

CATEGORICAL EXCLUSION

STATE HIGHWAY (SH) 121 AT
DALLAS NORTH TOLLWAY (DNT)
INTERCHANGE IMPROVEMENTS

CITIES OF FRISCO AND PLANO
COLLIN COUNTY, TEXAS

CSJ: 0364-04-047

U.S. DEPARTMENT OF TRANSPORTATION
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INTRODUCTION

This environmental document evaluates the social, economic, and environmental impacts resulting from the proposed State Highway (SH) 121 and the Dallas North Tollway (DNT) interchange improvements. The project limits of SH 121 extend from north of Legacy Drive to north of SH 289 (Preston Road), approximately 2.2 miles in length. The project limits along the DNT extend from south of Legacy Drive to north of Gaylord Parkway, approximately 1.8 miles in length. The Texas Department of Transportation (TxDOT) is proposing this project which is located in the cities of Frisco and Plano in Collin County, Texas. (See **Figure 1: Project Location Map** and **Figure 2: FEMA Floodplain and USGS Quadrangle Map**.) Construction of direct connection ramps and modifications to certain ramps are proposed to improve operational efficiency within this corridor.

The design schematic encompassing the proposed improvements is available for inspection at the Dallas District Office, 4777 E. Hwy. 80, Mesquite, Texas 75150-6643 and at the Collin County Area Office, 2250 S. SH 5, McKinney, Texas 75069.

NEED & PURPOSE

The need for the proposed project is to respond to the considerable on-going growth of commercial and residential development along and near the SH 121 and DNT facilities that has and will continue to produce a major travel demand on these transportation systems. The proposed project would improve the current system linkage by providing connectivity and direct access between two regional toll facilities, SH 121 and DNT. Improving system linkage would reduce congestion and improve the operational efficiency of the SH 121 and DNT facilities.

As Collin County's principal route to the Dallas-Fort Worth International Airport, and a vital north-south corridor connecting United States Highway (U.S.) 75 in McKinney to Denton County and points west, SH 121 continues to become more congested and more strained every day. Mainlane traffic counts (2005) along SH 121 show an average daily traffic of 21,010 vehicles per day (vpd), and are projected to reach 83,900 vpd by 2030. Similarly, mainlane traffic counts (2005) along DNT show 42,475 vpd and are projected to reach 66,600 vpd in 2030. As southwest Collin County continues to grow in both employment and population, the SH 121 corridor will continue to experience exponential growth in traffic.¹ The SH 121 facility, from 0.23 mile west of Business SH 121 to DNT, is a 13-mile, six-lane, controlled access toll facility. The 12.5 miles of SH 121 mainlanes between the DNT and SH 121 at US 75 interchange are currently proposed to be implemented as a six-lane, controlled access toll facility.

¹ *Two Futures for Collin County: Incremental Versus Leveraged (SH 121 Feasibility Study Report)*, April 2005. <http://www.nctcog.org/trans/corridor/SH121/SH121FeasibilityStudyReport.pdf>

The DNT provides a convenient north-south connection for motorists between downtown Dallas and cities in northern Dallas, Collin, and Denton Counties. The DNT facility is currently expanding to accommodate growing traffic needs in the region. The 22-mile, six-lane, limited access tollway currently passes through or along the cities of Dallas, Highland Park, University Park, Addison, Farmers Branch, Plano and Frisco. The first section of the DNT from downtown Dallas to IH 635 (LBJ Freeway) opened to traffic in June 1968. It was extended to Briargrove Lane in 1987 and to SH 121 Drive in Plano in 1994.

A 1.5-mile DNT extension/SH 121 Interchange to Gaylord Parkway in Frisco opened in April 2004 and the Phase 3 Extension of the DNT from Gaylord Parkway North to U.S. 380 was opened to traffic in September 2007. The Phase 3 Extension will provide a vital route to downtown Dallas for motorists coming from Frisco and the fast-growing cities to its north. Additionally, initial planning is under way for a proposed extension of DNT from U.S. 380 north to the Grayson County line. The length of this extension is approximately 13.5 miles. The DNT extensions, coupled with the growing demands along SH 121, have substantially increased the demand for efficient linkage between these two crucial North Texas transportation facilities.

The purpose of the project is to improve system linkage by providing continuity between major regional transportation facilities and improving mobility in the study area and region. The existing SH 121 and DNT facilities currently lack direct connection access yet are experiencing increasing traffic demands due to the intense growth patterns the region has and will continue to experience. The proposed project would support the project need by responding to population increases and associated development which has resulted in traffic increases that have created congestion in the study area and across the region. The proposed improvements would reduce congestion and improve operational efficiency. The Traffic section further explains the anticipated reduction of congestion and improved operational efficiency.

DESIGN

Existing SH 121/DNT Interchange

The existing SH 121/DNT interchange is a 3-level interchange. Level 1 consists of the at-grade frontage road intersection of SH 121 and DNT; Level 2 consists of the SH 121 mainlanes (currently under construction); and Level 3 consists of the DNT mainlanes.

The existing SH 121 facility runs north-south and generally consists of six mainlanes (three in each direction) with a 52 ft open median, three-lane frontage roads in both directions, slip ramps to and from cross streets, and the frontage road intersection with DNT.² Another aspect to consider is the orientation of the SH 121 facility itself. The existing SH 121 facility is situated in a diagonal direction, generally southwest to northeast. The SH 121 mainlanes are currently under construction. The existing DNT facility runs north-south and generally consists of six mainlanes (three in each direction) barrier separated with a median ranging from approximately 0 ft to 15 ft, two-lane

² A slip ramp is a type of connector that provides access to and from frontage roads/mainlanes; allowing motorists to 'slip' from one roadway to another.

frontage roads in both directions, slip ramps to and from cross streets, and the frontage road intersection with SH 121. The existing SH 121 and DNT facilities have a mainlane and frontage road width of 12 ft, as well as a mainlane shoulder width of 10 ft.

Table 1 provides descriptions of the existing SH 121 and DNT facilities, including lane, median, shoulder, and right-of-way (ROW) widths, and existing entrance and exit ramp locations. See **Figure 3: Existing and Proposed Typical Sections** and **Appendix A: Project Photographs**.

