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Date: 12/16/2008 11:47 AM
Subject: 3964-04-040 SH 121 at US 75 Collin County
Attachments: 0364-04-040_Reeval_121508_email.pdf; 0364-04-040_CRF_FHWA_121508.pdf

Robert -

Please find attached the revised Re-evaluation for the subject project and the FHWA comment/response form. All comments have been addressed and the text has been provided to be resubmitted electronically to FHWA. Please let me know if hard copies are preferred.

Thanks,

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COMMENT RESPONSE FORM

RE-EVALUATION FOR PROPOSED TOLL FACILITY
SH 121: FM 423 TO SH 121 AT US 75 INTERCHANGE

CSJs: 0364-03-067, etc.

December 15, 2008

Comment Number	Page No. (Original) New	Comment	Response
FHWA Comments (received 11/26/08)			
1	ii, 17, Appendix B	**NOTE**: Below are our comments on the environmental document. Please note that even with the resolution of these comments FHWA will not be able to take final action on this environmental document until the project is determined to be consistent with the STIP. Although NCTCOG has taken action to include the project in the Dallas-Fort Worth MPO TIP, the necessary action to include the project in the approved STIP has not occurred. There is currently no time-frame for the completion of the necessary STIP action.	Comment noted. The document has been revised to include boiler plate conformity language. Also, removed the August STIP modification page in Appendix B – Supplemental Data and replaced with the "2008-2011 STIP Revision". The revised STIP page will be provided to FHWA as soon as it becomes available.
2	Letter of Transmittal	Comment on the Letter of Transmittal: The document is a reevaluation which references the 2007 re-evaluation which was for two documents (SH 121 from FM423 to US 75 and the SH121/US75 interchange) and therefore the letter of transmittal needs to refer to those limits (and corresponding counties) and the leading CSJ be the same as the one from the 2007 document (0364-03-067). Below are our other comments (in addition to the **NOTE** above) on the document.	Comment noted. All future transmittal letters will reflect that the document is a "Re-evaluation for the SH 121: FM 423 to SH 121 at U.S. 75 Re-evaluation for Proposed Toll Facility in Denton and Collin Counties, Texas (CSJs: 0364-03-067, etc.)"
3	(22) 23	EJ/MVB: Last ¶, 2nd sentence, change "determine" to "estimate" travel patterns…	Change made as requested.
4	(22) 23	Origin-Destination discussion beginning on page 22 does not include boilerplate "Analysis Assumptions and Limitations" section. Please add section below: Analysis Assumptions and Limitations	The suggested "Analysis Assumptions and Limitations" section has been added. An additional sub-header ("Analysis Results") was also added to separate the analysis findings from the assumptions and limitations discussion.

Comment Number	Page No. (Original) New	Comment	Response
		To clarify the intent of the O&D analysis, the analysis does not attempt to identify specific users (low-income and minority populations) but instead compares the origins and intensity origins of trips based on collective socio-economic characteristics at the TSZ level for both the toll and non-toll scenarios. In other words, the O&D analysis predicts the potential users of the SH 121 corridor in 2030 by correlating the general socio-economic characteristics of the future users based on Census 2000 data to the intensity of use quantified by the number of trips per TSZ generated by TransCAD®. NCTCOG conducted a "select-link analysis" based on 2030 AM peak period traffic. The model distinguishes between toll and the non-toll scenarios by identifying the "toll links." These "toll links" are assigned a cost per mile for the toll scenario and no cost per mile for the non-toll scenario. The model then assigns vehicle trips based on user cost, trip distance, time of day, and other factors to achieve system equilibrium in the network. For trip assignment purposes, if a facility has only tolled lanes and no free mainlanes, then the trip assignment is only for the toll facility. If the facility has existing free mainlanes and the project is adding managed toll lanes, then the trip assignment data is for both the managed toll and free mainlanes. The correlation of Census 2000 and TransCAD data is the best available method to identify which TSZs would originate trips anticipated to utilize the SH121 facility and the general demographics of the population associated with those TSZs. However, the vehicle trip assignment process does not consider relative income differences or the differences in relative costs to potential users in the population when making trip assignments. Because no definitive data exists on the future users of SH 121 or similar type facilities, the O&D analysis cannot predict the specific race, ethnicity, or economic status associated with the predicted trips on toll or non-toll facilities. However, the O&D analysis can identify a potential difference in trip intensity by comparing toll and non-toll scenario TSZ trip percentages.	
5	(23) 23,24	¶3, 1st sentence, after "utilize" add parenthetically "(at least one trip per day)" Please do the same elsewhere where "utilize" is mentioned in the O&D discussion.	Revised as requested.
6	(34) 36	Last ¶ states that traffic analysis performance reports were developed for build and no-build regional "toll/managed lane scenarios." The previous ¶ states that the	This is part of the regional toll language developed and approved to be used in all Dallas district cumulative impact analyses. As stated in the last

Comment Number	Page No. (Original) New	Comment	Response
		"MTP roadway network" was used in the analysis which includes both toll and non-toll roadways in 2030. I believe the latter is correct. Please correct.	paragraph, "...performance reports and regional O&D studies were developed for the NCTCOG's MPA transportation network..." which means that the MTP network was used to produce the performance reports; therefore, both statements are correct. No changes made to the document.
7	---	TCB – comments-Substantial: Need completed EPIC sheet to be sent with submittal.	The EPIC sheet has been attached as requested and was submitted to TxDOT-DAL on December 12, 2008.
8	(5) 5	Section 4.0, 2nd paragraph, states that "NTTA would complete required mitigation ...would be completed ...prior to construction" - This is problematic for mitigation or commitments that need to be taken care of during and/or after construction - consider rewording appropriately.	Revised sentence to state "... following section prior to, during, or after construction."
9			**The EPIC sheet has been attached as requested and was submitted to TxDOT-DAL on December 12, 2008.**
	(6, 9, 19) 6, EPIC sheet	Top of p. 6 (NWPs and banking credits) AND	Section 404 mitigation is not necessary for the Interchange Project. The work at the interchange would be authorized by NWPs 14 and 25 with no preconstruction notification required. The banking credits mentioned in the document were required for the construction of the frontage roads for the SH 121 corridor; therefore, the banking credits do not need to be included in the Interchange Project EPIC sheet. Revised the document to clarify that the banking credits mentioned were not for the Interchange Project.
	EPIC sheet	p. 9, 3rd paragraph (MBTA construction window) AND	The EPIC sheet states that the contractor would remove all old migratory bird nests from September 1 through the end of February from any structure where work will be done. No change to document.
	EPIC sheet	P. 19 (lighting) - identifies EPIC items to be included.	EPIC includes under Section VII-Other: that the NTTA's *System Wide Design Guidelines* would be utilized to enhance the visual appearance of

Comment Number	Page No. (Original) New	Comment	Response
			the interchange to ensure consistency with the rest of the SH 121 corridor. No change to document.
10	(10) 10	T&E section 1st paragraph, last line use proper ESA terminology - "to have 'no effect' on any population..."	The statement was revised as suggested.
11	(9) 9	Editorial - Water Quality 1st sentence has a random word "long" thrown in...or is it along?	The word "long" was revised to "along."
12	(10) 10	Top line "... due to of..." needs correction.	The word "of" was deleted.
13	--- ---	BCM: MTP/STIP/env doc consistency does not exist. Current STIP -- 2008-2011 STIP, Feb-Mar rev. with a print date of June 2008 in the top left corner. TxDOT transmittal letter states "... Although the project is not currently programmed into the TIP/STIP. It was in the original 2008-2011 TIP, but was not brought forward in the February 2008 amendments. We have been informed by the District that they are requesting from Administration an out of schedule TIP amendment to add this project."	Comment noted. Revised 2008-2011 STIP page will be provided once it becomes available. Comment noted.
14 15	Cover, 15 (ii, Appendix B) ii, Appendix B	Misc. (Many will be answered with a 2008-2011 STIP entry, once it's available) a. Cover pg (Denton, Collin) vs. AQ language (Denton) counties b. Page ii - Reflection of 2008-2011 STIP Mod. (August). See Comment 13. re. the STIP.	The air quality language in reference to the "Toll Project" was revised to include both Denton and Collin Counties. However, no changes were made if the air quality language that was referring to the "Interchange Project" specifically as the interchange is located within Collin County only. Comment noted. 2008-2011 STIP Mod. (August) has been removed from Appendix B. Instead, a placeholder for the 2008-2011 Revision has been inserted.

Comment Number	Page No. (Original) New	Comment	Response
16	---	c. Need confirmation of dc&s consistency (BCM to visit with JMC) MTP: major interchg with 6-flyover ramps @ US 75. Env doc Approved dc&s: five-level interchg (p. 2). Env doc Final dc&s: four-level interchg (p. 2). Env doc p. 20 "...final design requires changes in control of access, allowable driveway locations and ramp locations." Comment/Response reflects "The final design does not involve new connections that would result in added capacity."	Comment noted. No change was made to the document.
17	---	d. Need confirmation that there's opening date consistency e.g., with "accelerating const time" (p. 4) and "reducing const duration" (p. 4) does the "open to traffic" date move b/w MTP AQCD dates?	Confirmed. The opening date remains in consistency with the original MTP AQCD dates (planned for opening after 2009 but no later than 2015).
18	(2) 2	e. Need confirmation that there's total cost consistency MTP -- $273.8 M (Corridor 39. p. 2 of 2) STIP -- unknown; as not yet approved. Env doc Approved dc&s (p. 2): $222.5M env doc Final dc&s (p. 2): $234.7	There will not be consistency with the MTP "Corridor Fact Sheet" cost of $273.8 M because this cost includes not only the interchange but the SH 121 mainlanes between Hillcrest and U.S. 75. These mainlanes are currently under construction under a separate contract. The $222.5 M cost included in the environmental document is an escalated cost and was revised to the estimated non-escalated construction cost of $195.9. The most current construction cost estimate consisting of $222.5 will be included in the next 2008-2011 STIP revision. The STIP modification will also include that the project would be funded 100 percent by local contributions (Category 10 - Toll Bonds). Once the revisions are approved, there will be consistency between the environmental document and the revised 2008-2011 STIP. The reported cost for the Interchange Project was revised from $234.7 to $222.5 in the environmental document.
19	---	f. Need confirmation of source of funding e.g., 2008-2011 STIP - Cat 5 (CMAQ)? p. 5 reflects "increased travel distances for simple left-turn maneuvers"	The funding for the interchange project is no longer from Category 5 –CMAQ. The interchange project will be funded 100 percent by the NTTA (local toll bonds).

Comment Number	Page No. (Original) New	Comment	Response
			Correct, "increased travel distances for simple left-turn maneuvers" is considered a disadvantage of the design enhancements. No change was made to the document.
20	(15, 17) 15,17, ii, Appendix B	g. p. 15 reflects 2006-2008 STIP language while p. 17 reflects 2008-2011 STIP language. Page 17 reflects Appen A. 08-01-2008 TIP mod yet it is not yet part of 2008-2011 STIP.	Correct. Page 15 summarizes the 2007 re-evaluation and project consistency with the 2006-2008 TIP; while p. 17 reflects pending consistency or the interchange project using latest STIP language. August 1st, 2008 TIP mod was included as reference. The August TIP mod was removed from the document and a placeholder for the 2008-2011 STIP has been included in Appendix B – Supplemental Data.
Additional Edits			
		Changed cover page date to December 2008.	
		Reference to latest 303(d) list has been revised from "2006" to "2008" globally.	

SH 121: FM 423 TO SH 121 AT US 75 INTERCHANGE

RE-EVALUATION
FOR PROPOSED TOLL FACILITY

CSJs: 0364-03-067, 0364-03-066, 0364-04-038, 0364-04-037,
0364-04-022, 0364-04-024, 0364-04-043, 0364-04-046,
0364-04-040

DENTON AND COLLIN COUNTIES, TEXAS

Prepared by:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
TEXAS DEPARTMENT OF TRANSPORTATION
NORTH TEXAS TOLLWAY AUTHORITY

DECEMBER 2008

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Appendix A: Figures

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1.0 INTRODUCTION

This document is a re-evaluation of the 2007 Re-evaluation of State Highway (SH) 121 from Farm-to-Market (FM) 423 to SH 121 at United States Highway (US) 75 in Denton and Collin Counties, Texas. The 2007 Re-evaluation was prepared to assess impacts resulting from the implementation of tolling the SH 121 mainlanes from FM 423 to SH 121 at US 75 interchange. The 2007 Re-evaluation, prepared by the Texas Department of Transportation (TxDOT), was approved by the Federal Highway Administration (FHWA) on October 12, 2007. Since award of SH 121 to the North Texas Tollway Authority (NTTA) in November of 2007, the NTTA has progressed the design and incorporated safety enhancements to the SH 121/US 75 interchange. For purposes of this re-evaluation, the "Toll Project" is defined as the SH 121 mainlanes from Dallas North Tollway (DNT) to SH 121 at US 75 interchange as defined in the October 2007 approved Re-evaluation.

The SH 121 corridor is divided into five design segments: Segment 1 [from 0.23 mile west of Business SH 121 to Old Denton Road (Rd.)], which is outside of the 2007 Re-evaluation limits; Segment 2 (from Old Denton Rd. to Hillcrest Rd.), which is currently under construction and scheduled to open to traffic by September 1, 2008; Segment 3 (from Hillcrest Rd. to Watters Rd.), which is currently under construction and scheduled to open to traffic by January 1, 2010; Segment 4, which corresponds to the SH 121/US 75 interchange; and Segment 5, which encompasses the SH 121/DNT interchange currently being developed as a separate project (CSJ: 0364-04-047).

As part of the final design process for the Toll Project, the NTTA considered several design options as a step of its quality assurance program. The final design process is intended to add value to a project by improving design, meeting requirements for quality, performance, operation, maintenance, safety, and aesthetics. The final design process identified several enhancements that would reduce the construction duration by six to eight months, reduce construction detours, and improve traffic flow at the SH 121/US 75 interchange.

Because the final design modifications, which consists primarily of safety enhancements, are only proposed for Segment 4 and the rest of the segments are either under construction or are under separate environmental review, this re-evaluation focuses on impacts resulting from the final design of the SH 121/US 75 interchange or "Interchange Project." The purpose of this re-evaluation is to evaluate potential social, economic, and environmental impacts resulting from the final design of the Interchange Project (See **Appendix A - Figure 1: Interchange Project Limits**). This re-evaluation evaluates the same resources addressed during the 2007 Re-evaluation and presents additional analyses and conclusions resulting from the final design. The final design results in minor shifts in access, but there are no additional right-of-way (ROW) requirements beyond what was identified in the 2007 Re-evaluation. See **Appendix A - Figure 2: Final Design** for the final design configuration.

The SH 121/US 75 interchange was included in the 2007 Re-evaluation and is referred to as the "approved design concept and design scope" in this document. No changes in the scope or concept of the Toll Project result from the final design. For purposes of this re-evaluation, the "Interchange Project" is also known as Segment 4 or the SH 121/US 75 interchange. The Interchange Project limits along SH 121 extend from west of Hardin Boulevard (Blvd.) to east of Medical Center Drive (Dr.), approximately 2.7 miles in length. The Interchange Project limits along US 75 extend from Ridgeview Dr. to just south of Eldorado Parkway (Pkwy.), approximately 1.9 miles in length. The Interchange Project is located in the Cities of McKinney and Allen and the Town of Fairview in Collin County, Texas.

Approved Design Concept and Design Scope
The approved design concept and design scope consisted of a five-level urban interchange. Level one consisted of the US 75 mainlanes; level two consisted of US 75 and SH 121 frontage roads, which met at signalized intersections and formed a "frontage road box"; level three consisted of SH 121 mainlanes; and levels four and five consisted of six direct connectors. The mainlanes of US 75 (level one) were depressed (lowered) through the interchange. The total cost of the interchange under the approved design concept and design scope was estimated to be $195.9 million.

Final Design
The final design incorporates a series of loop ramps that would allow for better management of the frontage road traffic. The final design, a four-level interchange, allows the US 75 mainlanes to stay at the current elevation and eliminates costly earthwork operations and traffic detours. In addition, the final design also allows for the braiding of the ramps and direct connectors, thus minimizing short weaving conditions.[1] The total cost of the enhanced interchange is estimated to be $222.5 million.

Removal of the depressed US 75 main lanes afforded the opportunity to invest in additional improvements for safety and mobility. Although these improvements have increased the total estimated cost, the improved safety and mobility for motorists is of greater value. The following elements were incorporated into the final design:

- Material selection (primarily structural) which reduces long-term operation and maintenance costs;
- Grade separated frontage road interchanges that eliminate signals and provide continuous flow traffic. They improve safety by eliminating conflicts with opposing traffic streams common at signalized intersections;
- The final design allows the mainlane ramps to be reconfigured to eliminate short weaving segments with the US 75 direct connecting ramps. This reconfiguration removes operational turbulence associated with weaving sections, which in turn improves mobility and safety. This enhancement results in longer bridge structures and an increase in pavement cost;

[1] Braiding is a design feature where two nearly parallel ramps cross each other and use grade separation to avoid weaving or at-grade crossing.

- At the request of the local municipalities (City of Allen, City of McKinney, and the Town of Fairview), three ramps were included in the final design to improve local mobility;
- Two-lane direct connecting ramps are included to help carry the large volumes of traffic projected to travel from northbound SH 121 to northbound US 75 as well as from southbound US 75 to southbound SH 121. In addition, two-lane direct connecting ramps improve design-year level of service (LOS) and result in a safer facility; and
- The final design provides separate direct connecting ramps for the northbound and southbound US 75 traffic merging southbound on SH 121. Providing separate SH 121 connections improves traffic flow by eliminating merging of the two US 75 traffic streams prior to entering southbound SH 121.

Drawings of the final design encompassing the improvements are available for inspection at NTTA, 5900 W. Plano Pkwy., Plano, Texas 75093.

2.0 NEED AND PURPOSE

As documented in the 2007 Re-evaluation, the need for SH 121 is to respond to considerable on-going growth of commercial and residential development along and near SH 121 that has and will continue to produce a major travel demand on the existing transportation system. The purpose of SH 121 is to improve system linkage and mobility in the area. The final design would not alter the need and purpose documented in the 2007 Re-evaluation.

3.0 FINAL DESIGN ANALYSIS

The final design includes "loop ramps," which would keep the first level of the interchange at grade. This configuration would include frontage roads at the same elevation as the mainlanes without signalized movements within the interchange. Several entrance and exit ramps associated with the final design would be shifted to accommodate the frontage road configuration.

The five primary enhancements to the SH 121/US 75 interchange include:

- **Modifications to the vertical elevation of the US 75 mainlanes**: Under the final design, the US 75 mainlanes would remain at the current elevation. This enhancement would minimize earthwork operations, need for retaining walls, traffic detours, and construction duration.
- **Modification to the frontage road box**: The loop ramps would not require signalized intersections, thus would reduce the potential for "wrong way" movements. Multiple conflict points associated with signalized intersections would be eliminated. The loop ramp configuration would also eliminate the less than desirable "skew" of the signalized intersections.

- **Modification to ramps**: The elimination of the grade differences between the US 75 mainlanes and frontage roads would allow for the braiding of ramps and direct connectors. This braiding would help eliminate multiple weaving issues and allow for smoother traffic flow.
- **Modification to the direct connectors**: The northbound SH 121 to northbound US 75 and the southbound US 75 to southbound SH 121 direct connectors would be upgraded from one-lane to two-lanes in order to accommodate the anticipated 2030 traffic volumes. Also, northbound and southbound US 75 traffic traveling to southbound SH 121 are provided completely separate direct connector ramps. These enhancements would improve traffic flow and lane balance throughout the interchange.
- **Modification to control of access and property access location points**: Changes in control of access and allowable driveway locations would occur as part of the final design in order to accommodate the modified ramping configurations and to maximize the traffic operations of the interchange. The final design accommodates all existing driveways. Future driveway locations would be coordinated with TxDOT.

The final design specifically involves the frontage road system at the SH 121/US 75 interchange. The final design satisfies the need and purpose documented in the 2007 Re-evaluation. It results in operational efficiency and construction time savings while further enhancing safety without any additional environmental or ROW impacts. Specifically, these enhancements would result in no additional ROW and only minor longitudinal adjustments to future driveway locations.

In general, the final design would replace the frontage road box configuration developed during preliminary engineering phase with a grade separated frontage road loop ramp configuration. The following describes the advantages and disadvantages of the loop ramp configuration.

Advantages of the final design include:

- Accelerating construction time by eliminating a level of the interchange. There would not be a need to depress the US 75 mainlanes;
- Reducing construction duration and improving mobility during construction;
- Eliminating several weaving conditions along the US 75 mainlanes as mainlane ramps would be braided with the direct connector ramps;
- Providing for a safer frontage road interchange by eliminating signalized intersections and multiple intersection conflict points; and
- Providing additional enhancements that further satisfy public input and public comments received during the preliminary engineering phase as follows:

    1. As requested by the Cities of Allen, McKinney and the Town of Fairview: Braided ramp for SH 121 northbound to SH 121 northbound frontage road.
    2. As requested by the Town of Fairview and the Fairview Center Developer: Frisco Road Rd. connector.

3. As requested by the Fairview Center Developer and property owner: US 75 on-ramp from US 75 northbound frontage road.
4. As requested by the City of Allen: addition of slip ramp from US 75 southbound under the SH 121S-US 75S direct connector to the US 75 southbound frontage road.
5. As requested by the City of McKinney and Bridge Street Developer: design adjustments to the SH 121 southbound frontage road/US 75 northbound frontage road connector, US 75 northbound frontage road, and the SH 121N-US 75N direct connector to enhance driveway access along the south and west side of the Bridge Street Development within the northwest quadrant.

Disadvantages to the final design include:

- Increased travel distances for simple left-turn maneuvers; and
- Because loop ramps are uncommon in the region, adjustment by drivers to become familiar to the configuration.

4.0 DIRECT IMPACTS

This section assesses the impacts that would result from the final design process. This re-evaluation reflects the resources evaluated in the 2007 Re-evaluation and as such have been grouped into four categories: natural resources, land use, community, and other resources.

TxDOT would ensure that the NTTA would complete required mitigation, coordination, and commitments identified in the following section prior to, during, or after construction.

4.1 Natural Resources

Farmlands

The 2007 Re-evaluation concluded that no coordination with the Natural Resources Conservation Service (NRCS) would be required for the Toll Project.

The final design of the Interchange Project does not require additional ROW; therefore, there would be no impacts to farmlands above those levels disclosed and discussed in the 2007 Re-evaluation. For this reason, no additional coordination with the NRCS is required. The conclusions regarding farmlands from the 2007 Re-evaluation remain valid.

