

Final Need and Purpose

Environmental Impact Statement

Loop 375 Border Highway West Extension Project From Racetrack Drive to US 54

CSJ: 2552-04-027

El Paso County, Texas

Texas Department of Transportation

June 2012

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Need and Purpose

Loop 375 Border Highway West Extension Project From Racetrack Drive to US 54 El Paso County, Texas

1.0 Introduction

This Need and Purpose Statement was prepared using guidance from 43 Texas Administrative Code (TAC) Chapter 2. A State Environmental Impact Statement (EIS) is being prepared to determine the potential environmental, social, economic and cultural impacts of the Loop 375 Border Highway West Extension Project in El Paso, Texas, as defined by the El Paso Metropolitan Planning Organization (MPO) in the currently approved *Mission 2035 Metropolitan Transportation Plan (MTP)*. The proposed project is being developed at the state level, and would not use federal funds or connect to the Interstate Highway 10 (I-10) facility. TxDOT is the lead state agency for the proposed project. TxDOT would coordinate with the appropriate cooperating and participating agencies. A list of these agencies can be found in the Project Coordination Plan.

A full and complete Alternatives Analysis is being prepared to evaluate alternatives based on the Need and Purpose. The definition of the Need and Purpose has formed the basis for the “no action” discussion in the Alternatives Analysis and has been used in the project development process to identify reasonable alternatives and the selection of the Recommended Preferred Alternative. The Alternatives Analysis has utilized current best practices, procedures, quantifiable performance measures, analysis of the Need and Purpose and full documentation of each decision making step from a universe of alternatives to the final Recommended Preferred Alternative.

Tolling is considered in the Alternatives Analysis as a funding option as directed by state legislation. Existing traffic lanes would remain non-tolled lanes.

Planning began for an outer loop in El Paso in the early 1960s. In 1961, a Minute Order (MO) was passed to develop an outer secondary loop (Texas Highway Commission, MO 49822). Existing Loop 375 was proposed as an expressway in the first El Paso Long Range Transportation Plan published in 1963. Loop 375 has been developed in five segments. **Table 1** below lists each of the segments of Loop 375. Refer to the **Loop 375 System Map** in **Appendix A**. These projects were originally created as part of a regional comprehensive mobility plan for the El Paso region.

Table 1: Existing Loop 375 Segments

Segment	Limits	Year of Completion
Americas Avenue	I-10 to Zaragoza Road	1966
Woodrow Bean Transmountain Road	US 54 to I-10	1969
Joe Battle Boulevard	I-10 to US 62/180	1975
Border Highway (now known as César Chávez Highway)	From downtown El Paso to Zaragoza Road	1976
Purple Heart Memorial Highway	US 62/180 to US 54	1994

Source: TxDOT 2010

The proposed Loop 375 Border Highway West Extension Project is the result of several previous studies which have identified a need to complete a loop or southern connection around the City of El Paso (**Table 2**). **Table 2** also illustrates the steps that the local MPO, the state and the legislature have taken to bring the project up to this point. Loop 375 currently ends at Santa Fe Street near downtown at an existing rail yard located to the west of Santa Fe Street. In order to make this connection, a new alignment would be required to extend to the west beyond Santa Fe Street to connect with United States Highway 85 (US 85).

Table 2: Summary of Project Development

Year	Study Name	Summary	Outcome of Study/Type of Facility
1961	Texas Highway Commission - Minute Order (MO) 49822	MO 49822 agreed to develop an outer secondary loop around El Paso.	The outer loop, Loop 375, was divided into segments and constructed between 1966 and 1994. The southern segment, Santa Fe Street to US 85/I-10, was not constructed due to constraints within the project limits.
1963	El Paso MPO - Long Range Traffic Plan		Loop 375 was proposed as an expressway.
1994	TxDOT - Value Engineering Report and Workbook - Loop 375 Border Highway Extension: Paisano Drive Interchange (West) to Sixth Street Vicinity	Evaluated alternatives to overcome constraints for the missing southern segment of Loop 375.	Recommended a 4-lane elevated structure over existing Loop 375 from Paisano Drive Interchange (West) to Sixth Street Vicinity.
1999	TxDOT - I-10 West Corridor Major Investment Study (Loop 375 Transmountain Road to US 54)	The study evaluated multi-modal congestion relief solutions for I-10.	Recommended improvements to Paisano Drive, Doniphan Drive, Mesa Street, Loop 375 and various other facilities within the study limits. In conjunction with other modal alternatives, the study identified improving the southern section of Loop 375 to four lanes as one of the most viable alternatives. This alternative was carried forward and evaluated in future studies.
2003	TxDOT - The National I-10 Freight Corridor Study	This study was a joint effort by eight state Departments of Transportation (DOTs) including California, Arizona, New Mexico, Texas, Louisiana, Mississippi, Alabama and Florida. The purpose was to analyze current and projected freight movements, assess how current and future freight volumes impact national and local transportation systems and develop strategies for improving freight flow along the I-10 corridor.	Results of the study indicated that I-10 traffic would continue to increase through the year 2025 and that El Paso is one of the areas where level of service is unacceptable.

Year	Study Name	Summary	Outcome of Study/Type of Facility
2003	Texas Transportation Commission/Texas House of Representatives - House Bill (HB) 3588 and MO 109519	In response to the rapidly increasing transportation funding shortfalls across the state and the innovative financing tools available with the passing of Texas HB 3588, the Texas Transportation Commission (TTC) passed Minute Order 109519, which required TxDOT to evaluate all controlled-access mobility projects in any stage of development or construction as potential toll roads. The objective was to maximize the use of innovative financing tools to leverage available funds for constructing other needed mobility projects.	Required all new location and added capacity projects to be evaluated as a potential toll facility. Loop 375 is proposed as a new location, added capacity project; therefore, it is required to be evaluated as a toll facility.
2004-2005	TxDOT - Preliminary Route Study and Route Refinement Concept Report - Loop 375 César Chávez Highway (Border Highway West) Extension Route Study	This study was to develop conceptual layout alternatives to complete Loop 375 and provide controlled access connection to I-10. The project limits went beyond those of the 1994 Value Engineering Study extending from just east of the US 85/Doniphan Drive/New Mexico State Route 273 interchange to just west of San Marcial Street on Loop 375.	This study developed conceptual layouts for both elevated and depressed alternatives along Loop 375 from east of the US 85/Doniphan Drive/New Mexico State Route 273 interchange to just west of San Marcial Street on Loop 375.
2004	TxDOT - Loop 375 César Chávez Highway (Border Highway West) Extension Interstate Highway 10 and Schuster Avenue Intersection Improvements Feasibility Study (non-tolled study initiated prior to HB 3588)	This study evaluated improvements to the I-10/Schuster Avenue interchange area to provide immediate traffic congestion relief for, and address the growing need for safety and congestion relief for the population of University of Texas at El Paso (UTEP) students, faculty and staff; business and medical facility users; and area residents. This study took into consideration the Loop 375 Border Highway West Extension route study recommendations.	The study identified interim improvements that would allow a future connection to the Loop 375 Border Highway West Extension Project.
2005-2006	TxDOT - I-10 Southern Relief Route (SRR) Toll Feasibility Study (included three segments) I-10 Southern Corridor: Loop 375 Cesar Chavez Border Highway and Americas I-10 Southern Corridor: Loop 375 Border Highway West I-10 Southern Corridor: Border Highway East	This conceptual level, toll feasibility study was conducted to determine the feasibility of adding barrier separated express toll lanes to portions of I-10, including the Loop 375 César Chávez Border Highway West Extension project. These initial studies identified conceptual funding.	Through the traffic studies and modeling, it was determined that the Loop 375 Border Highway West segment was the highest priority and most effective route for reducing user delays and vehicle miles traveled (VMT).

Year	Study Name	Summary	Outcome of Study/Type of Facility
2006	TxDOT - I-10 SRR Mobility and Funding Study (MFS) (From New Mexico State Line to I-10 / Loop 375 Interchange (Americas))	The MFS considered alternatives from the New Mexico State Line on the west side to the I-10/Loop 375 Americas Interchange on the east side of El Paso. This 40-mile proposed project, if a build alternative is selected, would be divided into three separate construction phases for funding and implementation.	The MFS concluded that segments of the 1-10 SRR were toll viable, including the Loop 375 Border Highway West segment. However, the El Paso MPO Transportation Policy Board (TPB) was not ready to incorporate these projects into the long range plan as toll projects.
2007-2008	TxDOT - Loop 375 Border Highway West Extension Project	Subsequent to the previous studies, the TxDOT El Paso District elected to proceed with the Loop 375 Border Highway West Extension Project.	This project was placed on hold due to negotiations between TxDOT and the newly formed Camino Real Regional Mobility Authority (CRRMA) with regards to which entity would develop the project.
2008	TxDOT - Border Highway West (I-10 @ US 85 Interchange to Loop 375 @ US 54 Interchange) – Traffic Projections for Toll and Non-Toll Alternatives, Final Technical Memorandum	This study evaluated toll and non-toll traffic projections for the proposed Loop 375 Border Highway West Extension Project.	The study showed that under non-tolled scenarios, traffic diversion from I-10 to the Loop 375 Border Highway West Extension Project would vary with the highway segment and reflect alternative routes and destinations. Loop 375/US 85 volumes would increase anywhere from 9 percent (%) to almost 100% over the no-build scenario by the 2035 design year. Under tolled scenarios, less traffic would use the tolled lanes, because the toll encourages some traffic to continue to use I-10 or to divert to the non-tolled lanes of Loop 375/US 85. Depending upon the tolling scenario, 20 to 40% of Loop 375 Border Highway West Extension toll traffic would shift to non-tolled I-10. Traffic diversion to the non-tolled lanes of Loop 375/US 85 would vary from 10% to almost 40%. The Loop 375 Border Highway West Extension Project was included as part of the 2008 Comprehensive Mobility Plan (CMP, July 2008).
2010	TxDOT - Current Study – Loop 375 Border Highway West Extension Project (Racetrack Dr. to US 54)	Current study reinitiated under agreement that TxDOT would develop the Environmental Impact Statement and CRRMA would continue project development upon receipt of a State Record of Decision (ROD).	The proposed project, as proposed in the MPO plan, would construct a new four-lane controlled access facility that may follow portions of existing Loop 375 or US 85, or other reasonable alternative routes that would best meet the need and purpose.