Table 1
Existing SH 121 and DNT Facility Descriptions

Existing Description	Facility	
	SH 121	DNT
Number of mainlanes	6 mainlanes (under construction) with open median	6 mainlanes barrier separated
Number of frontage roads	3 lanes each direction	2 lanes each direction
ROW widths	Varies from 460' to 615'	Varies from 300' to 400'
Lane widths	12'	12'
Mainlane shoulder widths	10'	10'
Median widths	Approximately 52'	Approximately 0' to 15'
Entrance ramp locations	(Northbound) Legacy Dr. *Parkwood Blvd.	(Northbound) *SH 121 frontage road intersection
	(Southbound) Parkwood Blvd. *DNT frontage road intersection	(Southbound) SH 121 frontage road intersection Legacy Dr.
Exit ramp locations	(Northbound) *DNT frontage road intersection Parkwood Blvd. *Preston Rd.	(Northbound) Legacy Dr. Headquarters Dr. SH 121 frontage road intersection Gaylord Pkwy.
	(Southbound) *Parkwood Blvd. Legacy Dr.	(Southbound) *SH 121 frontage roads intersection

* Ramps currently under construction

Proposed SH 121/DNT Interchange

The existing 3-level SH 121/DNT interchange would remain and direct connection ramps would be constructed above the existing interchange, resulting in a 5-level fully directional interchange between SH 121 and DNT. The proposed direct connection ramps would be built over the existing mainlanes and frontage roads of both SH 121 and DNT. The proposed project would allow for direct connection between two tolled facilities. As previously stated, the DNT, is a 22-mile, six-lane, limited access tollway. SH 121, from 0.23 mile west of Business SH 121 to DNT, is a 13-mile, six-lane, controlled access toll facility. The 12.5 miles of SH 121 mainlanes between the DNT and SH 121 at US 75 interchange are currently proposed to be implemented as a six-lane, controlled access toll facility. No toll gantries are proposed along the limits of the direct connection ramps.

The principal features of this proposed action are two new interchange levels (Levels 4 and 5) of direct connection ramps. Modifications to entrance and exit ramps, as well as

auxiliary lanes are also proposed.³ The SH 121 and DNT mainlane shoulder width, lane, and median widths would not change; however, the shoulder widths on the proposed direct connection ramps and entrance and exit ramps would range from 4 ft to 8 ft. **Table 2** provides descriptions of the proposed interchange improvements. See **Figure 3: Existing and Proposed Typical Sections**.

Table 2
Proposed SH 121 and DNT Interchange Improvements

Proposed Interchange Improvements	Facility	
	SH 121	DNT
Direct Connection Ramps	(Northbound) Begins east of Legacy Dr. and would provide access to northbound and southbound DNT	(Northbound) Begins south of Headquarters Dr. and would provide direct connection to northbound and southbound SH 121
	(Southbound) Begins west of Preston Rd. and would provide access to northbound and southbound DNT	(Southbound) Begins south of Gaylord Pkwy. and would provide direct connection to northbound and southbound SH 121
Modified Entrance Ramp Locations	(Northbound) Ramp from Legacy Dr. would be modified to allow braided condition with the direct connection ramp	(Northbound) No modifications proposed
	(Southbound) Ramp from DNT frontage road intersection would be removed to accommodate southbound direct connection ramp	(Southbound) Gaylord Pkwy. ramp would be modified to allow braided condition with the direct connection ramp SH 121 frontage road intersection ramp would be modified to allow braided condition with the direct connection ramp
Modified Exit Ramp Locations	(Northbound) No modifications proposed	(Northbound) SH 121 frontage road intersection ramp would be removed
	(Southbound) Ramp to Parkwood Blvd. would be modified to accommodate the proposed entrance ramp braid from Preston Rd. to southbound SH 121	(Southbound) SH 121 frontage road intersection ramp would be removed
Proposed Entrance Ramp Locations	(Northbound) Ramp from Preston Rd. to southbound SH 121	(Northbound) Ramp from Headquarters Dr. to northbound DNT would be braided underneath the direct connection ramp
Proposed Exit Ramp Locations	(Southbound) No ramps proposed	(Southbound) Ramp to Legacy Dr. would be modified to allow braided condition with the direct connection ramp

³ An auxiliary lane connects slip ramps/roads with the entrance ramp or acceleration lane from one interchange leading to the exit ramp or deceleration lane of the next.

Proposed Interchange Improvements	Facility	
	SH 121	DNT
Auxiliary Lanes	(Northbound) No auxiliary lanes proposed	(Northbound) Lane added from proposed Headquarters Dr. entrance ramp to existing Gaylord Pkwy. exit ramp
Proposed Interchange Improvements	Facility	
	SH 121	DNT
	(Southbound) Lane would be added between Parkwood Blvd. exit ramp and Hillcrest Dr. entrance ramp Lane would be added between Preston Rd. entrance ramp to the direct connection ramp	(Southbound) Lane would be added from SH 121 frontage road entrance ramp to Legacy Dr. exit ramp.
Ramp lane widths	12' to 14'	12' to 14'
Ramp shoulder widths	Approximately 4' to 8'	Approximately 4' to 8'

Direct connection ramps from northbound/southbound SH 121 and northbound/southbound DNT would consist of one lane, tapering out to two lanes, which would improve operations at the decision point. The direct connection ramp would then join with either the SH 121 or DNT mainlanes. Any auxiliary lanes added along the SH 121 or DNT mainlanes would result in pavement and/or bridge widening.

PROJECT COST ESTIMATE

As listed in the 2008-2011 Transportation Improvement Plan (TIP), the total estimated cost to improve the proposed DNT and SH 121 interchange is \$116,127,648 as of June 2008.

SURROUNDING TERRAIN AND LAND USE

The topography in the project area is mostly level. The Natural Resource Conservation Service (NRCS) Soil Survey of Collin County, Texas (July 1968) indicates that the proposed project is within the Houston Black-Austin general soil type. This soil type is gently sloping to sloping, clayey soils that are deep over marl and chalk formations on uplands.

The proposed project is located in an urban area within the Cities of Frisco and Plano in southwest Collin County. Land use along the project is predominately zoned for major commercial development and non-residential mixed-use. Properties adjacent to the proposed project are primarily retail and commercial properties. It is not anticipated that this project would substantially change the land usage as it now exists or as planned for future development. In addition, the project is consistent with local land planning efforts. See **Appendix A: Project Photographs**.

