

EXECUTIVE SUMMARY

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Introduction

US 59 is a principal highway that traverses the entire eastern area of the state of Texas in a north-south direction between the cities of Texarkana and Laredo. This US highway is heavily utilized by both local and through traffic along its entire length. US 59 also carries a significant amount of truck traffic as

it is part of a major North American Free Trade Agreement (NAFTA) trade corridor between the United States/Mexico border and the industrial northeast area of the United States and Canada. As such, US 59 is the corridor alignment being considered in the state of Texas for the proposed Interstate 69 extension

between Indianapolis, Indiana, and the City of Laredo/Rio Grande Valley area. US 59 experiences the highest traffic utilization within the Houston metropolitan area where it serves as a major radial highway and carries approximately 250,000 vehicles per day (vpd).

Study Area

The study area for this US 59 Major Investment Study (MIS) is located within Fort Bend County, located in the southwestern portion of the Houston metropolitan area. The project limits of this MIS extend from SH 6 to the Fort Bend/Wharton County line, a 28-mile corridor that traverses both urban and rural areas.



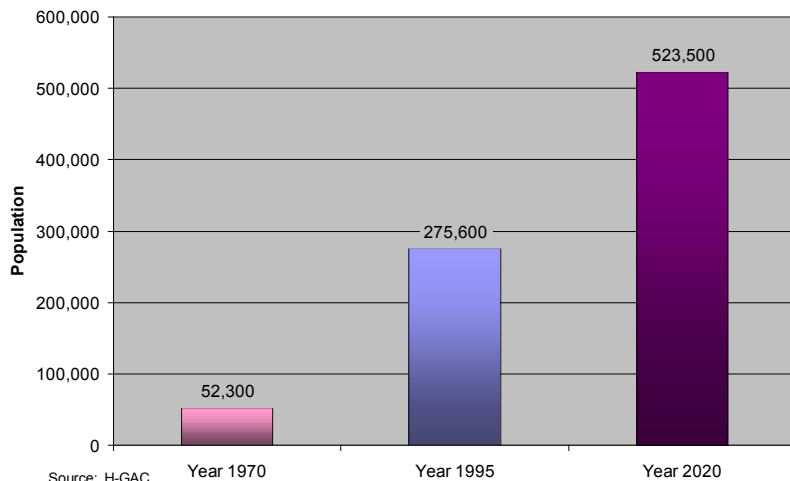
Adjacent cities include Sugar Land, Richmond, Rosenberg, Beasley and Kendleton. US 59 is a four-lane divided rural highway within the study corridor. The section between SH 6 and Spur 529 is a freeway facility with full control of access (i.e., grade separations or interchanges at cross streets). The section between Spur 529 and the Wharton County line has limited access control, with at-grade intersections that are stop-sign controlled at cross streets.

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Study Purpose and Need

The purpose of this MIS is to select a preferred alternative that will improve existing and future mobility and safety conditions along US 59. This study evaluated the need and feasibility of various alternative modal/transportation improvements within the US 59 corridor using evaluation criteria based on traffic/mobility impacts, engineering/cost considerations, environmental impacts, cost effectiveness and public/agency input. The result of this study is a preferred alternative that is based on an objective evaluation of its overall impacts, as well as consideration of agency and community input.

Fort Bend County Population Growth

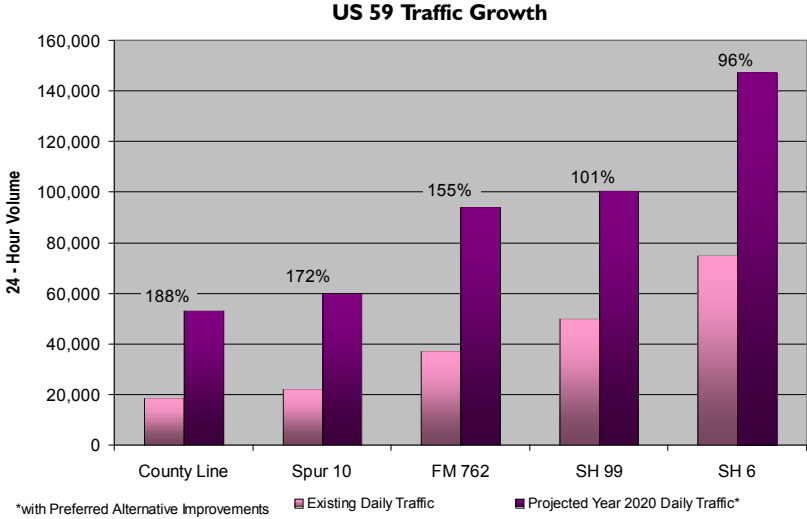


Fort Bend County has experienced a significant amount of growth in the past couple of decades and future projections indicate a high rate of growth will continue over the next 20 years. Population increased from approximately 52,300 to 275,600 persons between the years 1970 and 1995, representing an average growth rate of nearly 7 percent per year.