Waters of the U.S., including Wetlands

Section 404
The final design does not increase impacts to waters of the U.S., including wetlands, above the levels disclosed and discussed in the previously approved environmental documents. The 2007 Toll Re-evaluation stated that impacts to jurisdictional areas would be authorized by a Nationwide Permit (NWP) 14 – Linear Transportation Projects with a Preconstruction Notification (PCN). The estimated mitigation for the anticipated impacts was the purchase of 11.35 banking credits from a U.S. Army Corps of Engineers (USACE) approved regional mitigation bank. Of these 11.35 banking credits, none were determined to be required due to construction of the Interchange Project.

Since that time, jurisdictional areas within the project ROW were identified, characterized, and delineated in order to evaluate the jurisdictional status of the sites in November 2007 and January 2008. A total of five areas were identified. Four jurisdictional waters, totaling 1.21 acres, and one jurisdictional wetland, totaling 0.10 acre, were delineated.

During the detailed design process, bridged sections and culvert extensions were utilized to avoid or minimize impacts to jurisdictional areas. The placement of bridge columns on the direct connector and frontage road from SH 121 to U.S. 75 was evaluated to minimize temporary impacts during construction and permanent impacts to jurisdictional areas. The final design reduces the Section 404 impacts compared to what was previously disclosed in the 2007 Toll Re-Evaluation. The frontage road would utilize a bridged section to span the jurisdictional wetland. The placement of bridge columns in the wetland is not anticipated. However, if columns are placed in the wetland then this activity would be authorized by NWP 25 – Structural Discharges. The direct connect is a bridge structure, thus reducing impacts to the jurisdictional waters. Based on the described avoidance and impact minimization measures, the project would now be authorized by NWP 14, without a PCN and a NWP 25; therefore, coordination with the USACE is no longer required and compensatory mitigation is not required or proposed. Impacts to the Section 404 jurisdictional areas are detailed in **Table 1**. Waters of the U.S. beyond the ROW of the proposed project were not included in these calculations.

TABLE 1: WATERS OF THE U.S. WITHIN THE INTERCHANGE PROJECT ROW

Feature No.	Type of Potential Impact	Name	Crossing Type	Acres within Interchange Project ROW (Acres)	Approximate Permanent Impacts (Acres)	Proposed Permit
1	Water	Sloan Creek	Single and Complete	0.38	0.06	NWP 14 & NWP 25
2	Water	Tributary to Sloan Creek	Single and Complete	0.65	0.07	NWP 14 & NWP 25
3	Water	Unnamed	Single and Complete	0.03	0.01	NWP 14
4	Water	Tributary to Sloan Creek	Single and Complete	0.15	0.05	NWP 14
5	Wetland	NA	NA	0.10	<0.01	NWP 25
				Total	**0.19**	

Source: Results of waters of the U.S. and wetland delineations conducted in the spring of 2008.

A preliminary jurisdictional determination (PJD) is not required by the USACE for the design enhancements; however, a report is currently being prepared by the NTTA for project documentation purposes.

Section 401

Because the Interchange Project would not require a PCN, coordination with Texas Commission on Environmental Quality (TCEQ) for Section 401 Water Quality Certification would not be required. However, because the Interchange Project would utilize one or more NWPs, all NWP general conditions and Best Management Practices (BMPs) would be utilized in compliance with all federal, state, and local regulations.

General Condition 21 of the NWP Program requires applicants to comply with Section 401 of the Clean Water Act (CWA). Compliance with Section 401 requires the use of BMPs to manage water quality on construction sites. The Storm Water Pollution Prevention Plan (SW3P) would include at least one BMP from each of the three categories of the 401 Water Quality Certification Conditions for NWPs as published by TCEQ on April 25, 2007. These BMPs address each of the following categories:

- Category I – Erosion Control
- Category II – Sedimentation Control
- Category III – Post-construction Total Suspended Solids Control

Category I would be addressed by applying temporary reseeding (TxDOT approved seeding specifications), mulch and sod to disturbed areas. Category II would be addressed by installing silt fences combined with rock berms. Category III would be addressed by planting permanent native vegetation to create grass-lined ditches. These ditches would receive roadway runoff as sheet flow and filter it along the front slopes of

the ditches as well as the bottom of the ditches. Other approved methods may be substituted if necessary, using one of the BMPs from the identical category.

Floodplains

The 2007 Re-evaluation stated that the Toll Project would not result in floodplain impacts above those discussed in the previously approved environmental assessments and re-evaluations.

The final design of the Interchange Project does not result in floodplain impacts above those discussed in the 2007 Re-evaluation. The hydraulic design of the Interchange Project would be in accordance with the current TxDOT and FHWA policy standards. The final design of the Interchange Project does not increase the base flood elevation; and therefore, does not violate applicable floodplain regulations and ordinances. The conclusions regarding floodplains from the 2007 Re-evaluation remain valid.

Navigable Waters of the U.S.

As stated in the 2007 Re-evaluation, a navigational clearance under the General Bridge Act of 1946, Section 9 of the Rivers and Harbors Act of 1899 [administered by the U.S. Coast Guard (USCG)], and Section 10 of the Rivers and Harbors Act of 1899 (administered by the USACE) is not applicable. There are no navigable lakes, rivers, or streams within or adjacent to the Toll Project.

Similarly, Sections 9 and 10 of the Rivers and Harbors Act of 1899 do not apply to the Interchange Project. The conclusions regarding navigable waters of the U.S. from the 2007 Re-evaluation remain valid.

Vegetation and Wildlife Habitat

As stated in the 2007 Re-evaluation, it is estimated that the construction of the Toll Project would disturb approximately 11.7 acres of riparian woodland habitat. This acreage amount includes riparian woodland impacts from the Interchange Project. In accordance with a mutual agreement to coordinate highway projects with the Texas Parks and Wildlife Department (TPWD), the planting of 11.7 acres of trees was proposed as mitigation. Since approval of the 2007 Re-evaluation, the site at which mitigation would occur has changed from Lake Lavon to Lewisville Lake.

Vegetation abutting or within the ROW of the Interchange Project has not changed since approval of the 2007 Re-evaluation. The USACE Lewisville Lake office, TPWD, and the TxDOT – Dallas District have been coordinated with and are in agreement with the revised mitigation site. The NTTA has assumed the responsibility to ensure that the 11.7 acres of plantings previously committed to on behalf of TxDOT are met.

The final design of the Interchange Project does not result in impacts to unusual vegetation species or special habitat features. The Interchange Project would not impact

habitat that occurs for state or federally listed threatened or endangered species. At the public information meeting held on June 16, 2008, adjacent property owners stated a natural spring is located under the existing US 75 northbound frontage north of Sloan Creek. Subsequent inquiries verified that a natural spring occurs at that location. When US 75 was previously expanded, the spring was protected prior to the construction of the frontage road and a French drain allowed the spring to outfall into Sloan Creek.[2] The outfall is located downstream of the proposed ROW on private property. During the previous widening of US 75, an agreement between TxDOT and the property owner was reached so that the spring would be protected and continue to flow into Sloan Creek. The construction of the interchange would continue to provide for the protection of the spring in its current state allowing it to flow into Sloan Creek.

Migratory Bird Treaty Act
As stated in the 2007 Re-evaluation, the Federally listed species in Denton and Collin Counties are all avian species and considered migratory. The 2007 Re-evaluation concluded that no suitable habitat is present for the listed species.

The final design of the Interchange Project would not change the footprint of the Toll Project. Therefore, it was determined that the Interchange Project would not effect a population or habitat of any federally listed species. No active nesting activities were observed for the non-listed species and no adverse effects are anticipated because the final design of the Interchange Project would not alter the design, location, or ROW footprint of the Interchange Project.

The Migratory Bird Treaty Act states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part or in whole, without a federal permit issued in accordance within the Act's policies and regulations. Migratory patterns would not be affected by the Interchange Project. No migratory birds, streams, water bodies, woody vegetation, or other habitat that would serve as a temporary or seasonal stop for migratory birds were observed within the Interchange Project area during a site visit. In the event that migratory birds are encountered on-site during Interchange Project construction, every effort will be made to avoid take of protected birds, active nests, eggs, and/or young. The contractor would remove all old migratory bird nests from September 1 through the end of February from any structure where work will be done. In addition, the contractor would be prepared to prevent migratory birds from building nests between March 1 and August 31.

Water Quality

The 2007 Re-evaluation concluded that because there was no river or stream designated in the 2004 CWA Section 303(d) list as a threatened or impaired water along the Toll Project, and because the Toll Project was not within five miles upstream of a threatened or impaired water segment; coordination with TCEQ is not required for total maximum daily loads. The 2007 Re-evaluation also stated that no permanent water quality impacts

[2] A French drain is a ditch filled with gravel/rock that redirects surface and ground water away from an area.

are expected as a result of the Toll Project. Subsurface water would not be required for the Toll Project; therefore, no adverse impacts to groundwater are expected to occur. Existing surface drainage patterns would be maintained. The area's public water supply treatment facilities and water distribution systems would not be affected by the Toll Project.

Since approval of the 2007 Re-evaluation, the 2004 CWA 303(d) list was replaced with the 2008 CWA 303(d) list. A review of the 2008 CWA 303(d) list indicates that there are no rivers or streams designated in the 2008 CWA Section 303(d) list as threatened or impaired waters within the Interchange Project limits. In addition, the Interchange Project is not within five miles upstream of a 2008 CWA Section 303(d) threatened or impaired water segment. Therefore, coordination with TCEQ is not required for total maximum daily loads.

Temporary water quality impacts due to erosion and sedimentation would be controlled by job specifications. This includes on-site inspections during construction, use of silt fences, and by seeding during, and at the completion of the Interchange Project. TxDOT contract specifications require the contractor to minimize negative impacts to water quality at all times during construction.

The CWA makes it unlawful to discharge storm water from construction sites into waters of the U.S., unless authorized by the TCEQ's Texas Pollutant Discharge Elimination System (TPDES) General Permit. The current SH 121 construction activities within the final design of the Interchange Project comply with TCEQ requirements such as the TPDES General Permit for Construction Activity and filing and preparing a Notice of Intent (NOI) and SW3P.

Municipal Separate Storm Sewer System (MS4)
This project is located within the boundaries of the Cities of McKinney and Allen and the Town of Fairview Municipal Separate Storm Sewer System (MS4), and would comply with the applicable MS4 requirements.

The final design of the Interchange Project does not alter the ROW footprint of the Toll Project. There would be no impacts to water quality above those levels disclosed and discussed in the 2007 Re-evaluation. The conclusions regarding waters quality from the 2007 Re-evaluation remain valid.

Threatened/Endangered Species

As stated in the 2007 Re-evaluation, two federally listed species, the bald eagle (*Haliaeetus leucocephalus*) and the whooping crane (*Grus americana*), were assessed for potential effects during the environmental evaluation of the Toll Project. The 2007 Re-evaluation concluded that no suitable habitat is present for the listed species within the Toll Project limits. The Toll Project was determined to have no effect on any population or habitat of any federally listed species.

Since the 2007 Re-evaluation, the bald eagle has been delisted and is being monitored for five years. This change in listing status for the bald eagle does not change the determination made for this species during the 2007 Re-evaluation.

The TPWD was consulted to obtain the Texas Natural Diversity Database (TXNDD) for the U.S. Geological Survey (USGS) topographic maps containing the Interchange Project. Results of the TXNDD search was received and reviewed in August 2008. TPWD disclosed that because of the proportion of public versus private land in the State, the TXNDD does not include a representative inventory of rare resources in the state. As is the case for the Interchange Project, the data is dependent on the best available data and some areas of the state may appear not to have any associated data; however, this does not suggest any presence, absence, or condition of special species, natural communities, or other significant features within the Interchange Project. It also does not substitute any onsite evaluation by qualified biologist.
A list of elemental occurrences was provided by TPWD for species identified in the USGS topographic map containing the Interchange Project (McKinney West, Texas) and the surrounding quadrangle maps (McKinney East, Texas; Plano, Texas; and Wylie, Texas). No species were indicated to occur within or near the Interchange Project. Reported occurrences identified by the TXNDD include one Texas oak series (*Quercus buckleyi series*) occurrence, one heron rookery occurrence, three Little Bluestem-indiangrass Series (*Schizachyrium scoparium-Sorghastrum nutans* series) occurrences, and one American Elm-chinkapin Oak-hackberry (*Ulmus americana-quercus muhlenbergia-celtis spp. Series)* occurrence. Locations of these occurrences were not provided by the TPWD, however no series or habitat for these occurrences was found within the Interchange Project ROW or nearby areas. No effects to these occurrences are anticipated as a result of the Interchange Project. **Table 2** lists the results of the TXNDD search and element occurrence identification (EOID) numbers for the McKinney West, Texas; McKinney East, Texas; Plano, Texas; and Wylie, Texas USGS topographic maps.

TABLE 2: TEXAS NATURAL DIVERSITY DATABASE SEARCH RESULTS

Common Name	EOID	Distance from Interchange Project (Feet)
Texas Oak Series	2487	NA*
Heron rookery	7731	NA*
Little Bluestem-indiangrass Series	988, 4573, 2718, and 2719	NA*
American Elm-chinkapin Oak-hackberry Series	3578	NA*

Source: TPWD TX NDD (August 15, 2008)
*NA: no element of occurrence report or Geographical Information System (GIS) information was available for this species.

The final design of the Interchange Project does not alter the ROW footprint of the Toll Project; therefore, no effects would occur to species that are historically found within Collin County, Texas. The conclusions regarding threatened and endangered species from the 2007 Re-evaluation remain valid.

4.2 Land Use

Section 4(f) Properties

The 2007 Re-evaluation stated that the Toll Project would not require the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge or historic sites of national, State or local significance; therefore, a Section 4(f) evaluation would not be required. There would be no Section 4(f) properties impacted by the proposed Toll Project.

The final design of the Interchange Project does not alter the ROW footprint of the Toll Project. The final design of the Interchange Project does not require the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge or historic sites of national, State or local significance.

The conclusions regarding Section 4(f) properties from the 2007 Re-evaluation remain valid.

4.3 Community

Relocation/Displacements

The 2007 Re-evaluation stated that the Toll Project would not result in relocations or displacements. The final design of the Interchange Project would not alter the ROW footprint of the Toll Project and therefore would not result in displacement or relocations. The conclusions regarding relocation/displacements from the 2007 Re-evaluation remain valid.

Public Facilities and Services

The 2007 Re-evaluation stated that the Toll Project would not adversely impact any public facilities or services. However, emergency and transit vehicles using the SH 121 frontage roads would experience longer travel times than those using the tolled SH 121 mainlanes due to a lower posted speed limit and traffic signals along the frontage roads. Emergency and transit vehicles would be exempt from toll charges.

The Medical Center of McKinney is located adjacent to the Interchange Project and east of the SH 121/US 75 interchange. The final design of the Interchange Project does not require any additional ROW thus does not impact access to the medical center. The final design of the Interchange Project does not impact any public facilities or services located within the Cities of McKinney and Allen, or the Town of Fairview. The final design of the Interchange Project does not prohibit access to or use of any public facility or service. The conclusions regarding public facilities and services from the 2007 Re-evaluation remain valid.

Traffic Operations

The 2007 Re-evaluation made a comparison of non-toll and toll traffic volumes to determine the extent of traffic redistribution due to the Toll Project. The Toll Project was divided into three sections according to current development and usage: 1) DNT to Coit Rd., 2) Coit Rd. to Alma Dr., and 3) Alma Dr. to the SH 121/US 75 interchange. Analysis of the average daily traffic revealed that approximately seven percent of the mainlane volume (10,000 vehicles per day) between DNT and Coit Rd. would be redistributed to the frontage road/local arterial system due to the proposed Toll Project. Between Coit Rd. and Alma Dr. approximately 29 percent of the mainlane vehicles (41,200 vehicles per day) redistributed to the frontage roads and local transportation network. Finally, the section between Alma Dr. and US 75, approximately 28 percent of the mainlane traffic (39,400 vehicles per day) would be redistributed to the frontage roads and local transportation network.

In order to properly analyze the effects of this traffic redistribution on the local transportation network, 16 local arterials were analyzed for changes in traffic volume due to the Toll Project. The 2007 Re-evaluation concluded that overall, the redistribution of traffic is evenly dispersed along the local transportation network and no single roadway encounters substantial increases in vehicular traffic.

Because the Interchange Project does not include any changes to the tolling aspect of the Toll Project, the conclusions regarding traffic operations from the 2007 Re-evaluation remain valid.

In order to determine potential impacts to traffic operations stemming from the final design of the Interchange Project, a comparison of traffic operations was performed during this re-evaluation to determine if the final design improves operations within the interchange.

A microscopic traffic simulation using the VISSIM computer model was performed for the final design and approved design concept and design scope.[3] The computer model was calibrated using existing traffic counts and travel time runs collected on SH 121 and US 75 during the peak hour. By adjusting driver parameters, the model was then calibrated and validated for travel times and traffic volumes. The microscopic simulation of the final design revealed:

- The traffic simulation does not show any substantial bottleneck locations at the SH 121/US 75 interchange including direct connectors, ramps, and mainlanes;

[3] Microscopic traffic simulation is the tool used for the design, analysis, and evaluation of intelligent transport systems. Microscopic simulation modeling is used for analyzing transportation scenarios down to the level of individual travelers and generally includes physical components, such as the roadway network, traffic control systems, driver-vehicle units, etc. VISSIM is the microscopic, behavior-based multi-purpose traffic simulation program used in the SH 121/US 75 interchange project.

- The Eldorado Pkwy. interchange shows congestion on all approaches. Traffic exiting US 75 at Eldorado Pkwy. backs up onto the frontage road. None of this traffic backs up onto the ramp or the mainlanes; and
- Frontage road loop ramps at the interchange show smooth traffic operations.

Conversely, the simulation of the approved design concept and design scope revealed:

- The Eldorado Pkwy. interchange shows congestion on all approaches; traffic exiting US 75 to Eldorado Pkwy. backs up onto the ramp and mainlanes due to close proximity of the off-ramp to the signalized intersection;
- Traffic weaving issues on the mainlanes at several of the short weaving sections;
- The northbound SH 121 off-ramp to Medical Center Dr. is approximately 300 feet (ft) from the intersection. This poses a safety and operations problem for turning traffic;
- At the frontage road box, traffic experiences interrupted flow at the intersections; and
- High volume direct connectors between US 75 north of SH 121 and SH 121 south of US 75 are one-lane ramps that are close to capacity.

The relocation of ramps would eliminate the short weaving sections on the mainlanes. Off-ramp adjustments at Eldorado Pkwy. and Medical Center Dr. would provide queuing on the frontage road, as opposed to backing up onto ramp and mainlanes.[4] Traffic exiting to Eldorado Pkwy. would be shared between two off-ramps (from US 75 mainlanes and the direct connector). Additionally, off-ramps at Hardin Blvd. and Ridgeview Dr. would provide improved frontage road access. Dedicated turn lanes along the US 75 frontage road at Medical Center Dr. would accommodate the high turning traffic volumes. Loop ramps would provide continuous frontage road movement versus interrupted traffic flow in a box configuration.

According to the microscopic traffic simulation using the VISSIM computer model, the final design improves traffic operations without additional environmental impacts.

Traffic Noise

As stated in the 2007 Re-evaluation the previously approved traffic noise analyses concluded that the project would result in a traffic noise impact with no feasible and reasonable abatement. Although new development occurred within the Toll Project area, none of the development adjacent to the Toll Project would be impacted by traffic noise or would benefit from any feasible and reasonable noise abatement.

The 2007 Re-evaluation also included an analysis of the potential effects of the redistribution of traffic on SH 121 from tolled mainlanes to non-tolled frontage roads. These effects were determined by the associated change (increase or decrease) in sound pressure [noise] levels expressed in decibels (dB). Although the Toll Project would result in an increase in the average daily traffic (ADT) on many of the non-tolled frontage roads, any increase in traffic noise levels associated solely with an increase in traffic on

[4] Queuing refers to vehicles forming a line.

the frontage roads would be offset by the greater decrease (in ADT) in faster (louder) traffic on the tolled mainlanes. The result would be an overall decrease in traffic noise levels for areas along/adjacent to SH 121.

The Interchange Project would continue to result in traffic noise impacts at the manufactured home park located along US 75 approximately 0.5 mile north of Ridgeview Dr. However, no noise abatement measure (i.e., traffic management, alteration of horizontal or vertical alignment, buffer zone, or noise barrier) is feasible or reasonable; therefore, no noise abatement measure is proposed for the Interchange Project.

The final design of the Interchange Project does not include any changes to the tolling aspect of the Toll Project or alter the location or ROW footprint; therefore, the conclusions regarding traffic noise from the 2007 Re-evaluation remain valid.

A current land use analysis indicated that the undeveloped land adjacent to the Interchange Project is zoned mostly for commercial and agricultural uses with the exception of one area zoned for single-family residential use. This area is located at the northeast corner of Medical Center Dr. and Spur (SP) 399 within the Golf Club of McKinney golf course. The 2030 traffic noise contours for this area, indicates that the noise abatement criteria (NAC) category B impact contour is located along the ROW. NAC as established by the FHWA for various land use activity is displayed in **Table 3.**

TABLE 3: FHWA NOISE ABATEMENT CRITERIA

Activity Category	dBA Leq	Description of Land Use Activity Areas
A	**57 (exterior)**	Lands on which serenity and quiet are of extra-ordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	**67 (exterior)**	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	**72 (exterior)**	Developed lands, properties or activities not included in categories A or B above.
D	**--**	Undeveloped lands.
E	**52 (interior)**	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

NOTE: primary consideration is given to exterior areas (Category A, B or C) frequently used by humans. However, interior areas (Category E) are used if exterior areas are physically shielded from the roadway, or if there is little or no human activity in exterior areas adjacent to the roadway.

Air Quality

As stated in the 2007 Re-evaluation, the Toll Project is located in Denton and Collin Counties, which are part of the Environmental Protection Agency's (EPA) designated 8-hour, nine county nonattainment area for the pollutant ozone. The proposed SH 121 facility (as toll) was consistent with the area's financially constrained long-range plan known as *Mobility 2030* and the amended 2006-2008 Statewide Transportation Improvement Program (STIP)/TIP. The U.S. Department of Transportation (U.S. DOT)

found the *Mobility 2030* and amended FY 2006-2008 TIP to conform to the State Implementation Plan (SIP) on June 12, 2007.

The 2007 Re-evaluation concluded that the on-road emissions are anticipated to decrease over time due to the implementation of EPA regulations to improve vehicle technology and fuel. Overall, mobile source air toxics (MSAT), carbon monoxide (CO) and precursors to ground-level ozone [Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOCs)] emissions are anticipated to decrease.

As stated in the 2007 Re-evaluation, a traffic air quality analysis (TAQA) was conducted in accordance with the *TxDOT 2006 Air Quality Guidelines*. The local CO concentrations were modeled using CALINE3 and MOBILE6.2 and factoring in adverse meteorological conditions. It was concluded that the local concentrations of CO are not expected to exceed National Ambient Air Quality Standards (NAAQS) at any time.