TRAFFIC

The need for connectivity and direct access between the SH 121 and DNT roadways is supported through analysis of future traffic demand that is anticipated to utilize the proposed direct connection ramps. A travel demand modeling analysis has been performed in conjunction with the proposed project. This analysis evaluated the effect of the direct connection ramps on the overall interchange travel patterns. Local access choices were also considered by providing full direct connection at the interchange. After assessing impacts to regional and local traffic patterns, it was determined the proposed direct connection ramps would accommodate future traffic demands. The analysis also revealed that a lack of direct connection would increase travel on existing ramps and local transportation arteries by 10 percent. Therefore, the proposed improvements would enhance system linkage by improving operational efficiency and reducing congestion.

According to data obtained through TxDOT Transportation Planning and Programming Division (TPP), the percentage of mainlane vehicles anticipated to utilize the proposed SH 121 and DNT direct connection ramps ranges from approximately 19 to 31 percent [13,900 to 23,200 vpd for the design year (2030) Average Daily Traffic (ADT)]. The traffic numbers utilized for the proposed project reflect the fact that SH 121 was approved as a toll facility. The anticipated demand for direct connection ramp utilization is a reflection of the need of the project, which is improved continuity and mobility in the study area and region. See **Table 3** for 2030 traffic data per facility.

Table 3
Percentage of 2030 Mainlane ADT
Utilizing Direct Connection Ramps

Facility Mainlanes	Mainlane ADT (vpd)	Ramp ADT (vpd)	Percentage using Direct Connections
SH 121 –Northbound	76,300	14,600	19.1
SH 121 - Southbound	91,500	22,500	24.5
DNT – Northbound	74,300	23,200	31.2
DNT - Southbound	58,900	13,900	23.5

Source: TxDOT TPP

RIGHT-OF-WAY/UTILITY ADJUSTMENTS/EASEMENTS

In addition to the approximate 203.2 acres of existing ROW which was purchased under the original environmental clearance, the proposed improvements would require approximately 3.86 acres of additional ROW along the southwest corner of the SH 121 and DNT interchange. This proposed ROW is required to accommodate the construction of the proposed direct connection ramps. Additionally, two easements are proposed along the northwest and northeast corners of the interchange to accommodate the direct connection ramps. The total acreage of the two easements is approximately 2.62 acres. An interlocal agreement (ILA) between TxDOT and adjacent property owners would allow for the betterment, use, and maintenance of the property in the form of an easement. All remaining property is being acquired in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act, as amended in 1987. No displacements would occur as a result of the proposed project. See **Figure 4: Corridor Map**.

Utilities such as water lines, sewer lines, gas lines, telephone cables, electrical lines and other subterranean and aerial utilities may possibly require adjustment. The adjustment of any utilities would be handled by each utility company and in such a way so that no substantial disruption of service would take place while the adjustments are being made. Utility adjustments, if required, would occur according to standard TxDOT procedures.

PUBLIC INVOLVEMENT

Agency and stakeholder coordination meetings were conducted during the development of the proposed project. Efforts to minimize impacts and access changes for adjacent property owners, while minimizing negative effects to operational efficiency were the primary topics addressed. Coordination meetings, which did not include the general public, were held in March, June, September, and December 2006 to further refine the preliminary schematic design and gather agency and stakeholder feedback.

SOCIO-ECONOMIC DATA

The proposed project would directly impact five census block groups: Census Tract (CT) 305.01 Block Group (BG) 1, CT 305.01 BG 2, CT 316.44 BG 1, CT 316.44 BG 2, and CT 316.50 BG 2. Between 1990 and 2000, the project area's population increased by 150.0 percent, from a population of 6,906 persons in 1990 to a population of 17,337 persons in 2000. This compares to a growth of approximately 86.2 percent for Collin County, 72.7 percent for the City of Plano, and 445.5 percent for the City of Frisco during the same decade. See **Figure 5: 2000 Census Block Groups**.

COMMUNITY COHESION

Community cohesion is a term that refers to an aggregate quality of a residential area. Cohesion is a social attribute that indicates a sense of community, common responsibility, and social interaction within a limited geographic area. It is the degree to which residents have a sense of belonging to their neighborhood or community or a strong attachment to neighbors, groups, and institutions as a continual association over time.

Community cohesion would likely remain intact since the SH 121 and DNT corridors are existing facilities that serve as a boundary between neighborhoods and communities.

There are no distinct neighborhoods, ethnic groups, or other specific groups directly adjacent to the project. As a result, the proposed project would not effect, separate, or isolate any distinct neighborhoods, ethnic groups, or other specific groups. No displacements or relocations would occur due to the proposed project.

Limited English Proficiency Populations

Executive Order (EO) 13166, "Improving Access to Services for Persons with Limited English Proficiency (LEP)" requires federal agencies to examine the services they provide and identify any need for services to those with LEP. The EO requires federal agencies to work to ensure that recipients of federal financial assistance provide meaningful access to their LEP applicants and beneficiaries. Failure to ensure that LEP persons can effectively participate in or benefit from federally assisted programs and activities may violate the prohibition under Title VI of the Civil Rights Restoration Act of

1987 and Title VI regulations against national origin discrimination.

Census block group data for “Ability to Speak English” for the population five years and over indicates 1.1 percent of the population within the five census block groups directly adjacent to the project corridor speaks English “Not Well” or “Not at All.” Specific LEP languages and respective percentages represented in the LEP study area are the following: Spanish (0.5 percent), Other Indo-European (0.2 percent), Asian and Pacific Islander (0.4 percent), and Other (<0.1 percent). A field reconnaissance (windshield survey) indicated that English was the language used for building signage and other forms of posted information and advertisement along the project corridor. As stated previously, agency and stakeholder coordination meetings have been conducted throughout the development of the project. No LEP populations requested assistance during the agency and stakeholder coordination meetings. Additional public involvement is not anticipated; however, if subsequently determined necessary, reasonable steps such as the publication of Bilingual (English/Spanish) announcements in local papers, such as *Al Dia*, which inform citizens of the opportunity to request an interpreter (for language or other special communication needs) to be present at the public meetings would be taken to ensure that such persons have meaningful access to the programs, services, and information that TxDOT provides. Therefore, the requirements of EO 13166 appear to be satisfied.