Projections by the Houston-Galveston Area Council (H-GAC) estimate that Fort Bend County's population will increase to

approximately 523,500 persons by year 2020, which represents an average increase of 2.6 percent per year. As a comparison, population for the eight-county Houston-Galveston-Brazoria Consolidated Metropolitan Area (also referred to as the Houston-Galveston Transportation Management Area) is projected to increase at an average growth rate of about 1.5 percent per year through the year 2020.

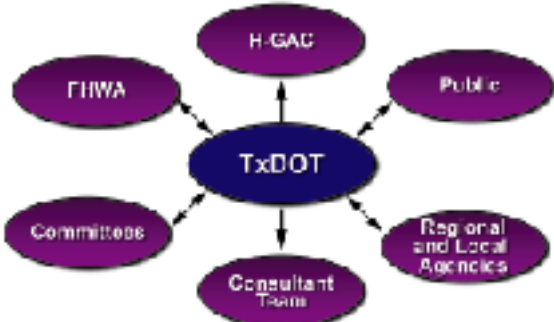
Similarly, existing average daily traffic volumes on US 59 range from nearly 20,000 vpd at the Fort Bend/Wharton County line to more than 75,000 vpd at SH 6. Future traffic volumes are projected to increase to more than 50,000 vpd at the Wharton County line and approximately 150,000 vpd at SH 6 by the year 2020. This represents traffic volumes nearly three times greater at the Fort Bend/Wharton County line and two times greater at SH 6 compared to what they are today.



Study Coordination and Development

The US 59 MIS was a joint undertaking of the Texas Department of Transportation (TxDOT) as lead agency with a team of consulting engineering and planning firms headed by Wilbur Smith Associates, area governmental agencies, several committees established for the project and the public. The following committees met and provided technical assistance and/or input throughout the study:

- **Staff Support Work Group** – representatives from various TxDOT Divisions.
- **Steering Committee** – representatives from TxDOT, Federal Highway Administration, H-GAC, Metropolitan Transit Authority of Harris County, Fort Bend County and Texas Natural Resource Conservation Commission.
- **Community Advisory Work Group** – representatives of TxDOT and the Steering Committee, as well as adjacent cities and chambers of commerce, Fort Bend County, Fort Bend County Economic Development Council, neighborhood associations and other area stakeholders.



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Public Involvement



This study included a comprehensive public involvement program that provided several opportunities for the adjacent communities and citizens to state their ideas, concerns and suggestions regarding transportation improvement needs along US 59. Four series of public meetings were held in adjacent cities at major study milestones. Approximately 330 people attended these public meetings. Five newsletters were also mailed during the project to keep interested agencies and citizens informed of the study progress, findings and recommendations.

Evaluation of Alternatives

This study began with the identification of 14 initial improvement alternatives, which included a No-Build alternative, a Transportation Systems Management/Travel Demand Management (TSM/TDM) alternative and 12 build alternatives. The build alternatives consisted of various transportation improvements, including additional single occupancy vehicle (SOV) or general purpose lanes, high occupancy vehicle (HOV) lanes, transit improvements including bus

