



# IH 35 PEL Study Affected Environment Technical Report

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# IH 35 PEL Study

## Affected Environment Technical Report

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### 1. Introduction and Environmental Setting

In the broad context, the existing IH 35 corridor spans approximately 550 miles across the state of Texas from the Mexican border to the Oklahoma state line. The corridor serves as the primary trade route for North American Free Trade Agreement (NAFTA) traffic between Mexico and Canada. As the only Interstate Highway connecting Mexico and Canada through the U.S. heartland, the majority of Mexico's trade with the U.S. and Canada passes through Texas along the IH 35 corridor via commercial trucks and rail. The IH 35 corridor is considered to be one of the most critical corridors in the state of Texas in terms of future growth and economic development. Thus, the IH 35 corridor is the backbone of the Texas economy and it plays a critical role in improving business productivity in the state.

IH 35 in the San Antonio Region is uniquely positioned to serve both the local and regional travel demand of area residents and employees in addition to facilitating national and international trade. As a primary trade and travel route for the region, IH 35 serves a critical role in the efficient function of the regional transportation system. Located within this region, the IH 35 Planning and Environmental Linkages (IH 35 PEL) Study Area is approximately 24.3 miles in length. It extends 21.3 miles from the intersection of IH 35/US 281/IH 37 northeast of downtown San Antonio to FM 1103 in Schertz, northeast of San Antonio, and includes three miles of IH 410 from IH 35 to IH 10 northeast of downtown San Antonio. The Study Area is approximately 7,808 acres and covers 0.25 miles on each side of the existing IH 35 and IH 410 facility center-lines between the study termini. **Figure 1.1** shows the IH 35 study limits and the boundaries of the Study Area.

**Figure 1.1: IH 35 PEL Study Area**



This report describes the affected environment, including the existing social, economic, and environmental conditions for the IH 35 PEL Study for the San Antonio region. This inventory and evaluation of the affected environment will provide the baseline information to be used in further project development. The IH 35 PEL Study Area (Study Area) is located on the northeast side of Bexar County, western portion of Guadalupe County and the southern portion of Comal County within the cities of San Antonio, Windcrest, Live Oak, Selma and Schertz in south central Texas on the Balcones Fault Zone between the Edwards Plateau to the northwest and the Gulf Coastal Plains to the southeast. The Study Area largely consists of urbanized land uses that include single family residential, commercial, industrial, civic and military land uses in close proximity to the access roads adjacent to IH 35.

All resource descriptions and data presented in this report are within, or touching, the Study Area boundaries. A number of the resource descriptions in this report refer to the northern, central, or southern portions of the Study Area. The **southern** portion of the Study Area extends from the southern terminus of the study limits at the intersection of IH 35/US 281/IH 37 to the IH 35/IH 410 intersection; the **central** portion of the Study Area extends from the IH 35/IH 410 intersection to the IH 35/Loop 1604 intersection; and the **northern** portion of the Study Area extends from the IH 35/Loop 1604 intersection to the northern terminus at the IH 35/FM 1103 intersection in Schertz.

## **2. Land Use and Planning**

This section summarizes the methodology that was used to identify the existing land uses specific to the Study Area and existing local government plans and policies relevant to the Study Area. The concepts proposed and analyzed in the PEL Study are consistent with local transportation planning efforts. The San Antonio-Bexar County Metropolitan Planning Organization's (MPO) *Mobility 2035 Metropolitan Transportation Plan* (MTP) identifies the need for additional roadway capacity in the IH 35 PEL project area along IH 35 from Schertz Parkway to IH 37/US 281 in downtown San Antonio (MPO 2009). Similarly, the 1996 Major Investment Study (MIS) and PEL Study stakeholders both proposed major capacity improvements as one of various preliminary mobility solutions in the study area. The PEL Study is listed as a Special Studies Subtask in the San Antonio-Bexar County MPO FY 2012-2013 Unified Planning Work Program (UPWP) (MPO 2011a).

### **2.1 Methodology**

The existing land uses specific to the Study Area were identified based on data collected during a windshield survey (conducted October 2011), aerial photography, and land use parcel data obtained for Bexar (2007, 2011), Guadalupe (2012), and Comal (2012) Counties.

### **2.2 Existing Conditions and Local Government Plans and Policies**

The following summarizes the existing land uses specific to the Study Area and the existing local government plans and policies relevant to the Study Area.

### 2.2.1 Existing Land Uses Specific to the Study Area

As shown in **Table 2.1**, the majority of the Study Area is comprised of residential and commercial development land uses, which together comprise approximately 4,262 acres, or 54.6% of the Study Area.

<b>Table 2.1: Land Uses in the IH 35 PEL Study Area</b>		
<b>Land Use</b>	<b>Acres</b>	<b>% of Study Area</b>
Residential	899	11.5
Roadways	2,108	27.0
Heavily Wooded Areas	309	4.0
Brushland Areas	599	7.7
Meadow Areas	107	1.4
Pasture Areas	351	4.5
Agricultural Areas	10	0.1
Water Body	4	0.1
Commercial	3,363	43.1
Rail	58	0.7
<b>Total</b>	<b>7,808</b>	<b>100.0</b>

Source: City of San Antonio (2007), Bexar Appraisal District (2011), Comal Appraisal District (2012), and Guadalupe Appraisal District (2012).

Approximately 899 acres (11.5%) of the Study Area is occupied by residential land uses (see **Appendix A**). Single family homes front IH 35 in the southern part of the Study Area to the north of IH 35, from US 281 to Frank Road, and to the south of IH 35 from US 281 to Hines Avenue. Another occurrence is found to the west of IH 35 between Rittiman Road and Lanark Drive in the southern part of the Study Area. The majority of the single family lots are located over 100 feet from the existing right-of-way. The only multi-family land use in proximity to IH 35 within the Study Area is the San Antonio Housing Authority (SAHA) – Sutton Homes Development located to the southeast of the IH 35/West Walters Street intersection in the southern part of the Study Area.

Approximately 3,363 acres (43.1%) of the Study Area is occupied by commercial land uses (see **Appendix A**). The commercial development along IH 35 is primarily strip-type development. Large retail centers are present near the Walzem Road/IH 35 intersection in the southern part of the Study Area and near the Wurzbach Parkway/IH 35 intersections in the central part of the Study Area. Large commercial land uses include the following:

- The Windsor Park Mall (purchased by Rackspace and rehabilitated) on the east side of IH 35, between Eisenhower Road and Walzem Road in the southern part of the Study Area;
- The Windsor Park Center and Home Depot on the east side of IH 35 between Walzem Road and the IH 35/IH 410 intersection in the southern part of the Study Area;
- Super K Mart (vacant) and Sam’s to the west of IH 35, between O’Conner Road and Judson Road in the central part of the Study Area; and

- The Forum at Olympia Parkway on the northeast side of the IH 35/Loop 1604 intersection, Live Oak Crossing on the southeast side of the IH 35/Loop 1604 intersection, Academy Sports & Outdoors on the southeast side of the IH 35/Retama Parkway intersection, and the Interstate Business Park on the northeast side of IH 35 at Seguin Road in the central and northern parts of the Study Area.

In addition to residential and commercial development, the Study Area also contains roadway, heavily wooded areas, brushland, meadow, pasture, agricultural, water, and rail land uses. The most abundant of these other land uses is roadway, which comprise approximately 2,108 acres (27.0%) of the Study Area. The existing IH 35 facility accounts for the majority of the roadway land use within the Study Area.

### **2.2.2 Local Government Plans and Policies**

This section briefly summarizes plans and policies that have been adopted by local governments that may influence the selection of an alternative within the Study Area or have some bearing on possible impacts and mitigation measures. Municipal governments in the state of Texas are granted broad authority to regulate land use within their respective jurisdictions. This authority allows considerable flexibility in the adoption of zoning and subdivision ordinances, as well as land use and transportation plans. Portions of the cities of San Antonio, Windcrest, Live Oak, Selma and Schertz are included in the Study Area (see **Appendix A**). The cities of San Antonio and Schertz have adopted land use or transportation plans and policies that are relevant to the Study Area for the purpose of managing future growth within their municipal limits and extraterritorial jurisdiction (ETJ) areas. These plans and policies include the San Antonio North Sector Plan (2010), the Northeast Gateway Corridor District Plan (2004), and the City of Schertz Comprehensive Land Use Plan (2001). The cities of Windcrest, Live Oak and Selma do not have any adopted land use or transportation plans and policies relevant to the Study Area.

#### **San Antonio North Sector Plan**

The San Antonio North Sector Plan (SANSP) is a strategic instrument which is one of several key planning tools that promote a community fabric that is vibrant, attractive and valued. It is one of seven sector plans for the City of San Antonio. The SANSP was adopted in August 2010 and includes numerous elements including Transportation, Infrastructure, and Utilities and Economic Development. The SANSP study area includes the central portion of the IH 35 PEL Study Area from the IH 35/IH 410 interchange to the IH 35/Toepperwein Road intersection (see **Appendix A**). The Transportation, Infrastructure, and Utilities and Economic Development elements of the SANSP include the following specific references to areas that are included in the Study Area:

- Support the recommendations of SmartWaySA (Long Range Transit Comprehensive Transportation Plan) to explore options within the North Sector for high capacity transit, including bus rapid transit, electric streetcar, light rail, commuter rail, dedicated bus lanes, transit stations, and HOV lanes. Portions of the Study Area have been identified for potential high capacity transit by SmartwaySA.
- Continue to locate higher density residential and compatible employment uses near five intersections. IH 35/IH 410 was identified as one of these five intersections.

- Continue to maintain and revitalize the North Sector to retain and expand vibrant retail and commercial uses within four corridors and/or centers. IH 35 was identified as one of these four corridors and/or centers.

### **Northeast Gateway Corridor District Plan**

In 2003, the City of San Antonio identified the IH 35 North Corridor as a National Highway System High Priority Corridor District and created a zoning ordinance that established an overlay zoning district from the IH 35/Walzem Road intersection to the city limits at the IH 35/Toepperwein Road intersection (see **Appendix A**). According to the ordinance, the IH 35 North Corridor is significant because it is a gateway to the city and is surrounded by commercial areas and neighborhoods that contribute to the economic development of the City of San Antonio and is an amenity and asset of great value to the city, its inhabitants, its visitors and its economy.

The overlay zoning district provides additional site development standards pertaining to building setbacks, lighting, sidewalks, pedestrian circulation, landscaping, parking lot screening, natural areas, rear buffer yards, front street yard fencing, outside activities, elevation features, building materials, on-premises signage, and wall signs for all lots that are adjacent to IH 35 within the overlay zoning district. The entire overlay zoning district is included in the Study Area.

### **City of Schertz Comprehensive Land Use Plan**

Prepared in 2001, the Schertz Comprehensive Land Use Plan (SCLUP) provides a foundation for guiding the future growth and development of the city from 2001 to 2021 that is consistent with the vision and goals of the community. The SCLUP, which was adopted in February 2002, includes numerous elements, including a Land Use and Transportation elements.

The northern portion of the Study Area is partially located within the city limits of Schertz (see **Appendix A**). The Land Use and Transportation (including a thoroughfare master plan) elements of the SCLUP include the following specific references to areas that are included in the Study Area:

- Commercial development should be concentrated in nodes at intersections and along major thoroughfares that are designed and constructed to accommodate heavy traffic or serve a specific commercial purpose. IH 35 between its intersections with Schertz Parkway and FM 3009 was identified as one of the areas to concentrate commercial development.
- Develop gateways into Schertz. IH 35 was identified as one of the gateways into Schertz to develop.
- Expand existing industrial districts to permit the continued growth of industry along IH 35 in a way that allows immediate access to transportation routes and adequate utilities while protecting existing and future neighborhoods from incompatible land uses.
- Alleviate traffic congestion along FM 3009, Schertz Parkway and FM 1518.
- Participate in and support the improvement of IH 35, including its expansion to six lanes as well as future development of high occupancy vehicle lanes or mass transit.