ENVIRONMENTAL JUSTICE

EO 12898 entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of the programs on minority and low-income populations. A minority population is defined as a group of people and/or a community experiencing common conditions of exposure or impact that consists of persons classified by the U.S. Bureau of the Census as African-American; Hispanic; Asian or Pacific Islander; American Indian, Eskimo, or Aleut; or other non-white persons. A low-income population is defined as one with a median income for a family of four equal to or below the national poverty level of \$21,200 in the year 2008 (2008 Department of Health and Human Services Poverty Guidelines).

Under EO 12898, disproportionately high and adverse effects are defined as effects that “will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.”

The potential effects of the proposed project have been evaluated in accordance with the requirements of EO 12898. Population data at the census block and census block group levels from *Census 2000* has been used in this socio-economic analysis. Census block data provides information at the lowest scale available for race and ethnicity analysis; census block group data provides information at the lowest scale available for household income and poverty population analyses. See **Figure 5: 2000 Census Block Groups** and **Figure 6: 2000 Census Blocks**.

Definition of Minority and Low-Income Population Study Areas

The study areas for the minority and low-income population analyses differ due to the availability of census data. A total of 39 census blocks fall within a 1/4 mile area adjacent to the proposed project limits; however, only 9 of the 39 census blocks contain populations. These nine census blocks comprise the “minority population study area.” The area traversed by the proposed interchange improvements lies within five census block groups. These five census block groups comprise the direct impacts study area for household income and poverty populations, and will be referred to as the “low-income population study area.”

Four census block groups were also included for comparison purposes in the minority characteristics discussion (“comparison census block groups”). The comparison census block groups were chosen because of their close vicinity to the proposed project, they border the proposed improvements, and are associated with several of the census blocks that define the minority population study area.

Minority Characteristics

For purposes of the analysis, an environmental justice population is present when the total minority population percentage within the proposed project limits or individual census blocks is greater than 51 percent. Data from *Census 2000* for the nine census blocks, shown in **Table 4**, has been used in this analysis. The nine census blocks comprising the minority direct impacts study area have a total population of 1,443. Overall, minorities account for 19.5 percent of the minority population study area. The comparison census block groups exhibit minority percentages that range from 0.0 to 42.9 percent. Of the nine census blocks that comprise the minority population study area, no census blocks exhibit a minority population greater than 51 percent.

See **Table 4** for data on all census blocks within the project area and comparison area census block groups.

Table 4
Percent Minority Populations*

Census Tract	Census Block Group	Census Block	Total Population	Minority Population of One Race/ Not Hispanic or Latino				Percent Hispanic or Latino of Any Race	Percent Total Minority Population
				Percent Black or African American	Percent American Indian and Alaska Native	Percent Asian	Percent Pacific Islander		
COMPARISON BLOCK GROUPS									
CT 215.08	1	-	3,541	5.5	0.6	2.5	0.1	14.1	22.9
CT 305.01	2	-	257	3.5	0.0	0.0	0.0	6.6	10.1
CT 316.44	2	-	1,631	5.2	0.0	17.4	0.0	1.1	23.7
CT 316.50	2	-	1,681	6.0	0.0	15.7	0.0	5.3	27.1
PROJECT AREA									
CT 215.08	1	1000	446	3.1	0.9	5.6	0.0	8.3	17.9
CT 305.01	2	2003	98	0.0	0.0	0.0	0.0	6.1	6.1
CT 305.01	2	2007	15	0.0	0.0	0.0	0.0	0.0	0.0
CT 305.01	2	2008	28	21.4	0.0	0.0	0.0	21.4	42.9
CT 305.01	2	2021	13	0.0	0.0	0.0	0.0	7.7	7.7
CT 316.44	2	2007	3	0.0	0.0	0.0	0.0	0.0	0.0
CT 316.44	2	2009	99	0.0	0.0	13.1	0.0	0.0	13.1
CT 316.50	2	2060	421	4.5	1.2	3.3	0.0	15.4	24.5
CT 316.50	2	2061	320	7.8	0.0	6.9	0.0	6.3	20.9
Total Minority Population Study Area			1,443	4.4	0.6	5.1	0	9.4	19.5

Source: U.S. Census Bureau. *Census 2000*. <http://factfinder.census.gov>

* Population percentages are rounded to the nearest tenth of a percent.

Income Characteristics

Due to the lack of income data at the census block level, the five census block groups associated with the project area census blocks were used for this part of the analysis. According to *Census 2000*, the median household income of the project area ranged from \$59,512 to \$110,745. The percentage of the total project area below the poverty level is 1.4 percent. It is not anticipated that there would be any disproportionate impacts to low-income populations. See **Table 5** for income characteristics of the low-income population study area.

Table 5
Median Household Income and Poverty Status

Census Tract	Census Block Group	Population*	Median Household Income	Persons Below Poverty Level	
				Number	Percent
CT 305.01	1	9,311	\$87,614	96	1.0
	2	283	\$76,255	50	17.7
CT 316.44	1	1,412	\$59,512	20	1.4
	2	1,631	\$110,745	9	0.6
CT 316.50	2	1,681	\$76,248	28	1.7
Total Low-Income Population Study Area		14,318	N/A	203	1.4

* Population for whom poverty status has been determined. Source: U. S. Census Bureau. *Census 2000*.

Summary of Environmental Justice Impacts

Based on the analysis provided above, no significant direct environmental justice impacts would result from the proposed interchange improvements. Although the study area

contains a total minority population of 19.5 percent, the project impacts would not be isolated within a limited number of census blocks, but would be distributed among all users of the SH 121 and DNT facilities. As stated previously, no toll gantries are proposed along the limits of the direct connection ramps. The proposed implementation of direct connection ramps would provide better mobility along frontage roads as a result of a decrease in the amount of traffic utilizing the existing SH 121/DNT signalized intersection.

Environmental justice issues related to tolling have been addressed in the re-evaluation of the proposed tolling of SH 121 in Collin County (CSJ: 0364-03-067, etc.). Based on the analysis provided in the SH 121 Collin County Toll Re-evaluation, no significant direct environmental justice impacts would result from the proposed tolling of SH 121 in Collin County. Although the study area contained a total minority population of 23.3 percent, the project impacts are not isolated within a limited number of census tracts, but are distributed among all users of the SH 121 facility. Low-income populations are 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 is higher for low-income users because the cost of paying tolls represents 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. As indicated in the Origin-Destination (O&D) analysis results, a majority of trips anticipated to utilize the toll facility will not originate from areas identified with high concentrations of environmental justice populations. O&D data based on projected trips indicates “environmental justice” traffic serial zones (those with 51 percent or greater environmental justice populations) would utilize SH 121 as a toll or non-toll facility.

