FAST Act Requirements
Integration of Performance Measures into the
Alamo Area Metropolitan Planning Organization
FY 2023 – 2026 Transportation Improvement Program

Introduction

The Moving Ahead for Progress (MAP-21) federal transportation bill instituted performance measurement to provide greater accountability and transparency to achieve the most efficient and effective investment of transportation resources. Performance measurement requirements were refined in the Fixing America's Surface Transportation (FAST) Act. State DOTs and Metropolitan Planning Organizations (MPOs) are required to move towards a performance-based planning process with an emphasis on project selection based on specific planning factors. Among its project scoring criteria, the Alamo Area Metropolitan Planning Organization (AAMPO) considers the following factors for selection of projects in its financially constrained project list:

- Safety: Three-year average of vehicle-related fatal and severe injury crashes within the project limits
- Congestion: Current and future Volume/Capacity ratios; reliability of roadways
- Bicycle and Pedestrian Safety: Three-year average of bicycle- and pedestrian-related fatal and severe injury crashes within the project limits
- Current and expected future transit ridership and reliability
- System connectivity for transit and bicycle and pedestrian projects
- Transportation equity: How projects address access by minority and low-income populations as well as other populations traditionally underserved by transportation options including older adults and people with disabilities

Safety

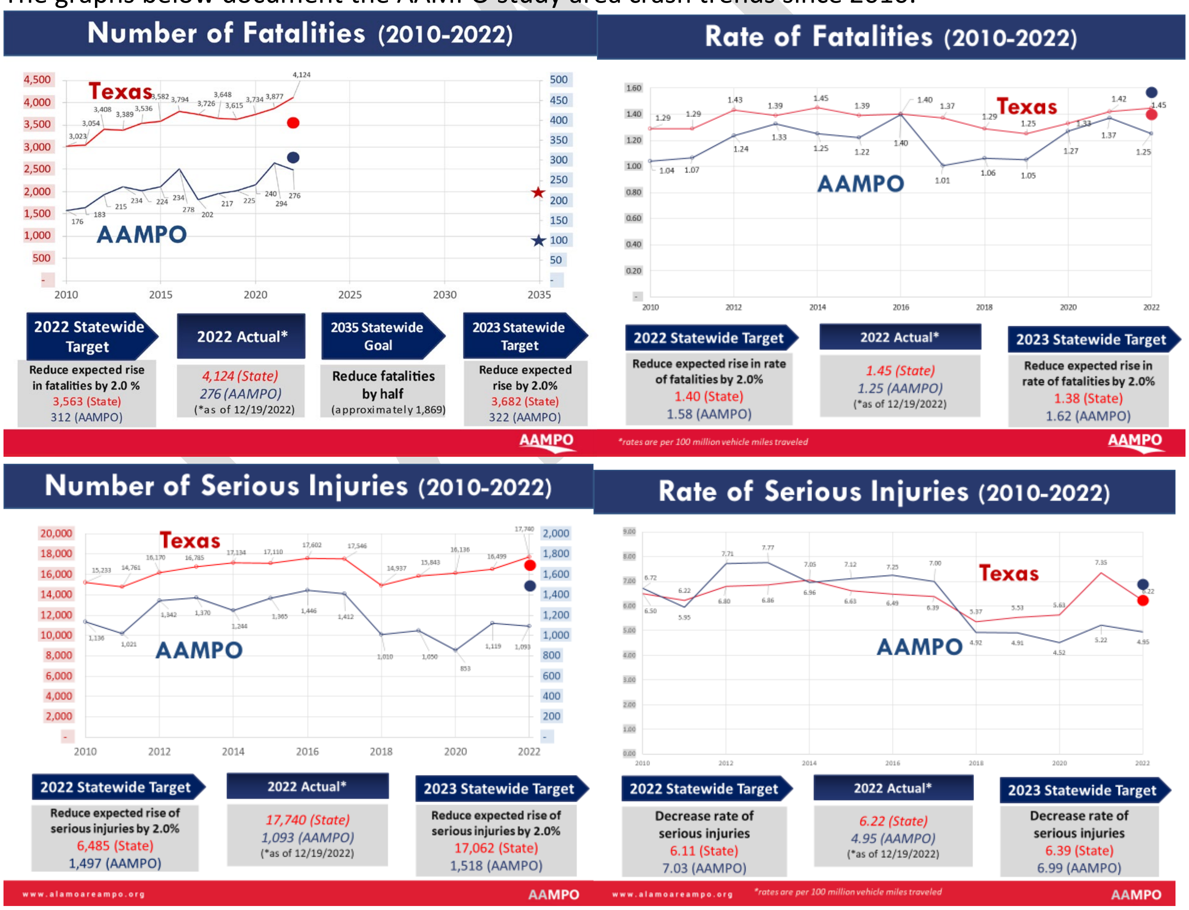
Under the FAST Act, States are required to set annual safety performance targets. The annual measures States set targets for include:

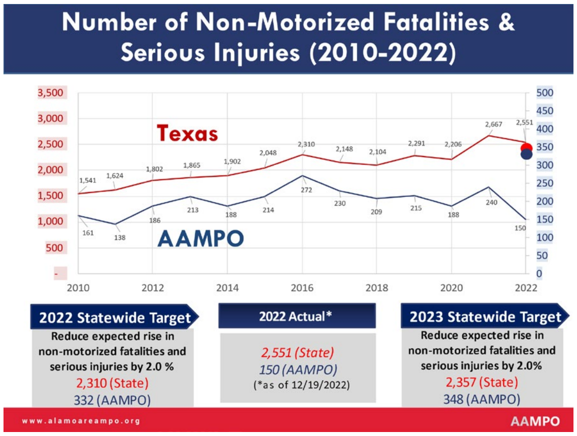
- Number of fatalities (The total number of persons suffering fatal injuries in a motor vehicle crash during a calendar year).
- Rate of fatalities per 100 million vehicle miles traveled (VMT) (The ratio of total number of fatalities to the number of vehicle miles traveled (VMT expressed in 100 Million VMT) in a calendar year).
- Number of serious injuries (The total number of persons suffering at least one serious injury in a motor vehicle crash during a calendar year).
- Rate of serious injuries per 100 million VMT (The ratio of total number of serious injuries to the number of VMT (VMT expressed in 100 Million VMT) in a calendar year).
- Number of non-motorized fatalities and number of non-motorized serious injuries combined (The combined total number of non-motorized fatalities and non-motorized serious injuries involving a motor vehicle during a calendar year).

The Texas Department of Transportation established statewide targets to support the Strategic Highway Safety Plan (SHSP) and the Highway Safety Improvement Program (HSIP). Once the State of Texas set statewide safety targets, MPOs within Texas were required to establish targets by either agreeing to plan and program projects so that they contribute toward the accomplishment of statewide targets or commit to quantifiable targets for the metropolitan planning area. To date, the AAMPO Transportation Policy Board has adopted TxDOT's statewide safety targets, which are expressed in the table below as five-year rolling averages.

Safety Targets (expressed as a five-year rolling average)	Adopted January 2019	Adopted January 2020	Adopted January 2021	Adopted January 2022	Adopted January 2023
Total Traffic Fatalities Year per Calendar Year	3,791	4,068	3,687	3,272	3,682
Rate of Traffic Fatalities per 100M VMT	1.413	1.48	1.33	1.23	1.38
Number of Serious Injuries	17,751	18,602	17,151	19,065	17,062
Rate of Serious Injuries per 100M VMT	6.550	6.56	6.06	6.47	6.39
Number of Non-Motorized Fatalities and Serious Injuries	2,237.6	2,477	2,316.4	2,642	2,357

The graphs below document the AAMPO study area crash trends since 2010.





For each safety target, overall, crashes and rates are trending downward. This may be due to the extensive education programs such as Vision Zero and Street Skills classes that have been implemented in the last few years. Additionally, an emphasis on safe sidewalks, bike lanes, lighting, pavement markings, improved traffic signals and other funded infrastructure improvements should result in a downward trend of crashes and rates.

