]$$

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

<b>Variables:</b>	<b>ADT<sub>i</sub>:</b>	Average daily traffic for each affected roadway
	<b>EF<sub>A</sub>:</b>	Speed-based running exhaust emission factor after implementation (NO <sub>x</sub> and VOC) (grams/mile)
	<b>EF<sub>B</sub>:</b>	Speed-based running exhaust emission factor before implementation (NO <sub>x</sub> and VOC) (grams/mile)
	<b>L<sub>i</sub>:</b>	Length of each freeway affected by signalization program (miles)
	<b>N:</b>	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 13-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
NO <sub>x</sub>	178.15
VOC	70.04
PM <sub>10</sub>	203.03

Twenty-five percent of this total estimate was applied to Phase 4. Five percent was allocated to the previous Phase 1 design phase, 25 percent each to the proposed Phases 2-3. The remaining 20 percent will be available for Phase 5 CMAQ application.

## Summary of Results

The emissions analysis results for the Phase 4 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 4 - Construction**

Pollutant	Emissions Reduction (kg/day)
CO	340.135
NO <sub>x</sub>	44.538
VOC	17.510
PM <sub>10</sub>	50.758

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# Emission Reduction Analysis for City of El Paso Proposed CMAQ Project

Traffic Management Center Upgrade  
Phase 5 - Construction

October 2021

*Prepared for*



*By*





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## **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.

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## Traffic Management Center Upgrade – Phase 5 - Construction

The City of El Paso seeks to implement phased updates to the City's Traffic Management Center (TMC). The TMC oversees the operation of the City's Transportation Management Center Computerized Signal System. The system includes the signal timing and coordination for approximately 658 traffic signals. The TMC primary objective is incident management, providing real-time response to incidents with the ability to remotely implement emergency signal timing to help ease traffic congestion due to traffic accidents, special events or construction closures. The Traffic Signal controllers are outdated and limit the response capabilities of the TMC. Upgrading the equipment will allow the TMC to mediate congestion and allow for more creative timing of the traffic signal lights for incident management to include adaptive timing.

The fifth phase of these improvements consists of the following:

- 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.

TTI researchers used MOVES2014b emission rates developed for El Paso using rates and data as described in "*Development of Emission Rate Lookup Tables: Final Report*" prepared for the Texas Department of Transportation by TTI (May 2021). Local input parameters include meteorological; fuels; fuel fractions; age distributions; Inspection and Maintenance Program. Weekday; 24-hour and fleet or sub-fleet composites of individual hourly gasoline and diesel vehicle rates were produced for the analyses using El Paso District fleet and hourly mixes.

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

## Analysis Methods

TTI staff used the analysis method provided in the State of Texas 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. 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 MOVES2014b output for the project included:

- Output created for VOC, CO, NO<sub>x</sub>, 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. (Process ID 1, 9, 10, 11, 12, 13, 15)
- 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) resulting from implementation.
- The analysis period is from 6:00 a.m. to 7:00 p.m. on a winter weekday for CO; the same periods on a summer weekday for NO<sub>x</sub>, VOC, and PM-10. The effects of the signalization program can occur throughout the day, but the greatest impact on emissions will occur during any peak hours or daytime activity.
- The emissions reduced from the project were distributed across the 13 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 13-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.
- Twenty (20) percent of total estimate of emissions reduction applied to Phase 5.

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

## Strategy Equation

### Equation 7.4, Intelligent Transportation Systems (ITS)

$$\text{Daily Emission Reduction} = \sum_{i=1}^n [L_i * ADT_i * (EF_B - EF_A)_i]$$

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

<b>Variables:</b>	<b>ADT<sub>i</sub>:</b>	Average daily traffic for each affected roadway
	<b>EF<sub>A</sub>:</b>	Speed-based running exhaust emission factor after implementation (NO <sub>x</sub> and VOC) (grams/mile)
	<b>EF<sub>B</sub>:</b>	Speed-based running exhaust emission factor before implementation (NO <sub>x</sub> and VOC) (grams/mile)
	<b>L<sub>i</sub>:</b>	Length of each freeway affected by signalization program (miles)
	<b>N:</b>	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 13-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
NO <sub>x</sub>	178.15
VOC	70.04
PM <sub>10</sub>	203.03

Twenty percent of this total estimate was applied to Phase 5. Five percent was allocated to the previous Phase 1 design phase, 25 percent to the implemented and proposed Phases 2-4. The remaining 20 percent is available for the Phase 5 CMAQ application.

## Summary of Results

The emissions analysis results for the Phase 5 construction of the City's Traffic Management Center 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 5 - Construction**

<b>Pollutant</b>	<b>Emissions Reduction (kg/day)</b>
CO	272.108
NO <sub>x</sub>	35.630
VOC	14.008
PM <sub>10</sub>	40.606

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# Emission Reduction Analysis for Sun Metro Proposed CMAQ Project

Montana RTS Operations Assistance  
Phase 1

March 2020

*Prepared for*



*By*





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## 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 Weekday 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, NO<sub>x</sub>, 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 NO<sub>x</sub>, VOC, and PM-10.
- The vehicle trips reduced (VT<sub>R</sub>) and vehicle-miles travelled reduced (VMT<sub>R</sub>) 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.