The 2007 Re-evaluation included a quantitative analysis of the mass of air toxic emissions was completed using the latest version of the EPA's mobile emission factor model (MOBILE6.2). The MSAT study area was composed of the affected transportation network. The affected transportation network included the Toll Project network links and other transportation model links reflecting a plus or minus five or greater percent change in traffic volume between the Build and No-Build scenarios for the years 2015 and 2030. The plus or minus five percent threshold was adopted as the basis to determine the affected transportation network study area and was coordinated with and approved by FHWA. It was concluded that although the Vehicle Miles of Travel (VMT) for the SH 121 Build-Toll scenario would increase approximately 93 percent by 2030 when compared to 2007, total MSAT emissions for the same scenario would decrease at least 51 percent by 2030.

The final design of the Interchange Project consists of a loop ramp configuration. The loop ramp configuration would eliminate the need to depress the US 75 mainlanes reducing the number of interchange levels from five to four. The loop ramp configuration would include braided ramps without signalized intersections. Because the final design of the Interchange Project does not require depressing of the US 75 mainlanes, potential construction impacts to air quality would be further minimized due to a reduction of earthwork operations, traffic detours, and construction duration. In addition, the final design of the Interchange Project is likely to reduce emissions by improving traffic flow as signalized intersections are eliminated all together and several short weaving conditions are consequently eliminated. The traffic analysis for the final design configuration discussed in detail in the traffic section concludes the following operation improvements:

- Elimination of significant bottleneck conditions within the interchange, including direct connectors, ramps, and mainlanes;
- Improvement of the LOS at the SP 399 and Medical Center Dr. intersection;

- Improvement for traffic exiting from northbound US 75 to Eldorado Pkwy. as the breakdown of traffic flow would be limited to the frontage road instead of onto the ramps and the mainlanes;
- Elimination of short weaving conditions;
- Elimination of interrupted traffic flow; and
- Upgrading of the direct connects between SH 121 and US 75 north of SH 121 from one-lane to two-lanes.

Transportation conformity is a federal requirement for nonattainment areas which involves air quality analyses that include federally funded transportation projects, or transportation projects requiring federal approval, programs, and policies identified in the area transportation plan and transportation improvement program. The transportation conformity emissions estimate for the area must be below the prescribed motor vehicle emission budgets (MVEB) outlined in the State's air quality plan.[5]

The Interchange Project is located in Collin County, which is part of the EPA designated 8-hour, nine county nonattainment area for the pollutant ozone; therefore, the transportation conformity rule applies. The proposed action is consistent with the area's financially constrained Metropolitan Transportation Plan *Mobility 2030* (MTP) and the 2008-2011 TIP, as revised, as proposed by the NCTCOG. The U.S. Department of Transportation (FHWA/FTA) found the MTP to conform to the SIP on June 12, 2007, and the 2008-2011 TIP was found to conform on October 31, 2007. All projects in the NCTCOG's TIP that are proposed for federal or state funds were initiated in a manner consistent with federal guidelines in Section 450, of Title 23 Code of Federal Regulations (CFR) and Section 613.200, Subpart B, of Title 49 CFR. Energy, environment, air quality, cost, and mobility considerations are addressed in the programming of the TIP. The appropriate MTP/TIP pages are located in **Appendix B**.

Traffic Air Quality Analysis
Because the final design of the Interchange Project does not involve an increase in mainlane capacity, it can be concluded that as stated in the 2007 Re-evaluation, local concentrations of CO for the final design of the Interchange Project are not expected to exceed the NAAQS. The conclusions regarding TAQA from the 2007 Re-evaluation remain valid.

Congestion Management Process
Congestion Management Process (CMP) refers to several methods of roadway management. Included in the process are Intelligent Transportation Systems (ITS), Transportation System Management (TSM), and Travel Demand Management (TDM). These programs seek to improve traffic flow and safety through better operation and management of transportation facilities. Additionally, these programs provide low cost solutions that can be constructed in less time and provide air quality benefits to the

[5] The motor vehicle emissions budget, when found adequate by EPA, establishes a ceiling for emissions from the on-road sources.

region. The Interchange Project was developed from the NCTCOG operational CMP, which meets all requirements of 23 Code of Federal Regulations (CFR) § 500.109.

Committed congestion reduction strategies and operational improvements considered to be beneficial to the Interchange Project within its limits would consist of new roadways, bottleneck removal, and ITS projects. TxDOT, under the Congestion Mitigation and Air Quality Improvement Plan (CMAQ) program, would manage these projects, which are included in the regional CMP and TIP. The interchange related projects are listed in **Table 4**.

TABLE 4: OPERATIONAL IMPROVEMENTS

Location	Type	Implementation Year	Funding Source	TIP #	Cost
SH 289 (Preston Rd.)	New roadway	unavailable	TXDOT	12231.0000	unavailable
Hardin Blvd. at SH 121	Citywide signal system video detectors and communication (ITS)	2006	City of McKinney	11455.0000	$1,021,500
FM 720	New roadway	unavailable	City of McKinney	81415.0000	unavailable
South of Eldorado Pkwy.	Bottleneck removal	unavailable	TXDOT	52470.0000	unavailable
SP 399 at Medical Center Dr.	Citywide signal system video detectors and communication (ITS)	2006	City of McKinney	11455.0026	$1,021,500

Source: NCTCOG, http://nctcog.org/, Transportation Improvement Program Information System (TIPINS) (May 2008).

As stated in the 2007 Re-evaluation, in an effort to reduce congestion and the need for single vehicle occupancy (SOV) lanes in the region, TxDOT and NCTCOG would continue to promote appropriate congestion reduction strategies through the CMAQ program, the CMP, and the MTP.

Mobile Source Air Toxics

The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSAT in the context of highway projects. While MOBILE6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE6.2 is a trip-based model for which emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip, MOBILE6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale highway projects, and cannot adequately capture emissions effects of smaller highway projects (i.e., safety enhancements at the interchange). For this reason, MSAT loads resulting from the final design of the Interchange Project were not evaluated.

Regardless, emissions would likely be lower than present levels in the future year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020, and even more than these reductions when factoring in the 2007 MSAT rule. Local conditions may differ from these national projections in terms of fleet mix, vehicle turnover rates, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great that MSAT emissions in the study area are likely to be lower in the future in all cases.

Because the final design of the Interchange Project does not result in any meaningful changes in traffic volumes, vehicle mix, location of existing roadways, or any other factor that would cause an increase in emissions impacts, the final design of the Interchange Project is considered to have low potential for an increase in MSAT. The MSAT loads reported in the 2007 Re-evaluation remain valid.

Lighting and Visual Impacts

The 2007 Re-evaluation concluded that toll gantries are an additional visual element associated with the Toll Project. The gantries would include various components of video enforcement equipment such as cameras, lighting, and an interface with the electronic toll transponders. Although additional lighting would be incorporated as part of the violation enforcement system, these additional lighting components would add minimal lighting in comparison to the lighting structures previously planned. The gantry lighting design, although not complete at this time, would be designed to minimize glare and ambient lighting.

The final design of the Interchange Project does not alter the location of the gantries previously approved. Because the final design of the Interchange Project reduces the number of levels of the interchange from five to four, by maintaining the US 75 mainlanes at grade, the visual impacts due to the height of the interchange would remain relatively unchanged. The NTTA's *System Wide Design Guidelines* would be utilized to enhance the visual appearance of the interchange to ensure consistency with the rest of the SH 121 corridor.

As stated in the 2007 Re-evaluation, the gantry lighting would be designed to minimize glare and ambient lighting. The conclusions on lighting and visual impacts from the 2007 Re-evaluation remain valid.

Socio-economic Impacts

Community Cohesion
As stated in the 2007 Re-evaluation, the Toll Project would not adversely affect community cohesion. Community cohesion refers to the aggregate quality of a residential area. The Toll Project is not anticipated to disturb local neighborhoods and businesses. Frontage roads have been constructed between DNT and US 75; thus, the Toll Project would not impinge community cohesion. The Toll Project would not affect, separate, or isolate any distinct neighborhoods, ethnic groups, or other specific groups.

The final design of the Interchange Project does not result in impacts to community cohesion as the final design of the Interchange Project does not affect, separate, or isolate any distinct neighborhoods, ethnic groups, or other specific groups. The conclusions regarding community cohesion from the 2007 Re-evaluation remain valid.

Limited English Proficiency (LEP) Populations
As stated in the 2007 Re-evaluation the "Ability to Speak English," for the population five years and older indicates 4.7 percent of the population within the 10 census tracts along the Toll Project limits speaks English "Not Well" or "Not at All." In a windshield survey along the Toll Project limits, English was the only language observed on billboards and signs. Preparation for the July 2006 public meeting and February 2007 public hearing included published announcements in local papers, including the Spanish publication *Al Dia*, which informed citizens of the opportunity to request an interpreter (for language or other special communication needs) to be present at the public meetings. Steps were taken to ensure that Limited English Proficiency (LEP) populations had meaningful access to the programs, services, and information that TxDOT provides.

Preparation for the final design public information meeting held in June 2008 included published announcements in local papers, including the Spanish publication *Al Dia*, which informed citizens of the opportunity to request an interpreter (for language or other special communication needs) to be present at the meeting. Such steps would continue to be taken to ensure that such persons have meaningful access to the programs, services, and information that TxDOT and the NTTA provides.

Access
As stated in the 2007 Re-evaluation, access to the mainlanes of SH 121 would be limited to those who elect or can only on occasional basis afford to pay the toll. Under normal operating conditions, motorists (including emergency vehicles) using the frontage roads would experience longer travel times than motorists using the tolled mainlanes due to a lower posted speed limit and traffic signals along the frontage roads. According to traffic data and Complete Performance Reports generated by the NCTCOG, the frontage road system showed an increase in total delays (signalized delays and congestion delays) under a Toll scenario (20,992.17 hours of delay/day under the Toll scenario vs. 20,514.72 hours of delay/day under the Non-Toll scenario).

It was also concluded that the difference in travel times between the tolled mainlanes and the non-tolled frontage roads would be the highest during peak periods of travel when traffic congestion within the SH 121 project limits would be the greatest. However, the overall added capacity the on-going and remaining construction provides would relieve traffic congestion for all motorists using SH 121 whether they use the mainlanes or frontage roads compared to the existing facility. Furthermore, motorists would have access to the same number of non-toll lanes within the proposed Toll Project limits (i.e. frontage roads) as currently exist.

The final design of the Interchange Project does not alter the location of the toll gantries, the toll rates, or the method of toll collection of the Toll Project. The conclusions regarding access from 2007 Re-evaluation remain valid.

Although no additional ROW would be required by the final design of the Interchange Project, the final design does require changes in control of access, allowable driveway locations, and ramp locations. However, the final design does not cause a loss of driveway access to any property. The final design accommodates all existing driveways. Future driveway locations would be coordinated with TxDOT. The microscopic simulation for the final design does not result in any noticeable changes in travel time and only minimal additions to the travel distances on select movements. Additionally, the LOS is maintained or improved. Although change in travel routes are anticipated (i.e., utilizing the frontage roads instead of the direct connectors when traveling from the south to the northwest quadrant of the interchange), no negative impacts to access are anticipated due to the final design of the Interchange Project.

Throughout the design process, the NTTA has communicated the final design to the affected property owners. A complete list of meetings is available in **Section 8.0 – Public Involvement**.

Transit Usage
SH 121 is located within the Collin County Area Regional Transit (CCART) service area. CCART serves the elderly, school districts, and public transportation needs with over 1,000,000 miles of service per year provided in Collin County. CCART's service is open to the public, and all persons desiring transit have an equal opportunity for this service. There are no regularly scheduled trips along SH 121 between FM 423 and SH 121 at US 75 interchange; scheduling is on a first-contact, first-served basis. The Interchange Project is not expected to adversely affect transit usage.

The conclusions on transit usage from the 2007 Re-evaluation remain valid.

Economic Impact of Tolling

As stated in the 2007 Re-evaluation, assuming that the toll rate would be set at 14.5 cents per mile and that the average household would make 250 round-trips per year.[6] Under this scenario, the annual cost to use the entire 12.5-mile tolled section of SH 121 would be approximately $906 per year. A user with an annual household income equal to the median household income of Collin County ($70,835) would spend less than two percent (1.2 percent) of their annual household income on SH 121 tolls. However, households with incomes at the poverty level of $20,650 (for a family of four) would spend 4.3 percent of the annual household income on SH 121 tolls, approximately 3.1 percent more than the median Collin County household. Toll road users might decide to reduce their personal economic impact of tolls by carpooling or using transit, where tolls would be divided among many travelers or waived for the transit provider.

[6] Average number of work trips per year based on tolling industry observations provided by the NTTA.

Because an electronic toll collection (ETC) system would be implemented along SH 121, the facility would not offer "on site" or automated cash payment options through toll booths, toll plazas, toll stations, or toll gates. Instead, other methods of toll collection would be implemented. The 2007 Re-evaluation included a comparison of payment methods summarized as follows:

- Not maintaining a prepaid account would impact any user, including low-income users, because the cost of paying the accumulated toll charges without an account would represent a higher toll rate than toll charges affiliated with a prepaid account.
- Cash payment options are available for each payment method; however, only those users who maintain automatic and manual pay prepaid accounts would benefit from reduced toll rates compared to the video billing policy.

In summary, toll rates are generally one-third more for drivers who do not have an electronic toll transponder to offset the costs related to processing the license plate information associated with video billing. Although certain toll transponder account holders are required to pay up-front fees or deposits for toll transponders ($9.65 fee per transponder for TxTag® accounts and $25 deposit for TollTag® "cash users" accounts), the toll transponder account holders would benefit from lower toll rates compared to the total toll rates associated with video billing. In other words, the up-front fees associated with toll transponders may be offset through time when considering the premium and processing fees affiliated with the video billing method of payment.

The final design of the Interchange Project does not alter the location of the toll gantries, the toll rates, or the method of toll collection of the Toll Project. The economic impacts of tolling disclosed in the 2007 Re-evaluation remain valid.

Environmental Justice

As stated in the 2007 Re-evaluation, no significant direct environmental justice impacts would result from the Toll Project. Although the study area contains a total minority population of 23.3 percent, the impacts would not be isolated within a limited number of census tracts, but would be distributed among all users of the SH 121 facility. Low-income populations would be impacted by toll rates, toll collection, and other matters associated with user fees. Should a low-income person be unable to pay the toll and/or utilize Non-Toll alternatives, this may result in a difference of time travel associated with utilizing Non-Toll alternatives. In addition, the economic impact of tolling would be higher for low-income users because the cost of paying tolls would represent a higher percentage of household income than for non-low-income users. However, toll road users (including environmental justice populations) might decide to reduce their personal economic or time travel impact of tolls by using transit, where tolls would be waived for the transit provider.

The final design of the Interchange Project does not alter the location of the toll gantries, the toll rates, or the method of toll collection of the Toll Project. No impacts to environmental justice populations are anticipated beyond those previously identified in

the 2007 Toll-Revaluation. The conclusions on environmental justice from the 2007 Re-evaluation remain valid.

Origin-Destination Analysis
As stated in the 2007 Re-evaluation, origin-destination (O&D) data secured from the NCTCOG was used for further analysis of "user impacts" of the tolling of SH 121 on low-income and minority populations. Studying O&D data can estimate travel patterns of traffic along a transportation facility during a typical day. This form of analysis is useful in assessing "user impacts" as the number of trips associated with specific population characteristics can be studied to provide general travel assumptions of those specific populations. Trips were defined as a one-way movement from where a person starts (origin) to where the person is going (destination). The study area of the O&D analysis essentially consisted of the NCTCOG MPA. Given regional operating characteristics of SH 121, it was reasonable to assume the NCTCOG MPA contained the SH 121 daily users. This study area consists of 5,000 square miles and encompasses five entire counties (Collin, Dallas, Denton, Rockwall, and Tarrant Counties) and four partial counties (Ellis, Johnson, Kaufman, and Parker Counties).

Analysis Assumptions and Limitations
To clarify the intent of the O&D analysis, the analysis does not attempt to identify specific users (low-income and minority populations) but instead compares the origins and intensity origins of trips based on collective socio-economic characteristics at the traffic serial zones (TSZs) level for both the Toll and Non-Toll scenarios. In other words, the O&D analysis predicts the potential users of the SH 121 corridor in 2030 by correlating the general socio-economic characteristics of the future users based on *Census 2000* data to the intensity of use quantified by the number of trips per TSZ generated by TransCAD®. NCTCOG conducted a "select-link analysis" based on 2030 AM peak period traffic.

The model distinguishes between Toll and the Non-Toll scenarios by identifying the "toll links." These "toll links" are assigned a cost per mile for the Toll scenario and no cost per mile for the non-toll scenario. The model then assigns vehicle trips based on user cost, trip distance, time of day, and other factors to achieve system equilibrium in the network. For trip assignment purposes, if a facility has only tolled lanes and no free mainlanes, then the trip assignment is only for the toll facility. If the facility has existing free mainlanes and the project is adding managed toll lanes, then the trip assignment data is for both the toll and free mainlanes. The correlation of *Census 2000* and TransCAD® data is the best available method to identify which TSZs would originate trips anticipated to utilize the SH121 facility (at least one trip per day) and the general demographics of the population associated with those TSZs. However, the vehicle trip assignment process does not consider relative income differences or the differences in relative costs to potential users in the population when making trip assignments. Because no definitive data exists on the future users of SH 121 or similar type facilities, the O&D analysis cannot predict the specific race, ethnicity, or economic status associated with the predicted trips on Toll or Non-Toll facilities. However, the O&D analysis can identify a

potential difference in trip intensity by comparing Toll and Non-Toll scenario TSZ trip percentages.

Analysis Results

The O&D analysis revealed anticipated users and associated travel patterns in 2030 and identified environmental justice populations in order to assess the intensity of use by those protected populations.

Results of the O&D analysis indicated that of approximately 73,743 total trips which originated from TSZs anticipated to utilize SH 121 (at least one trip per day) in the Toll scenario; approximately 5.4 percent (4,012 trips) of the total trips originated from environmental justice (EJ) TSZs. For the Non-Toll scenario, the total number of trips generated by TSZs anticipated to utilize SH 121 (at least one trip per day) is approximately 73,287. Approximately 5.7 percent, or 4,246 trips, originating from EJ TSZs are projected to utilize the Non-Toll SH 121 facility (at least one trip per day). The relatively low EJ TSZ trip percentage for the Non-Toll and Toll scenarios suggested that a majority of trips anticipated to utilize the proposed SH 121 toll facility (at least one trip per day) would not originate from areas identified with high concentrations of environmental justice populations within the study area. The projected EJ TSZ Non-Toll and Toll overall trip percentages indicated that environmental justice populations may utilize SH 121 (at least one trip per day).

As indicated in the O&D analysis results, a majority of trips anticipated to utilize the toll facility (at least one trip per day) would not originate from areas identified with high concentrations of environmental justice populations. O&D data based on projected trips indicated that EJ TSZs would utilize SH 121 (at least one trip per day) as a Toll or Non-Toll facility.

The final design of the Interchange Project does not alter the location of the toll gantries, the toll rates, or the method of toll collection of the Toll Project. The conclusions regarding the O&D analysis from the 2007 Re-evaluation remain valid.

The final design of the Interchange Project does not result in any disproportionately high and adverse impacts to low-income or minority populations. The benefits associated with the final design of the Interchange Project includes: accelerated construction of the interchange, a reduction in the number of detours and lane closures along US 75, elimination of several weaving problems along the US 75 mainlanes, and provision of a safer frontage road interchange. The final design of the Interchange Project benefits users of the interchange and adjacent populations as a result of improved system linkage and mobility within the study area and region.

Although change in travel routes are anticipated (i.e., utilizing the frontage roads instead of the direct connectors when traveling from the south to the northwest quadrant of the interchange), no negative impacts to access are anticipated due to the final design of the Interchange Project. The conclusions regarding socio-economic impacts from the 2007 Re-evaluation remain valid.

4.4 Other

Hazardous Materials

During the 2007 Re-evaluation, a thorough investigation of public records and initial site assessments were performed for the Toll Project ROW to identify possible hazardous materials within the Toll Project limits. Based on the results received from the data base search and site assessments, there were no properties found within the Toll Project limits that were considered "at risk" of contamination from hazardous materials. The 2007 Re-evaluation concluded that there are no anticipated hazardous material impacts from the Toll Project.

In June 2008, a review of the available databases on the EPA and TCEQ websites was performed to determine if any new listed sites are within the Interchange Project limits. No new sites were located within the Interchange Project limits. There are two sites near the Interchange Project limits. One Resource Conservation Recovery Act site (TXD988081196) is located near Eldorado Pkwy. east of US 75. The other, a manufactured home park, has a National Pollutant Discharge Elimination System (NPDES) permit (TX0066737) and is located south of SH 121 and east of US 75. Due to their locations, neither site would pose a potential problem for the construction of the Interchange Project. The conclusions regarding hazardous materials from the 2007 Re-evaluation remain valid.

The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area. The use of construction equipment within environmentally sensitive areas such as streams or wetlands would be minimized or eliminated entirely. All construction materials used for the Interchange Project would be removed as soon as the work schedules permit. Any unanticipated hazardous materials and/or petroleum contamination encountered during construction would be handled according to applicable federal, state, and local regulations per TxDOT Standard Specifications.

Cultural Resources

Historical Sites

As stated in the 2007 Re-evaluation, TxDOT determined that there are no historic-age resources eligible for NRHP within the Toll Project area of potential effect (APE). There is one Official Texas Historical Marker (OTHM) commemorating the Rowlett Creek Baptist Church and Cemetery located within the APE. The marker would not need to be relocated due to the final design of the Interchange Project.

Because the final design of the Interchange Project does not alter the location or ROW footprint of the Toll Project, there would be no impacts to historic properties; therefore, individual coordination with State Historic Preservation Officer (SHPO) would not be required for the Interchange Project. The conclusions regarding historic sites from the 2007 Re-evaluation remain valid.

Archeological Sites
As stated in the 2007 Re-evaluation, the SHPO/Texas Historic Commission (THC) concurred with TxDOT on October 9, 1991 that no sites of archeological significance are located within the FM 423 to SH 121 at US 75 interchange APE. The 2007 Re-evaluation also stated that one cemetery, the Rowlett Creek Cemetery, is located in the vicinity of the SH 121 between FM 423 to SH 121 at US 75 interchange.

Rowlett Creek Cemetery is located approximately four miles from the Interchange Project; therefore, it is anticipated that the cemetery would not be affected by the final design of the Interchange Project. Because the final design of the Interchange Project does not alter the location or ROW footprint of the Toll Project, there would be no impacts to archeological resources; therefore, the conclusions regarding archeological sites from the 2007 Re-evaluation remain valid.