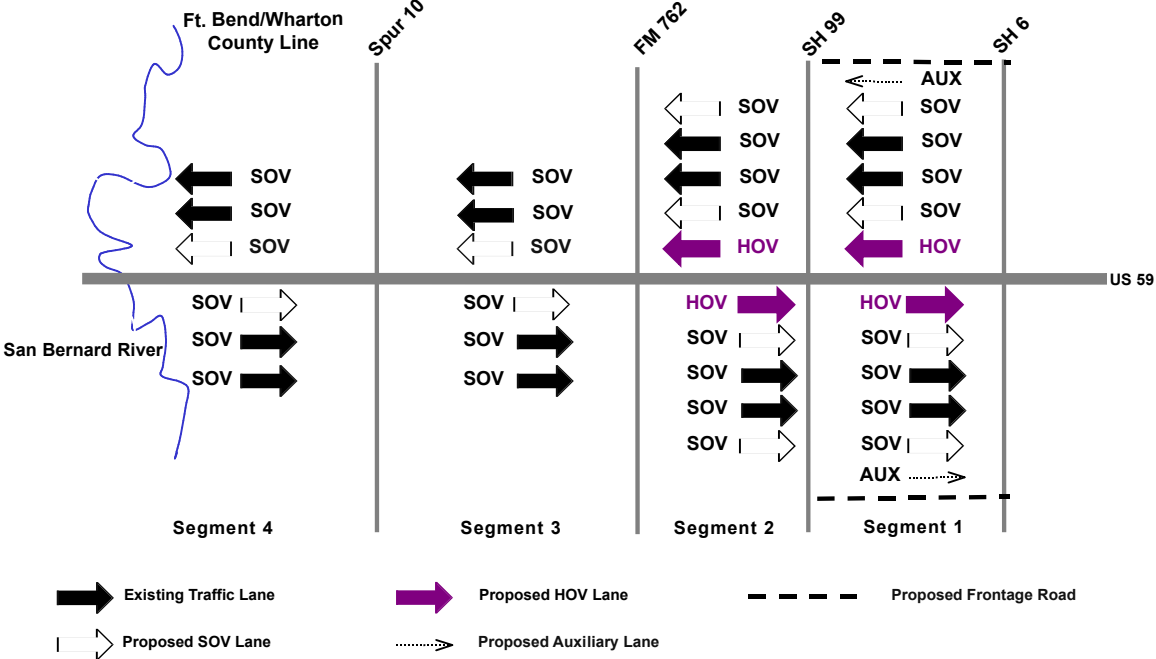
and rail, special use lanes (such as express traffic through lanes), frontage roads and combinations of these improvements.

Based on the initial screening process, these 14 alternatives were narrowed down to a total of nine that were studied in detail. Evaluation criteria used for the detailed study of the nine candidate alternatives included impacts to traffic/mobility, engineering/cost, envi-

ronmental constraints, economic feasibility and public/agency input. Special consideration was given to the major issues identified early in the study, which included existing and future traffic congestion, safety conditions, proposed development along the US 59 corridor and throughout Fort Bend County and impacts related to the proposed Interstate 69 NAFTA trade corridor.



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Preferred Alternative

The preferred alternative was selected based on the detailed evaluation of candidate alternatives, as well as agency and public input. This alternative recognizes future NAFTA impacts and is compatible with planned improvements on US 59 northeast of SH 6. It also provides improvements to traffic and safety along US 59, minimizes environmental and engineering impacts and is economically feasible.

The preferred alternative is generally described as a total of four to five general purpose (SOV) travel lanes and one HOV lane in each direction between SH 6 and FM 762; a total of three general purpose (SOV) travel lanes in each direction between FM 762 and the Fort Bend/Wharton County line; and two- to three-lane frontage roads on both sides of US 59 between SH 6 and SH 99. The total implementation cost is approximately \$460 million in 1998 dollars.



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Description by Segment

Segment 1 - SH 6 to SH 99

- Four to five SOV lanes in each direction.
- Non-barrier-separated HOV lane in each direction (provision for optional future conversion to barrier-separated, if necessary).
- Auxiliary lane in each direction for ingress/egress.
- Two- to three-lane frontage roads.
- Interchange improvements at Sweetwater Boulevard, Flanigan Road and SH 99 (in addition to committed improvements to SH 6 interchange).
- Designed with an urban freeway cross section (opposing travel lanes separated by a barrier).
- Proposed park & pool facilities at SH 99 and Flanigan Road (approximately 13 acres).
- Committed park & pool facility at Austin Parkway and Lexington Boulevard (250 spaces).
- Estimated cost of \$166 million (\$34 million per mile).

Segment 2 - SH 99 to FM 762

- Four SOV lanes in each direction.
- Non-barrier-separated HOV lane in each direction (provision for optional future conversion to barrier-separated, if necessary).
- Designed with an urban freeway cross section (opposing travel lanes separated by a barrier).
- Existing park & pool facilities at US 59 and FM 762 (approximately 60-65 spaces each).
- Estimated cost of \$49 million (\$14 million per mile).

Segment 3 - FM 762 to Spur 10

- Three SOV lanes in each direction.
- Grade separations/interchange improvements at FM 2218, SH 36 and Kroesche Road (in addition to the committed improvements to the Reading Road and Spur 10 interchanges).
- Proposed new interchange and elimination of the sharp curve at Spur 529.
- Upgrades to a rural freeway cross section (opposing travel lanes separated by a wide, grassy median).

- Upgrades to freeway/interstate highway standards south of Spur 529.
- Committed park & pool facility at US 59 and SH 36 (250 spaces).
- Estimated cost of \$109 million (\$13 million per mile).

