



DRAFT

Purpose and Need Statement

I-69 Connector Corridor EIS

Project limits: From I-69C/US 281 to I-69E/US 77

CSJ Number(s): 0921-02-353

Cameron, Hidalgo, and Willacy Counties, Texas

October 2022

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

1.0 INTRODUCTION

The Texas Department of Transportation (TxDOT) Pharr District conducted a feasibility study to evaluate the need for a new potential connection from Interstate Highway (I)-69C/United States Highway (US) 281 to I-69E/US 77 in Hidalgo, Cameron and Willacy counties. The I-69 Connector EIS is being developed based on the results of the I-69 Connector feasibility study.

The I-69 Connector study area (**Figure 1**) covers approximately 400 square miles and is bound by I-69C/US 281 to the west, I-69E/US 77 to the east, the community of Faysville and the City of Lyford to the north, and the City of Edinburg and the town of Combes (near Mile 12) to the south.

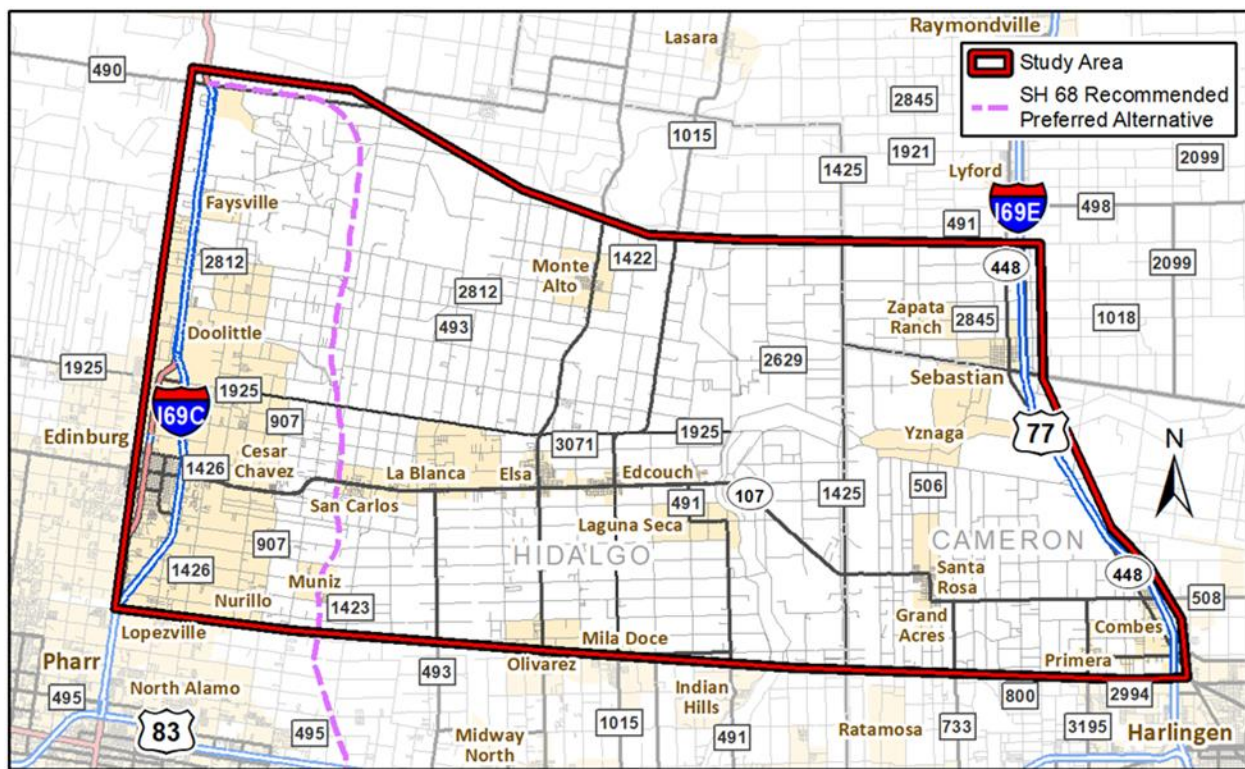


Figure 1. I-69 Connector Study Area

The intent of the feasibility study was to determine (1) whether an east-west facility is needed within the study area, (2) what type of facility is needed, and (3) the optimum location for the facility.

Through the feasibility study process, the goals and objectives were developed to examine existing and new location transportation corridors for passenger cars and trucks between I-69C/US281 and I-69E/US 77 to alleviate traffic congestion, provide additional capacity and infrastructure to meet future population growth and travel demand, provide an additional

hurricane evacuation route in the Lower Rio Grande Valley (LRGV), improve mobility, and enhance overall connectivity of the transportation network in the LRGV.