- Coordinate with TxDOT and participate in local activities regarding the proposed development of commuter rail service along IH 35 between San Antonio and Austin. Determine the likelihood of a commuter rail stop in Schertz.

### **3. Socioeconomic Factors including Population, Minority Population, and Employment**

This section summarizes the applicable federal and state regulations for socioeconomic factors and the methodology that was used to gather data on the social and economic conditions that are relevant to the IH 35 PEL Study. It also compares the population, demographic, employment, and income characteristics within the Study Area for Socioeconomic Factors (Socioeconomic Study Area), the three-county study region of Bexar, Guadalupe and Comal counties (Study Region) and the state of Texas (Texas). The Socioeconomic Study Area, shown in **Appendix C**, is slightly different than the Study Area described in **Section 1** of this report and includes the Census Block Groups or Census Tracts that touch the Study Area described in **Section 1**.

#### **3.1 Legal and Regulatory Context**

The following federal and state regulations apply to socioeconomic factors.

##### **3.1.1 Environmental Justice**

Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (U.S. Environmental Protection Agency [USEPA] 2011a). Executive Order (EO) 12898 issued by President Clinton (U.S. Executive Office of the President 1994) mandates that Federal agencies achieve environmental justice, stating in part that:

*... each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands.*

In 1997 the U.S. Department of Transportation (USDOT) issued USDOT Order 5610.2 to describe the process by which USDOT and its agencies would incorporate environmental justice principles into the department's programs, policies, and activities (USDOT 1997). USDOT Order 5610.2 states in part that:

*It is the policy of [USDOT] to promote the principles of environmental justice (as embodied in the Executive Order [12898]) through the incorporation of those principles in all [USDOT] programs, policies, and activities. This will be done by fully considering environmental justice principles throughout planning and decision-making processes in development of programs, policies, and activities...*

In 1997, the Council on Environmental Quality (CEQ) issued guidance to assist federal agencies in complying with environmental justice mandates during the preparation of National Environmental Policy Act of 1969, as amended (NEPA), documents. This guidance (CEQ 1997) included definitions of “low-income population” and “minority population” for use by agencies when attempting to identify populations potentially in need of environmental justice protection. The Federal Highway Administration (FHWA), in 1998, refined these definitions to fit within the context of the FHWA program (FHWA Order 6640.23; FHWA 1998). Definitions presented in FHWA Order 6640.23 include:

Minority – A person who is:

- (1) Black (having origins in any of the black racial groups of Africa);
- (2) Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
- (3) Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or
- (4) American Indian and Alaskan Native (having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).

Minority population – Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed / transient persons (such as migrant workers) who will be similarly affected by a proposed FHWA program, policy, and activity.

Low-income – A household income at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines. HHS guidelines issued in 2012 indicate that a family of four living within the study area and having an annual income of \$23,050 or less would be below the poverty guideline (HHS 2012).

Low-income population – Any readily identifiable groups of low-income persons who live in geographic proximity, and if circumstances warrant, geographically dispersed / transient persons (such as migrant workers) who will be similarly affected by a proposed FHWA program, policy, and activity.

It is not reasonable or practicable to complete a comprehensive environmental justice study at the corridor planning level of analysis; therefore, an environmental justice study for the Socioeconomic Study Area was not conducted at this time. However, data reported here summarizing the minority and low-income population in the Socioeconomic Study Area could be incorporated into environmental justice studies should projects be proposed for the IH 35 PEL Study Area and advance to a project-level NEPA study. Any impacts to low income and minority populations would need to be assessed in accordance with EO 12898 *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* and mitigation would be provided if warranted. For this report, “minority” is defined as persons characterized in the 2010 Census as:

- Hispanic or Latino of any race or combination of races;
- Black or African American alone;

- American Indian and Alaskan Native alone;
- Asian alone;
- Native Hawaiian and other Pacific Islander; or
- Not Hispanic or Latino, two or more races.

Data for summarizing the occurrences of minorities in the Socioeconomic Study Area were gathered from the 2010 Census. “Low-income” is defined in this report as having an income below poverty level as reported in American Community Survey 2005 - 2009<sup>1</sup> Table B17; these data are based on USCB poverty thresholds which are related to HHS poverty guidelines and are used by the USCB to “prepare its estimates of the number of individuals and families in poverty” (HHS 2012).

### **3.1.2 Limited English Proficiency**

Persons who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English can be considered to be limited English proficient, also referred to as LEP persons (LEP; USDOT 2005). In 2000, President Clinton issued EO 13166 (U.S. Executive Office of the President 2000) that states in part:

*... each Federal agency shall examine the services it provides and develop and implement a system by which LEP persons can meaningfully access those services consistent with, and without unduly burdening, the fundamental mission of the agency. Each Federal agency shall also work to ensure that recipients of Federal financial assistance (recipients) provide meaningful access to their LEP applicants and beneficiaries.*

In response to this mandate, USDOT published guidance to assist recipients of USDOT financial assistance in fulfilling their responsibilities to LEP persons. This guidance (USDOT 2005) states in part that recipients “are required to take reasonable steps to ensure meaningful access to their programs and activities by LEP persons.” The guidance also identifies factors that recipients should use to assess language needs and decide what reasonable steps should be taken. Among the factors identified is the number or proportion of LEP persons served or encountered in the eligible services area.

It is not reasonable or practicable to complete a comprehensive assessment of potential language needs at the corridor planning level of analysis; therefore, a comprehensive assessment of potential language needs in the Socioeconomic Study Area was not conducted at this time. However, data reported here summarizing the occurrences of potential LEP persons in the Socioeconomic Study Area could be incorporated into language needs assessments should projects be proposed as a result of this study and advance to a project-level NEPA study. For this report, “LEP persons” are defined as those persons characterized in the American Community Survey 2005-2009 as at least 5 years old and “Speaking English ‘not well’” or “Speaking English ‘not at all.’” Data for summarizing occurrence of LEP persons in

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<sup>1</sup> American Community Survey 2005-2009 Data have been used in several sections of this report, however, it is recognized that 2006-2010 ACS Data are now available and would need to be incorporated into any future studies.

the Socioeconomic Study Area were gathered from the American Community Survey 2005-2009 Table B16.

### 3.2 Methodology

Demographic and socioeconomic data were gathered from the U.S. Census 2010 and from the American Community Survey 2005-2009. Data summarized in this section include general population data and data characterizing occurrences of minorities, persons of low-income, LEP persons, employment, and household income within the Socioeconomic Study Area, Study Region, and Texas.

### 3.3 Existing Conditions

The following discusses a comparison of the socioeconomic characteristics within the Socioeconomic Study Area (see **Appendix C**), the Study Region, and Texas.

#### 3.3.1 Population

As shown in **Table 3.1**, over 74,000 people representing 0.3 percent of the Texas general population reside in the Socioeconomic Study Area, and over 1.95 million people representing 7.8 percent of the Texas general population reside in the Study Region. The most populous county in the Study Region is Bexar County, with a population of over 1.7 million. About 88 percent of the Study Region population lives in Bexar County, while only 12 percent live in Comal and Guadalupe Counties combined.

Category	Socioeconomic Study Area (Block Groups)	Bexar County	Comal County	Guadalupe County	Study Region	State of Texas
Total Population Combined	74,012	1,714,773	108,472	131,533	1,954,778	25,145,561
Percent of State Population	0.3	6.8	0.4	0.5	7.8	100

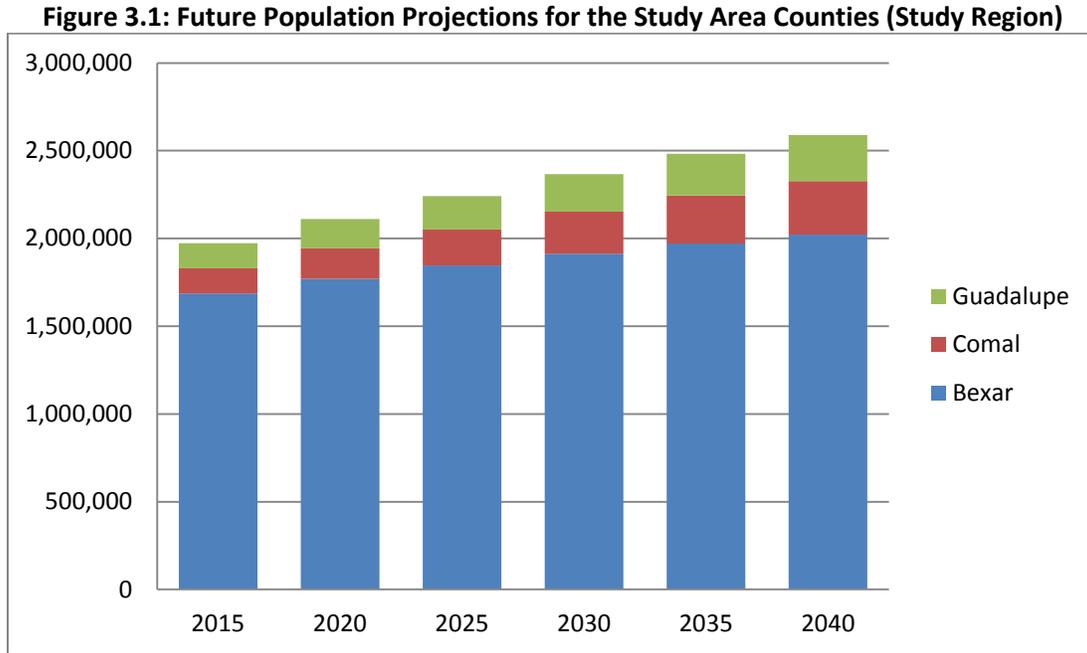
Source: Census 2010 SF1 Data Table P005.

The Texas State Data Center (TxSDC)<sup>2</sup> calculates future population projections at the county and statewide-level in single-year increments to the year 2040. **Figure 3.1** shows the projected population

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<sup>2</sup> Typically, TxSDC recommends utilizing the 0.5 migration scenario for long-range planning efforts, as this represents half of the migration rate that was experienced during the 1990-2000 time period, a period of high growth for many Texas counties. However, because of the high growth that has been experienced in the IH 35 PEL study area counties (Bexar, Comal, Guadalupe), utilizing the 0.5 migration scenario would provide 2020 population estimates that are less than the 2010 actual Census counts. As a result, the 1.0 migration scenario projections are presented in this section.

growth for Bexar, Comal and Guadalupe Counties (Study Region) from 2015 to 2040, in five-year increments.



Source: Texas State Data Center, Population Projections, 1.0 Migration Scenario (2009)

As shown in **Figure 3.1**, the population in the Study Region is projected to increase to over 2.5 million residents by 2040, representing a projected 31.2% increase and the addition of over 600,000 residents during the 2015-2040 time period. Individually, the projected growth rates for Bexar, Comal, and Guadalupe Counties are 19.9%, 111.3%, and 83.6%, respectively.

### 3.3.2 Environmental Justice Populations

As shown in **Table 3.2**, the percentage of minority persons in the Socioeconomic Study Area (62.9%) and Study Region (65.8%) are both higher than Texas (54.7%). The largest minority group in the Socioeconomic Study Area and Study Region is Hispanic or Latinos, representing 43.2 percent of the total population in the Socioeconomic Study Area and 55.3 percent in the Study Region, compared to 37.6 percent in Texas. Also, the Black or African American population in the Socioeconomic Study Area (14.7%) is proportionally higher than in Texas (11.5%); however, the Black or African American population in the Study Region (6.5%) is proportionally lower than the statewide average.