TII 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 ( $TEF_{AUTO}$  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

<b>Variables:</b>	<b>EF<sub>B</sub>:</b>	Speed-based running exhaust emission factor for affected roadway before implementation (NO <sub>x</sub> , VOC, or CO) (grams/mile)
	<b>EF<sub>BUS</sub>:</b>	Speed-based running exhaust emission factor for transit vehicle (NO <sub>x</sub> , VOC, or CO) (grams/mile)
	<b>F<sub>T,SOV</sub>:</b>	Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)
	<b>N<sub>TR</sub>:</b>	New transit ridership

<b>TEF<sub>AUTO</sub>:</b>	Auto trip-end emission factor (NO <sub>x</sub> , VOC, or CO) (grams/trip)
<b>TEF<sub>BUS</sub>:</b>	Bus (or other transit vehicle) trip-end emission factor (NO <sub>x</sub> , VOC, or CO) (grams/trip)
<b>TL<sub>w</sub>:</b>	Average auto trip length (miles)
<b>VMT<sub>BUS</sub>:</b>	VMT by transit vehicle
<b>VMT<sub>R</sub>:</b>	Reduction in daily automobile VMT
<b>VT<sub>BUS</sub>:</b>	Daily vehicle trips by transit vehicle
<b>VT<sub>R</sub>:</b>	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.

$$VT_R = (3,300 * 2) * 0.52 = 3,432 \text{ trips/day}$$

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

$$VMT_R = 3,432 * 12.6 = 43,243 \text{ vehicle-miles/day}$$

*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
NO <sub>x</sub>	2.929
VOC	5.553
PM <sub>10</sub>	1.629

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# Emission Reduction Analysis for Sun Metro Proposed CMAQ Project

Montana RTS Operations Assistance  
Phase 2

March 2020

*Prepared for*



*By*





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## 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, NO<sub>x</sub>, 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 NO<sub>x</sub>, VOC, and PM-10.
- The vehicle trips reduced (VT<sub>R</sub>) and vehicle-miles travelled reduced (VMT<sub>R</sub>) 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 ( $TEF_{AUTO}$  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 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

<b>Variables:</b>	<b>EF<sub>B</sub>:</b>	Speed-based running exhaust emission factor for affected roadway before implementation (NO <sub>x</sub> , VOC, or CO) (grams/mile)
	<b>F<sub>T,SOV</sub>:</b>	Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)
	<b>N<sub>TR</sub>:</b>	New transit ridership
	<b>TEF<sub>AUTO</sub>:</b>	Auto trip-end emission factor (NO <sub>x</sub> , VOC, or CO) (grams/trip)
	<b>TL<sub>W</sub>:</b>	Average auto trip length (miles)
	<b>VMT<sub>R</sub>:</b>	Reduction in daily automobile VMT
	<b>VT<sub>R</sub>:</b>	Reduction in number of daily automobile vehicle trips

## Analysis

$$VT_R = (3,600 * 2) * 0.52 = 3,744 \text{ trips/day}$$

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

$$VMT_R = 3,744 * 12.6 = 47,174 \text{ vehicle-miles/day}$$

*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**

<b>Pollutant</b>	<b>Emissions Reduction (kg/day)</b>
CO	99.211
NO <sub>x</sub>	6.635
VOC	4.688
PM <sub>10</sub>	2.513

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# Emission Reduction Analysis for Sun Metro Proposed CMAQ Project

Montana RTS Operations Assistance  
Phase 3

March 2020

*Prepared for*



*By*





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## 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, NO<sub>x</sub>, 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 NO<sub>x</sub>, VOC, and PM-10.
- The vehicle trips reduced (VT<sub>R</sub>) and vehicle-miles travelled reduced (VMT<sub>R</sub>) 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 ( $TEF_{AUTO}$  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

<b>Variables:</b>	<b>EF<sub>B</sub>:</b>	Speed-based running exhaust emission factor for affected roadway before implementation (NO <sub>x</sub> , VOC, or CO) (grams/mile)
	<b>F<sub>T,SOV</sub>:</b>	Percentage of people using a transit vehicle that previously were vehicle drivers (decimal)
	<b>N<sub>TR</sub>:</b>	New transit ridership
	<b>TEF<sub>AUTO</sub>:</b>	Auto trip-end emission factor (NO <sub>x</sub> , VOC, or CO) (grams/trip)
	<b>TL<sub>W</sub>:</b>	Average auto trip length (miles)
	<b>VMT<sub>R</sub>:</b>	Reduction in daily automobile VMT
	<b>VT<sub>R</sub>:</b>	Reduction in number of daily automobile vehicle trips

## Analysis

$$VT_R = (3,700 * 2) * 0.52 = 3,848 \text{ trips/day}$$

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

$$VMT_R = 3,848 * 12.6 = 48,485 \text{ vehicle-miles/day}$$

*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**

<b>Pollutant</b>	<b>Emissions Reduction (kg/day)</b>
CO	90.721
NO <sub>x</sub>	5.599
VOC	4.504
PM <sub>10</sub>	2.569

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**APPENDIX B: PERFORMANCE BASED PLANNING AND  
PROGRAMMING**

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## PERFORMANCE MEASURES

Measuring and tracking the performance of the region's transportation system is a fundamental component of the RMS 2050 MTP and the performance-based planning process. Performance measurement allows planners to assess the current state of the system to develop recommendations for improvements, evaluate the effectiveness of recently implemented improvements, and forecast the effectiveness of planned improvements.