The Loop 375 Border Highway West Extension Project was included as an important element of the *TransBorder 2035 MTP*, a transportation program developed by the El Paso MPO covering the years 2007 through 2035. The project is also included in the current *Mission 2035 MTP* which was adopted by the MPO in August of 2010 and was approved for conformity on January 28, 2011. This document covers the years 2010 through 2035. Because of the overlap in publication of these documents, information was gathered and used from both to prepare this Need and Purpose document. The El Paso MPO has been charged with coordinating transportation planning for the region. In 2008, the Loop 375 Border Highway West Extension Project was approved as a toll project under the local Comprehensive Mobility Plan (CMP). The Camino Real Regional Mobility Authority (CRRMA) was created in March 2007. The project is under the direction of the TxDOT and would be coordinated with the CRRMA, the City of El

Paso and other participating agencies. The 2011-2014 El Paso District Statewide Transportation Improvement Plan (STIP) was approved in August of 2010.

1.1 Need and Purpose for the Proposed Project

As explained in the AASHTO *Practitioner's Handbook: Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects* (AASHTO 2007), federal regulations require every agency to “briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” The Need and Purpose is the fundamental building block of any EIS and is a key factor in determining the range of alternatives considered and the selection of the Recommended Preferred Alternative. The rationale for utilizing the Need and Purpose is that any alternative that does not meet the Need and Purpose of the project would eventually be rejected because it would not satisfy the needs that the project is intended to address.

The Need and Purpose for this project began development in 1961 and has been carried through the years of the state and local MPO planning processes. It also incorporates federal, state and local legislation and guidance.

The development of the Need and Purpose would include participating agencies and public input. This is anticipated to occur in a continuing public scoping process. Public Scoping Meetings were held in 2007 and 2011. A third Public Scoping Meeting will be held on June 20, 2012.

This Need and Purpose was developed to achieve the transportation objective identified in the *Metropolitan Transportation Plan* (MTP) as part of the metropolitan planning process. The metropolitan planning process identified the preliminary need for the project and enabled stakeholders and the public to comment on the vision for the El Paso's region's future transportation system. The following define the need and purpose for the proposed project.

1.1.1 Need for the Proposed Project

The needs for the proposed project, **system capacity, system linkage and safety are discussed in more detail in** the following sections along with supporting information.

1.1.2.1 System Capacity

System capacity is the primary need for this project. The following sections support the need for adding system capacity within the study area. The supporting information includes existing and proposed traffic data and level of service (LOS) data for area roadways. Incident delay information on I-10 is also provided. The data was obtained from the Mission 2035 Model.

Traffic Data

Table 3 summarizes the Enhanced Mission 2035 Model data for roadways within the study area. Current traffic counts on the portions of Loop 375 within the study area currently range from 18,200 to 36,000 vehicles per day (vpd). Other network roadways that would feed the proposed Loop 375 Border Highway West Extension facility are I-10 and US 85.

Table 3: Traffic Forecasts

Location	2009 Traffic Count	2010 ADT (Model)	2035 ADT (Model)	Annual Growth Rate	2035 Forecast**	2035 Capacity	V/C Ratio
Loop 375							
Loop 375 East of US 54/ I-110	36,000	21,900	29,960	1.26%	46,700	139,400	0.34
Loop 375 West of US 54/I-110	18,200	10,803	20,803	2.66%	31,600	39,600	0.80
Loop 375 East of Proposed Interchange at Cole St.*	18,200	20,258	42,848	3.04%	39,600	62,400	0.63
Loop 375 East of Cotton St.*	18,200	20,258	14,243	-1.40%	12,500	109,600	0.11
Loop 375 West of Cotton St.	18,200	19,127	13,698	-1.33%	12,900	94,400	0.14
Paisano Drive							
US 85 (Paisano) North of Executive Center Blvd.	24,000	34,165	42,668	0.89%	31,200	36,800	0.85
US 85 (Paisano Dr.) South of Executive Center Blvd.	21,000	21,900	27,964	0.98%	26,900	36,800	0.73
US 62 (Paisano Dr.) East of I-110	14,200	20,756	28,815	1.32%	21,000	90,000	0.23
US 62 (Paisano Dr.) West of I-110	14,200	33,884	44,173	1.07%	21,500	90,000	0.24
I-10							
I-10 East of US 54/I-110	209,000	187,111	238,126	0.97%	263,000	265,000	0.99
I-10 West of US 54/I-110	184,000	182,258	232,638	0.98%	234,600	300,400	0.78
I-10 South of State Highway (SH 20) (Mesa St.)	92,000	88,423	116,653	1.11%	120,800	248,000	0.49
I-10 North of Schuster Ave.	131,000	108,010	152,412	1.39%	180,100	200,800	0.90
I-10 South of Executive Center Blvd.	131,000	108,000	152,400	1.39%	180,100	200,800	0.90
I-10 North of Executive Center Blvd.	122,000	101,010	140,450	1.33%	165,500	200,800	0.82
US 54/I-110							
US 54 North of I-10	95,000	75,952	111,864	1.56%	135,400	333,200	0.41
I-110 South of Paisano Dr.	32,000	32,508	43,207	1.14%	42,600	128,000	0.33

* Proposed Loop 375 interchange at Cole creates a new access point on Loop 375 and would alter future traffic forecast at these locations.

** Forecast calculated using annual growth rates from the Mission 2035 Model, HNTB 2010
Source: Mission 2035 Model using 2009 TxDOT Traffic Map (http://ftp.dot.state.tx.us/pub/txdot-info/tpp/traffic_counts/2008/elp_base.pdf), HNTB 2010

These results show that Loop 375 and other roadways within the study area are currently congested and with the addition of the projected traffic growth in the area, will not be able to adequately handle future traffic demands. Therefore, indicating a need for increased system capacity.

Level of Service

LOS operational analysis of freeway main lanes, entrance and exit ramps, and urban arterials were performed in previous studies for the existing traffic and existing conditions on I-10 and US 85 using traffic counts provided by TxDOT-El Paso District according to procedures specified in the 2000 publication, Highway Capacity Manual (HCM), published by the Transportation Research Board.

LOS is an indication of the more intangible attributes of corridor travel, such as freedom to maneuver in the travel stream, traffic interruptions, comfort and convenience. Much like a student's report card, LOS is represented by the letters "A" through "F", with "A" generally representing the most favorable driving conditions and "F" representing the least favorable or most congested. According to the HCM, operations at LOS F are volatile because there are virtually no usable gaps in the traffic stream. Any alteration of the traffic stream such as a vehicle changing lanes, can establish a disruption wave that ripples throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident such as a disabled vehicle or debris on the roadway can potentially produce a serious breakdown in vehicle flow.

The existing study area network is comprised of three parallel major facilities: I-10, Loop 375, and US 85 (Paisano Dr.). I-10 is the only continuous east-west route near the study area. US 85 (Paisano Dr.) parallels I-10 but passes through the downtown street network which is heavily traveled by pedestrians crossing the international border.

Other than I-10, there is currently not a continuous free-flow route to reach one side of the downtown area to the other. The only other state facility that runs parallel to I-10 is US 62/85 (E. Paisano Dr.); however, this facility has numerous signalized intersections and heavy pedestrian activity. Therefore, the quickest route to reach I-10 from Loop 375 south of downtown is to follow Loop 375 to Santa Fe Street, turn right onto Santa Fe Street and travel north (across three active railroad tracks and in an area with high pedestrian activity) to the intersection of US 85/Paisano Dr. From this intersection turn left to continue on US 85/Paisano Dr. for approximately 3.5 miles to Executive Center, which is the next opportunity to connect to I-10.

To evaluate the existing network within the study area, the Mission 2035 Model was utilized to measure LOS. Refer to **Table 4** and the **2010 and 2035 Level of Service Maps in Appendix A**.

Table 4: 2010 and 2035 Level of Service (LOS)

Facility	2010 LOS Range	2035 LOS Range
I-10	C-D	C-E
Loop 375	C	C
US 85 (Paisano Dr.)	C-E	F

Sources: Mission 2035 MTP, HNTB 2011

Current and projected LOS is not acceptable on these area roadways and it is expected to continue to worsen with the projected increase in area traffic.

Incidents on I-10

To capture the impacts of an incident on I-10, the existing 2010 traffic data from the Mission 2035 Model was used to evaluate traffic conditions on I-10 and adjacent roadways following an incident (complete closure) on I-10 within the study area. The Mission 2035 Model was developed utilizing the approved Mission 2035 Model and assessing peak periods. Refer to the

two **2010 Incidents on I-10** Maps located in **Appendix A. Table 5** below indicates the percent of increase in traffic diverted from I-10 to each roadway within the study area.

Table 5: Diverted Traffic from Incidents on I-10 (2010)

Incident Location	Roadway	% Diverted from I-10
East of US 54, Between Raynolds and Chelsea	Gateway Blvd. West	39
	E. Yandell Dr.	18
	Trowbridge Dr.	16
	Montana Ave.	13
	Alameda Ave.	11
	E. Paisano Dr.	11
	Delta Dr.	3
	Fred Wilson Ave.	2
	Forrest Ave.	2
	Timberwolf Dr.	2
	Cesar Chavez (Loop 375)	2
Between Sunland Park and Executive Center	Transmountain Road	13
	W. Paisano Dr.	36
	N. Mesa St.	48

Sources: Mission 2035 MTP, HNTB 2011

According to the analysis, the study area roadways would experience an increase in traffic from I-10 when an incident occurs and closes both directions of the freeway and demonstrates a need for an increase of system capacity.

Population and Employment Growth

Over the past decade, the Northwest region of the City of El Paso has transformed from a primarily agricultural area to an area that is increasingly commercialized, industrialized and residential. The anticipated growth of the El Paso metropolitan area would continue to impact the Northwest and Central region with increased economic opportunities as well as significant challenges to the existing transportation network.

According to the MPO population projections, the El Paso metropolitan area would reach a population of approximately 1.2 million people by the year 2035, a 58% increase from the 2010 population of 805,660. The study area is located within the Central and Northwest portions of the MPO (El Paso MPO 2010). A map of the MPO Study Area can be found in **Appendix A**.

Employment growth within the MPO study area is expected to increase from 302,592 in 2010 to 361,185 in 2035. This represents an employment growth rate of approximately 19.4%. **Table 6** illustrates the *Mission 2035 MTP* forecast data for population and employment growth for the MPO study area.