Bridge / Pavement Condition Targets

Under the FAST Act, States are required to set targets for Bridge and Pavement Condition for both Interstate and Non-Interstate National Highway System roadways. In June 2023, the AAMPO Transportation Policy Board resolved to support the 4-year statewide targets:

1. Pavement in Good Condition:
   a. National Highway System (Interstate): 63.6%
   b. National Highway System (Non-Interstate): 46.0%

2. Pavement in Poor Condition
   a. National Highway System (Interstate): 0.2%
   b. National Highway System (Non-Interstate): 1.5%

3. National Highway System Bridge Condition
   a. Good: 47.6%
   b. Poor: 1.5%

The AAMPO commits to planning for and programming projects that contribute to the accomplishments of these targets. The AAMPO will also monitor the established targets and report achievements to the Transportation Policy Board as required.

Roadway System Performance Targets

Under the FAST Act, States are required to set targets for Roadway System Performance, specifically Interstate Reliability, Non-Interstate National Highway System Reliability and Truck Travel Time Reliability. In June 2023, the AAMPO Transportation Policy Board adopted targets for the Metropolitan Area Boundary (study area) that contribute to the State being able to meet its adopted 4-year targets and resolved continued support of its regional targets to support achievement of the statewide targets.

Performance Measure	2026 Statewide Target	2026 MPO Estimate
Interstate reliability	70.0%	64.0%
Non-interstate National Highway System reliability	70.0%	59.0%
Truck travel time reliability	1.55	2.30

AAMPO commits to planning for and programming projects that contribute to the accomplishments of these targets. The AAMPO will also monitor the established targets and report achievements to the Transportation Policy Board as required.

AAMPO has also developed the required PM3 "CMAQ" performance measures for the region prior to the beginning of the performance period beginning October 1, 2022: 1) Annual Hours of Peak Hour Excess Delay per Capita, 2) Percent Non-SOV Travel; and 3) Total Emissions Reduction. These targets were adopted by the Transportation Policy Board in August 2022 and transmitted to TxDOT for inclusion in their statewide performance reporting. Each measure had a Baseline and 2- and 4-year targets established. AAMPO will incorporate all CMAQ-specific performance measures, targets, and data in future CMAQ project calls as part of the competitive scoring process.

Established CMAQ-Focused Baseline and Two- and Four-Year Targets

Performance Measure	Baseline	2-Year Target	4-Year Target
Annual PHED per Capita	11	15	16
Percent of Non-SOV Travel	23.1%	20.0%	20.0%
Emissions – NO_x (kg/day)	121.583	127.75	219.13
Emissions – VOC (kg/day)	25.435	53.97	92.576

Transit Asset Management

As part of the FAST Act, performance measures were incorporated for transit agencies, primarily through the Transit Asset Management (TAM) assessment and planning requirements. A Tier II provider in the Alamo Area, Alamo Regional Transit, opted to work toward achievement of the statewide TAM plan and targets. VIA Metropolitan Transit (VIA) is the only Tier I transit provider serving the Alamo Area and developed its own TAM plan to meet that requirement.

In April 2022, the AAMPO adopted the updated TAM targets below.

1. Equipment - percentage of non-revenue vehicles that have either met or exceeded their useful life benchmark (ULB):

Asset Class	Useful Life Benchmark	2022 Performance Targets
Automobiles	Standard: 7 years or 125K Miles Police: 5 years or 80K Miles	44%
Trucks and Other Rubber Tire Vehicles	Standard: 7 years or 125K Miles Police: 5 years or 80K Miles Heavy Duty: 10 years or 150K Miles	36%

2. Rolling Stock - percentage of revenue vehicles that have either met or exceeded their useful life benchmark (ULB):

Asset Class	Useful Life Benchmark	2022 Performance Targets
Articulated Bus	15 years or 625K Miles	0%
Bus	15 years or 625K Miles	4%
Vans	7 years or 210K Miles	0%

3. Facilities – percentage of facilities rated below condition 3 (adequate) on the Federal Transit Administration (FTA) Transit Economic Requirements Model (TERM) scale:

Asset Class	2022 Performance Targets
Administrative	0%
Maintenance	0%
Passenger/Parking	0%

FY 2023 – FY 2026 Transportation Improvement Program Analysis

Upon adoption of the FAST Act, a direct correlation between TAM and Transit Safety plans, safety targets, bridge/pavement condition targets, and roadway system performance targets needed to be established through project selection as reflected in the Transportation Improvement Programs (TIPs). The AAMPO's FY 2023-2026 TIP was reviewed and this analysis developed showing how projects included in the TIP help achieve TAM plan requirements, safety, roadway reliability, and pavement and bridge condition.