A TxDOT archeologist evaluated the potential for the proposed undertaking to affect archeological historic properties (36 CFR § 800.16(l)) or State Archeological Landmarks (SAL) (13 TAC 26.12) in the APE. The APE comprises the existing ROW within the project limits and any areas of new ROW or easements. The APE extends to a maximum depth of 20-30 ft below the modern ground surface. Section 106 review and consultation proceeded in accordance with the First Amended Programmatic Agreement (PA) among the FHWA, TxDOT, the Texas SHPO, and the Advisory Council on Historic Preservation (ACHP) Regarding the Implementation of Transportation Undertakings (PA-TU), as well as the Memorandum of Understanding (MOU) between THC and TxDOT. The following documentation presents TxDOT's findings and explains the basis for those findings.

An intensive survey of the area APE was performed by Parsons Brinckerhoff under Texas Antiquities Permit No. 3430. This survey revealed no archeological historic properties within the proposed undertaking's APE.

Pursuant to Stipulation VI of the PA-TU, TxDOT finds that the APE does not contain archeological historic properties (36 CFR § 800.16(l)), and thus the proposed undertaking would not affect archeological historic properties. The project does not merit further field investigations. Project planning can also proceed, in compliance with 13 TAC 26.20(2) and 43 TAC 2.24(f)(1)(C) of the MOU. If unanticipated archeological deposits are encountered during construction, work in the immediate area will cease, and TxDOT archeological staff will be contacted to initiate post-review discovery procedures under the provisions of the PA and MOU.

Items of a Special Nature

Airway-Highway Clearance
During the 2007 Re-evaluation it was concluded that there are no aircraft clearance issues associated with the Toll Project.

The Interchange Project is located approximately 14,000 ft from the Collin County Regional Airport. The airport has one runway, parallel to US 75, which is approximately 7,030 ft in length. The vertical alignment of the final design of the Interchange Project would not exceed a slope of 100 to 1 from the Collin County Regional Airport. Therefore, aircraft clearance issues are not associated with the Interchange Project.

The conclusions on airway-highway clearance from the 2007 Re-evaluation remain valid.

Coastal Zone Management Plan
As stated in the 2007 Re-evaluation, the Toll Project is not located within the Texas Coastal Zone Management Program boundary; therefore, the Toll Project is not subject to the guidelines of the associated plan.

Similarly, the Interchange Project is not located within the Texas Coastal Zone Management Program boundary; therefore the conclusions regarding the Coastal Zone Management Plan from the 2007 Re-evaluation remain valid.

Essential Fish Habitat
The Magnuson-Stevens Fishery Conservation and Management Act, as amended on October 11, 1996, directs that all Federal agencies, whose actions would impact fish habitat, must consult with the National Marine Fisheries Service regarding potential adverse impacts. This requires any project that receives federal funding to address potential impacts to essential fish habitat. As concluded in the 2007 Re-evaluation, due to the nature and location of the Toll Project, essential fish habitat would not be impacted.

Similarly, due to the nature and location of the Interchange Project, the conclusions on essential fish habitat from the 2007 Re-evaluation remain valid.

Wild and Scenic Rivers
As stated in the 2007 Re-evaluation, there are no wild and scenic rivers in the Toll Project area; therefore, there would be no impacts to a river designated as a component or proposed for inclusion in the national system of Wild and Scenic Rivers.

Similarly, there are no wild and scenic rivers within the Interchange Project limits; therefore, the conclusions regarding wild and scenic rivers from the 2007 Re-evaluation remain valid.

5.0 INDIRECT IMPACTS

5.1 Project Level Indirect Impact Analysis

During the 2007 Re-evaluation the geographic boundaries of the indirect effects study area for the project level indirect impacts analysis were determined to be US 75 on the east, Eldorado Pkwy. on the north, the DNT on the west, and Legacy Dr. on the south.

The potential indirect impacts of the Toll Project are related to community issues, including environmental justice populations. Community related impacts studied in the 2007 Re-evaluation included effects to air quality, public facilities and services, traffic operations, traffic noise, and environmental justice populations. Because the final design of the Interchange Project does not alter either the ROW (footprint of the roadway) or need and purpose of the Interchange Project, no additional project level indirect impacts to the indirect impacts study area are anticipated.

However, since approval of the 2007 Re-evaluation, NCTCOG performed an indirect impacts analysis at the regional level to determine the indirect effects of tolling and the managed/high occupancy vehicle (HOV) system. Results of the analysis are presented below.

5.2 Regional Toll and Managed/HOV System Indirect Impact Analysis

The current regional network for roadways, toll/managed lane facilities [i.e., toll, HOV/managed], and passenger rail is expected to increase by 2030. Figures obtained from the 2030 MTP (see **Appendix B, *Mobility 2030*: Funded Roadway Recommendations, *Mobility 2030*: Priced Facilities,** and ***Mobility 2030*: Passenger Rail Recommendations**) show the proposed roadway, toll/managed lane facilities, and passenger rail for the region in 2030. For the roadways system, the 2007 transportation network for the Dallas-Fort Worth (DFW) area (calculated in mainlane lane-miles) consists of 4,397 lane-miles. Of the total system, 434 of the lane-miles are tolled (approximately 11 percent). The anticipated 2030 transportation network for DFW would consist of approximately 8,569 mainlane lane-miles, of which 30 percent (approximately 2,542 lane-miles) would be tolled. **Table 5** lists the toll/managed lane facilities included in the 2030 MTP and the proposed open-to-traffic date for each facility. These projects include the construction of new location toll roads, the addition of managed HOV lanes, and the expansion of existing toll facilities. See **Table 5** for a list of future toll road and managed HOV lane projects for the projected years 2015, 2025, and 2030. **Appendix B: 2015 Priced Facility Network, 2025 Priced Facility Network, and 2030 Priced Facility Network** for the priced facility networks in 2015, 2025, and 2030.

TABLE 5: FUTURE TOLL ROAD AND MANAGED HOV LANE PROJECTS

Roadway	Location	Responsible Agency	Work Planned
Open to Traffic by 2015			
Dallas North Tollway	Parker Road to Royal Ln.	NTTA	Expand existing toll road
IH 30 – Dallas County	SH 161 to IH 35E	TxDOT-Dallas	Add managed HOV lanes
IH 30 – Tarrant County	Cooper St. to Ballpark Way	TxDOT-Fort Worth	Add managed HOV lanes
IH 35E	IH 635 to Loop 12	TxDOT-Dallas	Add managed HOV lanes
IH 35E – "Northern Link"	FM 407 to PGBT	TxDOT-Dallas	Add managed HOV lanes
IH 35W	SH 170 to IH 30	TxDOT-Fort Worth	Add managed HOV lanes
IH 635	Luna Road to US 75	TxDOT-Dallas	Add managed HOV lanes
IH 820	SH 121/SH 183 to SH 121/SH 10	TxDOT-Fort Worth	Add managed HOV lanes
Loop 9	US 287/Outer Loop to IH 20/SH 190	TxDOT-Dallas	New toll road
Loop 12	IH 35E to SH 183	TxDOT-Dallas	Add managed HOV lanes
President George Bush Turnpike	IH 35E to SH 78	NTTA	Expand existing toll road
President George Bush Turnpike (Eastern Extension)	SH 78 to IH 30	NTTA	New toll road
SH 114	SH 121 (West) to International Pkwy.	TxDOT-Fort Worth	Add managed HOV lanes
SH 121	IH 820 to Minnis Rd.	TxDOT-Fort Worth	Add managed HOV lanes
SH 121	SH 183 to IH 820	TxDOT-Fort Worth	Add managed HOV lanes
SH 121	IH 30 to US 67	NTTA	New toll road
SH 121 – Collin County	US 75 to Hillcrest Rd.	TxDOT-Dallas	New toll road
SH 161	SH 183 to IH 20	TxDOT-Dallas	New toll road
SH 161/SH 360 Toll Connector	SH 161 to Sublett Rd. (SH 360)	TxDOT-Dallas & TxDOT-Fort Worth	New toll road
SH 170	SH 114 to US 81/US 287	NTTA	New toll road
SH 183	SH 121 to SH 161	TxDOT-Fort Worth	Add managed HOV lanes
SH 360 (toll road)	Sublett Road to US 287	NTTA	New toll road
Trinity Parkway	IH 35E to IH 45/US 175	NTTA	New toll road
US 75 – Collin/Dallas County	SH 121 (South) to Exchange Pkwy.	TxDOT-Dallas	Add managed HOV lanes
US 75 – North Collin County	SH 121 (North) to SH 121 (South)	TxDOT-Dallas	Add managed HOV lanes
Open to Traffic by 2025			
Dallas North Tollway	FM 121 to US 380	NTTA	New toll road
IH 20/US 287	IH 820 to Sublett Rd. (US 287)	TxDOT-Fort Worth	Add managed HOV lanes
IH 30	IH 35E to Bobtown Rd.	TxDOT-Dallas	Add managed HOV lanes
IH 30 – Tarrant County	IH 820 to Cooper St.	TxDOT-Fort Worth	Add managed HOV lanes
IH 30 – Tarrant County	Ballpark Way to SH 161	TxDOT-Fort Worth	Add managed HOV lanes
IH 35	Outer Loop (FM 156) to IH 35E/IH 35W	TxDOT-Dallas	Add managed HOV lanes
IH 35E	SH 183 to IH 20	TxDOT-Dallas	Add managed HOV lanes
IH 35E "Northern Link"	FM 2181 to FM 407	TxDOT-Dallas	Add managed HOV lanes
IH 35E "Northern Link"	PGBT to IH 635	TxDOT-Dallas	Add managed HOV lanes
IH 35W	IH 35/IH 35E to SH 170	TxDOT-Dallas	Add managed HOV lanes
IH 635	US 75 to IH 30	TxDOT-Dallas	Add managed HOV lanes
IH 820/US 287	US 287 to IH 820 (US 287)	TxDOT-Fort Worth	Add managed HOV lanes
Loop 12	SH 183 to Spur 408	TxDOT-Dallas	Add managed HOV lanes

Roadway	Location	Responsible Agency	Work Planned
Outer Loop (Eastern Subregion)	IH 20/Loop 9 to IH 30	TxDOT-Dallas	New toll road
Outer Loop (Eastern Subregion)	US 75 to IH 35	TxDOT-Dallas	New toll road
President George Bush Turnpike	Belt Line Road to IH 635	NTTA	Expand existing toll road
SH 114 – Dallas County	SH 121 to SH 183	TxDOT-Dallas	Add managed HOV lanes
SH 170	SH 199/Outer Loop to US 67	NTTA	New toll road
SH 183	SH 161 to IH 35E	TxDOT-Dallas	Add managed HOV lanes
SH 190	IH 30/PGBT to IH 20/Loop 9	NTTA	New toll road
SH 360	Outer Loop to FM 2258	TxDOT-Dallas	New toll road
SH 360 (toll road)	US 287 to Outer Loop/Loop 9	NTTA	New toll road
US 67	IH 35E to FM 1382	TxDOT-Dallas	Add managed HOV lanes
US 67 – Dallas/Ellis County	FM 1382 to Loop 9	TxDOT-Dallas	Add managed HOV lanes
US 80	IH 30 to Belt Line Rd.	TxDOT-Dallas	Add managed HOV lanes
Open to Traffic by 2030			
IH 635	US 80 to IH 20	TxDOT-Dallas	Add managed HOV lanes
Outer Loop (Eastern Subregion)	IH 30 to US 75	TxDOT-Dallas	New toll road
Outer Loop (Western Subregion)	SH 199 to US 287/Loop 9	TxDOT-Fort Worth	New toll road

The expanding roadway network, including toll/managed lane facilities, would cause indirect and/or cumulative impacts to the region. Because of the regional nature of these impacts, the proposed impacts would be better discussed at the regional level. The discussion of the expansion of the toll/managed lane component of the system is discussed in the Cumulative Impacts section.

6.0 CUMULATIVE IMPACTS

6.1 Project Level Cumulative Impact Analysis

As documented in **Sections 5.0** and **6.0** in the 2007 Re-evaluation, it was determined that the Toll Project would not have considerable direct or indirect impacts on the following resources or in the study area: Farmlands, Waters of the U.S., including Wetlands, Floodplains, Navigable Waters of the U.S., Vegetation and Wildlife Habitat, Water Quality, Threatened/Endangered Species, Land Use, Section 4(f) Properties, Relocations and Displacements, Public Facilities and Services, Hazardous Materials, Cultural Resources, and Items of a Special Nature (which include Airway-Highway Clearance, Coastal Zone Management Plan, Essential Fish Habitat, and Wild and Scenic Rivers).

Cumulative impacts were analyzed in terms of the specific resource being affected. The resources considered in the (2007 Re-evaluation) project level cumulative impacts analysis were community related:

Community (Resource)

- Traffic Operations
- Traffic Noise
- Air Quality (Resource)
- Lighting and Visual Impacts
- Socio-Economic Impacts
- Economic Impact of Tolling
- Environmental Justice (Resource)

In summary, the 2007 Re-evaluation concluded that any project level cumulative impacts on the resources analyzed are a result of the rapid urbanization of the area. The past and reasonably foreseeable actions in the area have impacted and would impact the resources considered in the study as a result of prosperous economic growth and development patterns adopted by the municipalities. The proposed action's contribution to the cumulative impact on the resources studied is negligible. It is well documented that the area has been rapidly developing without regard to the potential of improvements to SH 121. This is particularly true of the southern portion of Collin County. The majority of large parcels of land that are undeveloped or not subject to development plans are in the northern part of the county. It was concluded that the development of those parcels is unlikely to be influenced by the tolling of SH 121.

Implementation of transportation system improvements and reasonably foreseeable development in the region will likely result in temporary negative impacts to air quality in terms of construction-related impacts. Despite continuing urbanization, which will likely cause increases in latent demand and an increase in VMT, new EPA vehicle and fuel standards, coupled with fleet turnover, and technological advancements are expected to drastically reduce emissions. Lower emissions will cause MSAT, VOC, and NOx levels to be lower than they are today.

As acknowledged in the 2007 Re-evaluation, low-income households would spend a higher proportion of household income to use the toll system when compared to the average non-low income household. Those who do not use the toll system mainlanes would experience some decline in LOS. However, when considering the totality of the effects of the Toll Project, there are overall benefits provided for the entire community, including low-income and minority populations.

Because the final design of the Interchange Project does not alter either the ROW (footprint of the roadway) or need and purpose of the Toll Project, no additional project level cumulative impacts to the previously identified (2007 Re-evaluation) resource study areas are anticipated as a result of the final design of the Interchange Project.

However, since approval of the 2007 Re-evaluation, NCTCOG performed a cumulative analysis at the regional level to determine the cumulative effects of tolling and the managed/HOV system. Results of the analysis are presented below.

6.2 Regional Toll and Managed Lane/HOV System Cumulative Impacts Analysis

The impacts from the regional toll and managed/HOV lane network as it expands for the 2030 proposed transportation system was identified in **Section 5.0 – Indirect Impacts**. Each cumulative resource is studied from a regional perspective and addresses the impacts the proposed toll/managed lane network would have on each resource. Because of the accessibility of data resources supplied by the NCTCOG, the resource study area (RSA) for the regional study is the NCTCOG MPA.

Land Use

Metropolitan areas have come under intense pressure to respond to federal mandates to link planning of land use, transportation, and environmental quality from persons concerned about managing the side effects of growth such as sprawl, congestion, housing affordability, and loss of open space. The planning models used by Metropolitan Planning Organizations (MPO) were not designed to address these questions, creating a gap in the ability of planners to systematically assess these issues.

The relationships between land use, transportation, and the environment are at the heart of growth management. The emerging concern that construction of new suburban highways induces additional travel, vehicle emissions, and land development, making it implausible to "build our way out" of congestion has reshaped the policy context for metropolitan transportation planning. Recognizing the effects of transportation on land use and the environment, the Clean Air Act (CAA) and the Intermodal Surface Transportation Efficiency Act (ISTEA) mandated the MPOs integrate metropolitan land use and transportation planning. Later, the Transportation Equity Act for the 21st Century (TEA-21) succeeded the ISTEA to refine this process.

The NCTCOG is promoting sustainable development as a specific objective of *Mobility 2030* because of the direct link between land use, transportation, and air quality. NCTCOG has defined sustainable development as:

- Land use and transportation practices that promote economic development while using limited resources in an efficient manner.
- Transportation decision making based on impacts on land use, congestion, VMT, and the viability of alternative transportation modes.
- Planning efforts which seek to balance access, finance, mobility, affordability, community cohesion, and environmental quality.

The essence of sustainable development is the wise use of scarce resources so that future generations may enjoy them. At the regional level, the key to maintaining sustainable patterns of development is to allow cities the option to present a variety of land use, zoning, mobility, and service packages to the development market and residents. This can be accomplished by providing planning support for a diverse range of mobility options such as rail, automobiles, bicycling, transit, and walking.

The DFW MPA is forecasted to grow to almost 8.5 million people and 5.3 million jobs by the year 2030, producing nearly a 63 percent increase in population and a 64 percent increase in employment. If not planned for and implemented in a responsible way, this type of rapid growth would have negative impacts on the region. If development continues to grow away from the urban core, the VMT would substantially rise per household, per person, and per employee. Higher densities, mixed-land uses, and increased transportation alternatives, which are characteristics of the urban core, reduce overall VMT. This leads to lower emissions of VOC and NOx, improving air quality. NCTCOG's analysis of travel patterns showed that mixing land uses has a similar beneficial impact on travel as density. There are five types that categorize all land in the DFW MPA: employment dominant, employment leaning, mixed, household leaning, and household dominant. The localized mixing and integration of land uses occur at a variety of densities in urban, suburban, and rural settings in the region.

The MTP land development policies were created by combining regional expectations with local city plans, including anticipated population growth and land use. NCTCOG relies on the information provided by cities as a basis for their land development policies. By understanding the cities' expectations, NCTCOG is better able to educate the public and municipalities on the best alternatives for regional land development. NCTCOG conducted a series of demographic sensitivity analyses scenarios to quantitatively assess the potential impacts of alternative growth scenarios on the region between 2010 and 2030. Historically, the DFW area has grown outward with new developments turning rural areas into suburban cities. Within the alternative growth scenarios presented by NCTCOG, households and employment locations were redistributed throughout the region to simulate alternative market assumptions; however the control numbers for population and employment remained the same. **Table 6** contains the statistics produced through the analysis of each scenario. Brief descriptions of each scenario are:

- Rail Scenario: NCTCOG redistributed population and employment growth occurring between 2010 and 2030, while maintaining the population and employment control totals for the region. Growth was taken from rural areas of the region and added primarily to passenger rail station areas.
- Infill Scenario: NCTCOG redistributed population and employment growth occurring between 2010 and 2030, while maintaining the population and employment control totals for the region. Growth was taken from rural areas of the region and added primarily to infill areas along existing freeways/tollways.
- Rail with County Control Totals (RCCT) Scenario: NCTCOG redistributed population and employment growth occurring between 2010 and 2030, while maintaining the population and employment control totals for the region and each individual county. Growth was taken from rural areas of the region and added primarily to passenger rail-oriented areas.
- Vision North Texas (VNT) Scenario: NCTCOG redistributed population and employment growth occurring between 2010 and 2030, while maintaining the population and employment control totals for the region. Growth was distributed based on overall VNT participant feedback.

- Forward Dallas Scenario: Created for the City of Dallas, NCTCOG redistributed population and employment growth occurring between 2010 and 2030 based on the final alternative demographic dataset created during the Forward Dallas! Comprehensive Plan process.

TABLE 6: ALTERNATIVE GROWTH SCENARIOS COMPARED TO HISTORICAL GROWTH MODEL

Data of Interest	Rail Scenario	Infill Scenario	RCCT Scenario	VNT Scenario	Forward Dallas!
MPA Average of Trip Length	- 8%	+ 3%	- 0.01%	- 10.85%	- 2.9%
MPA Rail Transit Boardings	+ 52%	+ 9%	+ 8%	+ 11.13%	+ 7.4%
MPA Non-Rail Transit Boardings	+ 29%	+ 11%	+ 5%	+ 15.98%	+ 11%
MPA Vehicle Miles Traveled	- 6%	- 5%	- 1.2%	- 9.43%	- 2.2%
MPA Vehicle Hours Traveled	- 9%	- 7%	- 1.7%	- 14.31%	- 5.7%
Total Vehicle Hours of Delay	- 24.0%	- 19.0%	- 4.0%	- 32.5%	- 14.5%
Lane Miles Needs	- 13.0%	- 10.0%	- 13.3%	- 30.90%	- 32.1%
Financial Needs (billions)	- $9.5	- $6.7	- $2.9	- $15.6	- $7.0
Roadway Pavement Needs	- 8.3 sq. mi.	- 6.5 sq. mi	- 0.7 sq. mi.	- 19.8 sq. mi.	- 1.6 sq. mi.
NOx Emissions	- 4.1%	- 3.9%	- 1.2%	- 8.47%	- 2.4%
VOC Emissions	- 5.3%	- 5.2%	- 1.5%	- 11.02%	- 3.0%

The results of the analysis show a strong correlation between passenger rail and VNT scenarios, both reducing the greatest amount of ozone emissions and the amount of MPA vehicle miles traveled and hours of delay.

Mobility 2030 does not pick, favor, or choose any regional land use scenario. This data is provided by NCTCOG as an educational guide for the cities and municipalities that comprise the DFW metropolitan area. The alternative growth scenarios are presented as suggested alternatives the municipalities could incorporate into their land use policies in order to improve regional transportation and environmental issues. Because NCTCOG has no power to control regional growth and land development, the MTP provides these alternatives as guidance to city planners and developers as the most efficient way to grow. By presenting these options, NCTCOG's transportation goals are better served.

The 2030 MTP does not utilize any of these alternative growth scenarios as a basis for development since these regional scenarios cannot be realistically implemented. The proposed roadway system (includes toll/managed lane facilities) developed by the MTP is based on projected growth and land use changes that are predicted to occur in the future. The MTP growth model takes each municipality's land use growth projections as a basis for the 2030 MTP. Each municipality has its own method of addressing development within their boundaries depending on the growth they are experiencing. This growth includes mixed use, redevelopment, new development, industrial, commercial, high density, low density, transit oriented, rural growth, etc. The 2030 MTP was modeled using each city's growth projections and combining them with future growth patterns extrapolated from existing patterns for the region. These patterns do not follow, support, or conform to any regional scenarios presented in the 2030 MTP and the scenarios are used only as a guide for future consideration for growth and land use development.

The Regional Transportation Council (RTC) is an independent transportation policy body of the MPO and is comprised of elected officials representing the region's counties and municipalities as well as the region's transportations providers [Dallas Area Rapid Transit (DART), TxDOT, NTTA, etc.]. The RTC is responsible for overseeing the 2030 MTP as it relates to transportation and creates policies for regional transportation including toll policies, managed lane policies, comprehensive development agreements (CDA) policies, and other transportation related issues.