Table 6: Regional Forecasts for Population & Employment within the MPO Study Area

Demographics	2010	2035
Population	805,660	1,270,000
Employment	302,592	361,185

Source: El Paso MPO 2010

As discussed below, an influx of military personnel is also expected to result in an increase of civilian employment on Fort Bliss and an increase in employment in public schools and other local governments jobs (El Paso MPO 2010). Furthermore, the Fort Bliss expansion is also expected to bring 2,000 new engineering, technical and industrial jobs (El Paso MPO 2010).

The current and projected population and employment growth within the region demonstrates a need for an increase of system capacity.

Fort Bliss Expansion

As a result of the 2005 Base Realignment and Closure (BRAC) process, the Department of Defense recommended the expansion of Fort Bliss that would include permanent transfers of personnel from other bases. Fort Bliss is currently executing the BRAC decision that would triple the base size by 2012. By then it is anticipated that 90,000 additional soldiers and family members would call Fort Bliss home (El Paso MPO 2010). **Table 7** illustrates the population increase reported in the *Mission 2035 MTP*.

Table 7: Potential Fort Bliss Population Increase

Population Segment	2005	2012	Net Gain/Loss	Projected % of growth
Soldiers	9,330	37,284	27,954	300
Military Students	2,132	700	-1,432	n/a
Family Members	15,330	53,012	37,682	246
Full Time Employees	3,621	6,962	3,341	92
Total	30,413	97,958	67,545	222

Source: El Paso MPO 2010

The 2006 *Fort Bliss Grow the Force & Structure Realignment EIS* reports an average weekday entry of approximately 38,713 vehicles traveling through the various entry gates at Fort Bliss. Traffic generated by these trips is distributed along the regional and local road network. As the base continues to expand and more soldiers and their families are stationed there, it is likely that public roadways would see an increase in traffic and alter local circulation patterns.

Due to the fact that existing roadways within the study area are currently experiencing congestion, it is anticipated that the previously discussed increases in population and economic growth are expected to place an even greater demand on the existing roadway facilities within the El Paso region and the study area as people find employment, housing and education opportunities throughout the region.

International and Interregional Trade

Increasing international and interregional trade and associated freight movement is placing more demand on area highways and railroads. In January 1994, the enactment of the North American Free Trade Agreement (NAFTA) spurred already increasing trade levels between the United States and Mexico to higher levels (TxDOT 2005).

The characteristics of the region, including multiple border crossings/ports of entry, have created distinct patterns of freight activity in the area. Through flows was the largest single freight movement type in 2008, amounting to about 51.1 million tons of cargo. The vast majority of this consisted of domestic east-west flows on I-10. Outbound flows were the next largest share, at about 21.9 million tons. This reflects El Paso's position as a major North American manufacturing center. Industry growth, especially in goods-movement dependent industries, would lead to growth in the volume and value of freight in the El Paso region and consequently through its ports of entry.

Total freight flows to, from, within and through the El Paso area are expected to grow by more than 76% by 2035, reaching 172.1 million tons. This would amount to about 6.2% (by weight) of Texas' total freight bill.

Trucks would carry 78% of cross-border freight in the region by 2035, a total of nearly 19.8 million tons. The remaining 22% (5.7 million tons) would cross by rail. This compares to 74% and 26% for truck and rail respectively in 2008, meaning that truck crossings would grow faster than rail crossings in the future, despite the potential construction of a new rail crossing at Santa Teresa (TxDOT 2010).

The increasing volume of freight moved by commercial truck traffic throughout the region has contributed to congestion and deterioration of the area roadway network. Between 1994 and 2009, the number of trucks entering the U.S. through the roadway network increased by 15%. Trucks enter El Paso from Mexico primarily through four international bridges. The Bridge of the Americas, located within the study area, receives the heaviest use. **Table 8** shows that truck traffic entering the United States through El Paso's ports of entry has fluctuated but remains high.

Table 8: Number of Trucks Entering El Paso, Texas (2000 – 2009)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
720,406	660,583	705,199	659,614	719,545	740,654	744,951	782,936	758,856	644,272

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Border Crossing/Entry Data, based on data from U.S. Department of Homeland Security, Customs and Border Protection, Oral Management Report Database (OMR)

From 2008 to 2009, a decrease of almost 6% in commercial vehicle utilization from 51.5% to 46% of all commercial crossings has been seen in the El Paso MPO area. It is not anticipated that this decrease would be a permanent trend (El Paso MPO 2010).

Freight Rail

El Paso is home to a major railroad service center and junction with the Union Pacific Railroad (UPRR) and Tucumcari Line that connects El Paso with Kansas City and Chicago. El Paso is also served by the Burlington Northern Santa Fe Railway (BNSF) with a line that connects to the BNSF main line near Albuquerque, New Mexico. Both railroads connect to the Mexican carrier Ferromex (FXE) via bridges across the Rio Grande/international border south of downtown El Paso. Refer to the **Study Area Map** in **Appendix A**.

Freight concerns have been arising due to the consideration of construction of a new port at Punta Colonet in Baja California, Mexico and the rising demand in rail freight. Current conditions show 25 to 50 transits per day going in an east-west direction with 15-25 trains moving in a north-south direction. UPRR confirmed the east-west direction volumes as approximately 32 trains per day. Present conditions show no significant impact with regard to at-grade rail crossings in El Paso. However, UPRR is planning for 70 trains per day in the El Paso area by 2015 (El Paso MPO 2010).

The UPRR also interchanges approximately one train per day with FXE, while BNSF typically interchanges two trains per day. Rail cargo to and from Mexico was projected in 2003 to grow at approximately 8% per year (City of El Paso 2003). Anticipated increases in freight rail movement throughout the study area would have a direct correlation to increased truck traffic on the existing facilities.

University of Texas at El Paso (UTEP)

UTEP is located adjacent to I-10 and Schuster Avenue. In 2007, enrollment included 20,154 students; 1,157 faculty members; and 1,511 staff employees. According to UTEP, the number of local jobs attributed to UTEP's presence in 2007 was 6,123 (El Paso MPO 2007). Additionally, UTEP projects that the 2010 fall headcount enrollment would be at least 20,379 and is hoping to increase enrollment to 23,621 by the fall of 2015 (UTEP 2002).

From 2008 to 2011, UTEP has built new engineering, science and health facilities; a basketball practice facility; a new bookstore; a new nursing school; and parking garage. The expansion of the swimming and fitness center and 10 smaller projects are also being planned. The construction is also expected to support hundreds of jobs each year, with the number of additional jobs peaking at 770 in 2010. An overall \$64 million in incremental income is expected to be generated in the region over the four-year period, with an average compensation of \$37,700 per job per year, including wages and benefits. The income and compensation estimates are part of the overall \$164.8 million impact.

The increase in traffic, especially that associated with the growth of the UTEP campus, has created additional congestion in the area.

Texas Tech University - Paul L. Foster School of Medicine

The recent expansion of Texas Tech to a four-year medical school is expected to draw in numerous students and professors. As of 2008, there were approximately 732 staff members and 115 students enrolled (TTUHSC 2008). The school has approximately 1,000 faculty and staff members in 2010. By the year 2013, the Texas Tech medical school is expected to increase employment in the area by approximately 5,600 positions (El Paso MPO 2007). This growth is anticipated to impact roadway traffic within the study area.

1.1.2.2 System Linkage

This section discusses the problems and needs associated with system linkage within the study area. Due to the current gap in the existing roadway facility between US 85 and Loop 375 near downtown, drivers are required to utilize the local street network with high pedestrian traffic and circuitous routes to reach other parts of Loop 375 and US 85. In addition, Loop 375 provides connections to the UTEP campus, major ports-of-entry, downtown El Paso, US 54 and other major roadways. Two major traffic demand centers within the study area are UTEP and downtown El Paso. To access the UTEP campus from Loop 375, drivers are required to exit the controlled access Loop 375 facility and use the local street network to get to US 85 and eventually the campus.

El Paso's natural topography (the Rio Grande and the Franklin Mountains; refer to the **Study Area Map** in Appendix A) forces traffic to be concentrated on I-10, the only east west continuous roadway in the area. Incidents on I-10, have historically caused freeway closures that can last several hours. The alternate routes for incident management are US 85 (South of I-10) and Loop 375 Woodrow Bean Transmountain Road (northern section of Loop 375). Because of the current configuration of I-10 between SH 20 (Mesa Street) and US 85/NM 273, traffic is not able to access a parallel facility to bypass any incidents on I-10.

1.1.2.3 Safety

Safety has been identified as a need within the study area, this section discusses this need. In a June 2010 article from the El Paso Times ("East side I-10 Stretch is City's Most Dangerous"), it was reported that vehicle accidents on I-10, especially near the downtown area, can delay the flow of traffic. In order to confirm these reports and identify if enhanced safety was a need, a

crash analysis was conducted. Using crash data that were provided by TxDOT from their Crash Records Information System (CRIS) a crash analysis was conducted to determine the current travel and traffic safety conditions within the study area. Three-year crash data for the period 2007 to 2009 were analyzed for all primary roadway segments within the study area. Crashes were summarized by crash type including fatality, injury, or property damage only (PDO), as shown in **Table 9**. The total number of crashes for the study area primary travel routes over the three-year analysis period was 2,452.

Table 9: Summary of Roadway Crashes with the Study Area (2007 – 2009)

Road Segment	ADT	Location	Crash Type			
			Fatality	Injury	PDO	Total
Loop 375	12,100	At Santa Fe St.	0	2	16	18
Executive Center Blvd.	7,645	I-10 to US 85	0	2	33	35
Loop 375	37,500	Santa Fe St. to Fonseca Dr.	0	17	116	133
US 62	15,750	US 85 to US 54	0	42	513	555
US 85	19,650	SH 20 to US 62	3	24	229	256
W Schuster Ave.	9,260	SH 20 to I-10	0	7	63	70
I-10	96,666	Mesa St. to Resler Dr.	1	4	38	43
I-10	96,666	Resler Dr. to Sunland Park Dr.	0	10	141	151
I-10	133,000	Sunland Park Dr. to Paisano Dr.	0	3	48	51
I-10	120,000	Paisano Dr. to Executive Center Blvd.	0	20	125	145
I-10	131,000	Executive Center Blvd. to Porfirio Diaz St.	1	41	224	266
I-10	131,000	Porfirio Diaz St. to Mesa St.	0	7	161	168
I-10	131,000	Mesa St. to Cotton St.	0	18	187	205
I-10	180,000	Cotton St. to Piedras St.	0	14	168	182
I-10	182,000	Piedras St. to Copia St.	0	10	164	174
Totals			5	221	2,226	2,452

PDO – Property Damage Only

Source: TxDOT 2010

Crash rates were also calculated for the same roadway segments within the study area that are considered primary travel routes. **Table 10** summarizes statewide crash rates for various roadway types.