Transit Projects

VIA Metropolitan Transit developed investment priorities for vehicles and facilities. Transit projects listed in the FY 2023-2026 Transportation Improvement Program include:

Revenue Vehicles

1. Purchasing of CNG buses ($44,075,016)
2. Purchasing of paratransit vehicles ($10,249,960)

Non-Revenue Vehicles

1. From 2021 through 2024 VIA plans to continue its replacement program of non-revenue cars

and trucks ($1,865,271)

Facilities

1. VIA has planned for improvements to many of its passenger facilities including: Robert Thompson Transit Center, IH 10 Park & Pool lot, Alamo Ranch Park & Ride, and others. Total investment for the four-year time period in passenger facilities is $41,147,137.
2. VIA has also planned for upgrades to its Administration Building and Madla Training Center, renovation of its Main Service Station, and a new satellite Bus Operations & Maintenance Facility for a total investment of $69,991,941.

Transit Safety

Recipients of FTA 5307 (Urban Area Formula Grant) funding such as state DOTs and transit providers are required under 49 CFR Part 673 to establish and maintain Safety Performance Targets (SPTs) to address the Safety Performance Measures (SPMs) found in the National Public Transportation Safety Plan (NSP). The data to support these measures is reported regularly to the FTA's National Transit Dataset. Once targets are established by transit agencies, they are transmitted to the state DOT and MPO for integration into statewide and regional plans, including the TIP and MTP. Since VIA Metropolitan Transit is the sole 5307 provider currently operating in the Alamo Area, their targets will serve as the regional targets. Targets must also be established separately for Bus, Paratransit, and Rail modes, but in the Alamo Area only Bus and Paratransit measures are relevant since Rail transit is absent.

Seven SPTs across 4 SPM categories have been established by VIA in accordance with the NSP. Measures in the form of rates are per Vehicle Revenue Mile, which is a measure of mileage by fare-collecting vehicles only (e.g. excluding "dead-heading" transit vehicles or non-revenue vehicles such as supervisors' vehicles.) The measures are described as follows:

1. *Fatalities:* **Total fatalities** reported to NTD and **Rate** of fatalities per VRM.

2. *Injuries:* **Total number** of "major" injuries reported to NTD, and **Rate** of the same per VRM.

3. *Safety Events:* **Total number of Safety events** (meeting a "major event" threshold) reported to NTD, and **Rate** of the same per VRM.

4. *System Reliability:* **Mean distance** between major mechanical failures by mode. Equivalent to the number of VRM per major mechanical failure. Major mechanical failures generally prevent a revenue vehicle from completing or starting a scheduled route or trip.

Targets established by VIA were based on data for 2017-2021, and reflect a maximum 5% increase to the data over that period and are as follows:

Mode	**Fatalities**	**Fatality Rate**	**Injuries**	**Injury Rate**	**Safety Events**	**Safety Event Rate**	**System Reliability**
Bus	5	0.04	380	3.39	560	5.00	7,669
Paratransit	0	0.00	3	1.72	48	2.75	7,502

**all rates are per Million Vehicle Revenue Miles (VRM), except System Reliability, which is VRM per major mechanical failure*

Roadway Projects

Safety

Most of the roadway projects included in the TIP have significant impact on improving safety and thus work towards achieving the adopted safety targets. Generally, these projects include: stand-alone safe bicycle and pedestrian projects and road diet projects; added capacity and operational projects that also include safe bicycle and pedestrian facilities; intersection improvements; safety lighting; improved traffic signals; grade separated overpasses; installation of flashing beacons; and Intelligent Transportation Systems projects. While it would be redundant to relist the relevant projects in the TIP in this document, some of the major efforts include:

- Implementing the Safety Service Patrol on controlled access highways in Bexar, Comal, Kendall and Guadalupe Counties to quickly clear disabled vehicles and primary crashes and prevent secondary crashes
- Constructing direct connectors to reduce conflict points and crashes at the following interchange locations: IH 410 East at IH 10 East, SH 151 at Loop 1604, IH 10 West at Loop 1604 North, IH 35 North at IH 410 North and at Loop 1604 North
- Constructing a bicycle and pedestrian bridge on SS 536 (Roosevelt Avenue) at the San Antonio River
- Constructing sidewalks, removing unused utility poles, and implementing pedestrian detection ITS along Zarzamora Street. The City of San Antonio identified four segments of Zarzamora as Severe Pedestrian Injury Areas.