**Table 3.2: Total Population and Minority Populations in the Socioeconomic Study Area, Study Region, and Texas**

Populations	Socioeconomic Study Area (Block Groups)		Study Region		Texas		
	Number of People	Percent of Total Population	Number of People	Percent of Total Population	Number of People	Percent of Total Population	
Total Population	74,012	100.0	1,954,778	100.0	25,145,561	100.0	
White	27,427	37.1	668,596	34.2	11,397,345	45.3	
Minority populations	Black or African American Alone	10,845	14.7	128,029	6.5	2,886,825	11.5
	American Indian and Alaskan Native Alone	239	0.3	4,600	0.2	80,586	0.3
	Asian Alone	1,803	2.4	42,122	2.2	948,426	3.8
	Native Hawaiian and Other Pacific Islander Alone	143	0.2	1,997	0.1	17,920	0.1
	Some Other Race Alone	175	0.2	3,163	0.2	33,980	0.1
	Not Hispanic or Latino, Two or More Races	1,429	1.9	25,435	1.3	319,558	1.3
	Hispanic or Latino	31,951	43.2	1,080,836	55.3	9,460,921	37.6
	Total Minority Population <sup>3</sup>	46,585	62.9	1,286,182	65.8	13,748,216	54.7

Source: Census 2010 SF1 Data Table P005.

<sup>3</sup> The total minority population figure reported in this table may represent a slight overstatement of potential minority populations in the study area due to double-counting of minorities who are both Hispanic and of a different race.

As shown in **Table 3.3**, low-income persons as a percentage of the total population is lower in the Socioeconomic Study Area (14.6%) and the Study Region (16.1%) compared to Texas (16.8%). The percentage of low-income persons in Comal (9.0%) and Guadalupe (10.1%) Counties is lower than the statewide average (16.8%); Bexar County (17.1%) has a slightly higher percentage of low-income persons compared to the statewide average.

<b>Table 3.3: Low-Income Persons in the Socioeconomic Study Area, Study Region, and Texas</b>			
<b>Area</b>	<b>Low-Income</b>		
	<b>Population for whom Poverty Status is Determined</b>	<b>Number of People with Income at or Below Poverty Level</b>	<b>Percent of Total Population</b>
Socioeconomic Study Area (Tracts)	180,919	26,414	14.6
Bexar County	1,543,326	263,260	17.1
Guadalupe County	110,331	11,094	10.1
Comal County	102,934	9,275	9.0
Study Region	1,756,591	283,629	16.1
State of Texas	23,208,156	3,892,532	16.8

Source: American Community Survey 2005 - 2009 Table B17.

### 3.3.3 Limited English Proficiency Populations

**Table 3.4** shows that the LEP population as a percentage of the total population is lower in the Socioeconomic Study Area (4.4%) and the Study Region (6.3%) compared to the state of Texas (8.6 %).

<b>Table 3.4: Limited English Proficiency (LEP) in the Socioeconomic Study Area, Study Region, and Texas</b>						
<b>Populations</b>	<b>Socioeconomic Study Area (Tracts)</b>		<b>Study Region</b>		<b>Texas</b>	
	<b>Number of People</b>	<b>Percent of Population ≥ 5 Years Old</b>	<b>Number of People</b>	<b>Percent of Population ≥ 5 Years Old</b>	<b>Number of People</b>	<b>Percent of Population ≥ 5 Years Old</b>
Population 5 years and older	170,326	100.0	1,655,135	100.0	21,826,536	100.0
Persons with LEP	7,551	4.4	104,542	6.3	1,866,793	8.6

Source: American Community Survey 2005 - 2009 Table B16.

### 3.3.4 Economic Characteristics

The following summarizes the employment and income characteristics of the Socioeconomic Study Area, the Study Region and Texas.

## Employment

As shown in **Table 3.5**, labor force as a percentage of the working-age population (persons 16 years and older) is similar for the Socioeconomic Study Area (66.9%), Study Region (64.9%), and Texas (65.7%). The percentage of working-age population in the armed forces in the Socioeconomic Study Area (4.0%) is approximately eight times higher than the statewide average (0.5%) and the Study Region (1.6%) is approximately three times higher than the statewide average.

Populations	Socioeconomic Study Area (Tracts)		Study Region		Texas	
	Number of People	Percent of Population ≥ 16 yrs	Number of People	Percent of Population ≥ 16 yrs	Number of People	Percent of Population ≥ 16 yrs
Population 16 yrs and older	136,974	100.0	1,354,75	100.0	17,889,418	100.0
In labor force	91,624	66.9	878,702	64.9	11,749,614	65.7
In Armed Forces	5,429	4.0	21,937	1.6	96,766	0.5
Civilian labor force	86,195	62.9	856,765	63.2	11,652,848	65.1
Employed civilian labor force	80,680	58.9	801,760	59.2	10,860,964	60.7
Unemployed civilian labor force	5,515	4.0	55,005	4.1	791,884	4.4
Not in labor force	45,350	33.1	476,051	35.1	6,139,804	34.3

Source: American Community Survey 2005 - 2009 Table B23.

As shown in **Table 3.6**, percentages of employed civilian labor force among industries are similar when comparing the Socioeconomic Study Area and Study Region to Texas. The farming industry represents the greatest relative difference between the Socioeconomic Study Area (0.1%) and Study Region (0.2%) compared to Texas (0.6%). **Table 3.6** shows that the relative number of civilians 16 years and older employed in this industry is multiple times lower for the Socioeconomic Study Area and Study Region compared to the statewide average. The construction industry represents the greatest relative difference between the Socioeconomic Study Area (8.7%) and Texas (11.4%) among the industries listed in **Table 3.6**, showing a lower percentage of civilians 16 years and older in the Socioeconomic Study Area employed in the construction industry compared to the statewide average.

**Table 3.6: Employment by Industry Group in the Socioeconomic Study Area, Study Region, and Texas**

Populations	Socioeconomic Study Area (Block Groups)		Study Region		Texas	
	Number of People	Percent of Civilian Employed Population ≥ 16 years	Number of People	Percent of Civilian Employed Population ≥ 16 years	Number of People	Percent of Civilian Employed Population ≥ 16 years
Civilian employed labor force ≥ 16 years	40,822	100.0	801,760	100.0	10,860,964	100.0
Management	14,673	35.9	267,503	33.4	3,602,568	33.2
Services	6,401	15.7	142,163	17.7	1,824,234	16.8
Sales	11,285	27.6	224,672	28.0	2,799,863	25.8
Farm	51	0.1	1,846	0.2	61,447	0.6
Construction	3,542	8.7	83,712	10.4	1,240,921	11.4
Production	4,870	11.9	81,864	10.2	1,331,931	12.3

Source: American Community Survey 2005 - 2009 Table B24.

## Income

**Table 3.7** shows the distribution of household incomes in the Socioeconomic Study Area, Study Region, and Texas. The percentage of households making at least \$50,000 per year is higher in the Socioeconomic Study Area (59.6%) compared to the Study Region (47.6%) and Texas (48.5%).

**Table 3.7: Household Incomes in the Socioeconomic Study Area, Study Region, and Texas**

Household Income Levels (\$)	Socioeconomic Study Area (Block Groups)		Study Region		Texas		
	Number	Percent	Number	Percent	Number	Percent	
Total Households	30,686	100.0	616,153	100.0	8,269,046	100.0	
Household Incomes	<10K	1,646	5.4	53,775	8.7	671,142	8.1
	10K-14,999	1,465	4.8	35,484	5.8	484,624	5.9
	15K-19,999	1,320	4.3	33,314	5.4	478,474	5.8
	20K-24,999	1,468	4.8	37,891	6.1	487,288	5.9
	25K-29,999	1,432	4.7	35,119	5.7	476,850	5.8
	30K-34,999	1,000	3.3	34,037	5.5	461,142	5.6
	35K-39,999	1,407	4.6	33,090	5.4	426,890	5.2
	40K-44,999	1,477	4.8	31,600	5.1	413,274	5.0
	45K-49,999	1,172	3.8	27,742	4.5	365,059	4.4
	50K-59,999	2,723	8.9	52,876	8.6	676,263	8.2
60K-74,999	3,573	11.6	61,840	10.0	807,040	9.8	

Household Income Levels (\$)	Socioeconomic Study Area (Block Groups)		Study Region		Texas	
	Number	Percent	Number	Percent	Number	Percent
75K-99,999	5,222	17.0	72,252	11.7	951,399	11.5
100K-124,999	2,996	9.8	43,118	7.0	593,091	7.2
125K-149,999	1,870	6.1	24,265	3.9	336,478	4.1
150K-199,999	1,272	4.1	20,368	3.3	323,021	3.9
≥ 200K	643	2.1	19,382	3.1	317,011	3.8

Source: American Community Survey 2005 - 2009 Table B19.

As shown in **Table 3.8**, median household incomes within the Socioeconomic Study Area (\$65,521) and Study Region (\$56,202) are higher compared to Texas (\$48,199). The median household income in Comal (\$63,544) and Guadalupe (\$59,375) Counties is higher than Texas (\$48,199); Bexar County (\$45,688) has a slightly lower median household income compared to Texas.

Area	Median Income
Study Area (Tracts)*	\$65,521
Bexar County	\$45,688
Guadalupe County	\$59,375
Comal County	\$63,544
Study Region**	\$56,202
State of Texas	\$48,199

Source: American Community Survey 2005 - 2009 Table B19. \*Socioeconomic Study Area median income reported in this table is the average of median incomes in all tracts. \*\*Study Region median income reported in this table is the average of median incomes in Bexar, Comal, and Guadalupe Counties.

#### **4. Neighborhoods and Community Resources**

Neighborhoods and community resources located in the Study Area include military land, hospitals, schools and universities, and places of worship (see **Appendix A**). This section describes the neighborhood and community resources for the three parts of the Study Area: the southern, central, and northern portions. As mentioned in **Section 1** of this report, the southern portion of the Study Area is defined as the southern terminus of the study limits at the intersection of IH 35/US 281/IH 37 to the IH 35/IH 410 intersection; the central portion of the Study Area is defined as the area from the IH 35/IH 410 intersection to the IH 35/Loop 1604 intersection; and the northern portion of the Study Area is defined as the area from the IH 35/Loop 1604 intersection to the northern terminus of the study limits at the IH 35/FM 1103 intersection in Schertz (see **Appendix A**).

## 4.1 Military Land

Fort Sam Houston is a U.S. Army post that is partially located in the Study Area. Approximately 226 acres, or seven percent of Fort Sam Houston, is located in the southern part of the Study Area. Fort Sam Houston is located to the north and northwest of IH 35 between New Braunfels Avenue and Frank Street, Hines Avenue and the Union Pacific Railroad (UPRR), and Binz Engleman and Holbrook Road (see **Appendix A**). The Brooke Army Medical Center (BAMC), BAMC Heliport Clearance Envelope, and the Texas National Guard Armory are located on Fort Sam Houston property within the Study Area. The BAMC is located between the intersections of Binz Engleman/IH 35 and Petroleum/IH 35; the BAMC Heliport Clearance Envelope is located to the northwest of the Binz Engleman/IH 35 intersection; and the Texas National Guard Amory is located to the southwest of the Petroleum/IH 35 intersection.

## 4.2 Hospitals

Two hospitals, the BAMC and the Northeast Methodist Hospital, are located in the Study Area. As mentioned earlier, the BAMC is located on the Fort Sam Houston property in the southern part of the Study Area between the intersections of Binz Engleman/IH 35 and Petroleum/IH 35. The Northeast Methodist Hospital is located in the central part of the Study Area to the south of the Toepperwein Road/IH 35 intersection.

## 4.3 Schools and Universities

There are 11 schools and one university in the Study Area. The locations for each of these schools and universities are listed in **Table 4.1** and shown in **Appendix A**.

<b>Table 4.1: Schools and Universities in the Study Area</b>			
<b>Name</b>	<b>Study Area Location</b>	<b>Type</b>	<b>Location</b>
St. Patrick Elementary	Southern	Elementary	NE of the N Pine St/IH 35 Int
John Pershing Elementary	Southern	Elementary	NW of the N Walters St/IH 35 Int
East Terrell Hills Elementary	Southern	Elementary	NW of the Rittiman Rd/IH 35 Int
St. Thomas Moore Middle School	Southern	Middle	SW of the Eisenhower Rd/IH 35 Int
Learning Tree Academy	Southern	Pre-School	SW of the Lenark Dr/IH 35 Int
Walzem Elementary	Southern	Elementary	SW of the Walzem Rd/IH 35 Int
David Copeland Elementary	Southern	Elementary	SE of the IH 410/IH 35 Int
Wayland Baptist University	Central	University	S of the O Conner Rd/IH 35 Int
Deja Discovering Learning Center	Central	Pre-School	NE of the Toepperwein Rd/IH 35
Shekinah Radiance Academy	Central	Private	NE of the Toepperwein Rd/IH 35
Our Lady of Perpetual Help Child	Northern	Pre-School	W of the N Evans Rd/IH 35 Int
Our Lady of Perpetual Help Middle	Northern	Middle	W of the N Evans Rd/IH 35 Int

Source: CPO, Windshield Survey of the Study Area (2011).