The tolling analysis provided in the SH 121 Collin County Toll Re-evaluation includes the recommendations of *Mobility 2030*, which included the proposed interchange improvements. A non-toll alternative would remain available, as the frontage road systems between SH 121 and DNT would meet at a signalized intersection. This intersection would allow direct access to the adjoining system at no cost to the user.

The EO 12898 term “disproportionately high and adverse effect” considers the *totality* of significant individual or cumulative human health or environmental impacts. The benefits associated with the proposed interchange improvements would include improved system linkage by providing continuity between major regional transportation facilities and improved mobility in the region. Over the long term, the entire corridor and users would benefit from the proposed interchange improvements as a result of improved system linkage and mobility in the area. There do not appear to be any disproportionately high and adverse impacts on minority or low-income populations associated with the proposed project.

INVASIVE SPECIES AND BENEFICIAL LANDSCAPE PRACTICES

In accordance with EO 13112 on Invasive Species and the Executive Memorandum on

Beneficial Landscaping, landscaping would be limited to seeding and replanting the ROW according to TxDOT approved seeding specifications where possible.

VEGETATION AND WILDLIFE IMPACTS

The proposed project lies within the Blackland Prairies Ecological Area of Texas as defined by the Texas Parks and Wildlife Department (TPWD). The 1984 TPWD map of *The Vegetation Types of Texas* indicates that the project area falls within the “Crops” and “Others” classifications. “Crops” is described as cultivated cover crops or row crops and grassland areas with crop rotations. “Others” is described as mixed native and introduced grasses and forbs of herbaceous communities resulting from cleared woody vegetation of forest. The area does not correspond with the vegetation types as found in *The Vegetation Types of Texas*.

The proposed project area is mostly paved, with strips of vegetation along the edge of the roadway and in the medians. There are approximately 68.2 vegetated acres within the existing ROW of the project limits. Predominant vegetation, approximately 98 percent or 66.9 acres, is herbaceous with the dominant species Bermuda grass (*Cynodon dactylon*); ornamental shrubs and trees in the existing ROW constitutes the remaining two percent, or 1.3 acres of vegetation. Approximately 25.5 acres of herbaceous vegetation would be permanently impacted by the proposed improvements.

An undeveloped, vegetated area located in the southwest corner of the interchange would be acquired for the proposed improvements. From observations made during the project area reconnaissance and review of aerial photographs, it was determined this area had previously been used for agricultural purposes. It contains mixed grasses, with no woody vegetation. This area is approximately 3.86 acres in size and consists of herbaceous vegetation such as Johnson grass (*Sorghum halepense*), bluestems (*Andropogon spp.*), and other common pasture grasses. Approximately 0.83 acre of herbaceous vegetation within the proposed ROW would be permanently impacted by the construction of the proposed direct connection ramps.

No special habitat features were observed within the proposed project limits. The Little Bluestem-Indiangrass series is not present within the existing or proposed ROW. According to a field investigation, it was determined there are no substantial plant communities or native prairie remnants that would be adversely affected by the proposed project.

In accordance with Provision (4)(A)(ii) of the TxDOT – TPWD Memorandum of Understanding (MOU), some habitats may be given consideration for non-regulatory mitigation during project planning (at the TxDOT District’s discretion).

These habitats may include:

- Habitat for federal candidate species if mitigation would assist in the prevention of the listing of the species;
- Rare vegetation series (S1, S2, or S3) that also locally provide habitat for a state listed species;
- All vegetation communities listed as S1 or S2, regardless of whether or not the series in question provide habitat for state-listed

- species;
- Bottomland hardwoods, native prairies, and riparian areas; and,
- Any other habitat feature considered to be locally important.

No compensatory mitigation is offered per the TxDOT-TPWD Memorandum of Agreement since the project is occurring within an urbanized developed area.

Wildlife

The project would not encroach or affect a population or habitat of any federally listed endangered or threatened species listed in **Table 6**. The project area is urbanized and therefore not suitable habitat for any of the federally listed endangered/threatened species for Collin County, Texas. The proposed interchange improvements would not fragment or substantially alter any existing wildlife habitats. The loss of available foraging habitat is minimal based upon the diversity and quantity of habitat that appears to be available at this time. Some wildlife species could be adversely affected from construction activities, based upon their mobility and response mechanism. Some animals, like snakes, frogs, and lizards, have limited mobility when compared to roadway construction activities. Also, some animals, like snakes and rodents, hide in burrows or under rocks when threatened. These limited responses make these particular species more vulnerable to construction activities. The loss of or effect to migratory species is also a concern. Care should be taken and a brief reconnaissance performed before construction clearing is undertaken. If any Federal or State protected or migratory species are found, work should cease at that location and TxDOT personnel should be contacted.

Migratory Bird Treaty Act

All avian species considered migratory are protected under the Migratory Bird Treaty Act (MBTA). The Federal and State listed species in Collin County that are avian species are considered migratory. Other migratory species observed not listed as threatened or endangered were the Orchard oriole (*Icterus spurius*), Red tail hawk (*Buteo jamaicensis*), American Crow (*Corvus brachyrhynchos*), Northern cardinal (*Cardinalis cardinalis*), Northern mockingbird (*Mimus polyglottos*), Great tailed grackle (*Quiscalus mexicanus*), Mourning dove (*Zenaida asiatica*), European starling (*Sturnus vulgaris*), and Bluejay (*Cyanocitta cristata*). Some specimens may be local residents year round but the species in general does migrate. The MBTA makes it unlawful to take, kill, possess, transport or harm migratory birds, their eggs, parts and nests. If construction or clearing is to take place during nesting season, which could extend from March through July, the area would need to be checked for active nests prior to the commencement of work. If any active nests are found, the local U.S. Fish and Wildlife Service (USFWS) biologist should be contacted by TxDOT to determine an appropriate plan of action. No suitable nesting habitat was found within the proposed ROW for the Federal or State listed species and no active nesting activities were observed for the non-listed species and no adverse effects are anticipated.