The RTC has taken a proactive approach to improving regional traffic congestion and air quality through its Sustainable Development Policy adopted in 2001. The RTC established basic policy directions which serve as strategies to meet finance constraints, diversify mobility, and improved air quality. The objectives of these practices are to:

- Respond to local initiatives for town centers, mixed-use growth centers, transit-oriented developments, infill/brownfield developments, and pedestrian-oriented projects.
- Complement rail investments with coordinated investments in park-and-ride, bicycle, and pedestrian facilities.
- Reduce the growth in VMT per person.

Although the 2030 MTP and the RTC state that these practices should be followed, the local municipalities have direct jurisdiction over land use, and public agencies such as DART, TxDOT, and NTTA have jurisdiction over the regional transportation system. These agencies and municipalities would need to work with the NCTCOG and the RTC to implement these sustainable development policies. These policies represent an important new trend in local development patterns that are based on an increased desire for a greater variety of transportation options, mixed-use developments, and unique communities with a sense of place. This trend contributes to the region's increasing emphasis on sustainable development and the ability to attain federal air quality attainment.

This sustainable land use is one tool the NCTCOG uses to reduce the need for new infrastructure (utilities, transportation, emergency response, government facilities, water, etc.). Without sustainable land use, the addition cost of new infrastructure items would increase beyond the current cost.

Sustainable land use is only one part of the solution. The cost of implementation of a full sustainable land use plan is expensive and only municipalities have the power in the state of Texas to affect and implement land use zoning, codes, and enforcement. Furthermore, no government entity has the authority or power to instruct developers or people where to develop or live.

The future roadway network outlined in the 2030 MTP supports the predicted land use changes and growth in the region. Current and anticipated funding from the federal government for transportation will not meet the demands for the transportation infrastructure needed to support the predicted population growth and land use changes.

Toll roads and managed lanes are the methods that the MTP employs to ensure the transportation demands from future growth are met based on limited transportation funds.

The development of a toll/managed lane network is consistent with the land use policies discussed in the MTP. One component of the managed lane system is planned access to high density development areas. As more mixed-use development centers are planned in the region, managed lane facilities would continue to connect to these centers, allowing HOV and transit vehicles access to the transportation system. This would help remove SOV users from the main lanes and increase mobility, efficiency and reliability on all traffic facilities.

The proposed 2030 toll/managed lane network may affect land use within the MPA boundaries by helping to enhance land development opportunities. However, the toll/managed lane network is only one factor in creating favorable land development conditions; other prerequisites for growth in the region include demand for new development, favorable local and regional economic conditions, adequate utilities, and supportive local land development regulations and policies. The proposed 2030 priced facility network as currently envisioned may, with the right conditions, help influence and facilitate the planned regional land use conversion, redevelopment and growth.

Environmental Justice

Mobility 2030 presents a system of transportation improvements needed to maintain mobility in the DFW area over the next 20 plus years and serves as a guide for the expenditure of state and federal funds for the region. Its development was coordinated among local governments, transit authorities, TxDOT, FHWA, and FTA. The plan is based on regional transportation needs through the process of forecasting future travel demand, evaluating system scenarios, and selecting those options which best meet the mobility needs of the region. It also serves as a guide for the implementation of multi-modal transportation improvements, policies, and programs through the year 2030.

As part of the development of *Mobility 2030*, NCTCOG conducted an environmental justice study for the existing transportation system compared to the MTP 2030 proposed transportation system. NCTCOG concluded that the *Mobility 2030* transportation improvements and recommendations for the NCTCOG region would not cause adverse impacts to environmental justice populations. However, it did not account for the impact of tolls on environmental justice populations.

To further analyze the effects of expansion of toll roads and managed lanes in the NCTCOG region, a regional study was performed for environmental justice populations comparing regional Build and No-Build scenarios. The regional No-Build scenario utilized the existing roadway network in 2009 with 2030 population demographics. The regional Build scenario used the proposed MTP roadway network in 2030 with 2030 population demographics.

Regional traffic analysis performance reports and regional O&D studies were developed for the NCTCOG's MPA transportation network for the Build and No-Build regional

toll/managed lane scenarios. The analysis was conducted to investigate the possible cumulative impacts from the construction of toll roads and managed lanes to environmental justice populations and to determine if there would be disproportionately high and adverse cumulative impacts to these populations.

Traffic Analysis Performance Reports
Traffic analysis performance reports were developed for the regional Build and No-Build scenarios for the entire MPA transportation network. The average daily vehicle trips for both scenarios are 24,912,520 trips.

A comparison of the average loaded speed per roadway classification is shown in **Table 7**. Average loaded speed, based on the NCTCOG's performance reports, is defined as "the average speed on roadways with traffic on the road; it is the volume-weighted average of loaded speed." The average loaded speed is the average speed a vehicle is traveling along a specific roadway classification during traffic. This is calculated using the miles traveled divided by the time it took to travel a fixed distance. This calculation illustrates the usage of the roadway system by roadway classification. The results show that the regional Build scenario would result in an increase in roadway speed for all roadway classifications.

TABLE 7: 2030 AVERAGE LOADED SPEED (MPH)

Roadway Classification	Build Scenario			No-Build Scenario			Percent Change		
	AM	PM	Daily	AM	PM	Daily	AM	PM	Daily
Freeways (includes toll roads)	52.88	54.16	57.11	38.92	44.49	50.10	26.40%	17.85%	12.27%
Major Arterials	27.14	28.83	31.82	20.69	22.00	26.52	23.77%	23.69%	16.66%
Minor Arterials	24.01	25.55	27.38	20.45	22.09	25.21	14.83%	13.54%	7.93%
Collectors	20.14	21.62	23.00	17.54	18.93	21.22	12.91%	12.44%	7.74%
Frontage Roads	25.65	27.48	29.61	19.63	21.22	24.67	23.47%	22.78%	16.68%
HOV Lanes (includes managed lanes)	49.73	51.78	52.81	44.37	47.72	50.37	10.78%	7.84%	4.62%

Source: NCTCOG TransCAD® data for 2030 regional Build and No-Build scenarios (April 2008 Performance Reports)

In addition, an evaluation of the regional No-Build scenario versus the regional Build scenario was conducted for the MPA using LOS per lane mile by roadway classification. The results are shown in **Table 8**. The regional No-Build scenario shows an increase in lane-miles in LOS F for all roadway classifications with the exception of HOV/managed lanes.

TABLE 8: LEVEL OF SERVICE FOR THE TRAFFIC STUDY AREA (2030)

Roadway Classification	Build Scenario		No-Build Scenario	
	Lane-Miles	LOS	Lane-Miles	LOS
Freeways (includes toll roads)	7,602	A-B-C (3,826 lane-miles) 50%	4,486	A-B-C (890 lane-miles) 20%
		D-E (2,264 lane-miles) 30%		D-E (1,220 lane-miles) 27%
		F (1,512 lane-miles) 20%		F (2,376 lane-miles) 53%
Major Arterials	8,739	A-B-C (4,793 lane-miles) 55%	4,085	A-B-C (1,120 lane-miles) 17%
		D-E (1,848 lane-miles) 21%		D-E (640 lane-miles) 16%
		F (2,098 lane-miles) 24%		F (2,325 lane-miles) 57%
Minor Arterials	7,568	A-B-C (5,407 lane-miles) 71%	9,282	A-B-C (3,654 lane-miles) 39%
		D-E (829 lane-miles) 11%		D-E (1,574 lane-miles) 17%
		F (1,332 lane-miles) 18%		F (4,054 lane-miles) 44%
Collectors	9,007	A-B-C (6,992 lane-miles) 78%	8,217	A-B-C (4,568 lane-miles) 56%
		D-E (724 lane-miles) 8%		D-E (914 lane-miles) 11%
		F (1,291 lane-miles) 14%		F (2,735 lane-miles) 33%
Frontage Roads	4,152	A-B-C (3,182 lane-miles) 76%	2,622	A-B-C (1,254 lane-miles) 48%
		D-E (402 lane-miles) 10%		D-E (375 lane-miles) 14%
		F (568 lane-miles) 14%		F (993 lane-miles) 38%
HOV Lanes (includes managed lanes)	898	A-B-C (612 lane-miles) 68%	182	A-B-C (76 lane-miles) 42%
		D-E (190 lane-miles) 21%		D-E (45 lane-miles) 25%
		F (96 lane-miles) 11%		F (61 lane-miles) 33%

Source: NCTCOG TransCAD® data for 2030 regional Build and No-Build scenarios (April 2008 Performance Reports)

Regional Origin-Destination Study

A regional O&D study was conducted by NCTCOG for the MPA toll road/managed lane network for environmental justice populations. The assumptions and limitations of O&D studies are discussed in the Environmental Justice section of this re-evaluation. The figures in **Appendix B [Environmental Justice Traffic Survey Zones: Daily Trips on**

Existing (2009) Priced Facilities and **Environmental Justice Traffic Survey Zones: Daily Trips on Future (2030) Priced Facilities**] show the basis of the NCTCOG analysis and the identified TSZs that contain environmental justice populations (i.e. TSZs that contain greater than 50 percent minority and low-income populations) and the existing and future toll roads and managed lanes used in the O&D analysis. The figure shows the majority of environmental justice communities are located within the IH 635 and IH 820 loops in Dallas and Fort Worth, respectively, and within the southern section of MPA.

The entire MPA was evaluated for the existing and future toll network. The total TSZs that comprise the O&D study area within the MPA is 4,813. A total of 1,542 of these are considered environmental justice TSZs.

For the regional No-Build scenario, 4,720 TSZs are anticipated to regularly utilize the existing toll roads in the MPA in 2030 (originating at least one trip per day); this represents 98.1 percent of the total TSZs in the MPA. Under the regional No-Build scenario, 1,530 environmental justice TSZs are anticipated to regularly utilize the existing toll facilities (originating at least one trip per day); this represents 99.2 percent of the environmental justice TSZs in the MPA. Data analysis indicates that from the 246,462 total trips which would originate from all of the TSZs that would utilize the existing toll facilities in the MPA, approximately 14.8 percent (36,400 trips) of the total trips would originate from environmental justice TSZs (originating at least one trip per day).

The Build scenario is anticipated to contain 4,770 TSZs that would regularly utilize the future toll facilities in the MPA in 2030 (originating at least one trip per day); this represents 99.1 percent of the total TSZs in the MPA. From the total environmental justice TSZs identified in the MPA, 1,541 are anticipated to regularly utilize the proposed toll facilities in 2030 (originating at least one trip per day) for the Build scenario; this represents 99.9 percent of the total environmental justice TSZs in the MPA. Data analysis indicates that from the 516,988 total trips which would originate from TSZs that would utilize the future proposed toll roads, approximately 16.4 percent (85,011 trips) originate from environmental justice TSZs. **Table 9** outlines the O&D results for the MPA study area (originating at least one trip per day).

TABLE 9: ORIGIN-DESTINATION RESULTS

TSZ	2030 No-Build Scenario (Existing Toll Facilities)	2030 Build Scenario (Future Toll Facilities)
Total TSZs in the MPA	4,813	4,813
Total environmental justice TSZs in the MPA	1,542	1,542
TSZs utilizing toll facilities	4,720 (98.1%)	4,770 (99.1%)
Environmental justice TSZs utilizing toll facilities	1,530 (99.2%)	1,541 (99.9%)
Trips from TSZs utilizing toll facilities	246,462	516,988
Trips from environmental justice TSZs utilizing toll facilities	36,400 (14.8% of total trips)	85,011 (16.4% of total trips)

Source: NCTCOG TransCAD® data for 2030 regional Build and No-Build scenarios (April 2008 O&D data)

Results and Conclusions

The O&D results show an increase in usage of toll roads from the 2030 No-Build scenario to the 2030 Build scenario for the NCTCOG MPA region. Both the Build and No-Build scenarios showed trips generated from a majority of the TSZs in the MPA (98.1 to 99.1 percent), including a majority of environmental justice TSZs (99.2 to 99.9 percent).

Trips on the future toll facilities in the Build scenario would increase 110 percent from the current toll road facilities. Environmental justice TSZ trips would increase 134 percent. Because of the increase in trips generated by environmental justice TSZs, low-income populations would be impacted by the regional increase in toll facilities because low-income populations would use a greater amount of their income for toll road and managed lane usage. As shown in **Appendix B [Environmental Justice Traffic Survey Zones: Daily Trips on Existing (2009) Priced Facilities** and **Environmental Justice Traffic Survey Zones: Daily Trips on Future (2030) Priced Facilities**], existing toll roads and managed lanes are not adjacent to the majority of environmental justice TSZs, but future proposed toll roads and managed lane facilities would be built closer to environmental justice populations.

Results from the performance reports prepared for the MPA showed an increase in roadway speed and an improvement in LOS for the majority of the roadway classifications in the Build scenario compared to the No-Build scenario. The Build scenario for the MPA would improve roadway conditions throughout the NCTCOG region by increasing roadway speed and improving the LOS on the roadway network.

Although environmental justice populations would see an increase in spending for toll facilities, the entire MPA region would also see an increase in spending and usage as the toll road and managed lane system expands. The majority of environmental justice populations were identified by the NCTCOG travel demand model to potentially make trips along existing and future toll facilities. In addition, for populations (including environmental justice populations) who would opt to use Non-Toll options, the Build scenario for 2030 (which includes all proposed toll facilities and managed lanes) would

provide a roadway network that would operate at better traffic conditions (greater speeds and an improved LOS) on all roadways than the No-Build scenario and would provide an increased benefit for all users over the No-Build scenario.

Based on the previous discussion and analysis, the Build scenario for the NCTCOG MPA would not cause disproportionately high and adverse cumulative impacts on any minority or low-income populations as per Executive Order 12898 regarding environmental justice.

As discussed, the analysis does not show any disproportionately high and adverse impacts to environmental justice populations; therefore, no project-specific mitigation measures are appropriate for cumulative impacts in this document. However, NCTCOG will continue its efforts to work with all communities in the planning process to identify transportation challenges and explore and develop the appropriate strategies to respond to the issues. Examples include programs and projects to improve availability and accessibility to alternate transportation options including discounted transit fares and tolls, HOV discounts on toll roads and managed lanes, better accessibility to regional transportation systems, and community level congestion management. Specific strategies and projects will be developed through discussions with local governments and community representatives.

Air Quality

The NCTCOG serves as the MPO for transportation for the DFW area. It serves a 16-county metropolitan region centered on Dallas and Fort Worth. Since the early 1970s, MPOs have had the responsibility of developing and maintaining a MTP. The MTP is federally mandated; it serves to identify transportation needs; and guides federal, state, and local transportation expenditures.

ISTEA strengthened the role of the MTP and made it the central mechanism for the decision-making process regarding transportation investments. The passage of the TEA-21 in 1998 continued this emphasis. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law on August 10, 2005. SAFETEA-LU addresses the challenges on our transportation system such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment. Both SAFETEA-LU and the CAA Amendments (CAAA) impose certain requirements on an urbanized area's long-range transportation plan.

Transportation plans such as *Mobility 2030*, according to SAFETEA-LU metropolitan planning regulations, must be "fiscally constrained," that is, based on reasonable assumptions about future transportation funding levels. Because the DFW area is designated as a nonattainment area for the 8-hour ozone standard, the CAAA require the transportation plan to be in conformity with the SIP for air quality to demonstrate that transportation projects in the MTP meet air quality goals. *Mobility 2030* specifically addresses regional ozone in addition to its studies of general regional air quality and the

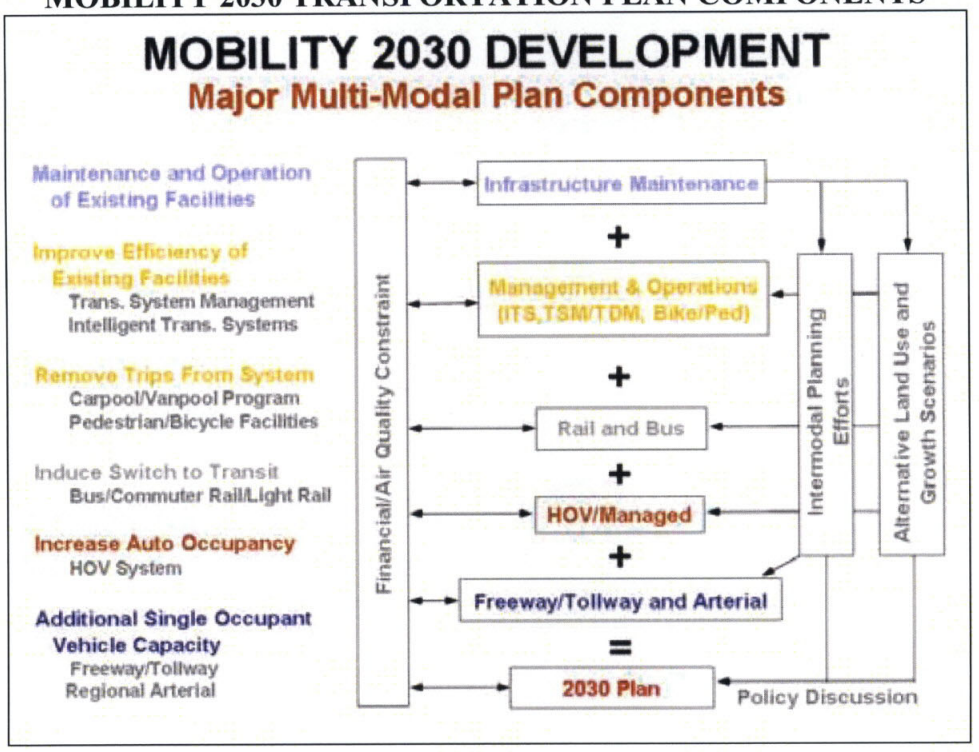
final result showed that the regional roadway network (including toll roads and managed lanes) would show a decrease in NOx and emissions of VOCs.

Transportation conformity is a process which ensures federal funding and approval goes to transportation activities that are consistent with air quality goals. Transportation activities that do not conform to state air quality plans cannot be approved or funded.

The CAAA established specific criteria which must be met for air quality non-attainment areas. The criteria are based on the severity of the air pollution problem. Transportation conformity is a CAAA requirement that calls for the EPA, U.S. DOT, and various regional, state, and local government agencies to integrate air quality and transportation planning development processes. Transportation conformity supports the development of transportation plans, programs, and projects that enable areas to meet and maintain national air quality standards for ozone, particulate matter (PM), and CO, which impact human health and the environment. Through the SIP, the air quality planning process ties transportation planning to the conformity provisions of the CAAA. This ensures that transportation investments are consistent with state and local air quality objectives. The NCTCOG is responsible for the conformity analysis in the DFW area. If the criteria are not met, EPA can then impose sanctions on all or part of the state. Sanctions include stricter industrial controls and the withholding of federal highway and transit funds.

Collin County has been designated as part of a nine-county nonattainment area for 8-hour ozone by the EPA. In accordance with the metropolitan planning regulations, *Mobility 2030* must include a CMP to systematically address congestion. The evaluation of additional transportation system improvements beyond the committed system began with a detailed assessment of transportation improvements that would not require building additional facilities for SOVs. Various improvements/modes including congestion management strategies, bicycle and pedestrian facilities, rail facilities, HOV lanes, managed lanes, and toll road facilities were investigated prior to determining the need for additional freeway capacity improvements. The following figure shows the implementation of these resources and how they are integrated into the MTP.

MOBILITY 2030 TRANSPORTATION PLAN COMPONENTS



Transportation system performance information was developed as a product of the DFW Regional Transportation Model (DFWRTM) travel model throughout the MTP development process. This information guided development of the system alternatives and indicated the impact of various improvements. The improvements recommended in *Mobility 2030* include regional congestion management strategies, bicycle and pedestrian facilities, managed HOV lanes, light/commuter rail and bus transit improvements, ITS technology, freeway and tollway lanes, and improvements to the regional arterial and local thoroughfare system such as intersection improvements and signal timing. Because *Mobility 2030* is financially and air quality constrained, other more cost effective methods are reviewed before SOV lanes (freeways and toll roads) are added into the roadway system. ITS, mass transit, and Managed/HOV lanes are ways to meet regional transportation demands under the financially constrained MTP while improving regional air quality.

The additional introduction of priced facilities into the existing roadway network would not cause any cumulative impacts to air quality. The regional priced facility system would provide additional travel capacity to the roadway network which would allow a greater flow of traffic throughout the region, decreasing the amount of vehicles traveling at lower speeds or idling conditions. Congestion reduction efforts, EPA's vehicle and fuel regulations, vehicle fleet turnover, and technological advancements would result in less fuel combustion and lower emissions including MSATs, CO, and ozone precursors, despite any increase in VMT.

Water Quality

Water quality is regulated on the state level by TCEQ. TCEQ monitors all major water bodies (rivers, lakes and streams) and reports the conditions of these streams in a biennial Texas Water Body Inventory report. Section 303(d) of this report details those water bodies TCEQ has identified as impaired due to water contamination.

The 303(d) list identifies five major water systems as impaired with pollutants and bacteria in the MPA. These major water bodies are the Upper Trinity River, the West Fork Trinity River, the East Fork Trinity River, the Elm Fork Trinity River, and the Clear Fork Trinity River. The construction of the proposed toll/managed lane system would cross and impact these water bodies at multiple locations and could cause water quality impacts.

As stated previously, TCEQ regulates water quality through SW3P, Municipal Separate Storm Sewer Systems (MS4), and BMPs. All construction of these toll/managed lane facilities would follow these water quality permits that would prevent further pollution to these impaired waters and to waters that are not impaired. Additionally any indirect land use development that would occur from the construction of these facilities would follow TCEQ's regulations for water quality through SW3P and MS4. Therefore, the regional toll/managed lane network would not have a cumulative impact to water quality.

Waters of the U.S.

The USACE regulates waters of the U.S. in the state of Texas. The MPA is under the jurisdiction of the Forth Worth District of the USACE. Fill of any jurisdictional waters of the U.S. is required to be permitted through the USACE.

While the USACE has specific guidelines for identifying waters of the U.S., several methods exist to preliminary identify these waters. USGS topography maps and TCEQ's Water Quality Inventory database provides information for the location of larger rivers and streams that would fall under the USACE jurisdiction. The National Wetlands Inventory maps created and maintained by the USFWS attempts to identify potential wetlands through the use of infrared aerial photography (Digital Ortho Quarter Quads). The current status for the National Wetland Inventory maps for the MPA consist digital formats and hard copy formats; some areas are currently not mapped.

Although this data is incomplete, it only serves as a background for the identification of waters of the U.S. Government and private developments must permit any fill into waters of the U.S. and the identification of these waters of the U.S. is completed at the project level with field surveys.