The following describes the schools and university in the southern, central and northern parts of the Study Area.

- **Southern** – Seven schools that include five elementary schools, one middle school, and one pre-school are located in the southern part of the Study Area.

- **Central** – One university and two schools that include one pre-school and one private school are located in the central part of the Study Area.
- **Northern** – Two schools that include a pre-school and a middle school are located in the northern part of the Study Area.

#### 4.4 Places of Worship

There are 12 places of worship in the Study Area. The locations for each place of worship are listed in **Table 4.2** and shown in **Appendix A**.

<b>Name</b>	<b>Study Area Location</b>	<b>Location</b>
Iglesias Pentecostal	Southern	SW of the N Pine St /IH 35 Int
Name Unknown	Southern	NW of the N Pine St /IH 35 Int
St. Patrick’s Church	Southern	NE of the N Pine St /IH 35 Int
La Nueva Baptist Church	Southern	SE of the N Walters/IH 35 Int
Shepherd of the Hills Church	Southern	NW of the Rittiman Rd/IH 35 Int
The Pentecostals	Southern	SE of the Eisenhower Rd/IH 35 Int
Church of Christ	Southern	SW of the Eisenhower Rd/IH 35 Int
New Creation Christian Church	Southern	SE of the IH 410/IH 35 Int
Kingdom Life Center	Central	NE of the Thousand Oaks Dr/IH 35 Int
Livingway Christian Church	Central	NE of the Toepperwein Rd/IH 35 Int
Our Lady of Perpetual Help Church	Northern	NW of the N Evans Rd/IH 35 Int
Journey Fellowship Church	Northern	W of the Schertz Pkwy/IH 35 Int

Source: CPO, Windshield Survey of the Study Area (2011).

Eight of the 12 places of worship in the Study Area are located in the southern part of the Study Area. The central and northern parts of the Study Area each include two places of worship.

## 5. Visual and Aesthetic Qualities

This section summarizes the applicable policies and goals for visual and aesthetic qualities, the methodology used to measure visual and aesthetic qualities, and the quality of the existing visual and aesthetic resources in the viewsheds that are included in the Study Area.

### 5.1 Legal and Regulatory Context

The following federal and local policies and goals apply to visual and aesthetic qualities.

#### Federal Highway Administration

FHWA’s Technical Advisory T6640.8A recommends that whenever a potential for visual impacts exists from a proposed transportation project, the environmental study should identify the potential visual impacts to the adjacent land uses as well as measures to avoid, minimize or mitigate these potential visual impacts.

## Local Policies and Goals

Portions of the cities of San Antonio, Windcrest, Live Oak, Selma and Schertz are included in the Study Area. Of these cities, the cities of San Antonio and Schertz have guidelines relevant to visual resources. **Table 5.1** summarizes relevant visual resource guidelines included in planning documents for these two cities, which include the San Antonio District Urban Design Themes, San Antonio Comprehensive Master Plan Framework, and Schertz Comprehensive Land Use Plan. The cities of Windcrest, Live Oak and Selma do not have any relevant visual resource guidelines.

<b>Table 5.1: Summary of Plan Policies and Goals</b>		
<b>Document</b>	<b>Policies and Goals</b>	<b>Requirements</b>
*San Antonio District Urban Design Themes (Bexar and Outlying Counties)	Downtown Region Design Theme (southern end of Study Area in Bexar County)	The elements of this design theme consist of heavy, strong, richly textured materials that reflect the architecture of regional missions and are distinct from the Missions theme discussed below, since it includes the use of additional textures, colors and plant material. Plant material will be bold and colorful to reflect the river-walk
	Mission Region Design Theme (southern portion of Study Area in Bexar County)	The elements of this design theme consist of heavy, strong, richly textured materials that reflect the architecture of regional missions.
	Hill Country Region Design Theme (central and northern portion of Study Area in Bexar, Guadalupe and Comal Counties)	The elements of this design theme consist of simple materials that translate the historical architecture of Hill Country towns into modern structures of the highway.
City of San Antonio Comprehensive Master Plan Framework	Community Character <i>Goal 3.F</i>	Context sensitive design is utilized to balance function, safety, and aesthetics for development and redevelopment.
	Multi-Modal Transportation <i>Policy 6.A.1</i>	Context Sensitive Street design is encouraged for new and redeveloped streets and streetscapes.
**City of San Antonio North Sector Plan	Land Use <i>Goal 5, Strategy 5.1</i>	Continue to implement the standards and guidelines of existing scenic corridors, gateway corridors and overlay districts to maintain and enhance a consistent design theme along North Sector principal and arterial roadways.
City of Schertz Comprehensive Land Use Plan	Land Use <i>Goal 1, Objective A, Action 3.</i>	Coordinate efforts with the Texas Department of Transportation to improve aesthetic features along I-35, I-10 and FM 78 including unique signage, intense and artistic landscaping, architectural additions to overpasses, and distinct entry/exit of City limits.

Table 5.1: Summary of Plan Policies and Goals		
Document	Policies and Goals	Requirements
	Transportation <i>Goal 3, Objective A, Action 1.</i>	Work with TxDOT to ensure that the design of bridges, overpasses, retaining walls and other improvements include consideration of visual impact and utilizes design features and materials, including landscaping treatments that will enhance the aesthetic appearance of the structures.
	Community Enhancement <i>Goal 2.</i>	Enhance aesthetics throughout Schertz by improved site planning to include vehicular and pedestrian mobility, paths and trails, roadway layout, usable open space, and appropriate landscaping lighting and other amenities.
	Community Enhancement <i>Goal 2, Objective 1.</i>	Preserve existing views that convey the indigenous heritage, character, environment and landscape of the City.

Sources: TxDOT San Antonio District Urban Design Themes 2005; San Antonio Comprehensive Master Plan Framework 2011; City of San Antonio North Sector Plan 2010; and City of Schertz Comprehensive Land Use Plan 2001.

\*These design elements apply to preliminary engineering of highway elements only and offer opportunities for additional enhancements with community participation.

\*\*The study area for the City of San Antonio North Sector Plan only includes the central portion of the Study Area from the IH 35/IH 410 interchange to the IH 35/Toepperwein Road intersection.

## 5.2 Methodology

The visual experience (viewshed) and aesthetic quality of an area depends upon a pattern of land or topography, the patterns of water bodies, vegetation patterns, and patterns of human development. More specifically, factors used to assess a person’s visual experience and the aesthetic quality of an area may include:

- Uniqueness of the landscape in relation to the region as a whole;
- Whether the scenic area is a foreground, middle ground, or background view;
- Focus of the view;
- Scale of the elements in the scene;
- Number of potential viewers;
- Duration of the view; and
- Amount of disturbance to the landscape.

The aesthetic value of an area is measured by its visual character within the community and the viewer response to scenic quality of the area. The level of visual sensitivity associated with the visual resources of an area determines whether an aesthetic change would or would not be considered a significant

effect. Visual sensitivity can be determined by the overall visual character of an area, the number of viewers, and the duration of the viewing time offered of the scene. A high visual sensitivity rating exists in areas where views are rare, unique, or in other ways special, such as in remote or pristine environments. Highly sensitive views would include undeveloped landscapes that consist of signature landforms, vegetation, water bodies, rock formations, or other features of unusual or outstanding quality (i.e., natural coastlines, streams and other river corridors, designated historic districts, and designated scenic vistas). A moderate visual sensitivity rating is given to landscapes that have some land development present. In a moderately sensitive area, human influence is more apparent, and the presence of manmade structures is common. Areas of low visual sensitivity commonly lack scenic, rare, or otherwise unique landscape features. Areas of low visual sensitivity are typically urban or suburban areas, agricultural and farming areas, industrial and commercial development areas, and other areas that do not contain resources typically associated with moderate or high sensitivity areas.

### 5.3 Existing Conditions

An inventory of the existing visual resources within the Study Area was performed through a review of published documents and field surveys. The Study Area consists of urbanized land uses and existing views are typical of a developed urban setting with little topographic variation, not allowing for opportunities of uninterrupted midground or background vistas. The following summarizes the visual experience in the southern, central and northern portions of the Study Area:

- **Southern** – The southern portion of the Study Area is characterized by man-made visual features that include single-family residential areas, military uses, industrial uses with a high number of warehouses, and commercial uses. The southeastern part of this area to the northeast of IH 410 includes views of undeveloped land. In addition, the viewshed includes views of the San Antonio River, Pershing Creek, Walzem Creek and vegetation dominated by large Oak trees and Ashe Juniper.
- **Central** – The central portion of the Study Area is characterized by man-made visual features that include single-family residential areas, industrial uses, commercial and civic uses. The northwestern part of this area to the northwest of IH 35 includes views of undeveloped land with dense vegetation dominated by large Oak trees and Ashe Juniper. In addition, the viewshed includes views of Beitel Creek and Salitrillo Creek.
- **Northern** – The northern portion of the Study Area is located in the Texas Hill Country and is characterized by low density visual features that include single-family residential areas, industrial and commercial uses. The Texas Hill Country area holds a visual significance for both residents and visitors, however the large majority of the existing views in the Study Area are partially obstructed or entirely blocked by the man-made land use developments in the Study Area. The northern part of this area includes views of large portions of undeveloped land with views of vegetation dominated by large Oak trees and Ashe Juniper. In addition, the viewshed includes views of Cibolo Creek.

Based on the inventory of existing visual resources and the level of visual sensitivity associated with the visual resources of an area described above, the Study Area is currently at a low visual sensitivity level.

The IH 35 corridor is not identified as a scenic corridor according to the City of San Antonio Scenic Corridors Ordinance that was adopted in 2003.

## **6. Existing Transportation Infrastructure**

This section summarizes the existing transportation infrastructure and future plans for transportation improvements within the Study Area, with primary focus on the existing IH 35 facility. Discussion is provided for major roadway, rail, transit, and intermodal transportation modes located within and around the Study Area.

### **6.1 Methodology**

Data was obtained from existing sources to provide current information on the road, rail, transit, intermodal, and air facilities located in and around the Study Area. Sources utilized for the description of each transportation mode are cited in each respective section.

### **6.2 Roadway System**

The primary roadway in the Study Area, IH 35, facilitates the travel needs of both local commuters as well as national and international freight shippers. This mixture of car and truck traffic and varied trip purpose presents additional challenges for addressing regional mobility needs and improving system performance in the area. This segment of IH 35 also provides many connections to other important regional components of the state and interstate highway system, including IH 10, IH 410, IH 37, US 281 and Loop 1604, among others. This section briefly discusses the characteristics of the existing IH 35 and IH 410 facilities in the Study Area, including traffic and operational characteristics and plans for future expansion. Information is also provided related to other major roadways that interact and interface with the IH 35 and IH 410 facilities in the Study Area.

#### **6.2.1 Existing IH 35 and IH 410 Facility Characteristics**

IH 35 from Hubertus Road/FM 1103 to IH 37/US 281 is located primarily within an urban/suburban area, with development densities increasing from north to south along the Study Area from Schertz to downtown San Antonio. Most land uses along this segment of IH 35 are warehouse, light industry and heavy commercial development.