Table 10: Statewide Crash Rates for Urban Areas

Road Segment	Accident Rate (Accidents per 100 MVMT)			
	2007	2008	2009	Average
Interstate	111.32	101.32	99.08	103.90
US Highway	148.23	142.57	137.71	142.84
State Highway	185.98	184.56	178.40	182.98
4 or more lanes, undivided	285.20	298.14	280.33	287.89

Crash rate calculated based on 100 Million Vehicle Miles Traveled (MVMT)

Source: TxDOT 2010

Table 9 summarizes the crash rates that were calculated for the primary travel roadway segments within the study area for each year between 2007 and 2009. **Table 11** also compares the calculated crash rates to the statewide crash rate average for each facility type. The crash rates for Executive Center Boulevard, US 62 (E. Paisano Drive) and W. Schuster Avenue are more than double the statewide average for each facility type. A review of the results also indicates that US 62 (E. Paisano Drive) from US 85 to US 54 had the highest crash rate (1,009), which is more than seven times the statewide crash rate average for US highways. Crash rates were calculated for nine different segments of I-10, totaling a distance of 10.89 miles within and surrounding the study area, between State Highway 20 (SH 20/Mesa Street) and Copia Street. The nine segments were analyzed to identify any possible concentrated areas of crashes on I-10. One of the I-10 segments, Resler to Sunland Park, had a 2009 crash rate of more than double the statewide crash rate average for urban interstates. Four other eastern segments of I-10 had a 2009 crash rate higher than the statewide crash rate average for urban interstates. These high crash rates along I-10 and near the study area indicated the need for safety improvements due to congestion in the area.

**Table 11: Study Area Roadway Crash Rates
Compared to the Statewide Average (2007 – 2009)**

Road Segment	Location	Crash Rate (Crashes per 100 MVMT)			
		2007	2008	2009	State Avg.
Loop 375	At Santa Fe St.	0*	90	24	288
Executive Center Blvd.	I-10 to US 85	895**	413**	827**	288
Loop 375	Santa Fe St. to Fonseca Dr.	61	88	112	288
US 62	US 85 to US 54	831**	820**	1009**	143
US 85	SH 20 to US 62	92	125	155**	143
W Schuster Ave.	SH 20 to I-10	803**	877**	475**	288
I-10	Mesa St. to Resler Dr.	37	40	9	104
I-10	Resler Dr. to Sunland Park Dr.	139**	120**	246**	104
I-10	Sunland Park Dr. to Paisano Dr.	96	28	83	104
I-10	Paisano Dr. to Executive Center Blvd.	45	32	56	104
I-10	Executive Center Blvd. to Porfirio Diaz St.	56	71	74	104
I-10	Porfirio Diaz St. to Mesa St.	105**	143**	171**	104
I-10	Mesa St. to Cotton St.	77	99	148**	104
I-10	Cotton St. to Piedras St.	93	81	126**	104
I-10	Piedras St. to Copia St.	118**	119**	155**	104

*No crashes recorded by TxDOT in 2007

**Exceeds the statewide average

Crash rate calculated based on 100 Million Vehicle Miles Traveled (MVMT)

Source: TxDOT 2010

According to statewide averages; local roads, collector facilities and non-freeway principal arterials have much higher crash rates due to more frequent turns, stop-and-go conditions, roadway distractions and lack of access control. National research has shown that controlled-access facilities such as freeways or tollways have lower crash rates than those without full control of access. This is attributable to the higher design standards for freeways, fewer access points, fewer driver distractions and less stop-and-go conditions (Transportation Research Board 2000).

During the Alternatives Analysis, studies would analyze if diverting traffic from collector roadways to a partially controlled access facility, such as the proposed Loop 375 Border Highway West Extension Project, could be expected to result in a reduction in study area roadway crash rates.

1.1.2 Project Purpose

The purpose of the proposed Loop 375 Border Highway West Extension Project is to address the needs of **system capacity, system linkage and safety**. **Table 12** below provides a description of each purpose matched with its associated need.

Table 12: Summary of Need and Purpose

Need (Problems)	Purpose (Solutions)
System Capacity	Due to the projected growth in the study area, the proposed project would improve mobility by providing additional infrastructure to accommodate this growth and aiding in congestion relief for the region and incident management.
System Linkage	The proposed project would provide a “connecting link” for the continuation of Loop 375 by improving connectivity.
Safety	The proposed project would improve crash rates and provide an incident management route for I-10.

1.2 Current Study

The proposed Loop 375 Border Highway West Extension Project would address the following needs within the study area: **system capacity, system linkage and safety**. Currently, Loop 375 only partially encircles the city of El Paso, Texas. The Border Highway section (now known as César Chávez Highway) currently ends near downtown El Paso at Santa Fe Street. Numerous previous studies in the El Paso area (refer to **Table 2**) have identified various capacity concerns and potential solutions. These studies have resulted in a number of proposed projects in the El Paso area, including the proposed Loop 375 Border Highway West Extension Project, as currently defined by the MPO. It was also determined that the proposed project would involve additional improvements in the study area in order to maximize flow of traffic, provide needed connectivity, provide congestion relief and provide safety improvements within the region.

The proposed project limits would begin at Park Street near downtown El Paso and extend to Racetrack Drive near its intersection with Doniphan Road. The project would extend approximately 8 miles in length. The project would provide a continuation of Loop 375, starting south of downtown and heading northwest. Currently traffic crossing the downtown area must take a circuitous route on local streets. Traffic starting at Park Street must take a four lane boulevard to US 62, and take US 85 from US 62 to New Mexico Route 273.

Based on previous study recommendations and the direction from the El Paso MPO in the approved MTP, the proposed project is currently defined as a new four-lane controlled access facility that may follow portions of existing Loop 375 or US 85. This project description is subject to revision based on agency and public input as well as the completion of the Alternatives Analysis process. There could be other reasonable alternative routes that would best meet the Need and Purpose. Due to funding constraints and legislative guidance, in the Alternative Analysis tolling would be considered as a funding option for the facility. However, under current TxDOT practices, all existing non-tolled lanes would remain non-tolled; only proposed constructed lanes may be tolled. In addition, the current study would evaluate alternative modes (such as Traffic Safety Management (TSM), Travel Demand Management (TDM), High

Occupancy Vehicle (HOV) lanes, etc.) to determine if they meet need and purpose. This project would address the traffic movement across or adjacent to downtown and the border region of El Paso when traveling either east or west. Currently traffic is required to take a circuitous route on local streets with traffic control and pedestrian traffic to cross the downtown area. Refer to the **Project Location Map** in **Appendix A**.

The Proposed project is listed in **Table 13** below and is shown as currently listed in the *Mission 2035 MTP*. Further revisions to the MTP for the "Border Highway West Loop 375/Paisano (F014X-15A)" project may be required to address any changes in limits and scope that result from the EIS alternatives analysis.

Table 13: Projects Proposed Under the Loop 375 Border Highway West Extension EIS

Highway	CSJ/Metropolitan Transportation Plan Number	Limits	Work Description
Border Highway West Loop 375/Paisano	CSJ: 2552-04-027 Metropolitan Transportation Plan: F014X-15A	Park Street to US 85 Paisano and Yandell	Construct 4-lane expressway – toll facility

Source: *Mission 2035 MTP*

The environmental analysis for the proposed project would be conducted thoroughly and systematically considering resource and constraints mapping, environmental issues, traffic, engineering and public involvement. This process enables a comparison and evaluation of alternatives through an iterative series of performance measures and evaluation criteria phases. It also provides the basis to select an alternative that best serves the project's Need and Purpose and avoids or minimizes environmental impacts.

1.3 Project Goals

The primary goal of the Loop 375 Border Highway West Extension Project is to provide a safe and efficient transportation facility capable of accommodating the current and future transportation needs in the project area while utilizing alternative funding to deliver the project in a timely manner. The supporting goals include:

- Enhance east-west mobility
- Improve local and regional access
- Improve safety
- Ensure compliance with the *Mission 2035 MTP*
- Reduce incident delay for the traveling public by providing an alternate route to I-10
- Ensure an open public participation process
- Minimize disruption to traffic during construction
- Maximize cost efficiency
- Develop a design that coexists with border security
- Avoid and/or minimize impacts to the human and natural environment
- Develop the facility utilizing context sensitive solutions
- Accelerate delivery through innovative financing options

Utilize Alternative Funding Opportunities, including Toll Implementation

Because of expected limited growth in conventional highway funding, the use of tolling as an additional funding source would play a strategic role in developing the Loop 375 Border Highway West Extension Project.

In December 2003, the Texas Transportation Commission issued MO 109519 which states that controlled access mobility projects in any phase of development or construction must be evaluated for tolling.

In early 2005, the TxDOT El Paso District requested that The Texas Turnpike Authority Division (TTA) conduct a conceptual level toll feasibility study to determine the feasibility of adding barrier separated express toll lanes to the Loop 375 Border Highway West Extension Project; in this study the corridor is referred to as the I-10 Southern Relief Route (SRR). These initial studies identified funding gaps. The study indicated strong toll viability based on the previous MPO model (El Paso MPO 2005). Without toll financing, it is unlikely the facility would be constructed and regional mobility is likely to continue to decrease over time.

Construction Phasing

Dependent on the Recommended Preferred Alternative chosen and approved through the NEPA EIS process with a State ROD, it is possible that the project would be constructed in phases. This construction phasing would be addressed in the EIS.