From the available data, the regional toll/managed lane system would impact and cause fill to waters of the U.S., both streams and potential wetlands. These roadway projects would be required to comply with permitting and mitigation for the fill of these waters of the U.S. Any land use change or development that would occur from this regional

toll/managed lane system would also be required to permit and mitigation for fill and loss of waters of the U.S.

Through the permitting and mitigation process the USACE has implemented a "no net loss" policy for permanent impacts to wetlands and waters of the U.S. This ensures that loss of these waters would require mitigation that is equal or greater than the loss. Because the USACE would regulate and require mitigation for loss of these waters of the U.S., the toll/managed lane network would not cause a cumulative impact to waters of the U.S.

Vegetation

An inventory of regional vegetation is not available for the MPA. General vegetation descriptions identifying regions and ecological areas are available from many resources. These resources (e.g. the *Vegetation Types of Texas*, etc.) vary in description of areas of regions and do not update their descriptions from the original publications. Project specific vegetation descriptions are the best method to map the vegetation that would be affected by a project.

Currently, the MPA lies in the Blackland and Cross Timbers prairies ecological regions identified by TPWD. The construction of most of the proposed toll/managed lane system would occur in areas already developed and contain urban type vegetation. The projects outside the urban areas could impact natural vegetation and the changes in land use and development that may be caused by these facilities would impact vegetation surrounding these projects.

The NCTCOG does not address impacts to vegetation or mitigation for loss of vegetation in the MTP. TxDOT districts can mitigate for loss of vegetation based on the MOU and MOA with TPWD, which focuses on special habitat types of wildlife and protected species. Wetlands are under the jurisdiction of the USACE and mitigation for the loss of these wetlands (which includes the vegetation) would occur through the permitting process. The USFWS can regulate and require mitigation for loss of vegetation that is designated habitat for a threatened or endangered species. Finally, cities can implement ordinances to protect trees, natural land, or open green spaces.

Although impacts to vegetation would occur from the toll/managed lane system, these impacts would be regulated at the project level for each individual roadway project. Because of this project mitigation, there would be no cumulative impacts to vegetation from the toll/managed lane system.

Regional Toll and Managed Lane/HOV System Level Analysis Conclusion

The regional toll/managed lane system would cause minor impacts to some of the identified resources in this section. Regional mitigation for some of these resources would be addressed by the NCTCOG. As part of *Mobility 2030,* NCTCOG will specifically address two issues – air quality and environmental justice populations. The Transportation Planning Process, at a regional level, provides ways to mitigate for any

potential impacts that could occur. The priced facility projects would be included in the STIP/TIP and MTP, and the STIP/TIP and MTP would conform to the SIP. This assurance addresses each project is in compliance with the STIP/TIP and MTP for air quality under the CAA and environmental justice under Executive Order 12898.

Land use impacts cannot be mitigated at a regional level, but at a municipality level because these entities have direct control over land use. These municipalities would work with NCTCOG to address regional infrastructure changes in their comprehensive plans. State and federal regulatory agencies that have direct jurisdiction over natural and cultural resources would be responsible for requiring avoidance, minimization and mitigation from any entity whose proposed project (transportation or other type) has a direct impact to any of these resources.

Finally as required by NEPA, mitigation for impacts would occur at the project level. Because of these potential mitigation measures, the regional proposed toll/managed lane system would not have a cumulative impact to these resources.

7.0 MITIGATION AND MONITORING COMMITMENTS

Several natural resources commitments require continued monitoring and compliance. The construction of the Interchange Project would be financed and managed by the NTTA, and therefore the NTTA would initiate and complete all natural resources mitigation and monitoring commitments. Oversight would be provided by TxDOT to ensure that all above described permits, commitments, and mitigation are in compliance with USACE regulations and other requirements and occur during and after construction of the facility.

Section 404
The final design of the Interchange Project allowed for the the avoidance and minimization and reduced impacts to waters of the U.S., including wetlands, below the levels disclosed and discussed in the 2007 Re-evaluation. The construction of the interchange would be authorized by NWP 14 and NWP 25 without a PCN. Coordination with the USACE is no longer required and compensatory mitigation is not required or proposed. All regional and general conditions would be followed in compliance with NWP requirements.

Section 401
The final design of the Interchange Project will comply with the CWA Section 401 Water Quality Certification requirements with one best management practice from each of the three Best Management Practice categories for Tier I projects. For example, these include block sod for erosion control, detention basins for sedimentation control, and vegetative filter strips for total suspended solids (TSS) controls. Because the Interchange Project would utilize one or more NWPs, all NWP general conditions and BMPs would be utilized in compliance with all federal, state, and local regulations.

Vegetation and Wildlife Habitat
Impacts to the woodland riparian areas associated with the stream crossings detailed in the 2007 Re-evaluation would require continued coordination with the USACE and TPWD. The proposed mitigation consists of planting approximately 11.7 acres of trees at Lewisville Lake. The NTTA would ensure that the 11.7 acres of plantings previously committed to on behalf of TxDOT are met. TxDOT would remain ultimately responsible for the proposed mitigation.

During construction of the Interchange Project, the NTTA will ensure that the natural spring, located beneath the US 75 northbound frontage road, continues to flow into Sloan Creek. This commitment will honor the existing agreement between TxDOT and private property owners developed during the previous expansion of US 75. When US 75 was previously expanded, the spring was protected prior to the construction of the frontage road with a French drain that allows the spring to outfall into Sloan Creek. The outfall is located downstream of the proposed ROW on private property.

Water Quality
Because the Interchange Project would disturb more than one acre, a TCEQ – TPDES General Permit for Construction Activity would be required. Also, the construction would disturb more than five acres; therefore, a NOI would be filed to comply with TCEQ requirements and a SW3P would be in place during construction. The SW3P would utilize the temporary control measures as outlined in the TxDOT manual *Standard Specifications for the Construction of Highways, Streets, and Bridges*. TxDOT is ultimately responsible for ensuring these commitments are met.

8.0 PUBLIC INVOLVEMENT

The intent of public involvement efforts associated with the final design was to optimize the level of communication with the general public, appropriate governmental agencies, and the design team members, and to coordinate the public awareness activities during the entire process. It was intended that the information pertaining to the Interchange Project would be shared, presented, and made available for review and comments.

The NTTA communicated with the TxDOT District and Collin County Area Office staff, the affected municipalities, and several adjacent property owners regarding the final design of the Interchange Project. Several informational meetings with the Cities of McKinney and Allen, and the Town of Fairview were held to discuss the final design of the Interchange Project.

Public involvement planning began in 2007 to inform residents and public officials about the final design of the Interchange Project. Meetings with stakeholders were initiated in August 2007.

Stakeholder outreach efforts included information-sharing meetings and discussions with TxDOT; elected/public officials in Collin County and the communities of McKinney,

Allen and Fairview; and the public. The outreach efforts also included coordinating with public information personnel at the NTTA to provide information to news reporters inquiring about the Interchange Project and updating NTTA customers about the Interchange Project through SH 121 monthly corridor reports and e-newsletter articles.

The following list summarizes stakeholder meetings and public outreach activities conducted to date on behalf of the NTTA since August 2007:

- August 16-17, 2007 – SH 121 aesthetics outreach initiative with city and county administrators and engineers.
- August 23, 2007 – Interchange meeting with the City of Allen engineers.
- August 23, 2007 – Interchange meeting with the Town of Fairview engineers.
- August 24, 2007 – Interchange meeting with the City of McKinney engineers.
- September 24, 2007 – Interchange workshop agenda item with the McKinney City Council and the public.
- October 5, 2007 – Interchange meeting with the City of McKinney engineering staff.
- October 22, 2007 – Interchange workshop agenda item for the McKinney City Council and public.
- November 9, 2007 – Interchange meeting with TxDOT Dallas District and TxDOT Collin County Area Office.
- November 16, 2007 – Interchange coordination meeting with TxDOT Collin County Area Office.
- November 19, 2007 – Interchange update meeting with TxDOT Dallas District.
- November 21, 2007 – Interchange meeting with the Town of Fairview.
- November 28, 2007 – Interchange meeting with the City of McKinney and TxDOT Collin County Area Office.
- November 29, 2007 – Interchange coordination meeting with TxDOT Collin County Area Office, and TxDOT Dallas District.
- November 29, 2007 – Interchange meeting with the City of Allen (City Manager and City Engineer).
- December 3, 2007 – Discussion with the McKinney City Council and the public; the interchange was listed on the agenda and the discussion focused on the final design of the Interchange Project. Also, additional Interchange Project discussions took place with Bridge Street developer (north east quadrant of the interchange).
- December 7, 2007 – Interchange meeting with the McKinney City Council members, including Mayor Pro Tem Thad Helsley and Councilman Brian Loughmiller, the McKinney City Engineer, and TxDOT.
- December 18, 2007 – Interchange meeting with the Town of Fairview, town consultants, Fairview Center developer, adjacent property owner, and developer's consultants.
- January 8, 2008 – During its public meeting, the Allen City Council passed a resolution supporting the final design of the Interchange Project.
- January 15, 2008 – McKinney City Council agenda item; discussion of the final design of the Interchange Project.

- February 4, 2008 – McKinney City Council work session in which council members, city staff and the public viewed an animation of traffic patterns on both the approved design scope and design scope and the final design of the Interchange Project.
- February 4, 2008 – Star Community Newspapers' *McKinney Courier Gazette* ran an article, "City Council to Review Interchange Schematic," about the final design of the Interchange Project.
- February 5, 2008 – During its public meeting, the McKinney City Council passed a resolution supporting the final design of the Interchange Project.
- February 5, 2008 – Star Community Newspapers' *McKinney Courier Gazette* ran a follow-up article about the final design of the Interchange Project and City Council discussion.
- February 6, 2008 – Star Community Newspapers' *McKinney Courier Gazette* ran an article, "Interchange's Future Clearer after Council Approves Schematic," about the final design of the Interchange Project.
- April 29, 2008 – Aesthetics outreach meeting with elected officials, administrators and engineers from the Cities of Coppell, Carrollton, Lewisville and The Colony.
- May 6, 2008 – Aesthetics outreach meeting with elected officials, administrators and engineers from the Cities of Allen, Frisco, McKinney, and Plano; the Town of Fairview; Collin County; and TxDOT.
- May 2008 – Article about the final design of the Interchange Project is published in *Civil Engineering* magazine.
- June 12, 2008 - Meeting with affected property owner James Lunsford help to explain the final design of the Interchange Project. Mr. Lunsford owns land directly adjacent to US 75, within the southeast quadrant of the SH 121/US 75 interchange.
- July 23, 2008 – the Town of Fairview signed a resolution supporting the final design of the Interchange Project.

A public information meeting was conducted in an open house format followed by a formal presentation to inform the public of the final design of the Interchange Project and to gather feedback. The meeting was held on June 16, 2008 from 6:30 p.m. to 8:05 p.m. at:

McKinney Fellowship Bible Church
2801 Orchid Dr.
McKinney, Texas 75070

The NTTA publicized the June 16, 2008 public information meeting by running legal notices in the following newspapers:

Publication	**Publication Dates**	
	First Notice	**Second Notice**
Dallas Morning News (Collin County edition)	Friday, May 16, 2008	Friday, June 6, 2008
Allen American	Friday, May 16, 2008	Friday, June 6, 2008
McKinney Courier-Gazette	Friday, May 16, 2008	Friday, June 6, 2008
Plano Star Courier	Friday, May 23, 2008	---
Frisco Enterprise	Friday, May 23, 2008	---
Al Dia (Spanish Publication)	Friday, May 16, 2008	Friday, June 6, 2008

Copies of the public information meeting legal notice were mailed to property owners whose parcels abut the interchange and to elected/public officials in the Cities of Allen, Frisco, McKinney, and Plano; the Town of Fairview; Collin County; TxDOT, and FHWA. In addition, the NTTA published this event on the front page of its Web site as well as on the SH 121 project page. Postcards containing information about the public information meeting were mailed to property owners adjacent to the SH 121 corridor in Collin County; TxDOT officials; and members of the public who signed in during the February 2007 public hearing for the 2007 Re-evaluation. Invitations to the public information meeting were also e-mailed to everyone who, as of June 2, 2008, had previously signed up to receive the NTTA monthly SH 121 corridor progress report.

A total of 26 members of the public, including 3 representatives from TxDOT attended the meeting. No elected officials registered at the meeting. Drawings and animations of the final design and of the approved design scope and design concept were made available for public review during the public information meeting. The drawings depicted the plan and profiles of the interchange. No written or verbal comments were received during the meeting or the comment period after the meeting. The outcome of this meeting was support by the public for the final design of the Interchange Project. Similarly, coordination with the Cities of McKinney, Allen and the Town of Fairview indicates that these municipalities are in support for the final design of the Interchange Project. **Appendix B** includes the signed resolutions for the Cities of Allen and McKinney, and the Town of Fairview. The public information meeting summary is available at the NTTA office at 5900 W. Plano Pkwy., Plano, Texas 75093.

9.0 CONCLUSION

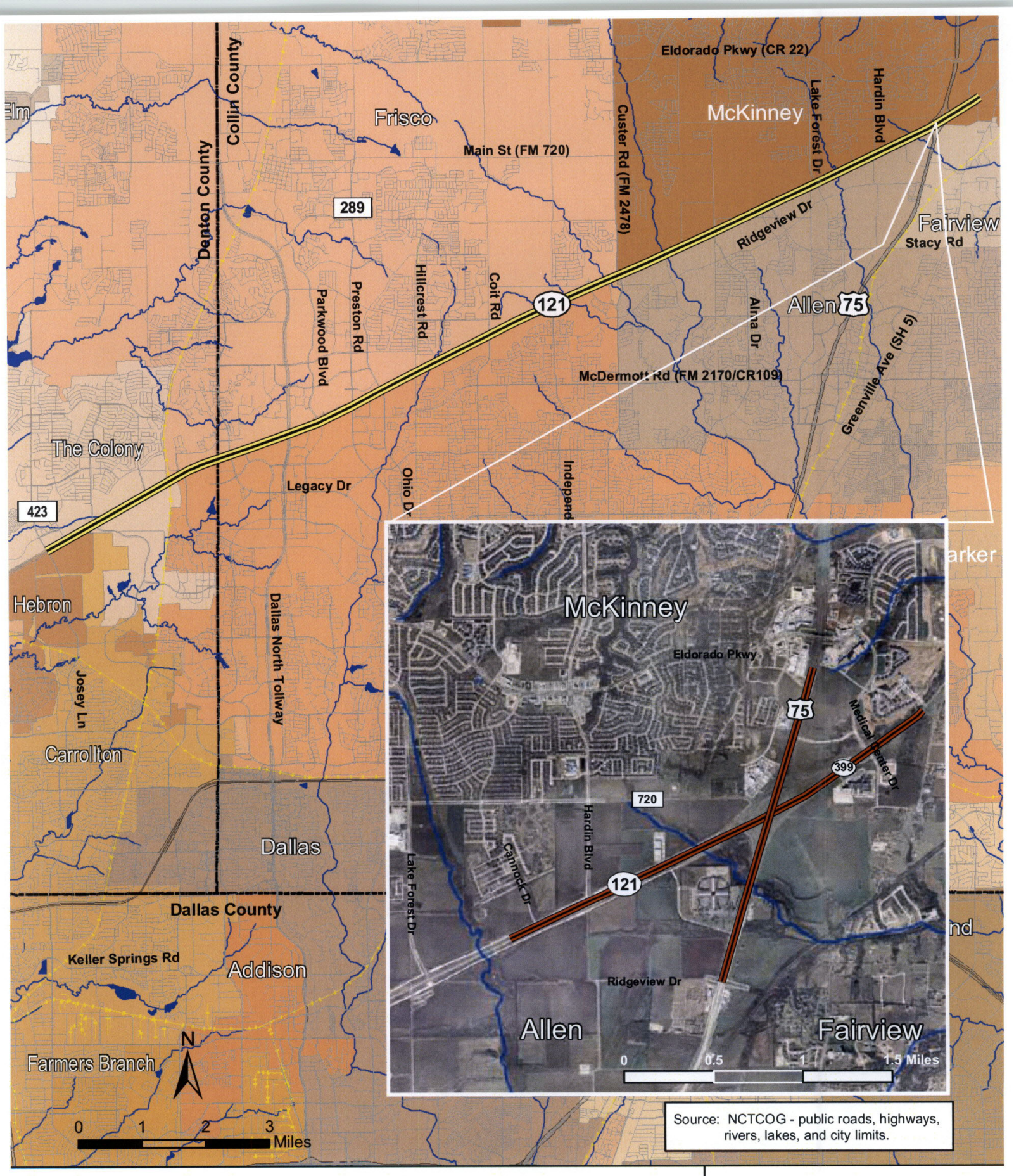
On October 12, 2007, the FHWA approved FM 423 to SH 121 at US 75 Interchange Toll Re-evaluation; this approval established the design concept and design scope interchange geometry at US 75 which was initially approved in 2006. On November 30, 2007, the NTTA secured the rights to complete final design, construct, maintain, and manage the SH 121 corridor. During the final design process, additional comments were received by interested parties and the public which primarily focused on the beneficial effects of the Interchange Project whereby additional safety enhancements were identified. The final design comprehensively addresses these items, in response to such comments, and incorporated corresponding safety elements into the development of the final Plans, Specifications and Estimates. This re-evaluation made a full analysis of these safety elements corresponding to the 2007 Re-evaluation design concept and design scope, and concluded with a comprehensive assessment of the final design. Moreover, a public information meeting was also held on June 16, 2008 that presented the final design parameters in anticipation of what would actually be built, and the corresponding public response was strong support for the final design of the Interchange Project.

The final design of the Interchange Project is consistent with the initially approved design concept and design scope and best satisfies the project need and purpose while minimizing environmental and socio-economic impacts. There would be no significant

environmental impacts, anticipated from implementation of the final design of the Interchange Project. Mitigation measures have been developed and would be undertaken to minimize any likely environmental impacts. In summary, the beneficial effects of the Interchange Project, such as improved traffic flow and reduced construction duration, make the Interchange Project both necessary and desirable.

In conclusion, the Interchange Project, with associated safety enhancements, was determined to have only minor changes in local driveway access point positions, with no additional ROW requirements and no added environmental issues or findings. The final design analysis and direct impacts assessment resulted in no significant social, economic, and environmental impacts and the October 12, 2007 Re-evaluation approval remains valid.

APPENDIX A



LEGEND

- Approved Design Concept and Design Scope (2007 SH 121 Toll Re-evaluation Limits)
- Interchange Project Limits
- Regional Rail
- County Boundary
- Lake
- Stream

FIGURE 1
INTERCHANGE PROJECT LIMITS
SH 121
FM 423 TO SH 121 AT US 75 INTERCHANGE

CSJs: 0364-03-067, etc.
Re-evaluation
Denton and Collin Counties, Texas

LEGEND

Final Design

Pavement Edge

Right-of-Way

N

0 1,000 2,000 3,000 Feet

FIGURE 2
FINAL DESIGN
SH 121
FM 423 TO SH 121 AT US 75 INTERCHANGE

CSJs: 0364-03-067, etc.

Re-evaluation
Denton and Collin Counties, Texas

APPENDIX B

39. SH 121 – Collin County

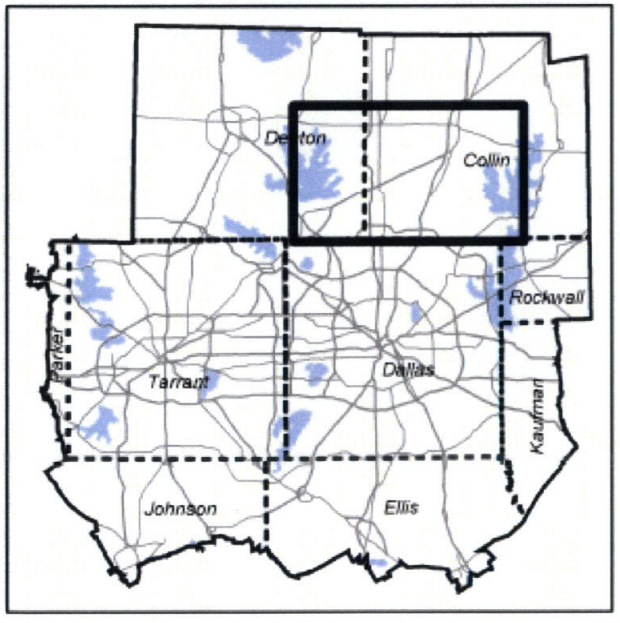
Highway Segments: FT1485, FR1485, FT1486, FR1486, FT1487, FR1487, FT1490, FR1490, IN114851, IN114861, IN114901

GENERAL DESCRIPTION

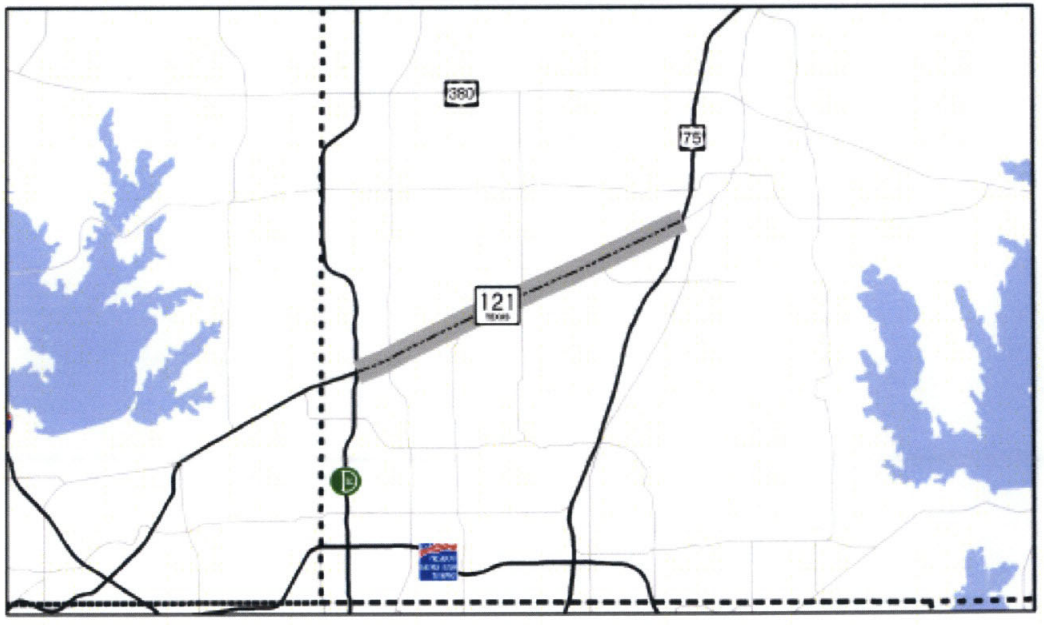
The SH 121 corridor in Collin County travels through several of the most rapidly developing communities in the State of Texas: Allen, Frisco, Plano, and McKinney. Once planned as a freeway facility, the Collin and Denton County portions of the SH 121 corridor are now being developed through the Texas Department of Transportation's Comprehensive Development Agreement (CDA) procurement process as a new toll road. This will greatly accelerate the timing for construction of this new limited-access facility.