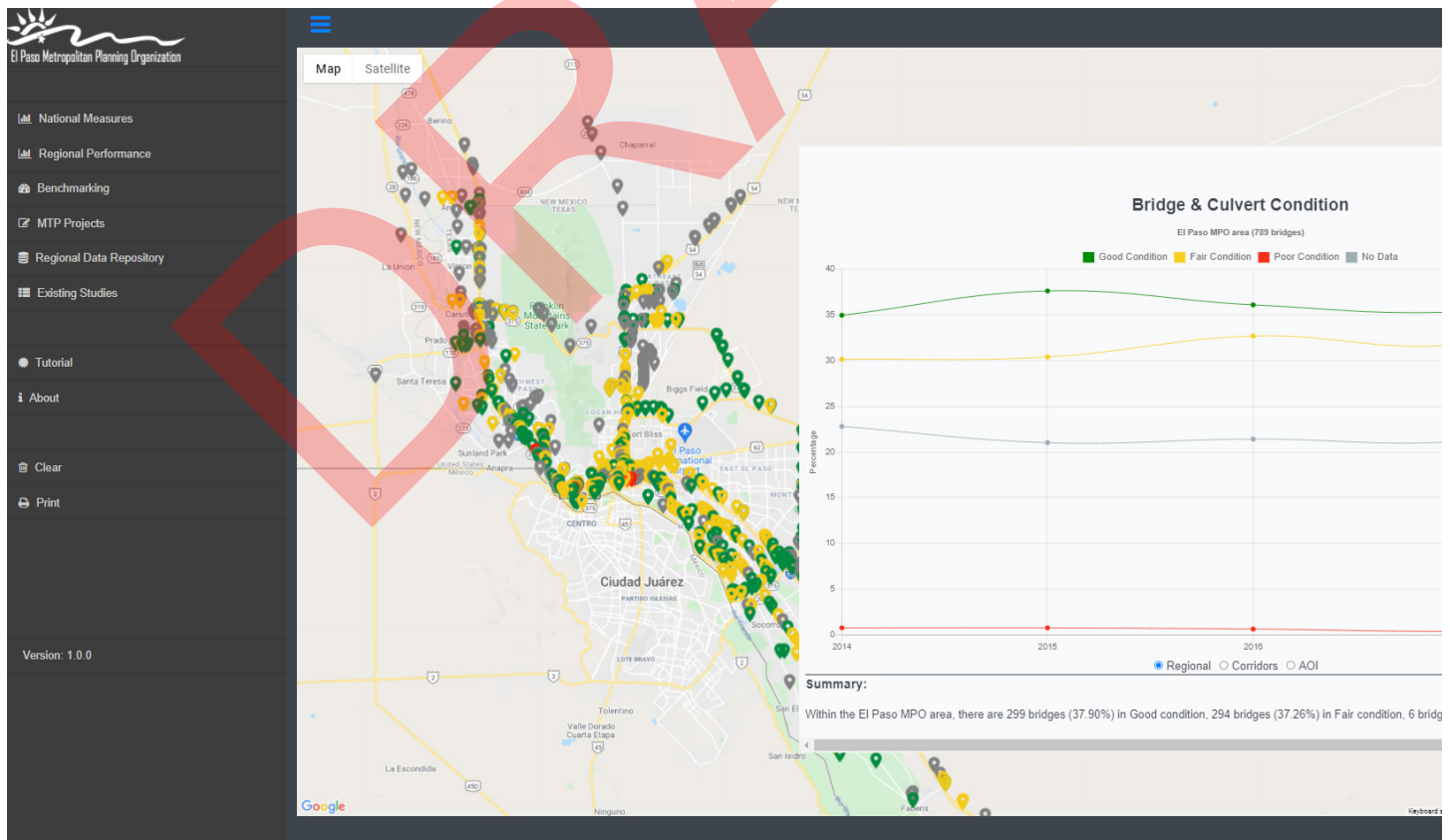
The EPMPO-monitors two kinds of performance as part of its performance-based planning efforts: Observed Performance and Forecasted or Modeled Performance.

Observed Performance: Performance is measured based on information from various sources

(national, state, local) and reported via a web-based application tool developed for geospatial visualization of performance of the transportation network. This webtool can be found at <https://www.elpasompo.org/Links> through the "EPMPO Performance Measures Tool" link.

The objectives of the Web Tool are:

- To track transportation performance over time
- To support identification of gaps in infrastructure across transportation modes
- To provide performance-based information for planning and programming decisions and
- To be a resource for local planning partners and general public.



The Multimodal Web Tool shows performance of transportation networks in the El Paso region captured by multimodal performance measures that were identified from Destino 2045 Metropolitan Transportation Plan (2018), Congestion Management Process (2013), and FHWA National Performance Measures (2017), and based on available local, state, and national data.

Forecasted or Modeled Performance: Using EPMPPO’s TDM, planners can forecast the performance of the region’s transportation system, considering both planned system improvements and forecasted demographics. Performance-based planning using these measures was initiated with the development of the previous MTP (Destino 2045 MTP), and additional measures have been incorporated as part of the development of the RMS 2050 TDM and the reporting output summary has been improved.

## NATIONAL PERFORMANCE REQUIREMENTS

Federal legislation passed in 2012 introduced a new requirement to incorporate a performance-based approach into the transportation planning process. The federal transportation bill *Moving Ahead for Progress in 21<sup>st</sup> Century Act* (MAP-21) required state Departments of Transportation, MPOs, 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 bolstered by the *Fixing America’s Surface Transportation* (FAST) Act, which was signed into law in 2015.

The federal performance measures fall into three main categories—safety, maintenance, and performance. Safety measures track highway and transit deaths and injuries and

include transit incidents like fires or crashes. Maintenance measures look at the age of transit fleets and the condition of roads and bridges. System performance measures look at highway congestion and reliability, freight movement, and environmental sustainability, including air quality.

**TABLE 2-2: FEDERAL PERFORMANCE MEASURE CATEGORIES**

<b>Safety</b>	Highway Safety
	Transit Safety (Public Transportation Agency Safety Plan)
<b>Maintenance</b>	Highway Pavement and Bridge Conditions
	Transit Asset Management (TAM)
<b>System Performance</b>	National Highway System (NHS) Congestion
	Freight
	Congestion Management and Air Quality (CMAQ) Program

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 adopt targets and baseline performance measures, and to report progress toward achieving the targets in Regional Performance adopted two years after the effective date of the final rule. The five performance measures’ final rules currently effective were established at different times, and therefore have different target-setting and implementation deadlines, as seen in **Table 2-3** below.

