



EXECUTIVE SUMMARY

PURPOSE OF NEEDS ASSESSMENT

The multimodal needs assessment for Destino 2045 has been performed to ensure that the investments recommended by the plan address the needs of the region. An early stage in the plan development used public and stakeholder input to define a statement of vision for the region supported by broad goal statements each with specific objectives. Quantifiable and measurable *system* performance measures were defined for each of the objectives and these performance measures were used to identify the areas of transportation need with the region. This process of defining a vision statement with corresponding goals, objectives and performance measures is essential to a data-driven and outcomes-based decision-making process for Destino 2045. The needs that drive the recommendations are determined by infrastructure or service gaps that are identified by comparing existing or future travel demand with the existing transportation system.

As part of the multimodal needs assessment for Destino 2045, the needs of the region were analyzed for existing conditions (typically 2015) and, where possible, for the conditions that are likely to exist in 2045 if no new public investment in transportation is made beyond projects that are already under construction or about to be released for construction bids. Consistent with the statement of vision, the goals, and the objectives of Destino 2045, needs were considered for transportation in four key modal categories:

- Roadway – Personal travel by driving alone or shared ride
- Transit – Personal travel by Brio Rapid Transit, fixed-route bus, or demand-response transit
- Active Transportation – Personal travel by bicycling or walking
- Freight – Commercial travel by truck, rail, air

For each of these modal categories, existing and future needs were evaluated with respect to seven goal areas:

1. Safety - Improve safety for all who travel in the region
2. Maintenance and Operations - Maintain the current transportation system in a state of good repair and maximize the system's functionality
3. Mobility - Improve the ability for travelers to reach destinations quickly and efficiently
4. Accessibility and Travel Choice - Provide a variety of reliable transportation options that are equitable and context-sensitive
5. Sustainability - Protect and enhance the natural environment
6. Economic Vitality - Expand economic opportunities and strengthen the regional freight network
7. Quality of Life - Implement plans, programs, and projects that contribute to the overall goals and objectives defined in Destino 2045 MTP to ensure an enhanced quality of life in the El Paso Region

The assessment of needs for each goal area was conducted by comparing the performance of the system for each mode in 2015 and 2045 against specific objectives defined for the seven goal areas.

METHODOLOGY AND DATA SOURCES

Evaluation of the existing transportation needs within each of the four modal areas based on the performance measures in the seven goal areas was performed using a variety of information on existing conditions. This included information on the location and characteristics of regional population and employment as well as other significant land uses that either generate or attract trips. Information on the existing patterns of travel (by mode) was assembled from a combination of observations of roadway volumes and



speed, transit boardings and alightings, and other specialized counts, but was also supplemented where necessary with output from the El Paso Travel Demand Model. Information on the characteristics of existing transportation facilities and services was derived from available inventories and databases for the modes analyzed. The evaluation of the future (2045) condition with only existing and programmed transportation improvements was conducted using the output of the El Paso Travel Demand Model for the 2045 forecast year, though not all performance measures in the seven goal areas could be estimated using model data. The analysis of needs for the existing condition and for 2045 was supplemented where necessary and/or appropriate with public or stakeholder input derived from outreach events or surveys of potential transportation system users.

RESULTS

The results of the evaluation of the transportation system performance measures for the multimodal needs assessment are presented in Table ES1. The performance measures and the additional analysis conducted for the needs assessment indicate that transportation facilities and service in the El Paso region are generally meeting the travel needs of the region's residents where a comparison with national averages or standards was possible. In the latest Texas Transportation Institute Urban Mobility Scoreboard, the El Paso region was ranked 54th nationally in terms of population but 61st in terms of total vehicle hours of delay and 81st in terms of average auto commuter delay. This comparison for "Annual Hours of Delay" suggests that congestion in the El Paso region is not any worse than might be expected for a region of its size. Although not always directly correlated, other performance measures such as vehicle crashes, fatalities, speed index, pollutant emissions, and delay on freight corridors are often highly related to congestion. While roadway congestion is currently not any worse than might be expected, there are locations where roadways have significant congestion during peak commute times. These are generally on the major highways and regional connectors rather than the arterials and collectors. The forecast of auto and truck travel for 2045 also suggests that the number of annual hours of delay will almost triple in the next thirty years if no capacity improvements are made beyond what is already programmed. The major highways and connectors will become more severely congested and the congestion will spread to many arterial roads. In addition, most visioning survey respondents (71%) believed that congestion needs were a top priority regionwide.

Safety is also a high-priority concern for the roadway system. While the rate of vehicle crashes per million vehicle miles remained fairly constant between 2011 and 2014, there was a dramatic increase in crashes in 2015, the last year for which crash information was available. The 2015 crash rate was 35 percent higher than the rate for 2014 and 37 percent higher than the average rate for the previous four years. Fortunately, only 0.42 percent of the crashes between 2011 and 2015 resulted in a fatality, but this produced 344 traffic-related deaths. The rate of fatalities for the El Paso region for the five-year period was almost 10 percent higher than the statewide average for Texas. While congestion is often a major factor in the number of vehicle collisions, the crashes resulting in incapacitating injury or death were spread over both congested and relatively uncongested roadways. Over the five-year period for which crashes were analyzed, there were 1,536 crashes involving either a pedestrian (1,142) or a bicyclist (394). These crashes represent about 2 percent of all crashes. The crashes involving pedestrians or bicyclist were even more focused on arterials and collectors and less focused on the major highways. The desire for safer roads in the El Paso region was reflected in safety being one of the top priorities for transportation system improvements identified by members of the public during the Destino 2045 visioning workshops.