This project extends from the Dallas North Tollway (DNT) in Plano and Frisco to US 75 in McKinney. The project will reconstruct SH 121 to accommodate 6 general purpose toll lanes (plus auxiliary lanes) and 6 frontage road lanes (plus auxiliary lanes near ramp locations and cross-streets). This project will also construct major interchanges at the DNT (with 8 high-speed flyover ramps) and US 75 (with 6 high-speed flyover ramps), as well as a 3-level interchange at SH 289 (Preston Road) that will allow north-south SH 289 traffic to bypass traffic signals at the SH 121 frontage roads. The toll road will feature all-electronic toll collection with no additional right-of-way needed for cash/change booth lanes.

Overview Map



Detail Map



The segment from the Dallas North Tollway to Hillcrest Road will be completed in 2007, while the segment from Hillcrest Road to US 75 is expected to be completed by 2015. The Texas Department of Transportation – Dallas District is the responsible agency for this project.

Estimated Total Project Cost: **$386.2 million**

RECOMMENDED IMPROVEMENTS

SH 121 – Collin County			
Highway Segments	Limits	Project Description	Cost
FT1485, FR1485, IN114851	US 75 to Hillcrest Road	6 general purpose toll lanes + auxiliary lanes. 6 frontage road lanes (plus auxiliary lanes near ramp locations and cross-streets). Major interchange with 6 flyover ramps at US 75.	$273.8 million
FT1486, FR1486, IN1 14861	Hillcrest Road to SH 289 (Preston Road)	6 general purpose toll lanes + auxiliary lanes. 6 frontage road lanes (plus auxiliary lanes near ramp locations and cross-streets). 3-level interchange at SH 289 (Preston Road).	$112.4 million
FT1487, FR1487, FT1490, FR1490, IN114901	SH 289 (Preston Road) to Dallas North Tollway	6 general purpose toll lanes + auxiliary lanes. 6 frontage road lanes (plus auxiliary lanes near ramp locations and cross-streets). Major interchange with 8 flyover ramps at Dallas North Tollway.	

Contacts:

Chad McKeown
North Central Texas Council of Governments
616 Six Flags Drive, Suite 200, Centerpoint Two
P.O. Box 5888, Arlington, Texas 76005-5888
Phone: (817) 695-9240

Bill Compton
Texas Department of Transportation – Dallas District
P.O. Box 133067, Dallas, Texas 75313-3067
Phone: (214) 320-6100

Supporting Documents:

Mobility 2025 Update: The Metropolitan Transportation Plan, NCTCOG, May 2001.

Mobility 2025: The Metropolitan Transportation Plan, 2004 Update, NCTCOG, January 2004.

Mobility 2025: The Metropolitan Transportation Plan, Amended April 2005, NCTCOG, April 2005.

2008-2011 STIP Revision

Mobility 2030 The Metropolitan Transportation Plan

Funded Roadway Recommendations

Legend

- New Freeway Facilities
- New Tollway Facilities
- Additional Capacity To Existing Freeway/Tollway
- HOV/Managed Lanes
- Improvements to Existing Freeway and HOV/Managed Lanes
- Selected New/Improved Regionally Significant Arterials
- Freeways/Tollways

Fort Worth CBD

Dallas CBD

Corridor specific design and operational characteristics for the Freeway/Tollway system will be determined through ongoing project development.

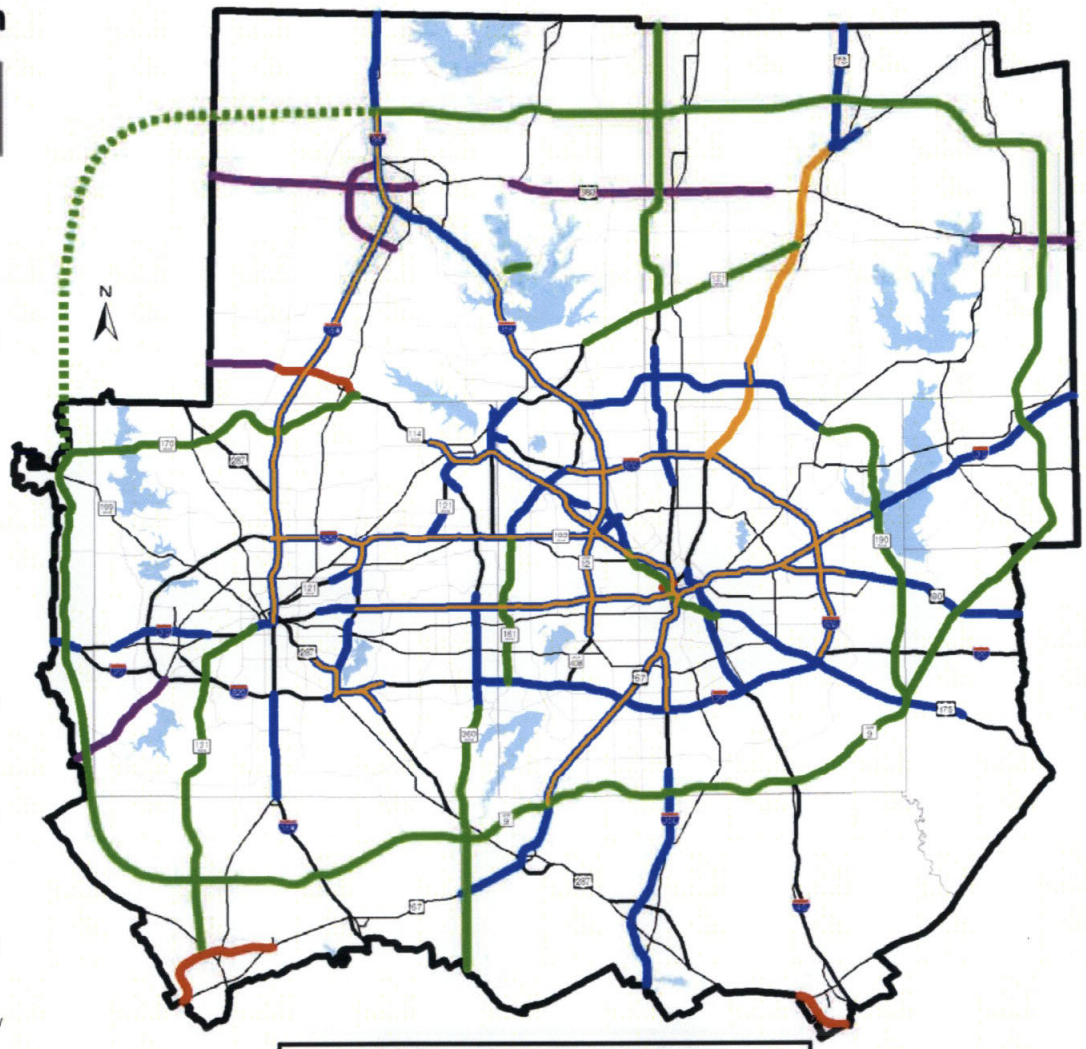
Additional and improved Freeway/Tollway interchanges and service roads should be considered on all Freeway/Tollway facilities in order to accommodate a balance between mobility and access needs.

All Freeway/Tollway corridors require additional study for capacity, geometric, and safety improvements related to truck operations.

New facility locations indicate transportation needs and do not represent specific alignments

Operational strategies to manage the flow of traffic should be considered in the corridors where additional freeway or tollway lanes are being considered.

North Central Texas Council of Governments Transportation



$29.8 Billion Regional Roadway System

Additional Freeway/Tollway lane miles = 3,444
Additional HOV/Managed lane miles = 626

January 11, 2007

Mobility 2030 The Metropolitan Transportation Plan

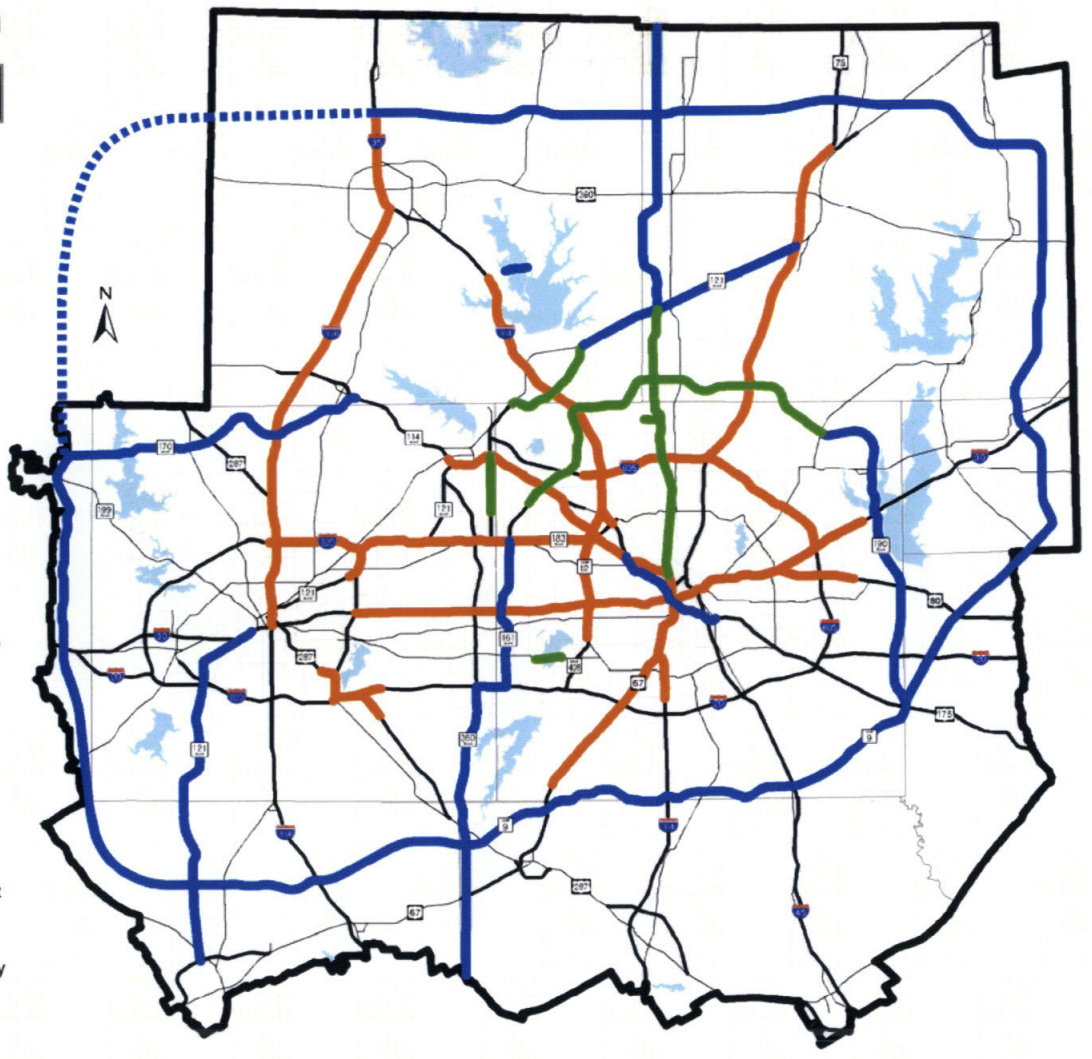
Priced Facilities

Legend

- Existing Toll Facilities
- Proposed Toll Facilities
- Proposed HOV/Managed Facilities*
- Freeways/Tollways

Fort Worth CBD

Dallas CBD



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Additional and improved Freeway/Tollway interchanges and service roads should be considered on all Freeway/Tollway facilities in order to accommodate a balance between mobility and access needs.

All Freeway/Tollway corridors require additional study for capacity, geometric, and safety improvements related to truck operations.

New facility locations indicate transportation needs and do not represent specific alignments

Operational strategies to manage the flow of traffic should be considered in the corridors where additional freeway or tollway lanes are being considered.

* Existing lanes in corridor remain free. Toll charged on new capacity only and will include HOV incentives.

North Central Texas Council of Governments
Transportation

$17.7 Billion of Innovative Funding Strategies

January 11, 2007

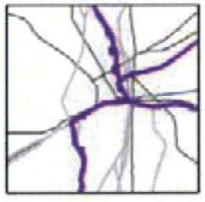
Mobility 2030 The Metropolitan Transportation Plan

Passenger Rail Recommendations

Legend

- Light Rail
- Light Rail - New Technology
- Regional Rail
- Regional Rail - Special Events Only
- Existing Rail Corridors
- Highways

Fort Worth CBD



Dallas CBD

Corridor specific design and operation characteristics for the Intercity Passenger, Regional Passenger and Freight Rail Systems will be determined through capacity evaluation and ongoing project development. Refined rail forecasts are necessary to determine technology and alignment in Future Rail corridors.

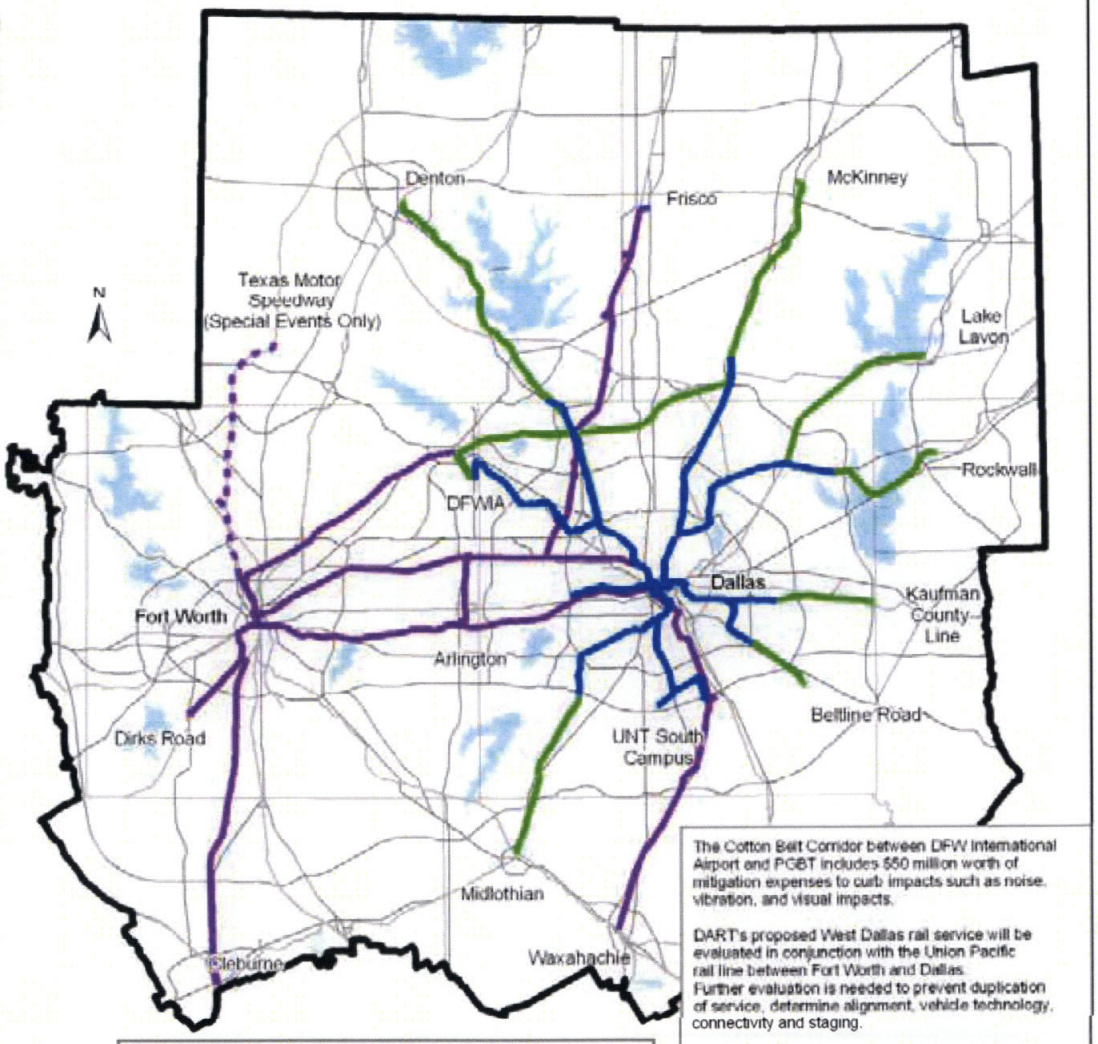
All existing railroad rights-of-way should be monitored for potential future transportation corridors. New facility locations represent transportation needs and do not reflect specific alignments.

Institutional structure being reviewed for the region.

The need for additional rail capacity in the Dallas CBD, Fort Worth CBD, DFW International Airport, and other inter-modal centers will be monitored. A grade separation is needed for the Dallas CBD second alignment.

North Central Texas Council of Governments Transportation

January 11, 2007

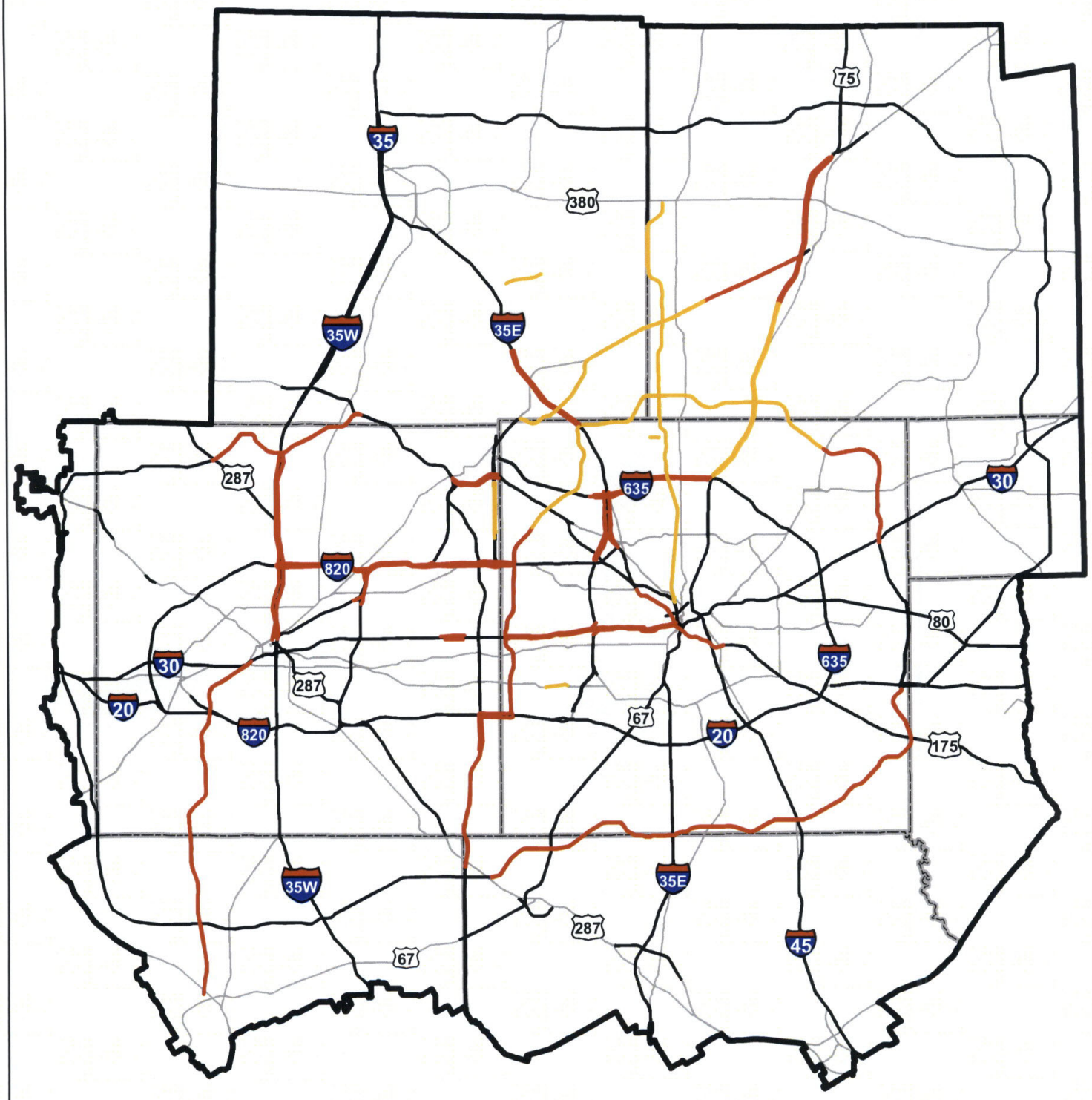


397 Additional Rail Miles
$9.6 Billion

The Cotton Belt Corridor between DFW International Airport and PGBT includes $50 million worth of mitigation expenses to curb impacts such as noise, vibration, and visual impacts.

DART's proposed West Dallas rail service will be evaluated in conjunction with the Union Pacific rail line between Fort Worth and Dallas. Further evaluation is needed to prevent duplication of service, determine alignment, vehicle technology, connectivity and staging.

DART's proposed SouthPort rail line extension will be evaluated in conjunction with the Dallas to Waxahachie rail service. Further evaluation is needed to prevent duplication of service, determine alignment, vehicle technology, connectivity and staging.