**TABLE 2-3: SUMMARY OF IMPLEMENTATION TIMELINES**

FINAL RULE	FINAL RULE EFFECTIVE DATE	TARGET SETTING DEADLINE			REQUIRED TO BE INCLUDED IN MTP BY	REPORTING PERIOD	REPORTING SCHEDULE
		STATE DOT	TRANSIT PROVIDER	MPO			
<i>PM1: Safety</i>	4/14/2016	8/31/2017	-	2/16/2018	5/27/2018	Annually	Annually
<i>PM2: Infrastructure</i>	5/20/2017	5/20/2018	-	11/16/2018	5/20/2019	2- and 4-year performance periods	Biannually (2018,2020, 2022,etc.)
<i>PM3: System Performance</i>							
Transit Asset Management (TAM)	10/1/2016	10/1/2017	-	12/27/2017	10/1/2018	Complete updated TAM Plan by Oct 2022	
Public Transportation Agency Safety Plan (PTASP)	7/19/2018	-	7/20/2020 (extended to 12/31/2020)	1/20/2021	7/20/2021	Updated and certified by transit agency annually.	

At the adoption date of RMS 2050 MTP, all five performance measure rules are effective, and the adoption of official targets is required and must be reported.

## REQUIRED PERFORMANCE MEASURES AND TARGETS

A summary of the required National Performance Measures aligned with the seven National Goals

is presented below in **Table 2-4**. The EPMPPO has adopted targets set by the states (TxDOT and NMDOT) for all National Performance Measures. This section summarizes the adopted targets for each of the measures and provides an analysis to determine if the targets were met or not. Certain performance measures may be updated on an annual basis. See Appendix D for updated information.

**TABLE 2-4: NATIONAL GOALS AND METRICS**

NATIONAL GOAL	NATIONAL PERFORMANCE MEASURE(S)	
Safety	- Fatalities (# and rate)	
	- Serious Injuries (# and rate)	
	- Number of non-motorized fatalities and serious injuries	
Infrastructure Condition	- % of Interstate pavements in Good & Poor Condition	<i>National Highway System =NHS</i>
	- % of non-Interstate NHS pavements in Good & Poor condition	
	- % of HNS bridges classified as in Good & Poor condition	
Congestion Reduction	- Annual hours of PHED per capita	<i>Peak Hour Excessive Delay =PHED</i>
	- % Non-SOV Travel	
System Reliability	- % of PMT on the Interstate that are reliable	<i>Passenger Miles Traveled=PMT</i>
	- % of PMT on non- Interstate that are reliable	
Freight Movement & Economic Vitality	- TTTR Index on the Interstate System	
Environmental Sustainability	- % Change in CO2 Emissions on NHS Compared to Calendar year 2017	
Reduced project delivery delays	- No national measures in current legislation	

## SAFETY (PM1)

State Targets adopted by the EPMPO Transportation Policy Board for previous fiscal years and for the most recent year up to the date of completion of RMS 2050 MTP are presented in the tables below for Texas and New Mexico respectively (**Table 2-5** and **Table 2-6**).

**TABLE 2-5: SAFETY - TEXAS STATE TARGETS BY CALENDAR YEAR**

PM1: SAFETY	2018	2019	2020	2021	2022
Number of fatalities	3,704	3,791	3,840	3,687	3,563
Rate of fatalities	1.43	1.414	1.406	1.33	1.27
Number of serious injuries	17,565	17,751	17,394	17,151	16,677
Rate of serious injuries	6.74	6.55	6.286	6.06	5.76
Number of non-motorized fatalities and serious injuries	2,151	2,237.6	2,285	2,346.4	2,367

**TABLE 2-6: SAFETY - NEW MEXICO STATE TARGETS BY CALENDAR YEAR**

PM1: SAFETY	2018	2019	2020	2021	2022
Number of fatalities	364.1	375	401.9	411.6	421.9
Rate of fatalities	1.33	1.318	1.429	1.486	1.645
Number of serious injuries	1,219.4	1,100	1,074.2	1,030.5	1,030.5
Rate of serious injuries	4.456	3.825	3.82	3.722	3.842
Number of non-motorized fatalities and serious injuries	228	220.6	204	200	190.6

Although the EPMPO has adopted the state's safety targets, eventually regional targets based on data specific to the EPMPO area will be developed. For this purpose, the EPMPO has initiated an analysis in cooperation with UTEP to calculate regional targets and performance, based on adopted targets following TxDOT and NMDOT methodology. The analysis presented below is based on available data for El Paso County and portions of Doña Ana County within the study area. The analysis aims to determine whether targets were met for the EPMPO study area and to provide information for the development of the regional targets.

Given that year 2020 was an unusual year due to the impact of the COVID-19 pandemic on traffic volumes and congestion, crash data for year 2019 is being reported for RMS 2050 MTP. According to the 2019 performance in El Paso County, only

two out of five performance targets were either met or were better than baseline as presented in **Table 2-7** for El Paso County and five out of the five performance targets were met for Doña Ana and Otero Counties as shown in **Table 2-8**.

The Final Rule allows states that do not meet a target to be considered as having made significant progress toward meeting the target if the outcome for that performance measure is better than the state's performance for the year prior to the year in which the target was established (i.e., baseline safety performance). A state DOT is determined to have met, or made significant progress toward meeting, its targets when at least four of the five required performance targets are either met or the safety outcome for the performance measure has improved.