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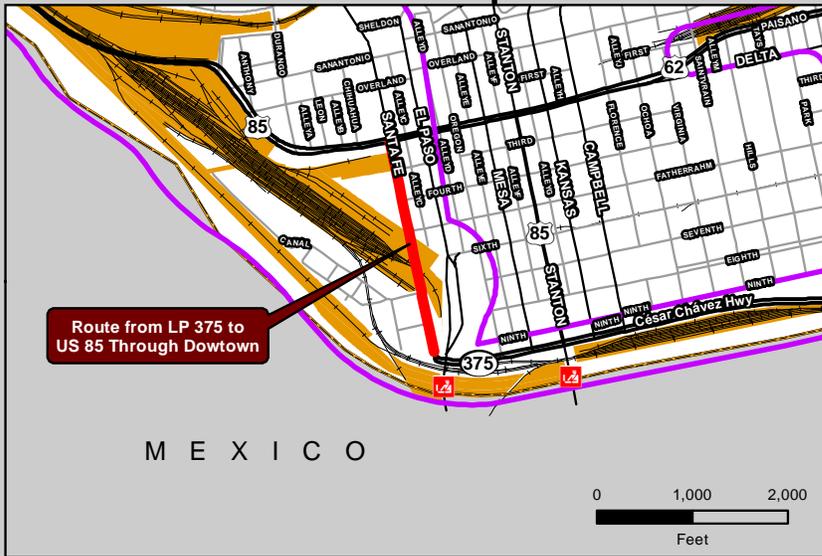
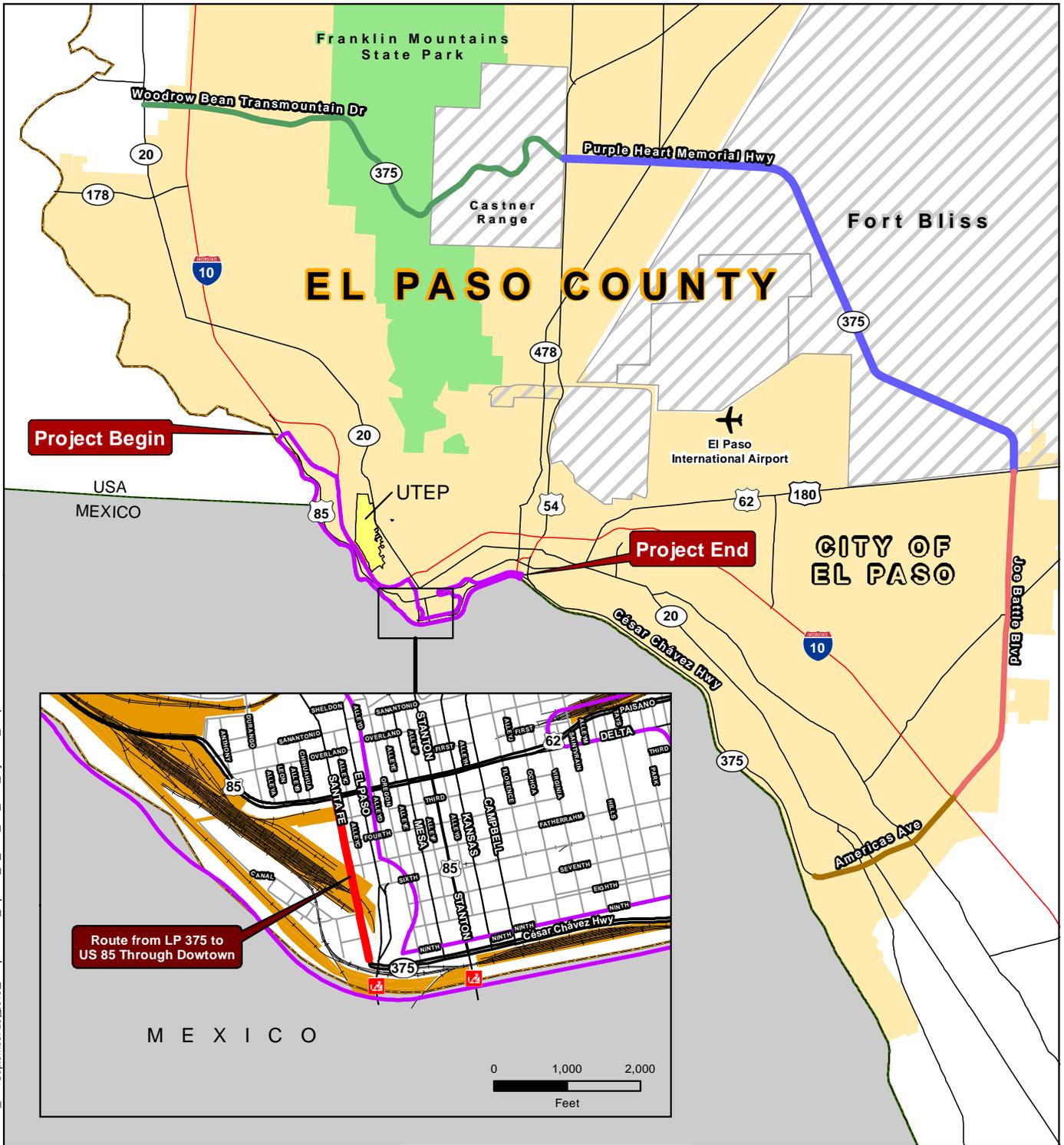
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Appendix A
Exhibits

Path: \\AUSW00\jobs\42085 Border Hwy West\Techprod\GIS\MXD\EX-HB\TPL_01\050\Fig\Legend_and_Purpose\NP_Aprdx_A_Ext_LP_375_System_Map.mxd Date Saved: 6/19/2012



Legend

- Port of Entry
- International Boundary
- Railroad
- City of El Paso Boundary
- County/State Boundary
- Study Area
- Railroad Yard
- University of Texas El Paso

LP 375 System

- Americas Ave
- César Chávez Hwy
- Joe Battle Blvd
- Purple Heart Memorial Hwy
- Woodrow Bean Transmountain Dr

Scale: 1:204,000
1" = 17,000'

Scale: 0 8,500 17,000 Feet
0 1 2 Miles

Dona Ana Otero

El Paso Hudspeth

MEXICO

This project does not cross international boundaries.

Sources

- City of El Paso: City of El Paso, 2009
- Fort Bliss: City of El Paso, 2007
- Franklin Mountains Park: City of El Paso, 2005
- Ports of Entry: City of El Paso, 2005
- Railroad Tracks: City of El Paso, 2005
- Railroad Yards: TxDOT, 2010
- Study Area: HNTB, 2010

Loop 375 Border Highway West Extension Project

From Racetrack Drive to US 54

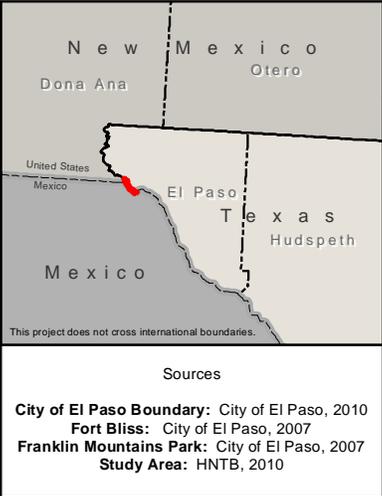
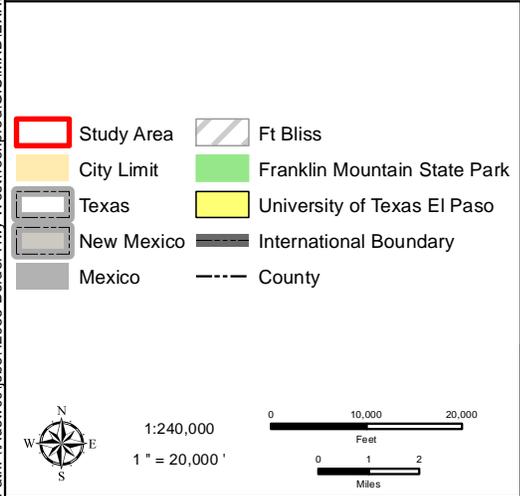
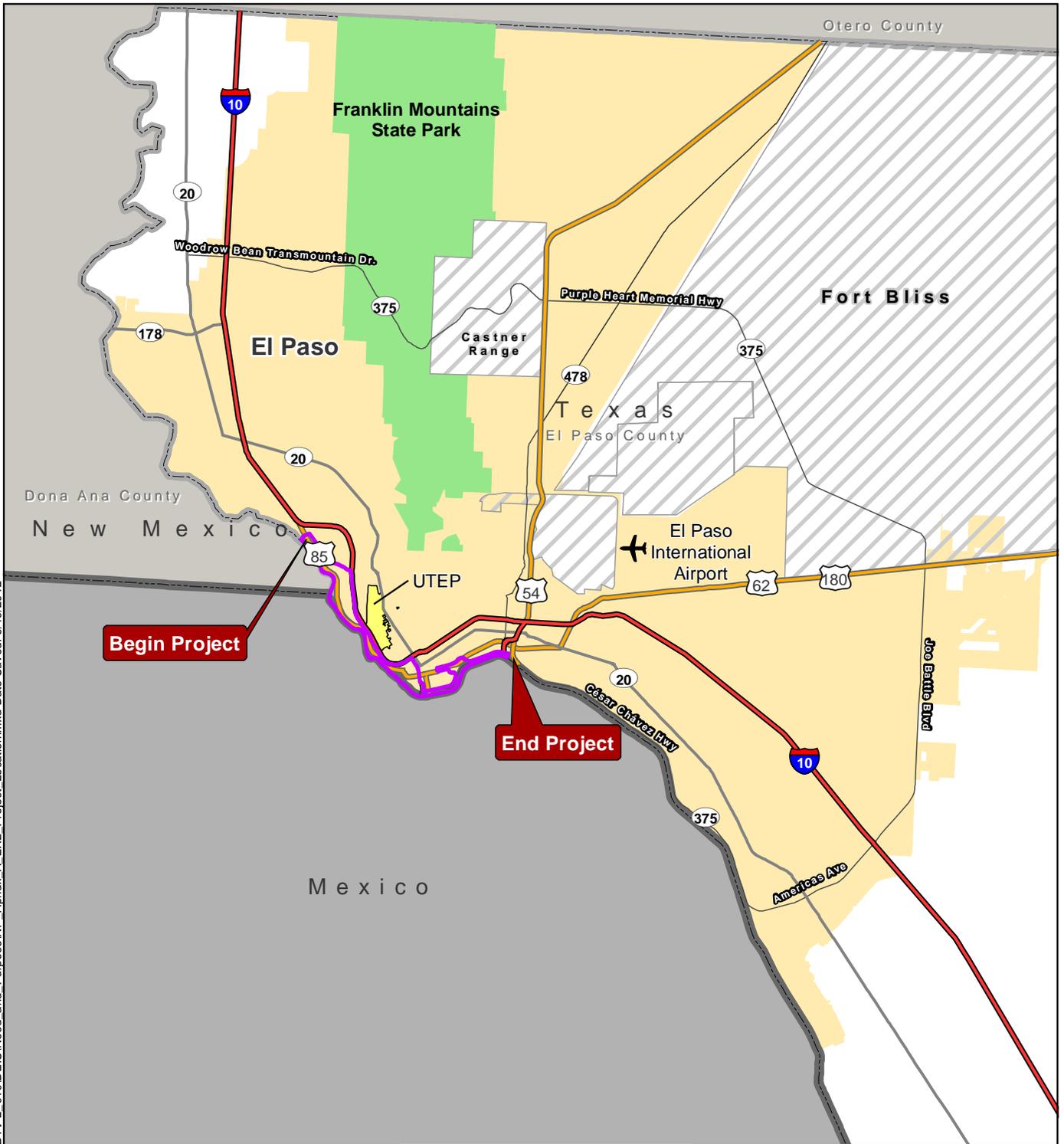
LP 375 System Map