THREATENED AND ENDANGERED SPECIES

The TPWD was consulted to obtain information from the Natural Diversity Database (NDD) for the project location. Coordination with the TPWD NDD occurred in February 2007. TPWD disclosed that because of the proportion of public versus private land in the

State, the NDD does not include a representative inventory of rare resources in the state. As is the case for the project location, 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 a presences, absences, or condition of special species, natural communities, or other significant features within the project location. It also does not substitute any on-site evaluation by a qualified biologist. A list of elemental occurrences was provided by TPWD for species identified in surrounding quadrangles to the Hebron, TX USGS quadrangle, which is the quadrangle for which the project is located. The elemental occurrences list identified two reported elemental occurrences, a rookery and the Texas garter snake, both of which would not occur within the proposed project limits since no existing habitat is present for these species within the project limits.

The pertinent TPWD Annotated County list of Threatened, Endangered, and Rare Species was reviewed and **Table 6** lists the state and federal threatened (T) and endangered (E) species indigenous to Collin County, Texas. Field surveys and available records show no evidence of suitable habitat for any of these species within the project area; therefore, no adverse effects to the listed species are anticipated.

Table 6
Federal and State Listed Threatened/Endangered Species of Collin County*

Species	Federal Status	State Status	Description of Suitable Habitat	Habitat Present	Species Effect
Birds					
American Peregrine Falcon <i>Falco peregrinus tundrius</i>	—	E	Nests in tall Cliffs; migrates across state from more northern breeding areas in U.S. and Canada, migrates at low-altitude with stopovers at leading edges such as lake shores, coastlines, and barrier islands.	No	No
Arctic Peregrine Falcon <i>Falco peregrinus tundrius</i>	—	T	Nests in tundra regions; migrates through Texas; winter inhabitant of coastlines and mountains from Florida to South America. Open areas, usually near water.	No	No
Bald Eagle <i>Haliaeetus leucocephalus</i>	DM	T	Nests and winters near rivers, lakes and along coasts; nests in tall trees or on cliffs near large bodies of water.	No	No
Interior Least Tern <i>Sterna anitillarum athalassos</i>	—	E	Nests along sand and gravel bars within braided streams and rivers; also known to nest on man-made structures.	No	No
Peregrine Falcon <i>Falco peregrinus</i>	—	E,T	Subspecies (<i>F.p. tundrius</i>) potential migrant through most of state, winters along coast; subspecies (<i>F.p. anatum</i>) resident, nests in west Texas.	No	No
Piping Plover <i>Charadrius melodus</i>	—	T	Wintering migrant along Texas Gulf Coast; beaches, bayside mud flats and salt flats.	No	No
White-faced Ibis <i>Plegadis Chihi</i>	—	T	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	No	No

Species	Federal Status	State Status	Description of Suitable Habitat	Habitat Present	Species Effect
Whooping Crane <i>Grus americana</i>	E	E	Estuaries, prairie marshes savannah, grasslands, croplands pastures; winter resident at Aransas National Wildlife Refuge, Aransas and Matagorda.	No	No
Wood Stork <i>Mycteria americana</i>	—	T	Forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, inhabits mud flats and other wetlands.	No	No
Reptiles					
Alligator Snapping Turtle <i>Macrochelys temminckii</i>	—	T	Perennial water bodies; deep water of rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near deep running water; sometimes enters brackish coastal waters; usually in water with mud bottom and abundant aquatic vegetation; may migrate several miles along rivers; active March-October; breeds April-October.	No	No
Texas Horned Lizard <i>Phrynosoma cornutum</i>	—	T	Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; sandy to rocky soil.	No	No
Timber/ Canebrake Rattlesnake <i>Crotalus horridus</i>	—	T	Swamps, floodplains, upland woodlands, riparian zones, abandoned farmland; prefers dense ground cover, i.e. grapevines or palmetto.	No	No
Mammals					
Red Wolf <i>Canis rufus</i>	—	E	Expirated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies.	No	No
E, T - Federally Listed Endangered/Threatened AD - Federally Proposed Delisted DM – Delisted, Monitoring E, T - State Endangered/Threatened					

Source: US Fish & Wildlife Service, 2007 and Texas Parks and Wildlife Department, 2007 and survey of project area.

FARMLAND IMPACTS

According to the U.S. Department of Agriculture (USDA) NRCS Soil Survey Geographic database, the proposed project is located within a soil type designated as prime or unique farmland. The prime or unique farmland soil is Houston black clay (1 to 3 percent slopes). However, the project area is urbanized; therefore, this project is exempt for requirements from the Farmland Protection Policy Act (FPPA) and requires no coordination with the NRCS.

HISTORIC SITES

A review of the National Register of Historic Places (NRHP), the list of State Archeological Landmarks (SAL), and the list of Recorded Texas Historic Landmarks (RTHL) indicated that no historically significant resources have been previously documented within the area of potential effect (APE). It has been determined through consultation with the State Historic Preservation Officer (SHPO) that the APE for the proposed project is 150 ft. A site visit revealed that there are no historic-age resources built prior to 1963 located within the APE. There are no Official State Historical Markers (OSHM) within the APE.

Pursuant to Stipulation VI “Undertakings with Potential to Cause Effects” of the First Amended Statewide Programmatic Agreement for Cultural Resources, (PA) between the Federal Highway Administration (FHWA), the SHPO, the Advisory Council on Historic Preservation, TxDOT and the MOU, TxDOT has determined no historic resources are present within the proposed project’s APE and that individual project coordination with SHPO is not required.

ARCHEOLOGICAL SITES

In the footprint of the proposed project, there are no known archeological sites. A TxDOT archaeologist evaluated the potential for the proposed undertaking to affect archeological historic properties or State Archeological Landmarks in the APE. Section 106 review and consultation will proceed in accordance with the PA among TxDOT, the Texas Historic Commission (THC), FHWA, and the Advisory Council on Historic Preservation, as well as the MOU between THC and TxDOT. In the event that 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.

IMPACT ON SECTION 4(f) PROPERTIES

The proposed 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) statement would not be required. There are no Section 4(f) properties impacted by the proposed interchange improvements.

PUBLIC FACILITIES

Existing public facilities such as police stations, fire stations, hospitals, or schools are not located adjacent to the proposed project limits. Therefore, direct impacts to public facilities would not occur as a result of the proposed project.