**TABLE 2-7: EL PASO COUNTY, PM1: SAFETY CALENDAR YEAR 2019**

PM1: SAFETY	BASELINE PERFORMANCE 2013-2017	2019 ACTUAL PERFORMANCE	5-YEAR ROLLING AVERAGE 2015-2019	2019 TARGET	TARGET STATUS	BETTER THAN BASELINE	MET OR MADE SIGNIFICANT PROGRESS
Number of Fatalities	67	80	75	70	NOT MET	NO	NO
Fatality Rate	1.299	1.388	1.383	1.283	NOT MET	NO	
Number of Serious Injuries	282.6	262	288.8	362.5	MET ✓	N/A*	
Serious Injury Rate	5.47	4.545	5.359	6.64	MET ✓	N/A*	
Number of Non-motorized Fatalities and Serious Injuries	58.6	74	63.8	62.5	NOT MET	NO	

\* N/A indicates that better than baseline analysis not applicable since the target was met

According to the 2019 performance in Doña Ana and Otero County, all five out of five performance targets were met.

**TABLE 2-8: DOÑA ANA AND OTERO COUNTY, PM1: SAFETY CALENDAR YEAR 2019**

PM1: SAFETY	BASELINE PERFORMANCE 2012-2016	2019 ACTUAL PERFORMANCE	5-YEAR ROLLING AVERAGE 2015-2019	2019 TARGET	TARGET STATUS	BETTER THAN BASELINE	MET OR MADE SIGNIFICANT PROGRESS
Number of Fatalities	5.6	7	5.2	6	MET ✓	N/A*	YES ✓
Fatality Rate	2.778	2.991	2.364	2.722	MET ✓	N/A*	
Number of Serious Injuries	19.2	6	12.2	15.8	MET ✓	N/A*	
Serious Injury Rate	9.592	2.6	5.59	7.194	MET ✓	N/A*	
Number of Non-motorized Fatalities and Serious Injuries	1.6	0	0.8	1.9	MET ✓	N/A*	

\* N/A indicates that better than baseline analysis not applicable since the target was met

**INFRASTRUCTURE CONDITION (PM2)**

Texas state targets for Infrastructure Condition adopted by the EPMPPO Transportation Policy Board are presented in the **Table 2-9**. 2-year and 4-year targets for FY 2022 were adopted on November 16, 2018 and 4-year targets were revised on March 26, 2021.

**TABLE 2-9: INFRASTRUCTURE CONDITION - TEXAS STATE TARGETS**

PM2: INFRASTRUCTURE CONDITION <i>ADOPTED BY TPB ON:</i>	BASELINE	2-YEAR CONDITION/ PERFORMANCE	2-YEAR TARGET	2022 TARGET	
				4-YR	4-YR ADJUSTED
				11/16/2018	3/26/2021
Percentage of pavements on the Interstate System in GOOD condition	-	66.60%	-	66.40%	65.50%
Percentage of pavements on the Interstate System in POOR condition	-	0.10%	-	0.30%	0.20%
Percentage of pavements on the non-Interstate NHS in GOOD condition	54.50%	55.20%	52%	52.30%	54.10%
Percentage of pavements on the non-Interstate NHS in POOR condition	14.00%	13.50%	14.30%	14.30%	14.20%
Percent of NHS bridges classified as in GOOD condition	50.70%	50.70%	50.60%	50.40%	-
Percent of NHS bridges classified as in POOR condition	0.90%	1.30%	0.80%	0.80%	1.50%

The New Mexico state 4-year targets for FY 2021 were adopted by the Transportation Policy Board on November 16, 2018 (**Table 2-10**).

**TABLE 2-10: INFRASTRUCTURE CONDITION - NEW MEXICO STATE TARGETS**

PM2: INFRASTRUCTURE CONDITION <i>ADOPTED BY TPB ON NOV, 16 2018</i>	4 YEAR (2021)
Percentage of pavements on the Interstate System in GOOD condition	59.10%
Percentage of pavements on the Interstate System in POOR condition	5.00%
Percentage of pavements on the non-Interstate NHS in GOOD condition	34.20%
Percentage of pavements on the non-Interstate NHS in POOR condition	12.00%
Percent of NHS bridges classified as in GOOD condition	30.00%
Percent of NHS bridges classified as in POOR condition	2.50%



Similarly, the EPMPPO has developed an analysis based on available regional data to determine whether the infrastructure condition targets were met for the EPMPPO study area. This analysis will be used in the development of future targets specific to the region.

The latest Highway Performance Monitoring System (HPMS) pavement condition data available at the time of development of RMS 2050 MTP was for year 2018 in El Paso, Doña Ana, and Otero

Counties. The latest National Bridge Investment Analysis System (NBIAS) bridge condition data was available for year 2019 in El Paso, Doña Ana, and Otero Counties.

Since Texas targets adopted by the state were only for years 2020 and 2022, the 2018 pavement data and 2019 bridge data are compared against these targets for El Paso County. As presented below in **Table 2-11**, only two of the six performance measures for El Paso County met the target.



**TABLE 2-11: EL PASO COUNTY, PM2: INFRASTRUCTURE CONDITION**

PM2: INFRASTRUCTURE CONDITION	TX		TX ADOPTED TARGETS	EL PASO COUNTY ACTUAL PERFORMANCE
	BASELINE			
	2018	2020	2022	2018 HPMS, 2019 NBIAS
Percentage of <u>pavements</u> on the Interstate System in GOOD condition	-	-	66.40%	47.71%
Percentage of <u>pavements</u> on the Interstate System in POOR condition	-	-	0.30%	4.75%
Percentage of <u>pavements</u> on the non-Interstate NHS in GOOD condition	54.40%	52.00%	52.30%	29.28%
Percentage of <u>pavements</u> on the non-Interstate NHS in POOR condition	13.80%	14.30%	14.30%	25.55%
Percent of NHS <u>bridges</u> classified as in GOOD condition	50.63%	50.58%	50.42%	54.37% ✓
Percent of NHS <u>bridges</u> classified as in POOR condition	0.88%	0.80%	0.80%	0.00% ✓

✓ indicates target was met

Since NM targets adopted by the state were only for years 2019 and 2021, the 2018 pavement data and 2019 bridges data are compared against these targets for Doña Ana and Otero Counties. **Table 2-12** below demonstrates that all of the measures for Doña Ana and Otero Counties were met.