El Paso County, Texas
CSJ: 2552-04-027

June, 2012

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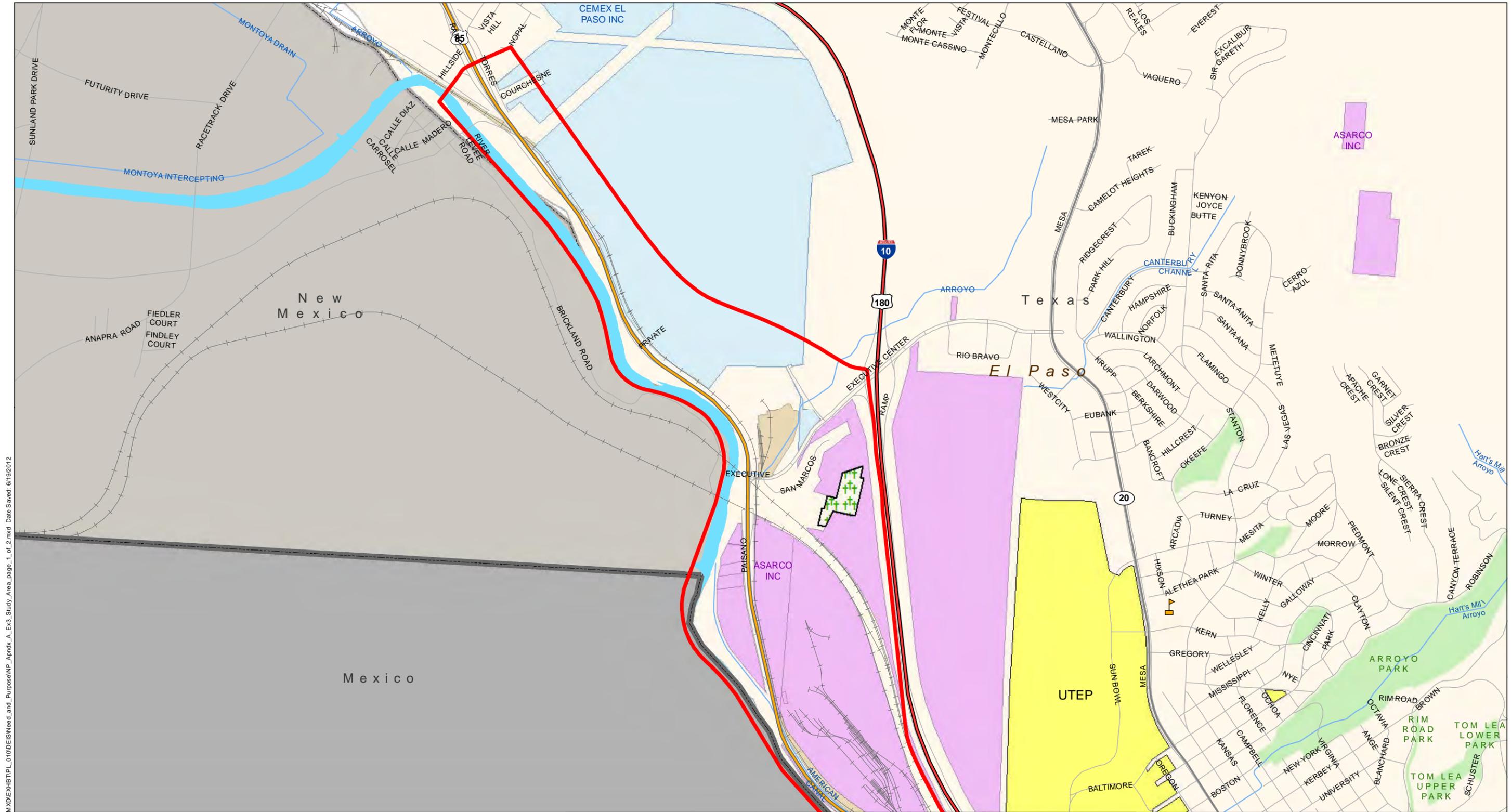
Loop 375 Border Highway West Extension Project

From Racetrack Drive to US 54

Exhibit: 1-1 Project Location

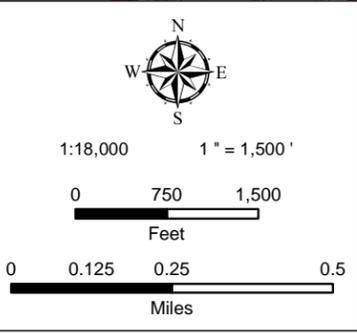
El Paso County, Texas
CSJ: 2552-04-027

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- | | |
|--|---|
|  School |  Study Area |
|  Interstate |  Cemetery |
|  US Highway |  Park |
|  State Highway |  Railroad Yard |
|  Street |  ASARCO |
|  International Boundary |  Cmex Inc |
|  Railroad |  University of Texas El Paso |
| |  City Limit |




**Loop 375 Border Highway
 West Extension Project**
 From Racetrack Drive to US 54

Study Area Detail
 Page 1 of 2

El Paso County, Texas CSJ: 2552-04-027

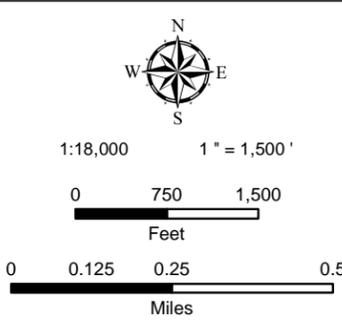
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- School
- Interstate
- US Highway
- State Highway
- Street
- International Boundary
- Railroad

- Study Area
- Cemetery
- Park
- Railroad Yard
- ASARCO
- Cmex Inc
- University of Texas El Paso
- City Limit



Loop 375 Border Highway West Extension Project

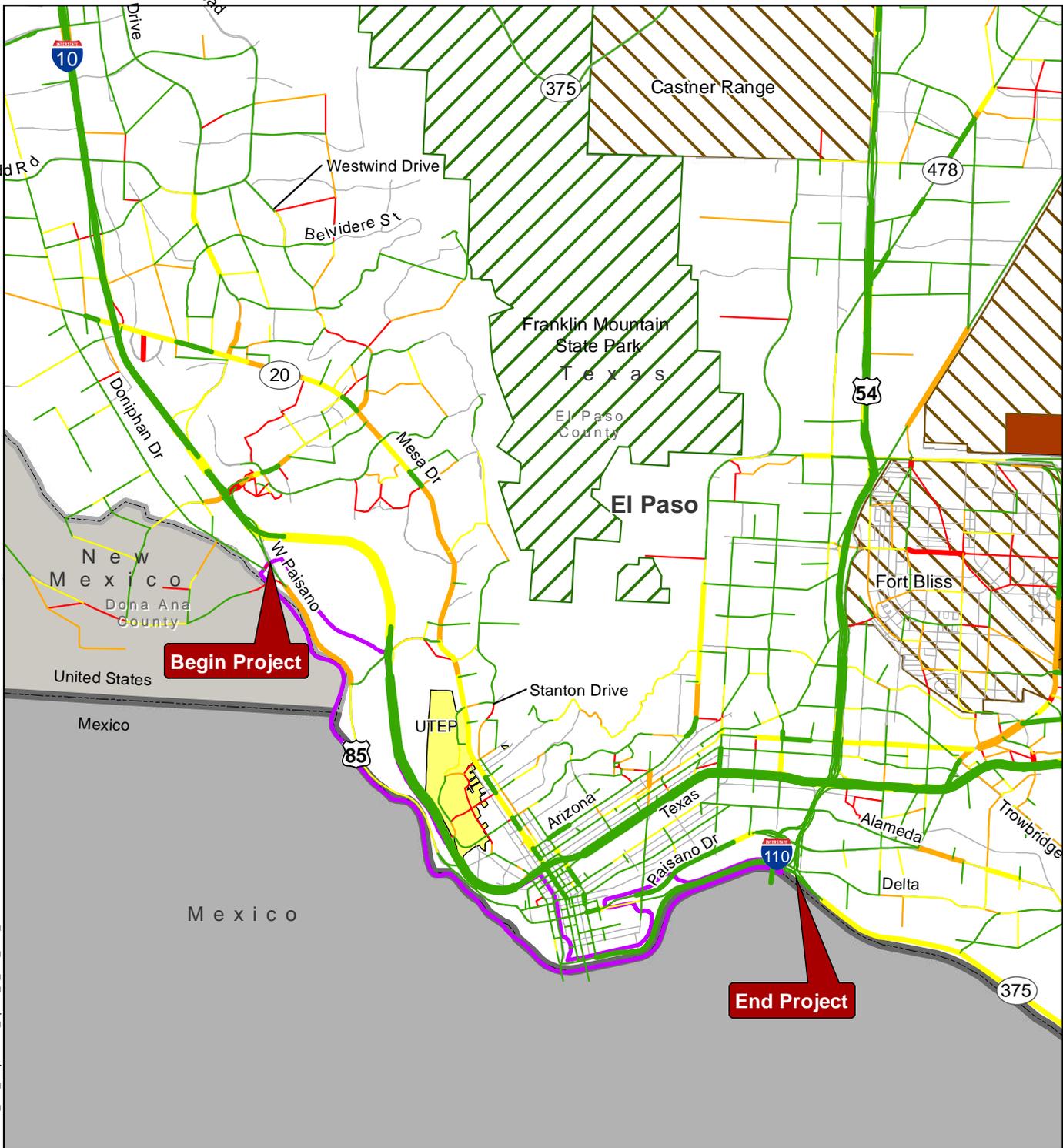
From Racetrack Drive to US 54

Study Area Detail

Page 1 of 2

El Paso County, Texas CSJ: 2552-04-027

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LOS (V/C Ratio) 2010

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- LOS D (0.85 - 1.00)
- LOS E (1.00 - 1.25)
- LOS F (>1.25)