The assessment of needs for transit focused primarily on where additional investment would be most effective in addressing the increase in potential transit demand from growth in population, employment, and transit-dependent residents. The assessment of existing and potential transit demand for fixed-route services was based on a combination of output from the El Paso Travel Demand Model and an assessment of expected growth and its proximity to existing and programmed fixed-route transit services. A comparison of the potential demand with the location and quality of services provided resulted in the identification of service gaps where potential demand was high but service quality was low or service was not available.



The needs assessment for fixed-route transit identified the need for more frequent service in the areas of highest existing demand and the need for new services to provide transit accessibility to the areas of high population and/or employment growth. Besides gaps in service, there are also areas where service levels and demand levels may not be matched appropriately. The assessment suggested that the region could benefit from a comprehensive service evaluation and realignment to better match higher levels of service with areas that have a higher demand or propensity for transit. The potential need for demand-responsive services relied primarily on the recently completed Far West Texas / El Paso Regional Human Services – Public Transportation Coordination Plan, which relied heavily on input from stakeholder and user surveys. That plan indicated that greatest need was for better coordination of service. Some improvements in fixed-route services and a uniform payment system could potentially reduce the need for more costly demand-responsive service by attracting more riders to fixed-route services. Other potential improvements suggested for demand-responsive service was for more same-day service and better coordination of rural transit service with demand-responsive service to reduce redundancy.

For active transportation modes, the assessment of needs was based on a comparison of potential desire for walking and bicycling with the existing and planned facilities for these modes. The desire for walking and bicycling was based on proximity of populations to schools, parks and other points of interest such as restaurants, bars, pharmacies and grocery stores. The areas of high potential desire were then evaluated with respect to the quantity and quality of facilities to accommodate walking and bicycling. Gaps in the system were defined by areas of high potential desire but with limited or no access to facilities of good quality. The assessment of needs for active transportation modes revealed that there is a high degree of variation with respect to accessibility by walking or biking across the region. Some areas have excellent walking or cycling conditions, and other areas have very poor walking or cycling conditions. While it is not necessary for all areas to have excellent walking or cycling conditions, the results of the active transportation gaps analysis identified specific locations where investment and development of both bicycle and pedestrian facilities could improve regional connectivity.

The assessment of needs for freight movement was focused on the amount of delay along the locally defined freight highway network within the El Paso region. This network is a combination of freight networks established by FHWA and TxDOT plus other roadways in the region that experience large amounts of current or forecasted freight traffic. In the needs assessment, the performance of the roadways in the freight network was evaluated with respect to major generators of freight movement. These included industries involved in natural resources extraction, utilities, construction, manufacturing, wholesale trade, and transportation/warehousing. It also included terminals for other modes of transportation for freight including rail and air.

Specific issues revealed in the freight needs assessment include congestion and delays on the freight network. The vehicle delay on the network is currently estimated to be about 7 million vehicle hours of delay per year, but that is expected to increase by 250 percent by 2045. The roadways of most concern are IH 10, Loop 375, Global Reach Dr., Montana Ave., and Sergeant Major Blvd. Forecasts reveal that congestion is also expected to become a major issue along freight corridors near the El Paso International Airport and the southwestern portion of Fort Bliss, which are major freight terminals that also include intermodal transfer facilities. The long commercial wait times at the border crossings and growing congestion on portions of the roadway network connecting the ports of entry with the major regional highways are also areas of significant concern because of existing congestion. The assessment suggests that it will be crucial that projects selected as a part of Destino 2045 address these identified freight issues if the economic growth in the region is to continue.

Finally, the needs assessment also reports qualitative performance of the region's ports of entry for multimodal travel, intercity passenger transportation, and infrastructure condition/maintenance. These needs are mostly analyzed qualitatively based on existing conditions due to the lack of available forecast data and the narrowly focused role these elements play in the region's transportation system.



TABLE ES1: SUMMARY OF SYSTEM PERFORMANCE 2015 AND 2045

Goals	Existing System Performance Measures	Current	2045	Change	% Change
Safety	Crashes per 100 million Vehicle Miles Traveled	489	-	-	-
	Total crashes resulting in fatality or incapacitating injury	59	-	-	-
	Total crashes involving cyclists and pedestrians	322	-	-	-
Maintenance & Operations	Number of deficient bridges	6	-	-	-
	Lane miles of deficient pavement	86	-	-	-
Mobility	Speed Index (actual travel speed versus non-congested travel speed)	0.8839	0.80238	(0.08)	-9%
	Annual hours of delay	11,281,388	31,247,000	19,965,612	177%
	Commute times from Environmental Justice zones	20.99	22.67	1.68	8%
Accessibility & Travel Choice	Percent of Population within 1/2 Mile of High Quality Transit	4.0%	15.0%		11%
	Percent of Employment within 1/2 Mile of High Quality Transit	14.0%	31.0%		17%
	Percent Non-Single Occupant Vehicle Travel (Commute Trips)	11.2%	11.3%		0.10%
	Average trip costs	\$2.26	\$2.21	(0.05)	-2%
Sustainability	Estimated Max Daily CO Emissions (Tons/Day)	7.8	2.1	(5.70)	-73%
	Estimated Max Daily PM10 Emissions (Tons/Day)	7.1	9.6	2.50	35%
	Daily Vehicle Miles Traveled (VMT)	14,691,694	22,838,563	8,146,899	55%
	Daily VMT per capita (regional)	16.64	16.63	(0.01)	-0.1%
Economic Vitality	Annual hours of delay along major freight corridors	6,733,443	23,499,313	16,765,870	249%
	Average commercial vehicle wait time at POEs (Minutes)	45	-	-	-