**TABLE 2-12: DOÑA ANA AND OTERO COUNTY, PM2: INFRASTRUCTURE CONDITION**

PM2: INFRASTRUCTURE CONDITION	NM ADOPTED TARGETS		ACTUAL PERFORMANCE
	2019	2021	2018 HPMS
Percentage of <u>pavements</u> on the Interstate System in GOOD condition	57.30%	59.10%	100% ✓
Percentage of <u>pavements</u> on the Interstate System in POOR condition	4.50%	5%	0.00% ✓
Percentage of <u>pavements</u> on the non-Interstate NHS in GOOD condition	35.60%	34.2%	72.16% ✓
Percentage of <u>pavements</u> on the non-Interstate NHS in POOR condition	9%	12%	7.58% ✓
Percent of NHS <u>bridges</u> classified as in GOOD condition	36%	30%	39.85% ✓
Percent of NHS <u>bridges</u> classified as in POOR condition	3.30%	2.50%	0.00% ✓

✓ indicates target was met

*SYSTEM PERFORMANCE, FREIGHT, AND CMAQ (PM3)*

Texas state targets for System Performance adopted by the EPMPPO Transportation Policy Board are presented in **Table 2-13**. 2-year and 4-year targets for FY 2022 were adopted on November 16, 2018 and 4-year targets were revised on March 26, 2021.

**TABLE 2-13: SYSTEM PERFORMANCE - TEXAS STATE TARGETS**

PM3: SYSTEM PERFORMANCE  <i>ADOPTED BY TPB ON:</i>	BASELINE	2-YEAR CONDITION / PERFORMANCE	2-YEAR TARGET	2022 TARGET	
				4-YR	4-YR ADJUSTED
				11/16/2018	3/26/2021
Percent of the Person-Miles Traveled on the Interstate That Are Reliable	79.50%	81.20%	61.20%	56.60%	70%
Percent of the Person-Miles Traveled on Non-Interstate That Are Reliable	-	83%	-	55.4%	70%
Truck Travel Time Reliability (TTTR) Index	1.40	1.44	1.7	1.79	1.78

The New Mexico state 4-year targets for FY 2021 were adopted by the Transportation Policy Board on November 16, 2018 (**Table 2-14**).

**TABLE 2-14: SYSTEM PERFORMANCE - NEW MEXICO STATE TARGETS**

PM3: SYSTEM PERFORMANCE  <i>ADOPTED BY TPB ON:</i>	4 YEAR (2021)  <i>NOV 16, 2018</i>
Percent of the Person-Miles Traveled on the Interstate that are Reliable	95.10%
Percent of the Person-Miles Traveled on Non-Interstate that are Reliable	90.40%
Truck Travel Time Reliability (TTTR) Index	1.15

TABLE 2-12: DOÑA ANA AND OTERO COUNTIES, PM2: INFRASTRUCTURE CONDITION

Observing the current performance of the roadway system is an important component of assessing the system's needs and planning for its future. For the regional analysis and to determine if the system performance targets were met or not for the EPMPO study area, UTEP has done a comparison of the adopted targets to actual performance based on available data.

These measures are primarily calculated using the National Performance Management Research

Dataset (NPMRDS). The latest NPMRDS travel time reliability data was available for years 2017, 2018 and 2019 in El Paso County, Doña Ana and Otero Counties.

Since Texas targets were adopted only for years 2020 and 2022, the 2017/2018/2019 travel time reliability is compared against these targets for El Paso County.

**TABLE 2-15: EL PASO COUNTY, PM3: SYSTEM PERFORMANCE**

PM3: SYSTEM PERFORMANCE	TX BASELINE	TX ADOPTED TARGETS		ACTUAL PERFORMANCE		
		2020	2022	2017	2018	2019
Percent of the Person-Miles Traveled on the Interstate That Are Reliable	79.60%	61.20%	56.60%	88.4% ✓	88.3% ✓	91.20% ✓
Percent of the Person-Miles Traveled on Non-Interstate That Are Reliable	-	-	55.40%	79.2% ✓	76.7% ✓	83.1% ✓
Truck Travel Time Reliability (TTTR) Index	1.5	1.7	1.79	1.54 ✓	1.49 ✓	1.47 ✓

✓ indicates target was met

Since New Mexico targets were adopted only for years 2019 and 2021, the 2017/2018/2019 travel time reliability is compared against these targets for roadway links that belong to the El Paso MPO area in Doña Ana and Otero Counties.