WATERS OF THE U.S., INCLUDING WETLANDS

An unnamed tributary of Stewart Creek historically extended south of SH 121; however, it is currently contained within a culvert of the existing ROW and no additional work would temporarily or permanently impact the existing stream. Field visits confirmed that no improvements are proposed within any jurisdictional waters of the U.S., including wetlands. Therefore, coordination with U.S. Army Corps of Engineers (USACE) would not be required. See **Figure 2: FEMA Floodplain and USGS Quadrangle Map**.

WATER QUALITY

Texas Commission on Environmental Quality

The Clean Water Act (CWA) makes it unlawful to discharge storm water from construction sites into waters of the U.S. unless authorized by the Texas Commission on Environmental Quality’s (TCEQ) Texas Pollutant Discharge Elimination System (TPDES) General Permit.

Because this project would disturb more than one (1) acre, TxDOT would be required to comply with the TCEQ - Texas Pollutant Discharge Elimination System General Permit for Construction Activity. The project would disturb more than five (5) acres; therefore,

a Notice of Intent would be filed to comply with TCEQ stating that TxDOT would have a Storm Water Pollution Prevention Plan (SW3P) in place during construction of the proposed project. This SW3P utilizes the temporary control measures as outlined in the Department's manual, *Standard Specifications for the Construction of Highways, Streets, and Bridges*. Impacts would be minimized by avoiding work by construction equipment directly in the stream channels and/or adjacent areas. No permanent water quality impacts are expected as a result of the proposed project.

Subsurface water would not be required for this project; therefore, no adverse effects 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 this proposed project. Since the proposed project does not involve the need for subsurface water, no effect on the water table is anticipated. Temporary water quality impacts due to erosion and sedimentation would be controlled by job specifications. This includes on-site inspections during construction, silt fences, and by seeding during and at the completion of the project. TxDOT contract specifications require the contractor to minimize negative effects to water quality at all times during construction.

Impaired Waters

As previously mentioned, an unnamed tributary of Stewart Creek originates southeast of the SH 121 and DNT interchanges. Stewart Creek, Segment 0823B, has been designated as a threatened or impaired segment in the 2006 CWA Section 303(d) list, not meeting water quality standards due to copper. Because the project is within five miles of a threatened or impaired water segment, coordination with TCEQ would be required.

FLOODPLAINS

According to the Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) Number 48085C0405G (revised January 19, 1996) the proposed improvements are located in Zone X, which are areas determined to be outside of the 500-year floodplain. The proposed project limits cross three areas which are designated Zone A, special flood hazard areas inundated by the 100-year flood with no base flood elevations determined. The two areas located at the northwest corner of the SH 121 and DNT interchanges and north of Gaylord Parkway along DNT are associated with unnamed tributaries of Stewart Creek. The third area, located west of SH 289 (Preston Road), is associated with an unnamed tributary of White Rock Creek. Collin County and the Cities of Plano and Frisco are participants in the National Flood Insurance Program (NIFP). See **Figure 2: FEMA Floodplain and USGS Quadrangle Map**.

The hydraulic design of the proposed roadway improvements would be in accordance with the current TxDOT and FHWA policy standards. The facility would permit the conveyance of the design year flood, inundation of the roadway being acceptable, without causing substantial damage to the roadway or other property. The proposed project would not increase the base flood elevation to a level that would violate applicable floodplain regulations and ordinances.

LAKES, RIVERS AND STREAMS

The unnamed tributary to Stewart Creek is not a navigable waterway. 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. Coordination with the USCG (for Section 9 and the Bridge Act) and the USACE (for Section 10) would not be required.

HAZARDOUS MATERIALS

Visual Survey

A visual survey of the proposed project area was conducted for evidence of hazardous substances and/or contamination. This survey included a visual observation of properties located along and immediately outside of the project limits to identify the release or threatened release of petroleum products or other hazardous substances. There were no obvious indications (such as spills, stains, or leaks) of environmental impacts along or within the project limits associated with this site or any other adjacent facilities.

Regulatory Records Review

A review of regulatory databases was conducted for the project area to determine if any known sites producing, storing, and/or disposing of toxic or hazardous materials might affect the proposed project. These databases were obtained directly from government sources and are updated on approximately quarterly intervals. The regulatory database lists reviewed are presented in **Table 7**. This assessment was conducted in accordance with the American Society for Testing and Materials (ASTM) Practice E1528-05 (Transaction Screen Process), with exceptions to accommodate the particular situations and needs of TxDOT roadway projects.

TABLE 7
Regulatory Databases and Minimum Search Distances

REGULATORY DATABASE	RADIUS SEARCH DISTANCE
U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)	
National Priorities List (NPL)	1.00 mile
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), (Uncontrolled hazardous waste sites)	0.25 mile
Resource, Conservation and Recovery Information System (RCRIS)	0.25 mile
<ul style="list-style-type: none"> • Treatment, Storage and Disposal Facilities (TSDF) • Hazardous waste Generator Violations and Corrective Action Reports (CORRACT) 	0.25 mile
Toxic Release Inventory System (TRIS)	0.25 mile
Emergency Response Notifications and Texas Spills (ERNS & TXSPILL)	0.25 mile
AIRS Facility Subsystem (AFS)	0.25 mile
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)	
Texas State Superfund (TXSSF)	0.50 mile
Texas Leaking Underground Storage Tanks (TXLPST)	0.50 mile
Municipal Solid Waste & Landfills (Authorized & Unauthorized) (TXLF & LFUN)	1.00 mile
Texas Voluntary Cleanup Program (TXVCP)	0.50 mile
Texas Underground Storage Tanks (TXPST)	0.25 mile

The ASTM radius search of the proposed project area was reviewed. The results of this investigation are shown in **Table 8**. Based on distance, topographic gradient, historical information, and database information, all eight sites were characterized as low risk. Sites categorized as “low risk” from the available information indicates that some potential for contamination exists, but the site is not likely to pose a contamination problem to highway construction. The adjacent land use consists of retail and commercial development. During review of regulatory information and site reconnaissance, none of these eight low risk sites showed likely to impact the proposed project area.