Segment 4 - Spur 10 to the Fort Bend/Wharton County line

- Three SOV lanes in each direction.
- Proposed new grade separations/interchanges at Isleib Road, FM 360, Darst/Tavener Road and FM 2919 (locations will be finalized during the design stage).
- Upgrades to a rural freeway cross section (opposing travel lanes separated by a wide, grassy median).
- Upgrades to freeway/interstate highway standards.
- Existing park & pool facility at FM 2919 and Spur 541 in Kendleton (60 spaces).
- Estimated cost of \$136 million (\$12 million per mile).

Impacts of Proposed Improvements

Traffic/Mobility

- All segments are projected to experience acceptable traffic operations during a.m. and p.m. peak periods except Segment 1 (between SH 6 and SH 99), which is projected to experience some congestion during peak periods.
- Recommended HOV lanes encourage the use of alternative transportation modes.
- Accommodates increases from NAFTA truck traffic.

Engineering/Costs

- Segment 1 is the only segment requiring substantial right-of-way acquisition – approximately nine acres (25-40 feet on each side of US 59 between SH 99 and the Brazos River; 40 feet on each side of US 59 between Sweetwater Boulevard and Bullhead Slough Bayou).
- Additional right-of-way may be required for corner clips at proposed interchanges in Segments 3 and 4.
- Eliminates all at-grade intersections and geometric deficiencies (vertical clearances and horizontal and vertical curves).
- Upgrades the existing facility in Segments 3 and 4 to freeway/interstate standards.
- Total implementation cost is \$460 million in 1998 dollars (\$311 million for construction; \$101 million for operation and maintenance; \$45 million for engineering design and contingencies; and \$3 million for right-of-way).

Environmental

- Potential residential relocation in Segment 1 only (to be determined in design stage).



- Visual impacts through additional lanes and interchanges on Segments 3 and 4 (which could provide opportunities for landscaping/aesthetic enhancements).

Economics

- Travel efficiency benefits exceed costs (benefit/cost ratio=3.21; that is for every dollar spent, the US 59 improvements will produce \$3.21 in user benefits).
- Promotes economic development throughout the corridor.

Community Benefits

- Improves overall safety.
- New frontage road in Segment 1 to provide access.
- Non-barrier-separated HOV lanes in Segments 1 and 2 allow for added flexibility (provision for optional future conversion to barrier-separated, if necessary).
- Provides an alternate route over the Brazos River.
- Eliminates sharp curve at Spur 529.
- Significantly increases roadway capacity, resulting in reduced congestion.

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Other Recommendations

ITS/TSM/TDM improvements that are considered reasonable will be implemented in the US 59 corridor. These improvements are cost-effective measures that make maximum use of the existing transportation system and reduce travel demands in the area. Examples include:

- Intelligent Transportation System (ITS) improvements such as changeable message signs and closed circuit television strategically located along US 59 and controlled by TranStar, the regional Transportation Management Center.
- Metering of on ramps in heavily traveled areas to regulate the flow of traffic entering the freeway, which should aid in minimizing interferences between entering traffic and freeway mainlane traffic flow.



- Expansion and construction of new park & pool lots to facilitate and encourage use of proposed HOV lanes between SH 6 and FM 762. Existing park & pool lots are located near the intersection of FM 2919 and Spur 541 at Kendleton; the northeast corner of US 59 and FM 762; and the southeast corner of US 59 and FM 762 (approximately 60-65 spaces each).
- The 1998-2000 Transportation Improvement Program (TIP) includes two committed park & pool lots located at the southwest corner of US 59 and SH 36, and near the intersection of Austin Parkway and Lexington Boulevard (250 spaces each). Additional park & pool lots should be considered near the interchanges of US 59 and SH 99, as well as US 59 and Flanigan Road (approximately 13 acres owned by TxDOT).
- Optimization of traffic signal timing and provision of exclusive turn lanes where feasible



at existing and future US 59 frontage road intersections with major cross streets.

- Development of programs to encourage major employers within the corridor to implement Employer Trip Reduction Programs, which could include carpool/vanpool/ridesharing programs, telecommuting, compressed work weeks/flex time, parking management/incentives, etc.
- Potential implementation of Congestion Pricing/High Occupancy Toll programs to maximize the use of the proposed HOV lanes between SH 6 and FM 762 during peak periods.

Conclusions

The preferred alternative improves traffic mobility and safety along the US 59 corridor, as well as throughout Fort Bend County. Selection of the alternative recommended by this MIS is the first phase of the overall implementation of needed transportation improvements in this major highway corridor.

The preferred alternative will now need to be adopted and included in the Houston-Galveston Metropolitan Transportation Plan (Vision 2020) and Transportation Improvement Program (TIP) for the Houston-Galveston area; be subjected to air conformity analysis; undergo preparation of required environmental documentation, preliminary and final design and right-of-way acquisition; and, then be constructed.