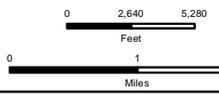
Magnitude of Shift Vehicles per Day



- Study Area
- El Paso Int' Airport
- Biggs Army Airfield
- Castner Range
- Fort Bliss
- Franklin Mtn State Park
- City Limit
- Texas
- New Mexico
- Mexico
- University of Texas El Paso
- International Boundary



1:95,040



Sources

- City of El Paso Boundary:** City of El Paso, 2010
- Fort Bliss:** City of El Paso, 2007
- Franklin Mountains Park:** City of El Paso, 2007
- Study Area:** HNTB, 2010
- Traffic data:** El Paso MPO, 2010



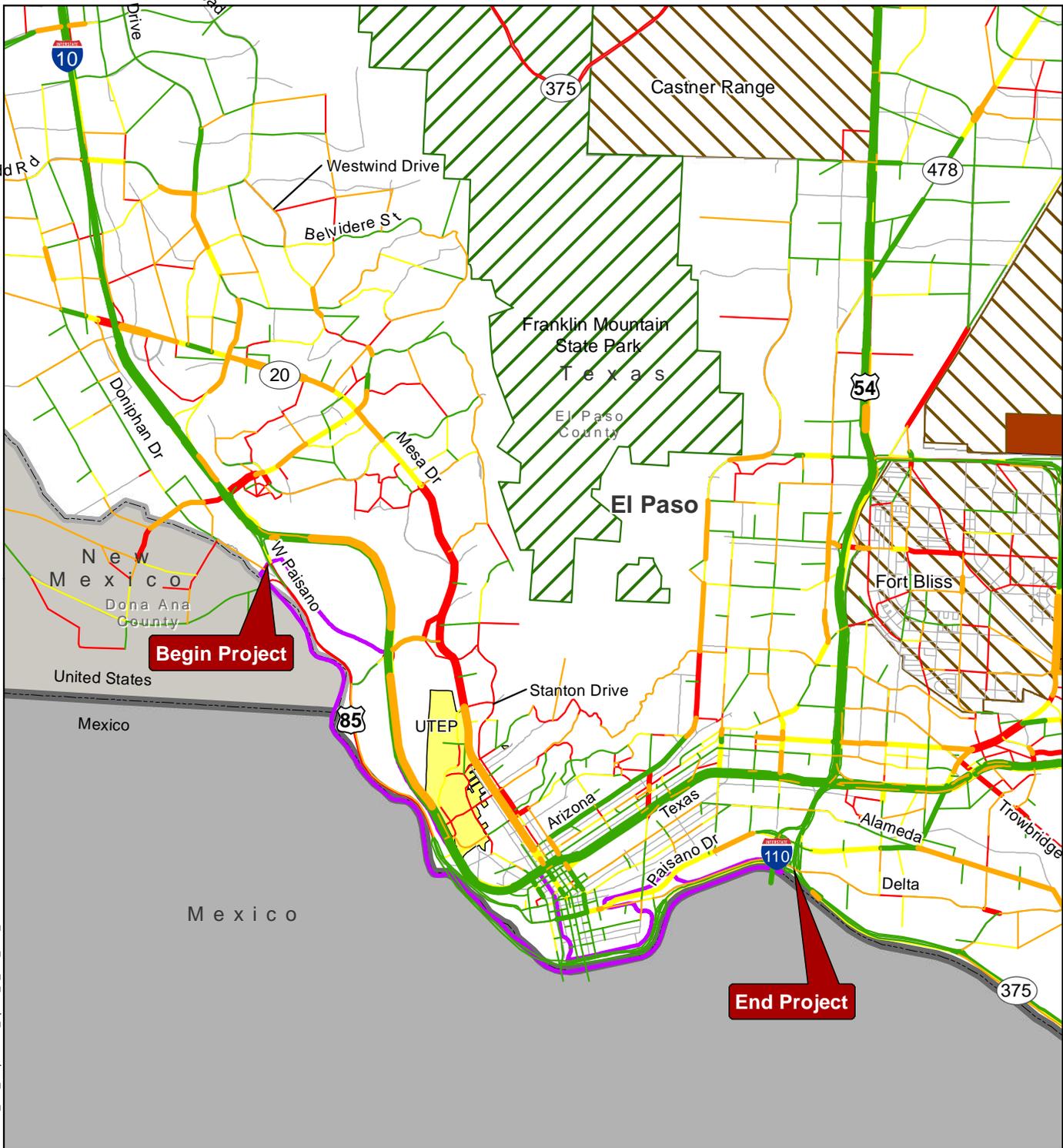
Loop 375 Border Highway West Extension Project

From Racetrack Drive to US 54

2010 Level of Service

El Paso County, Texas
CSJ: 2552-04-027

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LOS (V/C Ratio) 2035

- LOS C or Better (<0.85)
- LOS D (0.85 - 1.00)
- LOS E (1.00 - 1.25)
- LOS F (>1.25)

Magnitude of Shift Vehicles per Day

> 50000
 25001 - 49999
 <25000

 Study Area	 City Limit
 El Paso Int' Airport	 Texas
 Biggs Army Airfield	 New Mexico
 Castner Range	 Mexico
 Fort Bliss	 University of Texas El Paso
 Franklin Mtn State Park	 International Boundary

1:95,040
 1" = 7,920'

New Mexico
Dona Ana Otero

United States
Mexico

El Paso Texas
Hudspeth

Mexico

This project does not cross international boundaries.

Sources

City of El Paso Boundary: City of El Paso, 2010
Fort Bliss: City of El Paso, 2007
Franklin Mountains Park: HNTB, 2010
Study Area: HNTB, 2010
Traffic data: El Paso MPO, 2010

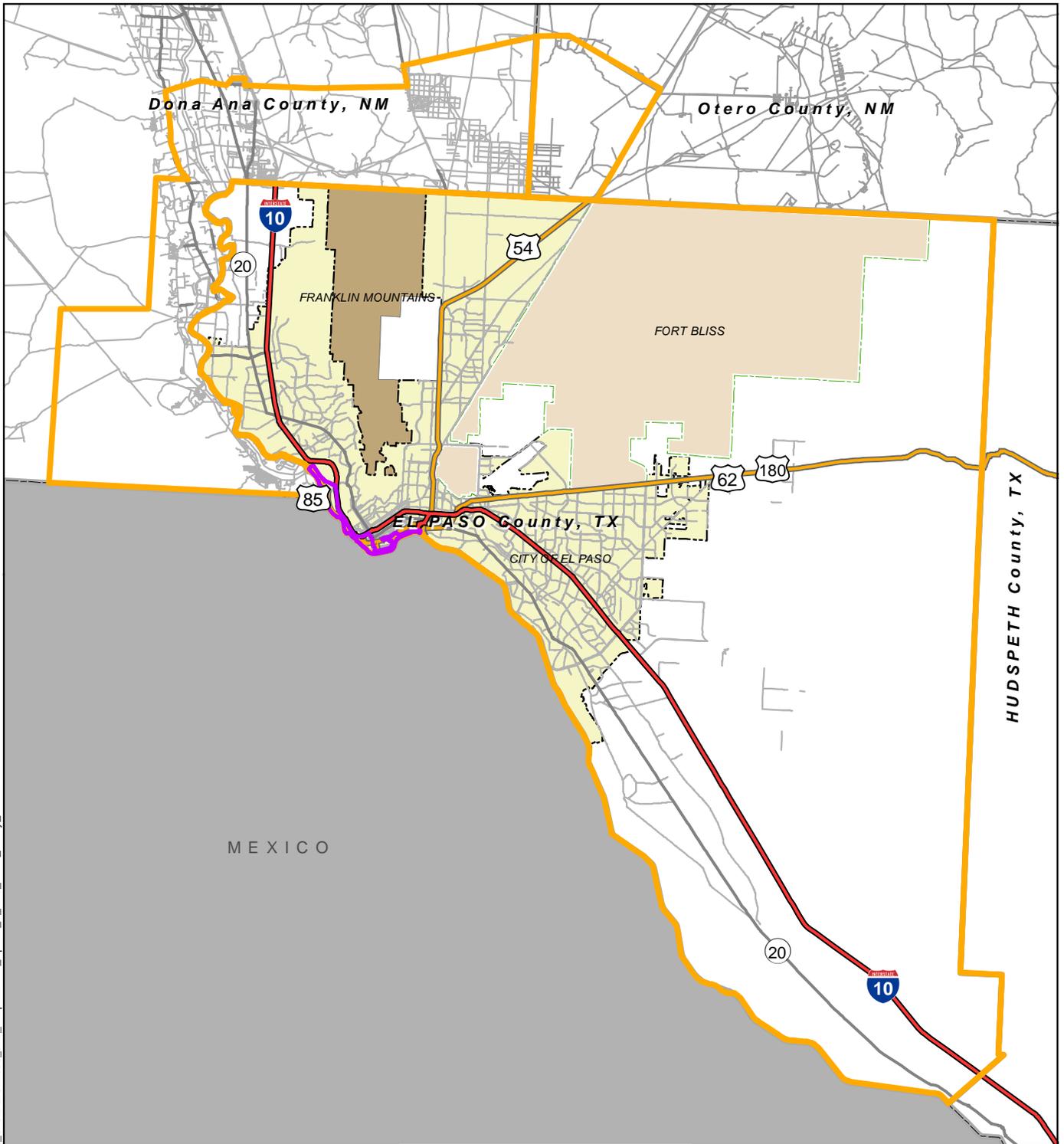
Loop 375 Border Highway West Extension Project
 From Racetrack Drive to US 54

2035 Level of Service

El Paso County, Texas
 CSJ: 2552-04-027

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Legend

- Study Area
- MPO Study Area
- Interstate
- US Highway
- State Highway
- Local Street

1:444,000
1" = 37,000'

0 18,500 37,000
Feet

0 3.5 7
Miles



Sources

Study Area: HNTB, 2010
Geologic Formations: USGS, 1992
Soils: U.S. Department of Agriculture, NRCS, 2007