In the Study Area, the existing IH 35 facility typically consists of six to eight mainlanes, with individual lane widths of 12 feet. IH 35 has ten-foot inside and outside shoulders throughout and auxiliary lanes in some locations. IH 35 typically has a concrete barrier median separating the northbound/southbound mainlanes, and two to three-lane continuous frontage roads with curbs and shoulders in most areas. The existing IH 410 facility consists of four mainlanes, with individual lane widths of 12 feet. IH 410 has four-foot inside and ten-foot outside shoulders throughout. IH 410 has barrier and median with barrier separating the northbound/southbound mainlanes, and one to two-lane discontinuous frontage roads with curbs and shoulders in most areas. A general overview of the existing lane configurations and transitions for IH 35 and IH 410 in the Study Area is provided in **Table 6.1**.

<b>Facility</b>	<b>From</b>	<b>To</b>	<b>Number of Lanes</b>
IH 35	FM 1103	Loop 1604	6
IH 35	Loop 1604	IH 410W	8
IH 35	IH 410W	US 281/IH 37	6
IH 410	IH 35	IH 10	4

Source: TxDOT Roadway Inventory File 2011

More detailed information regarding the limits of existing mainlane configurations and transitions, mainlane and shoulder widths, frontage roads, and right of way typical for IH 35 and IH 410 in the Study Area is provided on the existing typical sections, presented in **Appendix F**.

### **6.2.2 Other Major Roadway Facilities in the Study Area**

In addition to IH 35 and IH 410, several other major state, U.S., and interstate highway facilities are located within the Study Area, including:

- IH 10
- IH 37
- US 281
- Loop 1604
- SH 218
- SH 368

Major interchanges in the Study Area involving IH 35 and IH 410 include:

- IH 410S and IH 10E Interchange
- IH 410S and IH 35 Interchange
- IH 410NE and IH 35 Interchange
- Loop 1604 and IH 35 Interchange
- IH 35 and US 281/IH 37 Interchange

### **6.2.3 Facility Crossings and Entrance/Exit Ramps**

**Table 6.2** shows the major transportation facilities that are crossed by or cross over existing IH 35 and IH 410 in the Study Area.

**Table 6.2: IH 35 and IH 410 Transportation Facilities Crossed and Crossings**

<b>ID</b>	<b>Feature Crossed</b>	<b>Facility Carried</b>	<b>Bridge with Respect to IH 35</b>
1	IH 35	FM 1103	Bridge Crosses IH 35
2	IH 35	FM 482	Bridge Crosses IH 35
3	IH 35	Old Wiederstein Rd	Bridge Crosses IH 35
4	IH 35	FM 3009	Bridge Crosses IH 35
5	IH 35	Schertz Pkwy	Bridge Crosses IH 35
6	Cibolo Creek & FM 1518	IH 35	IH 35 Carried on Bridge
7	IH 35	Olympia Pkwy	Bridge Crosses IH 35
8	IH 35	Forum Pkwy	Bridge Crosses IH 35
9	IH 35	Loop 1604	Bridge Crosses IH 35
10	SH 218	IH 35	IH 35 Carried on Bridge
11	IH 35	Woodview Dr	Bridge Crosses IH 35
12	Toepperwein Rd	IH 35	IH 35 Carried on Bridge
13	IH 35	Judson Rd	Bridge Crosses IH 35
14	IH 35	O Connor Rd	Bridge Crosses IH 35
15	Weidner Rd	IH 35	IH 35 Carried on Bridge
16	Starlight Terrace	IH 35	IH 35 Carried on Bridge
17	IH 410 Connector	IH 35	IH 35 Carried on Bridge
18	Walzem Rd (FM 1976)	IH 35	IH 35 Carried on Bridge
19	Eisenhauer Rd	IH 35	IH 35 Carried on Bridge
20	Rittiman Rd	IH 35	IH 35 Carried on Bridge
21	IH 35	I-410	Bridge Crosses IH 35
22	IH 35	George Beach Ave	Bridge Crosses IH 35
23	Binz-Engleman Rd	IH 35	IH 35 Carried on Bridge
24	IH 35	IH 410 Connector	Bridge Crosses IH 35

Table 6.2: IH 35 and IH 410 Transportation Facilities Crossed and Crossings			
ID	Feature Crossed	Facility Carried	Bridge with Respect to IH 35
25	ATT Pkwy	IH 35	IH 35 Carried on Bridge
26	MKT Railroad	IH 35	IH 35 Carried on Bridge
27	IH 35	Walters St	Bridge Crosses IH 35
28	IH 35	New Braunfels Ave	Bridge Crosses IH 35
29	IH 35	N Pine St	Bridge Crosses IH 35
30	IH 35	US 281/IH 37 (Multiple other streets)	Bridge Crosses IH 35
31	Binz-Engleman/FM 78/UP RR	IH 410	N/A

Source: TxDOT Bridge Inventory File Data 2011.

As indicated in **Table 6.2**, there are approximately 31 transportation facilities either crossed by or crossing existing IH 35 and IH 410 (TxDOT 2011). In addition to the transportation facility crossings, there are numerous entrance and exit ramps that provide access to the existing IH 35 and IH 410 facilities. In the Study Area, there are approximately 117 access points (56 entrance ramps and 61 exit ramps) that facilitate access and vehicular movements on and off the IH 35 and IH 410 facilities.

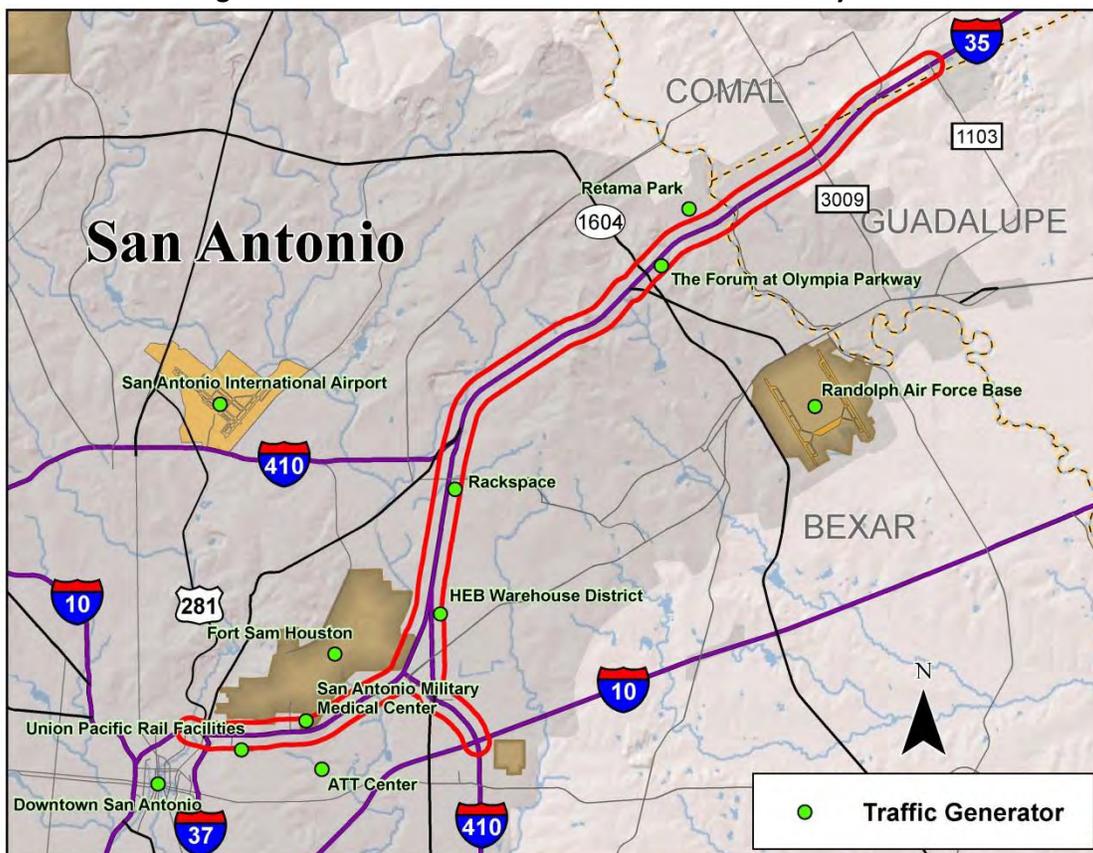
#### 6.2.4 Major Traffic Generators

The Study Area is located in and around downtown San Antonio, major employers, military installations, freight distribution, and sporting and medical facilities, all of which generate large volumes of traffic on a daily basis. Some of the major traffic generators/attractors that are located in and around the Study Area include:

- Downtown San Antonio
- Fort Sam Houston
- San Antonio Military Medical Center (BAMC)
- Union Pacific Rail Facilities
- HEB Regional Warehouse District
- Windsor Park Shopping Mall (now Rackspace Headquarters)
- San Antonio International Airport
- Randolph Air Force Base
- The Forum at Olympia Parkway
- Retama Park
- AT&T Center

The location of these traffic generators in relation to the Study Area is shown in **Figure 6.1**.

Figure 6.1: Traffic Generators in and around the Study Area



Source: SA-BC MPO 1996 and ESRI 2010.

### 6.2.5 Operational Characteristics

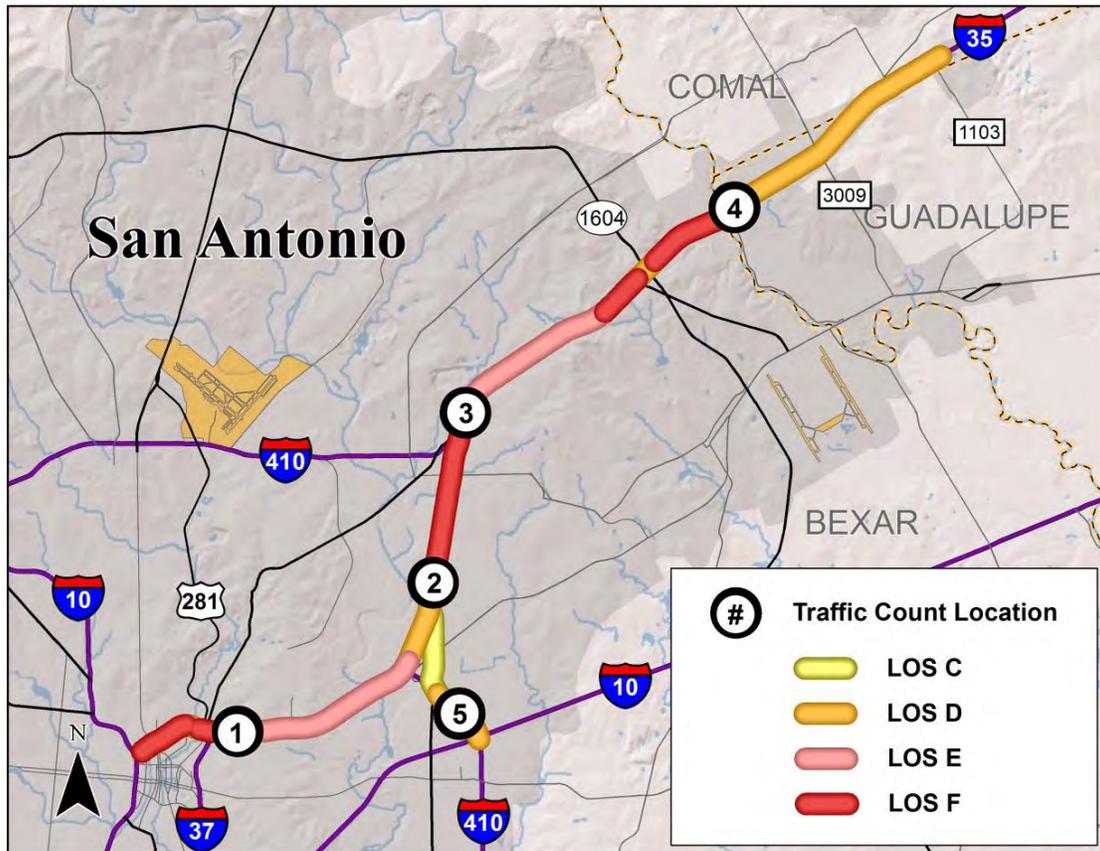
As might be expected, due to the high rate of population growth in the region (see *IH 35 PEL Study Need and Purpose Technical Report*) and major traffic generators located in and around the Study Area, traffic volumes in the corridor have increased significantly over the past two decades. **Table 6.3** presents traffic counts from five locations along the study corridor from 1990, 2000, and 2010 (TxDOT 2010). These locations are depicted graphically in **Figure 6.2**. As shown in **Table 6.3**, traffic has increased between 36 percent and 200 percent at various locations along the corridor during the last twenty years. Within the Study Area, 2010 truck volumes represented approximately 8 to 10 percent of the total average daily traffic volume on IH 35, ranging from 9,000 to 14,000 trucks per day (TxDOT 2010).