TABLE 8
Low Risk Sites

Site No.	Site Name/Site Information	Type of Contamination	Regulatory Status	Database Listing*	Corridor Map Sheet No.
1	Wadsworth Golf SH 121 and Legacy Dr. Frisco, TX 75034	Petroleum Hydrocarbons	Inactive	TXPST	7
2	McDavid Honda of Frisco 1601 N. Dallas Pkwy. Frisco, TX 75034	Petroleum Hydrocarbons	Active	TXPST	8
3	Bankston Chrysler Jeep 6578 SH 121 Frisco, TX 75034	Petroleum Hydrocarbons	Active	TXPST	4, 8
4	Bankston Ford / Formerly Howard Thornton Ford 6578 SH 121 Frisco, TX 75034	Petroleum Hydrocarbons	4.1 – Groundwater impacted; No apparent threats, impacts to receptors. 6A – Final concurrence issued, case closed. Site inactive.	TXLPST, TXPST, IHW, RCRA-G	2, 8
5	Wal-Mart Supercenter No. 2883 8801 Ohio Dr. Plano, TX 75024	Petroleum Hydrocarbons	Active	TXPST, RCRA-G	10
6	Stephens Cleaners 8700 Preston Rd. Suite 127 Plano, TX 75024	Perchloroethylene	Drop Station	DCR	10
7	RWS Enterprises and Kiddie Kandids 2601 Preston Blvd. Suite 2021 Frisco, TX 75034	Photographic Chemical Waste	Active	RCRA-G IHW	9
8	Legacy Dry Cleaners 7200 Bishop Rd. Suite D2 Plano, TX 75024	Perchloroethylen	Drop Station	DCR	1

* Note: DCR=Dry Cleaner Registration, IHW= Industrial and Hazardous Waste, RCRA-G= Resource Conservation and Recovery Act- Generator, TXLPST= Texas Leaking Underground Storage Tanks, TXPST= Texas Underground and Aboveground Storage Tanks

Any unanticipated hazardous materials encountered during construction would be handled according to applicable federal, state, and local regulations per TxDOT Standard Specifications. 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 sensitive areas would be minimized or eliminated entirely. All construction materials used for this project would be removed as soon as work schedules permit.

AIR QUALITY

The proposed North Central Texas project is located in Collin County, which is part of the EPA designated nine-county nonattainment area for the eight-hour standard for the pollutant ozone; therefore, the transportation conformity rule applies. The proposed project is consistent with the area's financially constrained long-range *Mobility 2030* (MTP) and the 2008-2011 TIP, as proposed by the NCTCOG. The US DOT (FHWA/FTA) found the MTP to conform to the SIP on June 12, 2007 and found 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 requirements of amended 23 United States Code (U.S.C.) 134, 23 U.S.C. 135, 176(c) of the Clean Air Act (42 U.S.C. 7506(c)) and 49 U.S.C. 5303. Energy, environment, air quality, cost and mobility considerations are addressed in the programming of the TIP. See **Appendix A: FY 2008-2011 STIP Listing** and ***Mobility 2030 Listing***.

The project would not add capacity; therefore, a Traffic Air Quality Analysis (TAQA) is not required because previous analyses of similar projects did not result in a violation of National Ambient Air Quality Standards (NAAQS). This project is not adding SOV capacity and is therefore exempt from a Congestion Management Process (CMP) analysis.

Mobile Source Air Toxics (MSATs)

The purpose of this project is to improve system linkage by providing continuity and improving mobility in the study area and region. Constructing direct connection ramps and modifying various ramp locations would reduce congestion and improve the operational efficiency at the SH 121/DNT interchange. This project will 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 relative to the no-build alternative. As such, FHWA have determined that this project will generate minimal air quality impacts for CAA criteria pollutants and has not been linked with any special MSAT concerns. Consequently, this project is exempt from analysis for MSATs.

Moreover, EPA regulations for vehicle engines and fuels will cause overall MSATs to decline significantly over the next 20 years. Even after accounting for a projected 64 percent increase in vehicle miles traveled (VMT), FHWA predicts MSATs will decline in the range of 57 to 87 percent from a baseline year of 2000 to 2020 based on the current vehicle and fuel regulations in effect. These reductions will reduce the background level of MSATs as well as the possibility of even minor MSAT emission increases from this project.

NOISE

The land use activity areas adjacent to the proposed project currently consist of commercial development and undeveloped land. Therefore, there are no receivers that would be impacted by traffic noise and benefit from any feasible and reasonable noise abatement measures.

Noise associated with the construction of the project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. However, construction normally occurs during daylight hours when occasional loud noises are tolerable. None of the receivers is expected to be exposed to construction for a long duration; therefore, any extended disruption of normal activities is not expected. Provisions will be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

On the date of approval of this document (Date of Public Knowledge), FHWA and TxDOT are no longer responsible for providing noise abatement for new development adjacent to the project.

ITEMS OF SPECIAL NATURE*Coastal Zone Management Plan*

The proposed project is not located within the Texas Coastal Zone Management Program boundary; therefore, this project is not subject to the guidelines of the associated plan.

Wild and Scenic Rivers

There are no wild and scenic rivers in the 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.

Airway-Highway Clearance

The proposed project does not come within 20,000 ft of any airport property. Therefore, aircraft clearance issues are not associated with the proposed project.

VISUAL IMPACTS

Aesthetic values would be emphasized on this project. It has always been the policy of TxDOT to build visually pleasing travel ways, coupling beauty with their functional capability. The aesthetic effect of this project would be influenced due to the addition of the two new interchange levels; however, it is anticipated the aesthetic effect would be equal to or better than the existing roadway.

CONSTRUCTION IMPACTS

Due to operations normally associated with road construction, there is a possibility that noise levels would be above normal in the areas adjacent to the ROW. Construction is normally limited to daylight hours when occasional loud noises are more tolerable. Due to the relatively temporary exposure periods imposed on any one receptor, extended disruption of normal activities is not considered likely. Provisions would be included in

the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

Reconstruction of the facility would be completed without the use of detours; however, temporary lane closures may occur. Lane closures would comply with the FHWA Manual on Uniform Traffic Control Devices (MUTCD) standards. It is not anticipated that the proposed project would cause any impacts to pedestrians. In addition, everything possible would be done to minimize the inconvenience to pedestrians, as well as vehicles using the existing roadway.

Construction may temporarily degrade air quality through dust and exhaust gases associated with construction equipment. Measures to control fugitive dust would be considered and incorporated into the final design and construction specifications.

CONCLUSION

The engineering, social, economic, and environmental studies conducted thus far indicate that no significant environmental effects would occur; therefore, the proposed project qualifies as a categorical exclusion. In addition, the proposed action has no significant environmental impacts as described in 23 C.F.R. § 771.117 (a) and does not involve any unusual circumstances as described in 23 C.F.R. § 771.117 (b).