Legend

- Existing Facilities (2009)
- Open to Traffic by 2015
- Mobility 2030 Roadway Network
- MPA Boundary
- County Boundaries

0 5 10 20 Miles

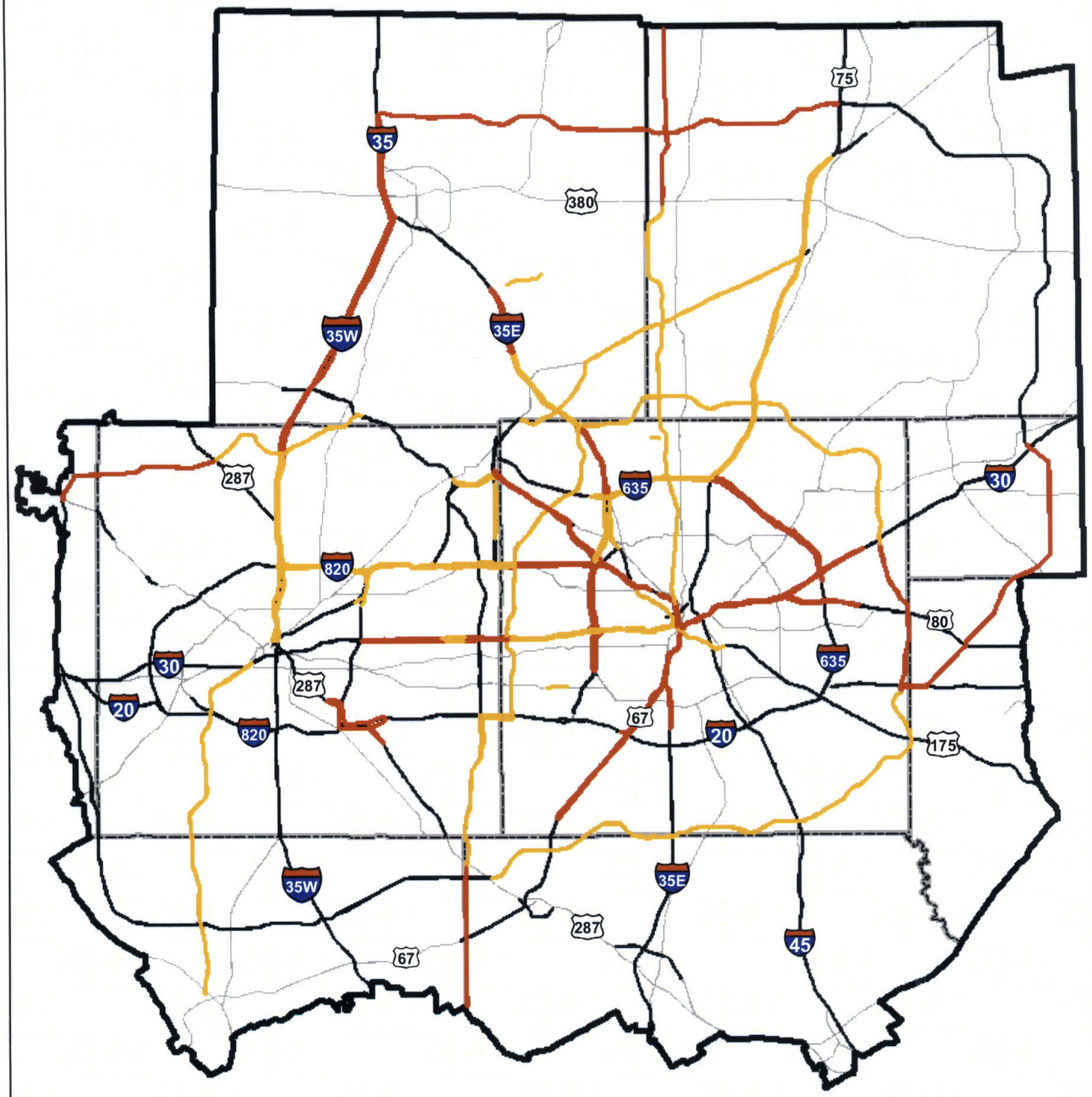
N

Texas Department of Transportation

Texas Department of Transportation
Dallas County

2015 Priced Facility Network

Date Created: May 2008



Legend

- Existing 2015 Facilities
- Open to Traffic by 2025
- Mobility 2030 Roadway Network
- MPA Boundary
- County Boundaries

0 5 10 20 Miles

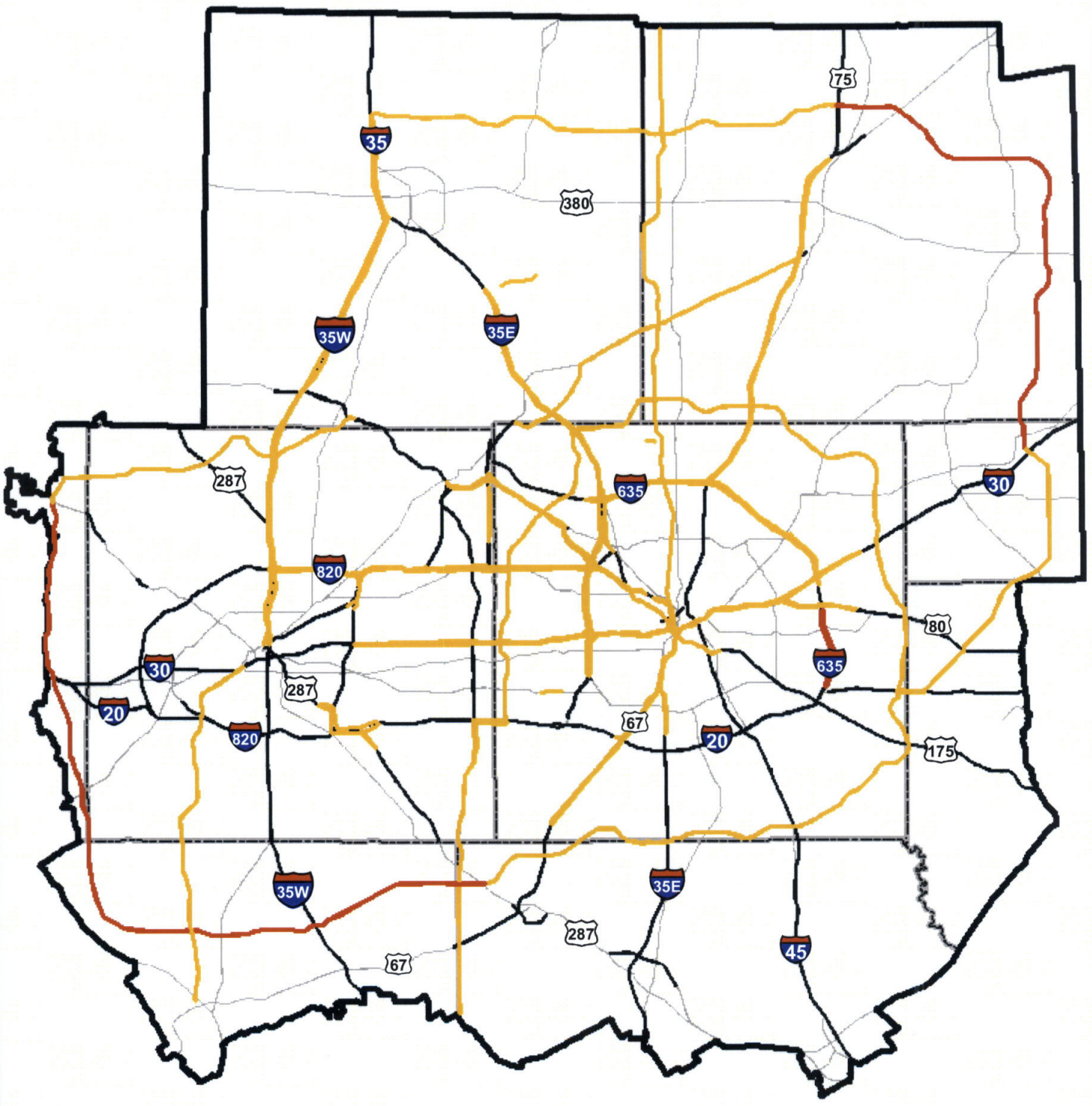
N

Texas Department of Transportation

Texas Department of Transportation
Dallas County

2025 Priced Facility Network

Date Created: May 2008



Legend

- Existing 2025 Facilities
- Open to Traffic by 2030
- Mobility 2030 Roadway Network
- MPA Boundary
- County Boundaries

0 5 10 20 Miles

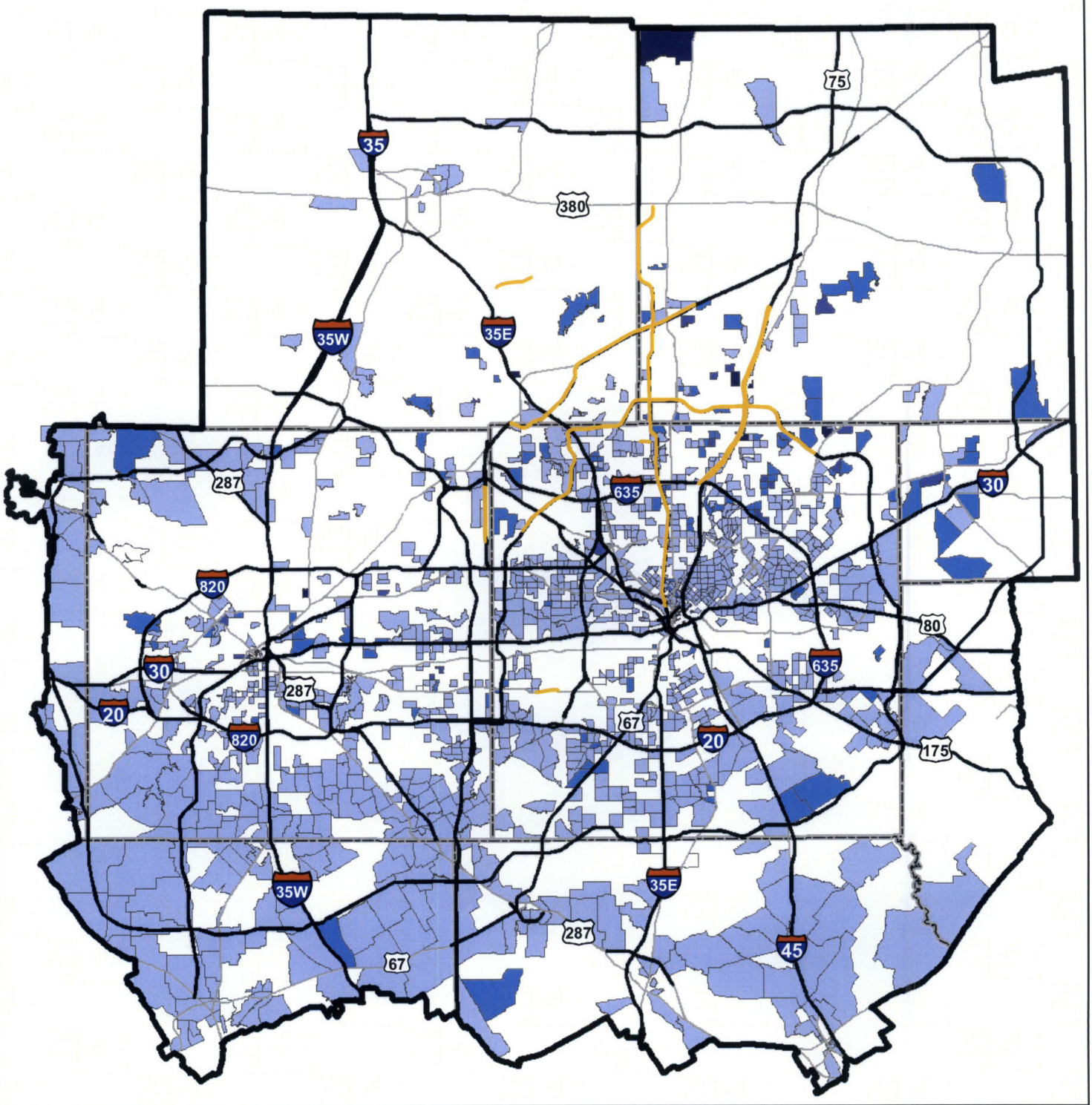
N

Texas Department of Transportation

Texas Department of Transportation
Dallas County

2030 Priced Facility Network

Date Created: May 2008



Legend

- 2009 Priced Facilities
- Mobility 2030 Roadway Network
- MPA Boundary
- County Boundaries

Environmental Justice TSZs

TRIPS

- <1 Trip
- 1-50 Trips (19,099 EJ Trips, 52% of total EJ Trips)
- 51-150 Trips (10,018 EJ Trips, 28% of total EJ Trips)
- 151-300 Trips (4,390 EJ Trips, 12% of total EJ Trips)
- >300 Trips (2,893 EJ Trips, 8% of total EJ Trips

0 5 10 20 Miles

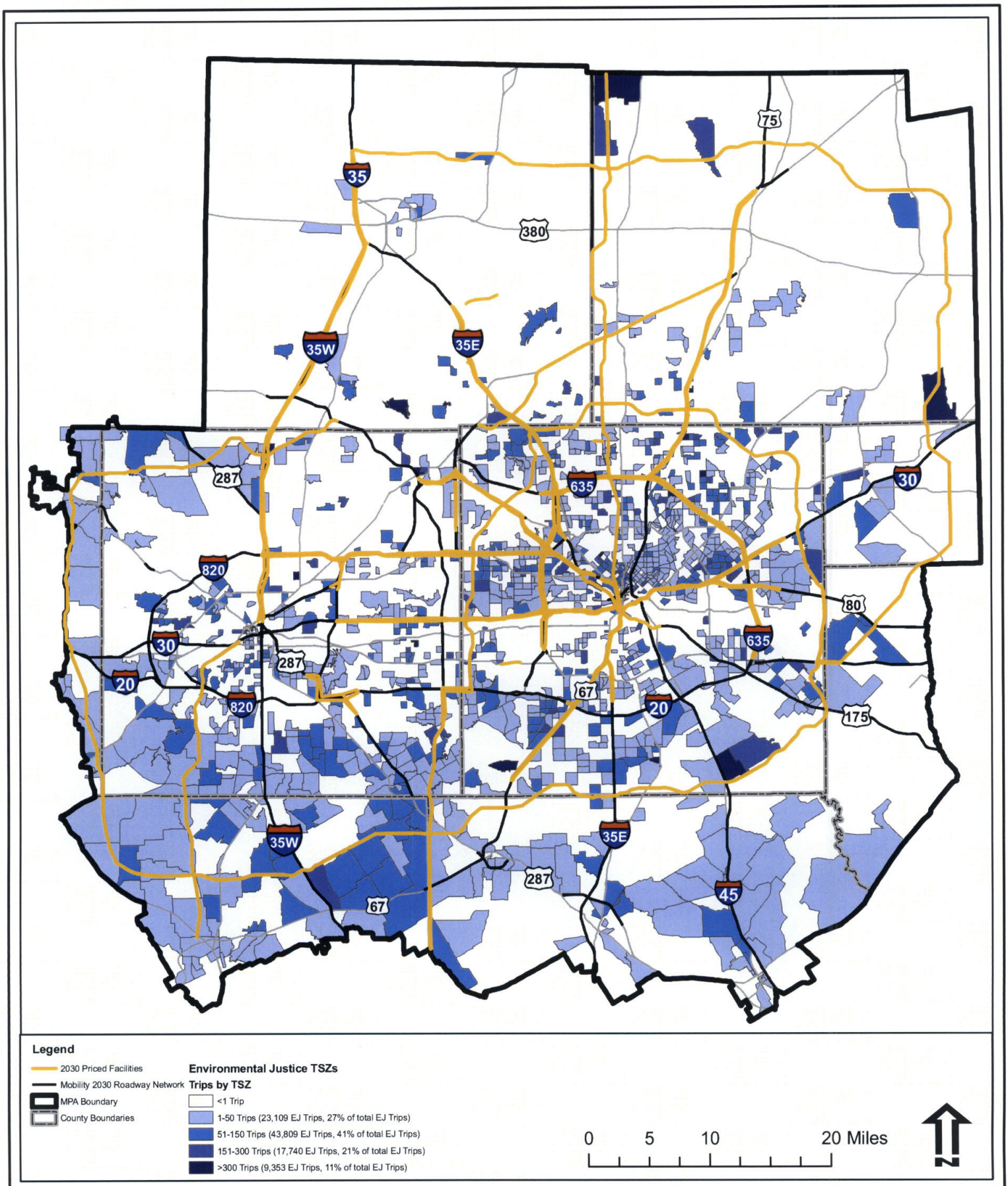
N

Texas Department of Transportation

Texas Department of Transportation

Environmental Justice Traffic Survey Zones: Daily Trips on Existing (2009) Priced Facilities

Date Created: May 2008



Texas Department of Transportation

Texas Department of Transportation

Environmental Justice
Traffic Survey Zones:
Daily Trips on Future (2030) Priced Facilities

Date Created: May 2008

CITY OF ALLEN

CERTIFICATION

CITY OF ALLEN, TEXAS §

COLLIN COUNTY, TEXAS §

I, Shelley B. George, City Secretary of the City of Allen, Collin County, Texas, do hereby certify that the attached is a true and correct copy of the City of Allen Resolution No. 2689-1-08(R) duly passed and approved by the City Council of the City of Allen, Texas, on the 8th day of January, 2008.

WITNESS MY HAND AND SEAL OF SAID CITY, this the 9th day of January, 2008.

Shelley B. George
City Secretary
City of Allen, Texas

RESOLUTION NO. 2689-1-08(R)

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ALLEN, COLLIN COUNTY, TEXAS, APPROVING A NORTH TEXAS TOLLWAY AUTHORITY SCHEMATIC FOR THE SH 121 AND US 75 INTERCHANGE

WHEREAS, the North Texas Tollway Authority (NTTA) and the Texas Department of Transportation (TxDOT) finalized a project agreement for State Highway (SH) 121 on August 22, 2007; and,

WHEREAS, the project agreement was executed by TxDOT on October 18, 2007, following environmental clearance of a re-evaluation for Segments 1-4 by the Federal Highway Administration (FHWA); and,

WHEREAS, the NTTA will assume management of the SH 121 corridor in 2008; and,

WHEREAS, an alternate design concept for the SH 121 and US 75 Interchange (Segment 4) is under discussion with the cities of Allen and McKinney, the town of Fairview and Collin County. An alternate design for Segment 4, currently under evaluation by NTTA, will require environmental re-evaluation; and,

WHEREAS, these changes include the addition of a braided ramp east of Chelsea and Hardin roads for access to the frontage road from the SH 121 mainlanes and for access from the frontage road to the mainlanes, as well as the northward relocation of the proposed southbound ramp from US 75 to the southbound frontage road prior to the City of Allen city limits; and,

WHEREAS, the updated schematics improve mobility and access for residents of the City of Allen, as well as surrounding areas.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ALLEN, COLLIN COUNTY, TEXAS, THAT:

SECTION 1. The terms and conditions of the alternate design concept for Segment 4 of the SH 121 corridor, having been reviewed by the City Council of the City of Allen and found to be acceptable and in the best interests of the City of Allen and its citizens, are hereby in all things approved.

SECTION 2. The City Secretary shall forward a certified copy of this Resolution to the NTTA and TxDOT.

SECTION 3. This Resolution shall become effective immediately upon its passage.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF ALLEN, COLLIN COUNTY, TEXAS, ON THIS THE 8TH DAY OF JANUARY, 2008.

APPROVED:

Stephen Terrell, MAYOR

ATTEST:

Shelley B. George, TRMC, CITY SECRETARY

RESOLUTION NO. 2008-02-022 (R)

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MCKINNEY, COLLIN COUNTY, TEXAS, APPROVING A NORTH TEXAS TOLLWAY AUTHORITY SCHEMATIC FOR THE SH 121 AND US 75 INTERCHANGE

WHEREAS, the North Texas Tollway Authority (NTTA) and the Texas Department of Transportation (TxDOT) finalized a project agreement for SH 121 on August 22, 2007; and

WHEREAS, the project agreement was executed by TxDOT on October 18, 2007, following environmental clearance of a reevaluation for Segments 1-4 by the Federal Highway Administration; and

WHEREAS, the NTTA will assume management of the SH 121 corridor in 2008; and

WHEREAS, an alternate design concept for the SH 121 and US 75 interchange (Segment 4) is under discussion with the Cities of McKinney and Allen, the Town of Fairview and Collin County; and

WHEREAS, an alternate design for Segment 4, currently under evaluation by NTTA, will require environmental reevaluation; and

WHEREAS, these changes include the addition of a braided ramp east of Hardin Boulevard, as well as frontage road connections to Frisco Road and McKinney Ranch Parkway, and alterations to the ramp(s) to Eldorado Parkway from northbound US75 and the east to north direct connector; and

WHEREAS, the updated schematic improves mobility and access for residents of the City of McKinney, as well as surrounding areas.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF McKINNEY, COLLIN COUNTY, TEXAS, THAT:

Section 1. The City of McKinney will work with the Town of Fairview to establish a Memorandum of Understanding (MOU) detailing terms and conditions for the realignment of Frisco Road to a location mutually beneficial to both parties, but constrained to the geometric requirements of the alternate design concept, and cooperate with all public and private parties to achieve the physical relocation of Frisco Road in a timeframe commensurate with construction of the interchange and development of properties adjacent to the interchange.

Section 2. The terms and conditions of the alternate design concept for Segment 4 of the SH 121 corridor, having been reviewed by the City Council of the City of McKinney and found to be acceptable and in the best interests of the City of McKinney and its citizens, are hereby in all things approved.

Section 3. The City Secretary shall forward a certified copy of this Resolution to the NTTA and TxDOT.

Section 4. This Resolution shall become effective immediately upon its passage.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF MCKINNEY, COLLIN COUNTY, TEXAS, ON THIS THE 5th DAY OF FEBRUARY, 2008.

CITY OF McKINNEY, TEXAS

BILL WHITFIELD, Mayor

ATTEST:

SANDY HART, TRMC, MMC
City Secretary
BEVERLY COVINGTON, TRMC, CMC
Deputy City Secretary

TOWN OF FAIRVIEW TEXAS

500 S. HWY 5 • Fairview, TX 75069 • Town Hall 972-562-0522

July 24, 2008

NTTA
Administrative Offices
5900 West Plano Parkway
Suite 100
Plano, TX 75093

To Whom It May Concern:

Please find the enclosed resolution passed by our Town Council supporting a revised design for the interchange of US 75 and SH 121.

Please contact me if you should have any further questions.

Sincerely,

Michelle Lewis Sirianni

Michelle Lewis Sirianni
Town Secretary

RESOLUTION NO. 2008-1-86

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF FAIRVIEW, COLLIN COUNTY, TEXAS, SUPPORTING A REVISED DESIGN, AS PRESENTED BY THE NTTA, FOR THE INTERCHANGE OF US 75 AND SH 121.

WHEREAS, the NTTA has assumed responsibility for construction and operation of SH 121 at and west of its interchange with US 75, including portions immediately contiguous to the Town of Fairview; and,

WHEREAS, the NTTA has prepared a revised design layout for said interchange that is expected to reduce both the cost and time of construction; and

WHEREAS, the NTTA has worked with the Town and immediately affected property owners to reasonably accommodate their needs, taking into account available right-of-way, safety needs, cost, and other significant variables; and

WHEREAS, a final design for access to Frisco Road from eastbound SH 121 cannot yet be finalized, yet the City of McKinney and the NTTA have expressed support of a rerouting of said access as agreed to by Fairview;

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF FAIRVIEW, COLLIN COUNTY, TEXAS, THAT:

Fairview hereby expresses its support for the proposed NTTA re-design of the US 75/SH 121 interchange, subject to a satisfactory re-route of Frisco Road, and it is accordingly so resolved.

PASSED AND APPROVED by the Town Council of the Town of Fairview, Texas this the 23 day of July, 2008.

Sim Israeloff

Sim Israeloff, Mayor
Town of Fairview, Texas

ATTEST:

Michelle Lewis Sirianni

Michelle Lewis Sirianni, Town Secretary
Town of Fairview, Texas

TOWN OF FAIRVIEW