Table 6.3: Historical Traffic Counts at Locations along the Study Area						
Location	Description	1990	2000	2010	Total Increase (1990-2010)	% Increase (1990-2010)
1	IH 35 east of IH 37/281	111,000	159,000	151,000	40,000	36%
2	IH 35 south of Rittiman	127,000	169,000	181,000	54,000	43%
3	IH 35 north of IH 410W	120,000	169,000	200,000	80,000	67%
4	IH 35 northeast of Lp 1604	53,000	105,000	159,000	106,000	200%
5	IH 410 north of IH 10	52,000	69,000	80,000	28,000	54%

Source: TxDOT TP&P Division, 1990-2010 Traffic Counts, Average Daily Traffic (ADT) Volumes.

The most common indicator of roadway efficiency is Level of Service (LOS). LOS is a measure of operational conditions along a roadway section during peak travel hours (generally 7AM to 9AM and from 4PM to 6PM). LOS is reported on a scale of A through F, with LOS A indicating free-flow travel conditions, with gradually declining conditions through LOS F. **Figure 6.2** presents the peak hour LOS in 2010 for the sections of IH 35 and IH 410 in the Study Area.

Figure 6.2: Peak Hour Levels of Service within the Study Area, 2010



Source: Level of service calculations based on TxDOT Roadway Inventory File, 2011

As shown in **Figure 6.2**, in 2010, approximately 75 percent of the peak hour travel within the Study Area was operating at LOS E and F. This high level of congestion in the corridor radiates throughout the regional transportation system and results in loss of time and increased costs for all motorists in the region.

### 6.2.6 Future Planned Improvements

The San Antonio-Bexar County Metropolitan Planning Organization (MPO) is the entity responsible for long-range transportation planning in the greater San Antonio metropolitan area. Their most recent Metropolitan Transportation Plan (MTP) is the San Antonio-Bexar County MPO *Mobility 2035 Plan* (MPO 2009). This multi-modal plan forecasts population and employment growth and transportation needs and solutions based on that growth for the next 25 years. The *Mobility 2035 Plan* also communicates the region's transportation vision, goals and strategies for surface modes of transportation. The project list is constrained by the amount of funding that is anticipated to be available to the region over the life of the plan, and the plan identifies over \$11.5 billion in funded transportation improvements for the region over the 2010-2035 time period (MPO 2009). Among these improvements, the *Mobility 2035 Plan* identifies the need for additional roadway capacity in the IH 35 PEL Study Area along IH 35 from Schertz Parkway to IH 37/US 281 in downtown San Antonio. Additionally, the plan lists operational improvements planned on IH 35 from FM 3009 to Judson Road and from IH 410 N to IH 37, including a

direct connector at IH 35 and IH 410 S. These IH 35 improvements total over \$2.1 billion in estimated cost. There is only one planned improvement for the section of existing IH 410 located in the Study Area, which involves the installation of concreted median barrier and illumination from IH 35N to IH 10E (TxDOT FY 2011-2014 STIP 2011). **Table 6.4** summarizes the major capacity and operational improvements<sup>4</sup> to IH 35 that are contained in the *Mobility 2035 Plan* and subsequent revisions.

<b>Table 6.4: IH 35 Capacity and Operational Improvements from <i>Mobility 2035 Plan</i></b>					
<b>Road</b>	<b>From</b>	<b>To</b>	<b>Description</b>	<b>Year</b>	<b>Cost</b>
<b>Capacity Improvements</b>					
IH 35	0.3 Mi N of Randolph Blvd	0.2 Mi S of Schertz Pkwy	Expand from 8 to 14 lanes, including direct connectors at Loop 1604	2020	\$1,018,355,254
IH 35	0.5 Mi S of Binz Engleman	0.3 Mi N of Randolph Blvd	Expand from 6 to 12 lanes, including direct connectors at IH 410 S and IH 410 N	2020	\$688,144,172
IH 35	US 281/IH 37	0.5 Mi S of Binz Engleman	Expand from 6 to 10 lanes	2020	\$335,546,368
<b>Operational Improvements</b>					
IH 35	Bexar/Guadalupe County Line	FM 3009	Reconstruct and reconfigure intersection, ramps, frontage and mainlane operational improvements	2012	\$12,489,633
IH 35	Judson Road	Guadalupe/Bexar County Line	Reconstruct and reconfigure intersection, ramps, frontage and mainlane operational improvements	2012	\$10,159,560

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<sup>4</sup> In addition to the major IH 35 capacity and operational improvements listed in **Table 6.4**, there are several other minor projects located in the Study Area involving IH 35 and IH 410 (e.g., installation of illumination on IH 35 at IH 37 and around Rittiman Road and installation of illumination/barrier on IH 410 from IH 35 N to IH 10 E). These have been omitted from **Table 6.4** since they would have a minimal impact on mobility.

Table 6.4: IH 35 Capacity and Operational Improvements from <i>Mobility 2035 Plan</i>					
Road	From	To	Description	Year	Cost
IH 35	IH 37	IH 410 S	Reconstruct and reconfigure intersection, ramps, frontage and mainlane operational improvements	2013	\$12,093,000
IH 35	IH 410 S	IH 410 N	Reconstruct and reconfigure intersection, ramps, frontage and mainlane operational improvements	2013	\$19,348,800
IH 35	At IH 410 S	N/A	Construct direct connector from IH 35 SB to IH 410 SB	2013	\$25,000,000
				<b>Total</b>	<b>\$2,121,136,787</b>

Source: *San Antonio-Bexar County MPO Mobility 2035 Plan – Alphabetical Project Listing, Page 106-107 (10/24/11)* and *San Antonio-Bexar County MPO FY 2011-2104 TIP Second Quarter 2012 Amendments (1/23/12)*.

It should be noted that the IH 35 capacity improvements listed in **Table 6.4** are identified in the *Mobility 2035 Plan* as toll lanes, with the funding mechanism identified as Comprehensive Development Agreement (CDA) in order to meet the fiscal constraint requirements of the MTP. The implementation year for these improvements is identified as 2020. Alternatively, the funding source for several of the IH 35 operational improvements is from Proposition 12 and Office of Economic Adjustment (OEA) funds. The implementation years for these operational improvements are more immediate, ranging from 2012 to 2013, and they are included in the amended FY 2011-2014 Transportation Improvement Program (TIP).

In addition to the planned improvements on the existing IH 35 and IH 410 facilities, there are several other projects listed in the *Mobility 2035 Plan* that are located within the Study Area. These projects involve improvements to existing FM 3009, Loop 1604, and Walters Street and are presented in **Table 6.5**.

Table 6.5: Other Capacity and Operational Improvements Planned in the Study Area					
Road	From	To	Description	Year	Cost
FM 3009	FM 2252	IH 35	Widen to provide for operational improvements	2012	\$1,848,480
Loop 1604	Redland Road	Kitty Hawk Road	Widen from 4 lanes to 8-lane expressway	2018	\$299,302,713
Walters Street	IH 35 North	Fort Sam Houston Entrance	Reconstruct existing roadway, add sidewalks, bike lanes, and operational improvements	2011	\$9,674,982
<b>Total</b>					<b>\$310,826,175</b>

Source: San Antonio-Bexar County MPO Mobility 2035 Plan and TxDOT FY 2011-2014 STIP, TxDOT San Antonio District February Quarterly Revisions.

### 6.3 Rail System

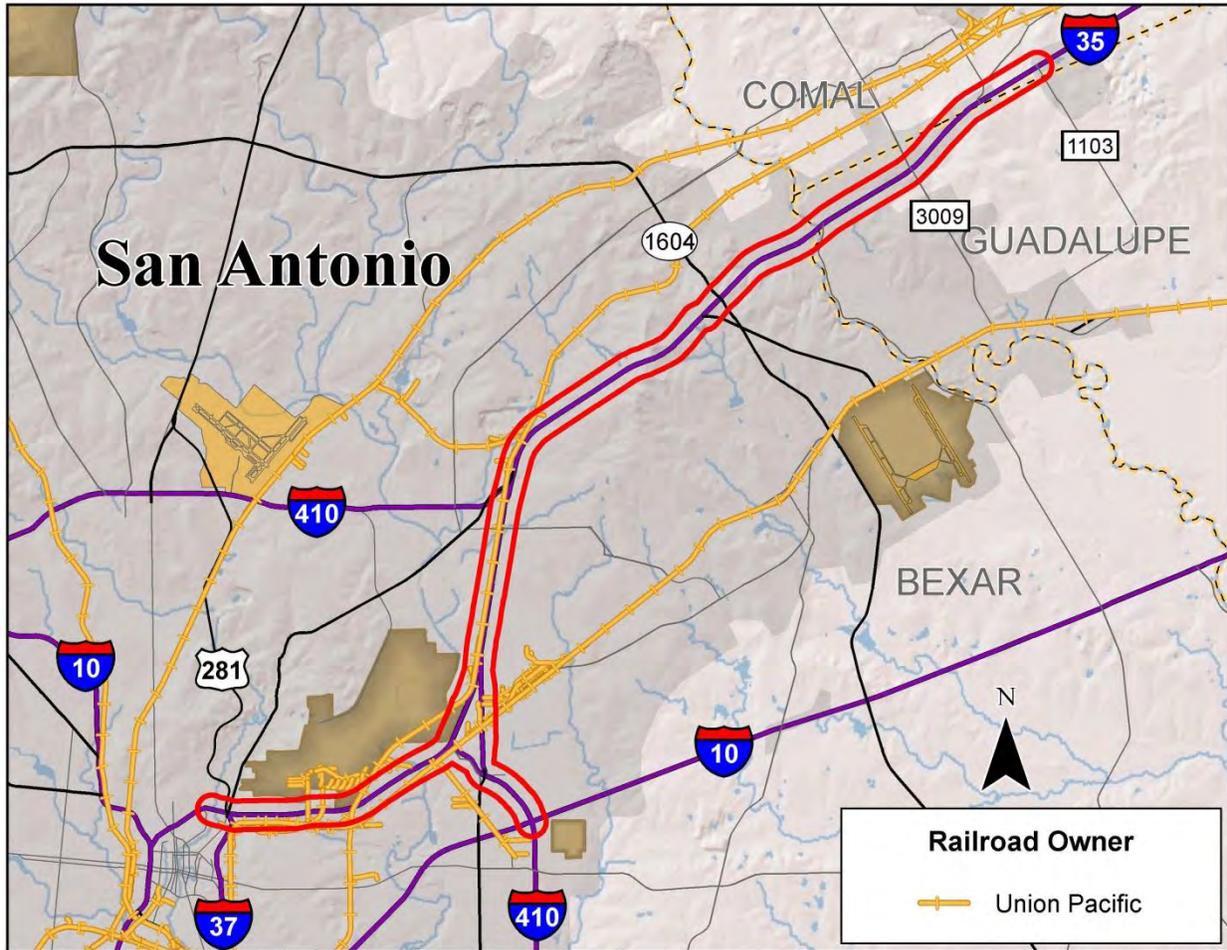
This section provides a brief overview of the freight rail and passenger rail network located in and around the Study Area.

#### 6.3.1 Freight Rail System

San Antonio provides a strategic location for distribution, transshipment and international trade processing activities, and has key logistical assets that support the delivery of products to both domestic and international customers (MPO 2009). Much of the freight movement in the region is facilitated by area rail facilities, in addition to the roadway system and intermodal facility network.