The purpose and need statement is the most important section of the environmental document and establishes the reason why an agency is proposing a project. A project's need is an identified transportation deficiency or problem, and its purpose is the set of objectives that will be met to address the transportation deficiency. A reasonable solution or range of solutions is developed and evaluated based on these objectives. The project's purpose and need drives the process for the alternatives analysis. The following information provides the Purpose and Need for the I-69 Connector project.

1.1 Purpose and Need

1.1.1 Purpose

The purpose of the proposed I-69 Connector is to alleviate/reduce traffic congestion and improve mobility, to improve connectivity for travelers, to address future travel demand, and to provide an east-west alternative hurricane evacuation route.

1.1.2 Need

This project is needed to alleviate traffic congestion, improve mobility in the study area and region, increase connectivity of the transportation network, meet future population growth and travel demand, and provide an additional hurricane evacuation route in the LRGV.

2.0 CONGESTION AND MOBILITY

To understand congestion and mobility related challenges of the LRGV, TxDOT conducted an Origin-Destination (O-D) Study for the I-69 Connector Corridor Feasibility Study. The O-D Study gathered and assessed the regional traffic patterns and behaviors generated from the cities and nearby communities. I-2, SH 107 and other parallel facilities were evaluated to determine how a new roadway connecting I-69C/US 281 to I-69E/US 77 may divert traffic volumes from existing roadways, thereby reducing congestion, and improving mobility. The results of the analysis varied depending on alternative location of a new potential roadway. Traffic volume percentages diverted from I-2 ranged from 5 to 20 percent. For SH 107, traffic volume percentages diverted ranged from 50 to 100. (TxDOT 2022a).

Congestion is measured by a method created by TxDOT referred to as the 'Car Space' method. This method factors the number of lanes, Annual Average Daily Traffic (AADT), and average car length to calculate the space remaining between vehicles for each 1-mile segment of roadway during the 30th highest peak hour. The calculated space between cars, or lack thereof, is categorized to illustrate levels of congestion.

According to TxDOT’s Statewide Planning Map (base year of 2020), I-2 is congested from I-69C/US 281 east to Farm-to-Market (FM) 493 and moderately congested from FM 493 east to I-69E/US 77. The forecast projection (2040) shows congestion increasing from moderate to congested along I-2 from I-69C/US 281 to I-69E/US 77. I-69E/US 77 from SH 54 to FM 2994 is moderately congested in the base year and projected to increase to congested in the forecast year. I-69C/US 281 from I-2 to Russell Road is moderately congested in the base year. The forecast projections show congestion increasing in this section from moderately congested to congested, and I-69C/US 281 from Russell Road FM 490 congestion increasing to moderately congested (TxDOT 2020a).

Based on the AADT and projected 2040 AADT shown in Table 1, the traffic volume on I-2 from I-69C/US 281 to I-69E/US 77 is projected to approximately double by 2040 in each segment analyzed. The future 24-hour percentage of trucks on I-2 between I-69C/US 281 to I-69E/US 77, ranges from 6.6 to 10.2 percent.

The proposed project would provide a continuous, new controlled access roadway connecting I-69C/US 281 to I-69E/US 77 that would reduce congestion and improve mobility within the region.

Table 1: Existing and Projected Traffic Numbers for I-2

I-2 from I-69C to I-69E Segments	AADT 2020	AADT 2040	Future 24-hour Truck Percentage
I -69C/US 281 to North I Road	114,358	228,716	6.6
North I Road to Stewart Road	97,613	195,386	7.2
Stewart Road to FM 907 (Alamo Road)	89,208	178,416	7.6
FM 907 to FM 1423 (Val Verde Road)	82,853	165,706	7.9
FM 1423 to FM 493	83,490	166,980	7.9
FM 493 to FM 1015	59,975	119,950	9.1
FM 1015 to FM 1425	49,236	98,472	9.5
FM 1425 to E. Mile 3 Road	50,775	101,550	9.3
E. Mile 3 Road to FM 2556	51,879	103,758	9.2
FM 2556 to FM 506	47,387	94,774	9.7
FM 506 to FM 800	51,988	103,976	9.2
FM 800 to FM 3195	53,480	106,960	9.0
FM 3195 to US 83S	60,904	121,808	8.4
US 83 S to I-69E/US 77	43,369	86,738	10.2

Source: TxDOT 2020a

3.0 IMPROVE SYSTEM CONNECTIVITY

Many of the existing east-west roads within the study area are discontinuous and do not provide for a single complete roadway connection between I-69C/US 281 and I-69E/US 77. SH 107 is the only continuous roadway that currently provides a complete connection between these roadways within the study area. Motorists travelling between I-69C/US 281

and I-69E/US 77 within the study area use SH 107 or other combinations of Farm to Market Roads and county roads to navigate the area.