**TABLE 2-16: DOÑA ANA AND OTERO COUNTY, PM3: SYSTEM PERFORMANCE**

PM3: SYSTEM PERFORMANCE	NM BASELINE	NM ADOPTED TARGETS		ACTUAL PERFORMANCE		
		2019	2021	2017	2018	2019
Percent of the Person-Miles Traveled on the Interstate that are Reliable	97.00%	96.10%	95.10%	100% ✓	100% ✓	100% ✓
Percent of the Person-Miles Traveled on Non-Interstate that are Reliable	90.50%	90.40%	90.40%	100% ✓	100% ✓	80.70%
Truck Travel Time Reliability (TTTR) Index	1.13	1.14	1.15	1.13 ✓	1.14 ✓	1.17

✓ indicates target was met

## CMAQ/AIR QUALITY

Nonattainment MPOs are required to establish targets and report progress for the performance measures related to the Congestion Mitigation and Air Quality (CMAQ) program as established in 23 CFR Part 490 (§ 490.707 and § 490.807) for on-road mobile source emissions. As of the effective date for pollutant target setting, the EPMPO was the only Carbon Monoxide (CO) and Particulate matter-10 (PM-10) nonattainment area in Texas and the only PM-10 nonattainment area in New Mexico.

Methodologies and Emission Targets for these measures have been mutually agreed upon by EPMPO, TxDOT-Transportation Planning and Programming Division and NMDOT-Planning Division. The effectiveness of the Congestion Mitigation and Air Quality Improvement Program is gauged by the following measures:

- Annual Hours of Peak Hour Excessive Delay Per Capita
- Percent of Non-SOV travel
- Total Emissions Reduction: Particulate Matter less than or equal to 10 microns (PM-10)
- Total Emissions Reduction: Carbon Monoxide (CO)

Note that EPMPO is not required to set targets for the annual Hours of Peak Hour Excessive Delay Per Capita and the Percent of Non-SOV travel until the Second Performance Period in 2022-2025.

Mid-point-4-year target and methodology has been updated (23 CFR Part 490 Subparts A, E, F, G & H) due to more reliable data available in 2018 and 2019 for CO and PM-10. The established baseline for the updated 4-year targets, which relies on historical data from 2014-2017, will remain the same. After the first two years (2018-2019) of the first performance period were available, EPMPO

updated the 4-year targets and recommended these targets to TxDOT to use for the state's on road mobile source emissions for CO and PM-10.

The Midpoint Performance Period On-road Mobile Source Emissions targets were presented to the Transportation Policy Board for approval in September 2020. The updated 4-year targets and the original 2-year and 4-year targets for Texas are presented in **Table 2-17**.



**TABLE 2-17: PM3: CMAQ - TEXAS STATE TARGETS**

TEXAS	BASELINE (KG/DAY)	ORIGINAL 2-YEAR TARGETS (KG/DAY)	MID-POINT CONDITION REPORT 2-YEAR TARGETS (KG/DAY)	ORIGINAL 4-YEAR TARGETS (KG/DAY)	UPDATED MIDPOINT 4-YEAR TARGETS (KG/DAY)
Total Emissions Reduction: PM-10	0.97	4.73	11.37	13.71	21.96
Total Emissions Reduction: CO	580.24	434.93	490.75	891.11	841.62

The EPMPPO worked with NMDOT to develop on-road mobile source emission targets for PM-10. A cost benefit analysis methodology was used in 2018 to develop the original 2-year and 4-year emission targets for the first performance period. The same methodology was used for the update to the 4-year emissions target at the midpoint reporting period.

The established baseline was developed with the original targets that were set in 2018 and will remain the same until the development of targets

for the next performance period. Because EPMPPO updated the midpoint 4-year on-road mobile source emission target for PM-10 in Texas (based on actual, rather than projected, 2018-2019 data), and because the New Mexico methodology is tied to the Texas methodology by way of the cost benefit analysis, the New Mexico 4-year on road mobile source emission target for PM-10 has also been updated. The updated 4-year target and the original 2-year and 4-year targets for New Mexico are presented in **Table 2-18**.

**TABLE 2-18: PM3: CMAQ - NEW MEXICO STATE TARGETS**

NEW MEXICO	BASELINE (KG/DAY)	ORIGINAL 2-YEAR TARGET (KG/DAY)	MID-POINT CONDITION REPORT 2-YEAR TARGET (KG/DAY)	ORIGINAL 4-YEAR TARGET (KG/DAY)	UPDATED MIDPOINT 4-YEAR TARGET (KG/DAY)
Total Emissions Reduction: PM-10	0.17	0.65	1.14	1.79	3.48

It should be noted that the EPMPPO is currently working with NMDOT to develop a new target methodology based on available data and independent from Texas methodology. This will allow a better representation of New Mexico’s project goals in terms of the CMAQ portion of Air Quality Benefits.

**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 MOUs 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, as well as targets for Texas and New Mexico and recommended that the El Paso MPO Transportation Policy Board (TPB) adopt the state of Texas' 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.

**TABLE 2-19: EL PASO TRANSIT ASSET MANAGEMENT 4 YEAR TARGETS**

TRANSIT ASSET MANAGEMENT	2022 TARGET
% 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 State of Good Repair 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.

*PUBLIC TRANSPORTATION AGENCY SAFETY PLAN (PTASP)*

On September 18, 2020 the El Paso MPO adopted the mass transit provider Sun Metro's PTASP. Sun Metro developed their PTASP in compliance with the requirements on 49 CFR 673.11(a) (1-6). The performance measures adopted in this PTASP for fix route, streetcar and paratransit per every 100,000 miles are for:

- Fatalities
- Injuries
- Safety Events
  - Accidents
  - Incidents
  - Occurrences
- System Reliability





**TABLE 2-20: PERFORMANCE MEASURES ADOPTED IN THE PTASP**

PERFORMANCE MEASURES-FIXED 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)		82,864 miles	90,000 miles	95,000 miles	100,000 miles

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)		2,879 hrs.	2,900 hrs.	2,950 hrs.	3,000 hrs.