The majority of rail freight operations in the Study Area are conducted by UPRR. There are approximately 16 miles of rail owned by UPRR located in the Study Area, including a major UPRR intermodal facility providing a rail-truck interface. The UPRR rail network located in and around the Study Area is shown in **Figure 6.3**. Although UPRR is the only rail company with rail ownership in the Study Area, the Burlington Northern Santa Fe Rail Company (BNSF) and the National Railroad Passenger Corporation, Inc. (Amtrak) utilize UPRR rail track, through trackage rights, for area freight and passenger rail operations.

Figure 6.3: Existing Freight Rail Infrastructure

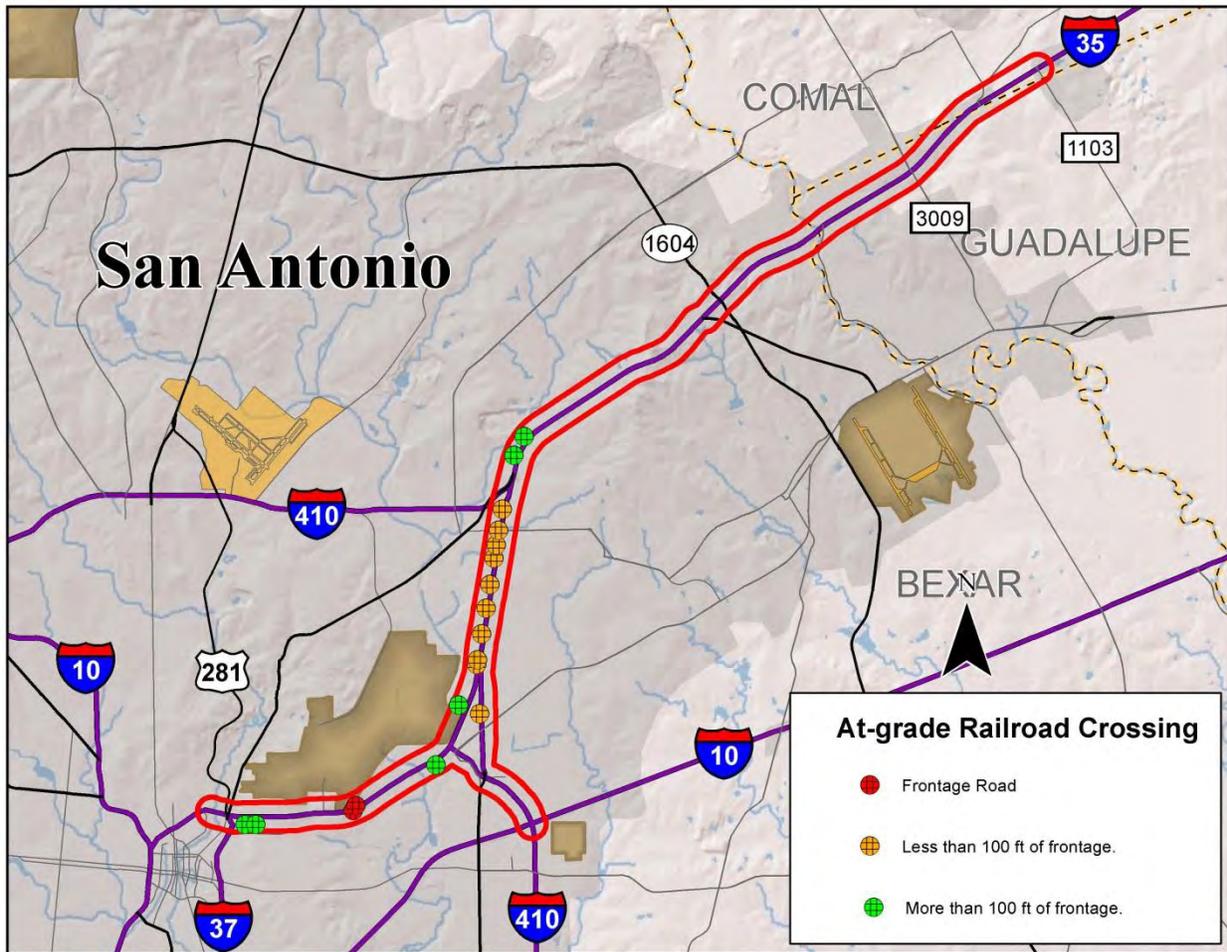


Source: TxDOT Rail Data, 2011

### 6.3.2 At-Grade Rail Crossings

There are multiple at-grade rail crossings located in the Study Area that present safety and mobility issues to travel on IH 35. In many instances, traffic will back up on the IH 35 frontage road when trains are crossing and can create or perpetuate congestion. Within the Study Area, there are 18 at-grade rail crossings on or near the IH 35 frontage roads. Two of these at-grade crossings are located on the IH 35 frontage road itself, six are located less than 100 feet from the IH 35 frontage road, and ten are located more than 100 feet from the IH 35 frontage road. The locations of the at-grade rail crossings located in the Study Area are shown in **Figure 6.4**.

Figure 6.4: At-Grade Rail Crossings in the Study Area

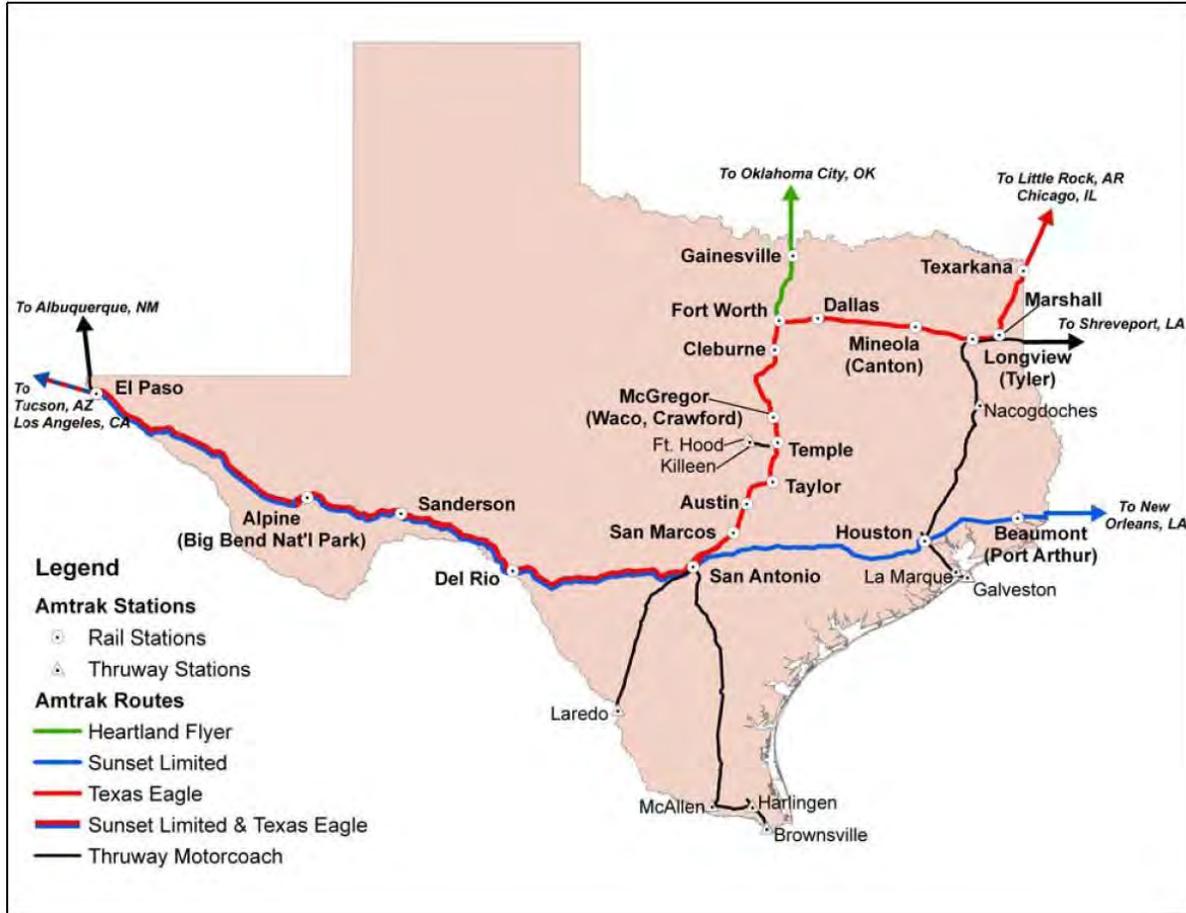


Source: IH 35 PEL Study Team, 2011

### 6.3.3 Passenger Rail System

There is currently no existing passenger rail service operating solely within the Study Area. The only passenger rail service currently provided in the San Antonio Region is by Amtrak. There are two routes that serve San Antonio: the Texas Eagle and Sunset Limited. The Texas Eagle provides service from San Antonio to Chicago, while the Sunset Limited provides service from Los Angeles to New Orleans, with a stop in San Antonio. The location of existing Amtrak routes in Texas is provided in **Figure 6.5** (TxDOT 2010).

Figure 6.5: Existing Amtrak Service in Texas



Source: TxDOT, 2010 (from TTI data)

There is one near-term planned passenger rail project with potential to impact travel patterns in the Study Area. The Lone Star Rail Project proposes to implement commuter rail service along the IH 35 corridor from north of Austin to San Antonio. As currently envisioned, the Lone Star Rail route would be located west of the Study Area, however its proximity to the Study Area would have the potential to influence travel patterns in and around the Study Area. The proposed Lone Star Rail route and station locations are depicted in **Figure 6.6** (LSR 2011).

Figure 6.6: Proposed Lone Star Rail Route and Station Location



Source: Lone Star Rail District, 2011.

Another long-range passenger rail initiative involving the San Antonio region is the federally designated South Central High Speed Rail Corridor. As designated in 2000, the South Central Corridor consists of a hub at Dallas-Fort Worth, Texas, with spokes extending to (a) Oklahoma City and Tulsa to the north, (b) Texarkana, Texas/Arkansas, Little Rock, Arkansas, to the east and northeast, and (c) Austin and San Antonio to the southwest. Currently, TxDOT is conducting an analysis of its statewide railroad network, which will support TxDOT’s plan to connect the state’s population centers on designated freight, intercity passenger, and high-speed rail corridors (FRA 2011). The location of the South Central High Speed Rail Corridor is presented in **Figure 6.7**.