I-2, located south of the study area, is the primary route motorists use to travel between I-69C/US 281 and I-69E/US 77. Motorist can also use SH 186 located north, outside of the study area, to travel between the two corridors. I-2, approximately 5 miles to the south of the study area, and SH 186, approximately 6 miles to the north of the study area, fall outside of these boundaries.

A major proposed infrastructure project in the area is SH 68, which would connect to I-2 and travel north and then west to connect to I-69C/US 281. Although SH 68 would provide connectivity from north to south, east-west mobility in the region is heavily reliant on I-2. Therefore, a continuous, new controlled access roadway connecting I-69C/US 281 to I-69E/US 77 located within the study area would enhance system connectivity.

4.0 POPULATION GROWTH AND TRAVEL DEMAND

The population of Texas increased 71 percent over the last 30 years to 28.7 million. It is expected to grow another 60 percent to 47.3 million by 2050 (TxDOT 2020b).

Population growth is also anticipated to continue growing in the LRGV, with the population of Cameron County projected to increase by 34 percent by 2040. The population of Hidalgo County is projected to increase by 48 percent and reach over 1.4 million people. Willacy county has the lowest current population and smallest projected increase of 25 percent by 2040 (Table 2).

Table 2: County Population Projections for 2020-2070

County	2020	2030	2040	2050	2060	2070
Cameron County Total	478,974	559,593	641,376	729,461	820,068	912,941
Hidalgo County Total	981,890	1,219,225	1,457,502	1,696,257	1,935,015	2,167,137
Willacy County Total	25,264	28,479	31,559	34,840	38,012	41,121

Source: TWDB 2021

Given the population data demonstrated in **Table 2** and the projected traffic numbers in **Table 1**, travel demand is expected to continue to increase.

5.0 HURRICANE EVACUATION ROUTE

Several roadways in the Lower Rio Grande Valley are designated as hurricane evacuation routes. Near the I-69 study area, I-2 and I-69C/US 281 are designated major evacuation

routes with provisions for contraflow lane reversal. In addition, SH 186, FM 1017, SH 107, and I-69E/US 77 are designated as major hurricane evacuation routes (TxDOT 2022b).

The TxDOT Pharr District has advised the public that I-69C/US 281 will not be able to handle all traffic evacuating from the Lower Rio Grande Valley and the surrounding areas (TxDOT 2021b).

The proposed I-69 Connector route would provide an alternative east-west route that would connect to I-69C/US 281 and I-69E/US 77 to facilitate hurricane evacuation.

6.0 SUMMARY

The purpose of the proposed I-69 Connector is to improve traffic congestion and increase mobility, to improve connectivity for travelers, to address future travel demand, and to provide an alternative east-west hurricane evacuation route. A reasonable solution has been developed based on the objectives. As described in this document, the proposed project would increase mobility and improve system connectivity as well as provide an alternative for the additional anticipated traffic demand. With this additional anticipated traffic demand, and the current lack of an east-west hurricane evacuation route, the proposed project should be considered for further development.

7.0 REFERENCES

Texas Department of Transportation (TxDOT). 2020a. Statewide Planning Map. Accessed October 25, 2022. Available at https://www.txdot.gov/apps/statewide_mapping/statewideplanningmap.html

_____. 2020b. Texas Transportation Plan 2050. Accessed January 28, 2022. Available at <https://ftp.txdot.gov/pub/txdot/tpp/2050/tpp-2050.pdf>

_____. May 2021b. Alternate Hurricane Evacuation Routes for Rio Grande Valley Brochure. May 20, 2021. Accessed on October 25, 2022. <https://ftp.txdot.gov/pub/txdot-info/trv/hurricane/rgv-evacuation.pdf>

_____. 2022a. I-69 Connector Primary Routes Memorandum. January 2022.

_____. 2022b. Pharr District Hurricane Evacuation Routes. June 1, 2022. Accessed October 25, 2022. Available at <https://ftp.dot.state.tx.us/pub/txdot-info/trv/evacuation/pharr.pdf>

Texas Water Development Board. 2021. 2021 Regional Water Plan County Population Projections for 2020-2070. Accessed October 25, 2022. Available at https://www3.twdb.texas.gov/apps/reports/Projections/2022%20Reports/pop_County_Search