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)		87,019 miles	88,000 miles	90,000 miles	91,000 miles

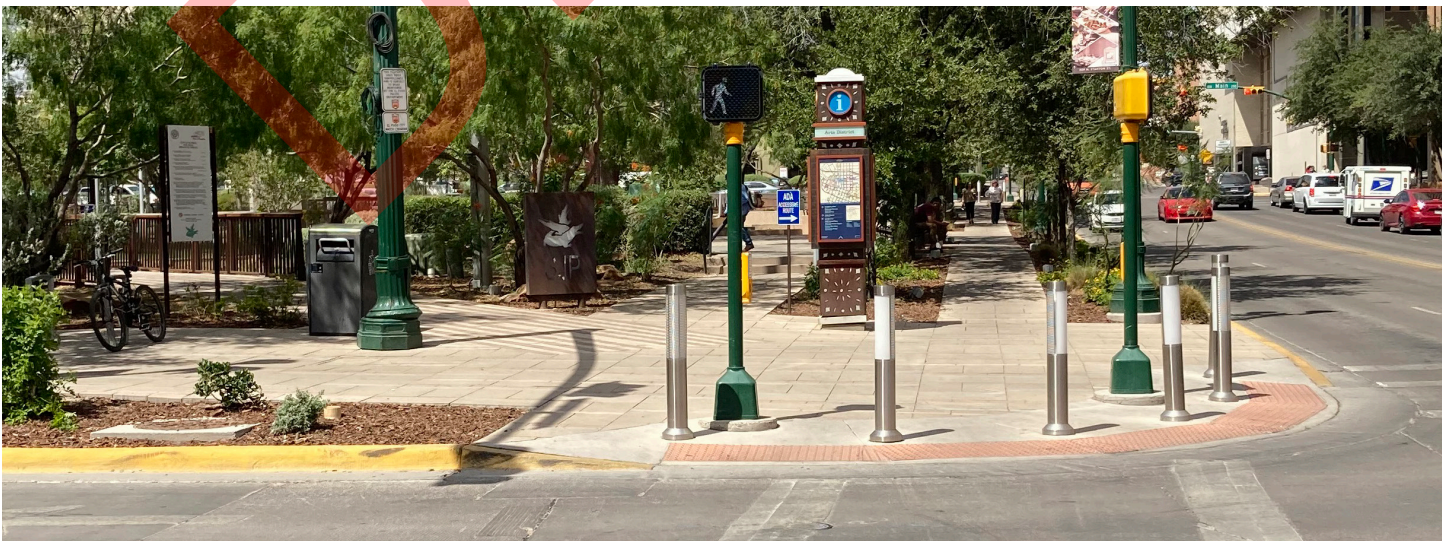
## ADDRESSING PERFORMANCE IN RMS 2050

RMS 2050 MTP includes performance measures beyond those that are required by the final rules. These supplemental performance measures are quantifiable indicators of whether the policies and proposed program of projects in the RMS 2050 MTP help the region achieve the desired outcomes articulated in the adopted goals and objectives. This approach provides decision makers with the ability to objectively set policies and prioritize projects based on a project's anticipated outcomes and whether those outcomes truly address the region's transportation challenges by achieving the local, state and national goals and objectives.

The use of an outcome-based process using objective measures in the planning process also allows the MPO to track transportation system performance as the RMS 2050 MTP is implemented by tracking project performance after projects are constructed. This tracking of project performance will help the MPO determine whether the project's actual, real-world performance matches the results expected during the planning process.

This approach also allows the EPMPPO to meet its federal mandate for a process of continuous improvement of both the transportation system and the planning process itself.

The planning-level performance measures recommended for RMS 2050 MTP (Table 2-21) combine performance measures developed in collaboration with local stakeholders based on the adopted goals and objectives with performance measures required by the USDOT through federal regulations. In general, these performance measures fall into two broad categories. The first category includes those measures (such as mobility and accessibility) that can be modeled (using the MPO travel demand model of the regional transportation system) and quantified at the project level to evaluate the specific performance outcomes of individual projects or packages of projects. The second category includes measures (such as environmental sustainability) whose outcomes are more appropriately measured at the regional transportation system level (and which cannot be discretely modeled by the El Paso travel demand model).



**TABLE 2-21: GOALS AND METRICS**

GOALS	PLAN PERFORMANCE MEASURES	NATIONAL PERFORMANCE MEASURES
Safety	- Number of projects that include safety enhancements located near crash hotspots	- Crashes per 100 Million Vehicle Mile Traveled
		- Total crashes resulting in fatality or incapacitating injury
		- Total crashes involving cyclists and pedestrians
Maintenance & Operations	- Number of projects that repair or replace deficient bridges or pavements	- Number of deficient bridges
		- Lane miles of deficient pavement
Mobility	- Travel Time Index (Actual Travel Time Divided by Non-Congested Travel Time)	- Percent Miles Traveled on Network that are reliable
	- Annual hours of delay (millions)	- Peak Hours Excessive Delay Per Capita
	- Commute times from Environmental Justice zones (min)	- Truck Travel Time Reliability Index (TTTRI)
Accessibility & Travel Choice	- Percent of jobs, key destinations, and population within ½ mile of high-quality, rapid transit	- Percent non-SOV (single occupancy vehicle) trips
	- Average trip costs	
Sustainability	- Total Vehicle Miles Traveled (VMT)	- Estimated Max Daily CO Emissions (Tons/Day)
	- VMT per capita (regional)	- Estimated Max Daily PM10 Emissions (Tons/Day)
Economic Vitality	- Annual hours of delay along major freight corridors	-
	- Average wait times by mode at POEs	-
	- Number of projects that improve operations or multimodal access at current or future POEs	-
Quality of Life	- The indicator for this goal is a summary of performance on each goal for each alternative relative to the other alternatives	-
Implementation	- Number of projects ready for implementation based on the Project Readiness Report	-

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