Loop 375 Border Highway West Extension Project

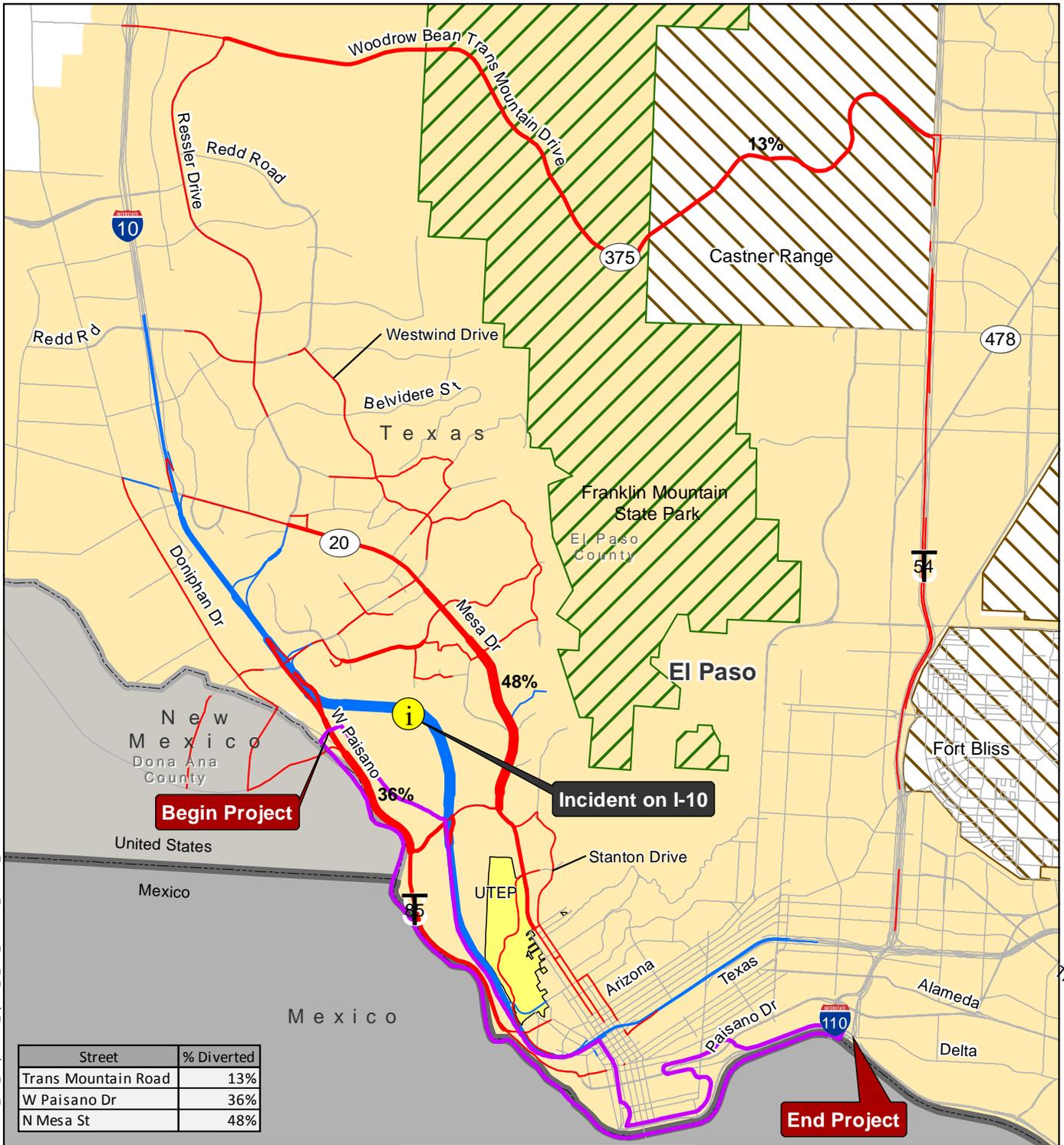
From Racetrack Drive to US 54

Metropolitan Planning Organization Study Area

El Paso County, Texas
CSJ: 2552-04-027

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Path: \\Ausw00\jobs\42085 Border Hwy West\Techprod\GIS\MXD\XHBT\PL_010\DEIS\Need_and_Purpose\NP_Aprdx\A_Ext_Incident_Sunland_Park.mxd Date Saved: 6/19/2012

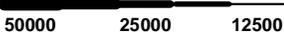


Street	% Diverted
Trans Mountain Road	13%
W Paisano Dr	36%
N Mesa St	48%

Traffic Shift During Incident

- Increase in traffic count
- Decrease in traffic count
- i Location of Incident

Magnitude of Shift

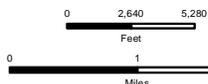


- Study Area
- El Paso Int' Airport
- Biggs Army Airfield
- Castner Range
- Fort Bliss
- Franklin Mtn State Park
- City Limit
- Texas
- New Mexico
- Mexico
- University of Texas El Paso
- International Boundary



1:95,040

1" = 7,920'



Sources
City of El Paso Boundary: City of El Paso, 2010
Fort Bliss: City of El Paso, 2007
Franklin Mountains Park: City of El Paso, 2007
Study Area: HNTB, 2010
Traffic data: El Paso MPO, 2010



Loop 375 Border Highway West Extension Project

From Racetrack Drive to US 54

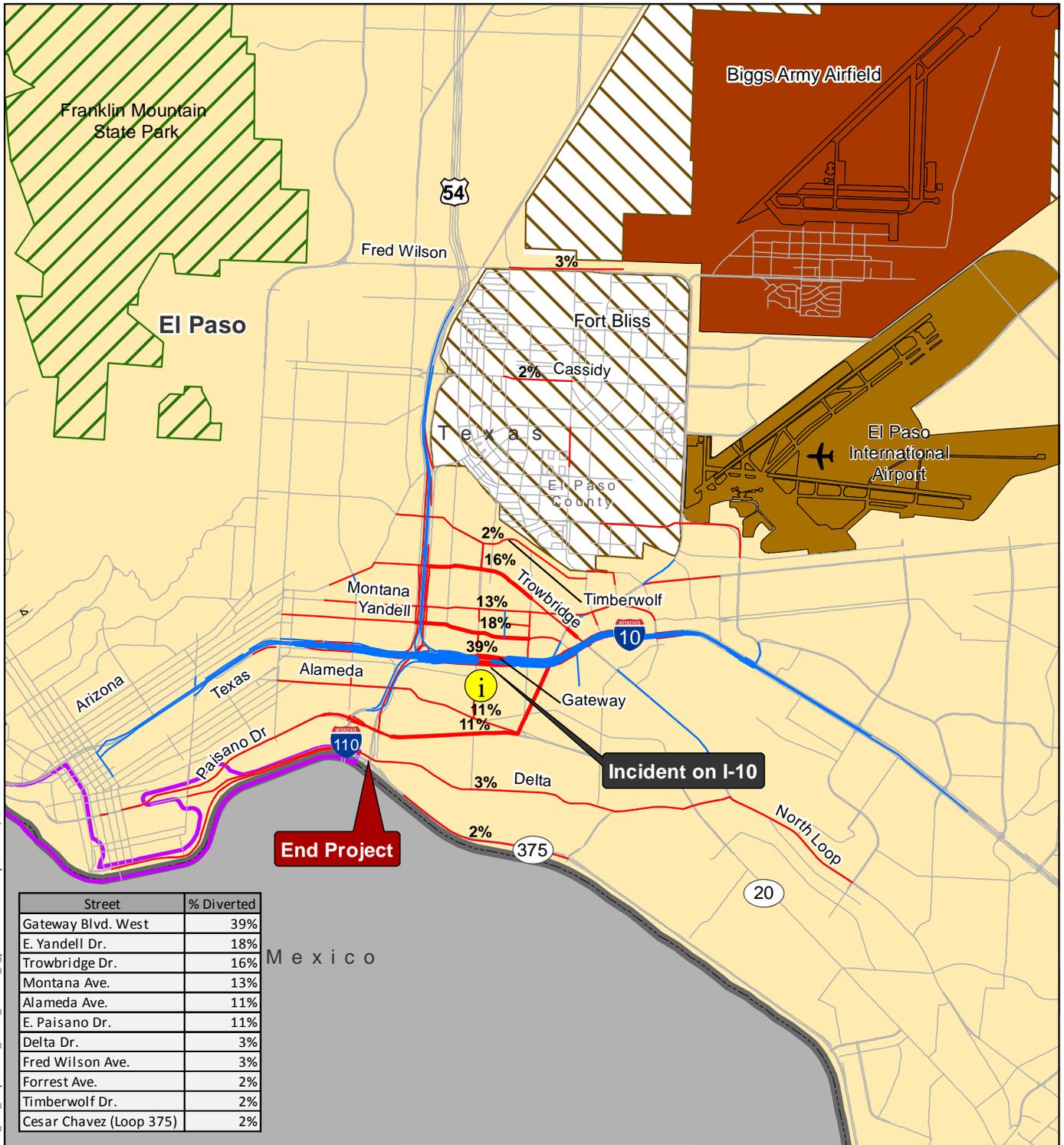
2010 Incident on I-10 Between Sunland Park and Executive Center

Incident closing I-10 both directions

El Paso County, Texas
 CSJ: 2552-04-027

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\\AUS001\jobs\42085 Border Hwy West\Techprod\GIS\WXD\EXH\T\PL_010\DEIS\Need_and_Purpose\NP_Traffic_Incident_2_percent.mxd September 9, 2011



Street	% Diverted
Gateway Blvd. West	39%
E. Yandell Dr.	18%
Trowbridge Dr.	16%
Montana Ave.	13%
Alameda Ave.	11%
E. Paisano Dr.	11%
Delta Dr.	3%
Fred Wilson Ave.	3%
Forrest Ave.	2%
Timberwolf Dr.	2%
Cesar Chavez (Loop 375)	2%

Traffic Shift During Incident

- Increase in traffic count
- Decrease in traffic count
- i Location of Incident

Magnitude of Shift

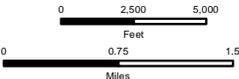


- Study Area
- El Paso Int' Airport
- Biggs Army Airfield
- Fort Bliss
- Franklin Mtn State Park
- City Limit
- Texas
- New Mexico
- Mexico
- University of Texas El Paso
- International Boundary
- County



1:79,200

1" = 6,600'



This project does not cross international boundaries.

Sources

- City of El Paso Boundary:** City of El Paso, 2010
- Fort Bliss:** City of El Paso, 2007
- Franklin Mountains Park:** City of El Paso, 2007
- Study Area:** HNTB, 2010
- Traffic data:** El Paso MPO, 2010



Loop 375 Border Highway West Extension Project

From Racetrack Drive to US 54

2010 Incident on I-10
East of US 54 between
Raynolds and Chelsea
Incident closing I-10 both directions

El Paso County, Texas
CSJ: 2552-04-027

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