Additionally, there are locally funded active transportation projects to reduce the number of vehicle travel lanes and provide wider sidewalks and marked bike lanes.

For many years the AAMPO has been proactively working to improve safety in the region. AAMPO staff have been long time users of TxDOT's Crash Records Information System (CRIS dataset) and have reported, through project scoring processes, online dashboards and presentations, the crash data trend for the region. Since 1997, AAMPO staff have also worked with partner agency staff on our Active Transportation Program to host Walkable Community Workshops with schools and neighborhood groups to identify bicycle and pedestrian needs in their communities. AAMPO staff also hold Streets Skills classes for teens and adults in both English and Spanish for new and returning cyclists. Bicycle helmets and bike light sets are provided as an incentive for participation in partnership with the City of

San Antonio. AAMPO staff also assists with school bike rodeos to be sure safe cycling starts early. The City of San Antonio was an early adopter of the Vision Zero initiative and the AAMPO continues to partner with San Antonio and other local governments on safety outreach efforts.

Roadway System Reliability

Because the AAMPO's project selection process considers reliability, specifically reliability in the form of reducing congestion, both current and projected congestion levels, many of the roadway projects included in the TIP can have significant impact on improving travel reliability and thus work towards achieving the adopted targets. Generally, these projects include: added capacity projects and certain operational projects including intersection improvements, grade separated overpasses and interchange direct connectors. While it would be redundant to relist all of the relevant projects in the TIP in this document, some of the major efforts, primarily focusing on the National Highway System, include:

- Constructing direct connectors at the following interchange locations: IH 410 East at IH 10 East, SH 151 at Loop 1604, IH 10 West at Loop 1604 North, IH 35 North at IH 410 North and at Loop 1604 North
- Expanding IH 35 North from IH 410 N to FM 3009 from 8 to 14 lanes, including HOV/special use lanes *
- Expanding IH 10 East from Bexar/Guadalupe County Line to FM 465 from 4 to 6 lanes *
- Expanding Loop 1604 from SH 16 to US 281 N from 4 to 10 lanes expressway to include HOV/special use lanes
- Expanding SH 151 from Loop 1604 to IH 410 from 4 to 6 lanes expressway
- Expanding SH 46 from Farhills Drive to Bentwood Drive from 2 to 6 lanes *

Those projects noted with an asterisk (*) are on roadways with heavy truck travel and improvements to these roadways can improve truck travel time reliability.

Bridge/Pavement Condition

Bridge and pavement condition targets are related to those roadways on the National Highway System. Typically, when roadway capacity is added, the existing travel lanes are reconstructed also. As noted in the previous section, many added capacity projects are included in the AAMPO's FY 2023-2026TIP. For each of these projects, then, the existing lanes are reconstructed when new lanes are added, thus improving the condition of the entire facility. Major projects where pavement condition will be significantly improved include:

- IH 35 North from IH 410 N to FM 3009
- IH 10 East from Bexar/Guadalupe County Line to FM 465
- Loop 1604 from SH 16 to US 281 N
- SH 151 from Loop 1604 to IH 410
- SH 46 from Farhills Drive to Bentwood Drive
- Additionally, 24 roadways are identified in the TIP for pavement rehabilitation

Conclusion

The AAMPO has proactively responded to the requirements of performance planning and target setting. The AAMPO Transportation Policy Board commits to supporting, planning and programming funding for projects and programs that contribute to the accomplishments of:

- transit asset management,
- transit safety,
- roadway safety targets,
- NHS Interstate reliability,
- NHS non-Interstate reliability,
- truck travel reliability,
- NHS Interstate pavement condition,
- NHS non-Interstate pavement condition
- NHS bridge condition
- Annual Hours of Peak Hour Excess Delay per Capita
- percent non-SOV travel, and
- total emissions reduction

The MPO, along with its partners will continue to monitor the established targets for all performance measures and report achievements.