Figure 6.7: South Central High Speed Rail Corridor



Source: Federal Railroad Administration, 2011

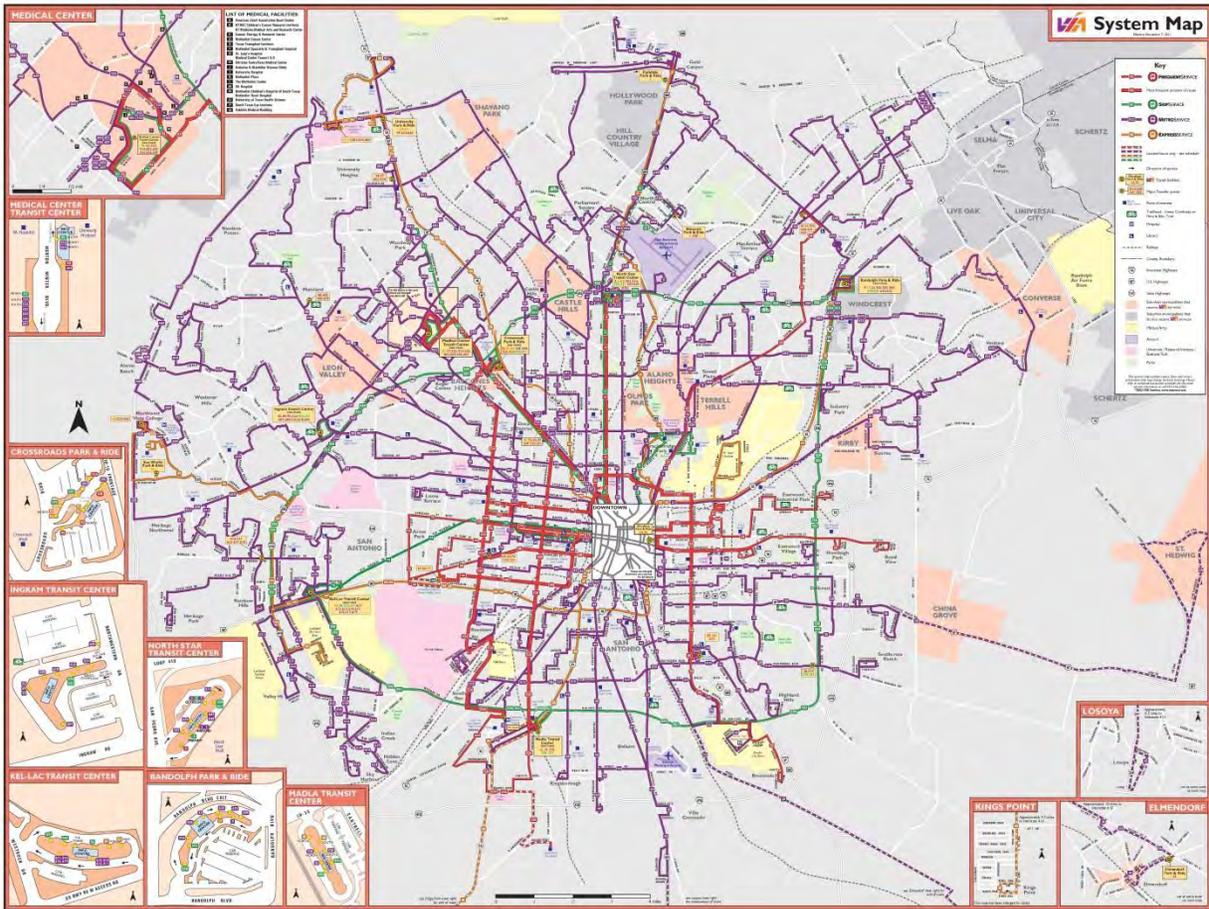
## 6.4 Transit System

This section provides a brief overview of the existing transit system located in and around the Study Area.

### 6.4.1 Transit Service

VIA Metropolitan Transit is the transit authority for the greater San Antonio area. VIA's service area covers over 1,226 square miles, which is 98 percent of Bexar County. The service area is made up of the unincorporated parts of Bexar County and the following municipalities: Alamo Heights, Balcones Heights, Castle Hills, China Grove, Converse, Elmendorf, Kirby, Leon Valley, Olmos Park, San Antonio, Shavano Park, St. Hedwig, Terrell Hills, and the Bexar County portion of Cibolo. VIA buses operate seven days a week from 4 a.m. to 1 a.m. There are 7,210 bus stops along 91 bus lines, which are divided into five service categories: frequent, metro, express, skip, and streetcar. VIA also provides special event park-and-ride service, VIAtrans paratransit service, and vanpool service (VIA 2011a). VIA's fleet consists of 418 buses, comprised of 194 North American Bus Industries (NABI) diesel buses, four NABI compressed natural gas buses, 176 New Flyer diesel buses, 30 New Flyer diesel-electric hybrid buses, and 14 Optima streetcars (VIA 2011a). The current VIA system map is shown in **Figure 6.8**.

Figure 6.8: VIA System Map



Source: VIA System Map, 2011

There are several VIA bus routes that provide service and connectivity to the Study Area. The most notable feature is the Randolph Park & Ride which is located at IH 35 and Randolph Boulevard in the Study Area. The Randolph Park and Ride has 287 parking spaces, an information center, and provides access to many VIA routes, including: 8, 17, 21, 502, 505, 509, 550, 551, 630, and 632.

### 6.4.2 Transit Ridership

VIA measures ridership based on numbers of boardings, also known as unlinked passenger trips. All of VIA's services carried approximately 46.4 million passenger trips during FY 2010-2011 (VIA 2011a).

**Table 6.6** shows FY 2010-11 Ridership by service type.

Table 6.6: VIA Ridership for FY 2010-2011		
Type of Service	Total Ridership	Weekly Average
Scheduled Line	44,129,717	137,290
VIATrans	1,051,869	N/A
Streetcar	1,132,972	2,933
Special Events	123,376	N/A

Source: VIA 2011a

As presented in the VIA FY 2012 budget and shown in **Table 6.7**, VIA estimates total FY 2012 ridership (bus and van services) to be 45,298,638. The main fixed-route bus line accounts for 97.4 percent of the total budgeted VIA system ridership for FY 2012 (VIA 2011b).

Table 6.7: VIA Passenger Summary for FY 2010-12				
Passengers	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
<b>Bus:</b>				
Line	41,450,314	41,903,290	43,737,922	44,105,983
Disaster Relief	-	-	-	-
Special Event	101,768	105,481	93,580	111,603
Charter	20,453	21,143	23,863	23,476
Contract	-	-	-	-
<b>Subtotal</b>	41,572,535	42,029,914	43,855,365	44,241,062
<b>Van:</b>				
VIATrans Directly Provided	529,854	528,939	545,413	486,485
VIATrans Private Operator	510,662	519,079	503,458	571,091
Starlight Service	-	-	-	-
<b>Subtotal</b>	1,040,516	1,048,018	1,048,871	1,057,576

**Table 6.7: VIA Passenger Summary for FY 2010-12**

<b>Total Passengers</b>	<b>42,613,051</b>	<b>43,077,932</b>	<b>44,904,236</b>	<b>45,298,638</b>

Source: VIA FY 2012 Budget

## 6.5 Intermodal Facilities

An intermodal facility is defined as a place where interface occurs between transportation systems. The term “intermodal” implies not only multiple transportation modes but also a high degree of connectivity and interchange between the modes. In a passenger terminal, people enter the facility by one mode of access (e.g., on foot, riding a bicycle, by car, by bus or train, etc.) and leave by another (Sacramento 2004). From a freight perspective, intermodal facilities or terminals are sites where freight is conveyed from one mode of freight transportation to another. Intermodal operations can involve highway, rail, water, and air modes and create opportunities to take advantage of the efficiencies and technological advances that can allow the different modes to work in tandem (FHWA 2009). This section will focus on discussion of freight intermodal facilities in and around the Study Area, as the VIA Park and Ride and Transit Centers (passenger intermodal facilities) were presented in **Section 6.4.1**.

### 6.5.1 Existing Intermodal Facilities

The development and promotion of San Antonio as an inland port has become one of the priority economic development strategies for San Antonio. One of the major regional intermodal facilities in San Antonio is the Port of San Antonio, which is a master-planned aerospace, industrial complex and international logistics platform created from the former Kelly Air Force Base. The Port of San Antonio is designated as a Foreign Trade Zone and includes an airport, accessibility by the railroads of UPRR and BNSF, and three interstate highways, IH 35, IH 10, and IH 37 (MPO 2009). The Port of San Antonio is located in southern San Antonio outside of the Study Area, but is mentioned due to its major impact to regional transportation shipping activities.

There are multiple intermodal facilities located directly in or around the Study Area. These facilities are listed in **Table 6.8** and depicted in **Figure 6.9**. Among some of the major intermodal facilities located in and around the Study Area are the San Antonio International Airport and Union Pacific Intermodal Facility (RITA BTS 2011).

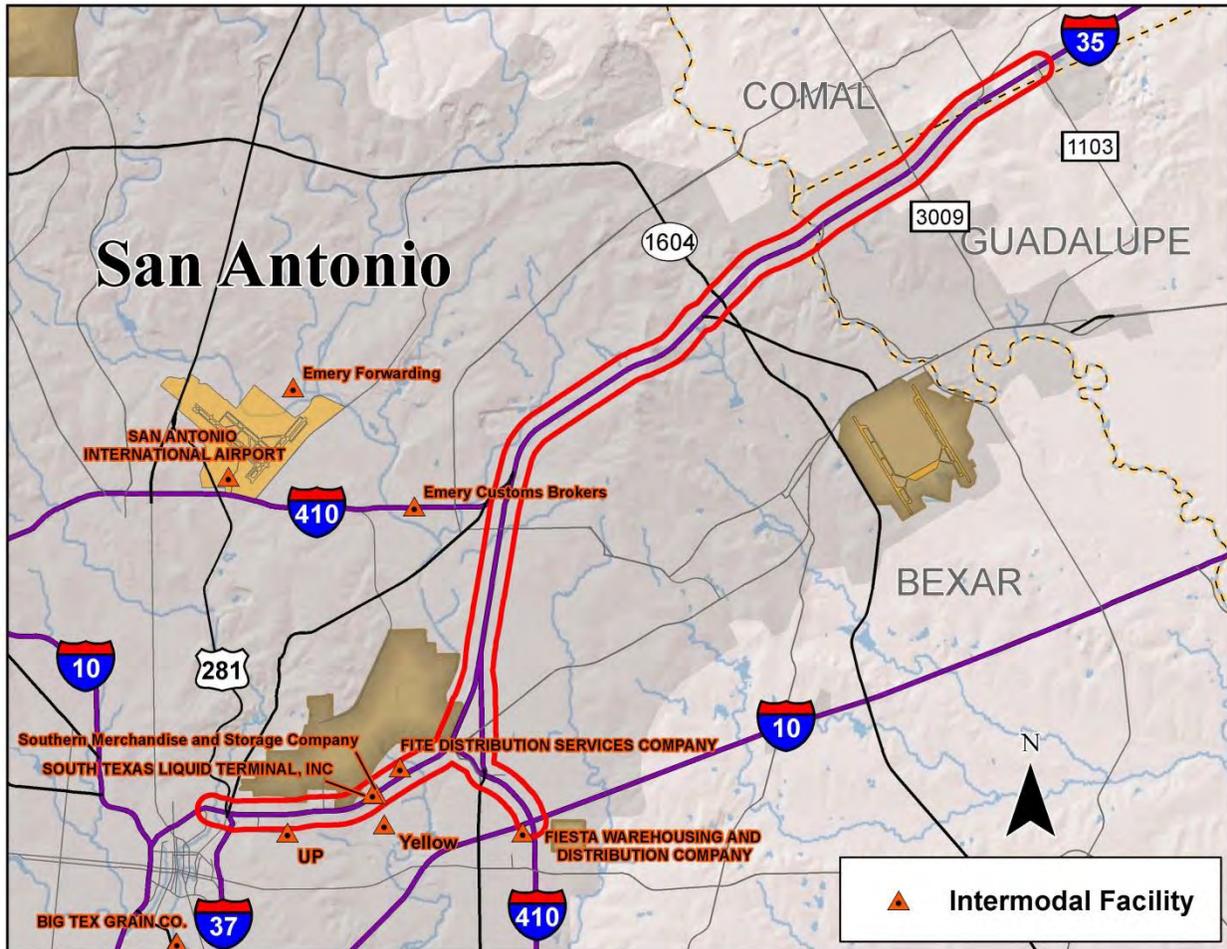
**Table 6.8: Intermodal Facilities in and around the Study Area**

<b>Intermodal Facility Name</b>	<b>Modes Facilitated</b>
Emery Forwarding	Air & Truck
Emery Customs Brokers	Air & Truck
San Antonio International Airport	Air & Truck
Union Pacific San Antonio	Rail & Truck
Big Tex Grain Co.	Rail & Truck
Star Seed and Grain Corp.	Rail & Truck
Southern Merchandise and Storage Company	Rail & Truck

Table 6.8: Intermodal Facilities in and around the Study Area	
Intermodal Facility Name	Modes Facilitated
Yellow San Antonio	Truck & Port & Rail
South Texas Liquid Terminal, Inc.	Rail & Truck
FITE Distribution Services Company	Rail & Truck
Fiesta Warehousing and Distribution Company	Rail & Truck

Source: RITA BTS, National Transportation Atlas Database 2011

Figure 6.9: Intermodal Facilities Located in and around the Study Area



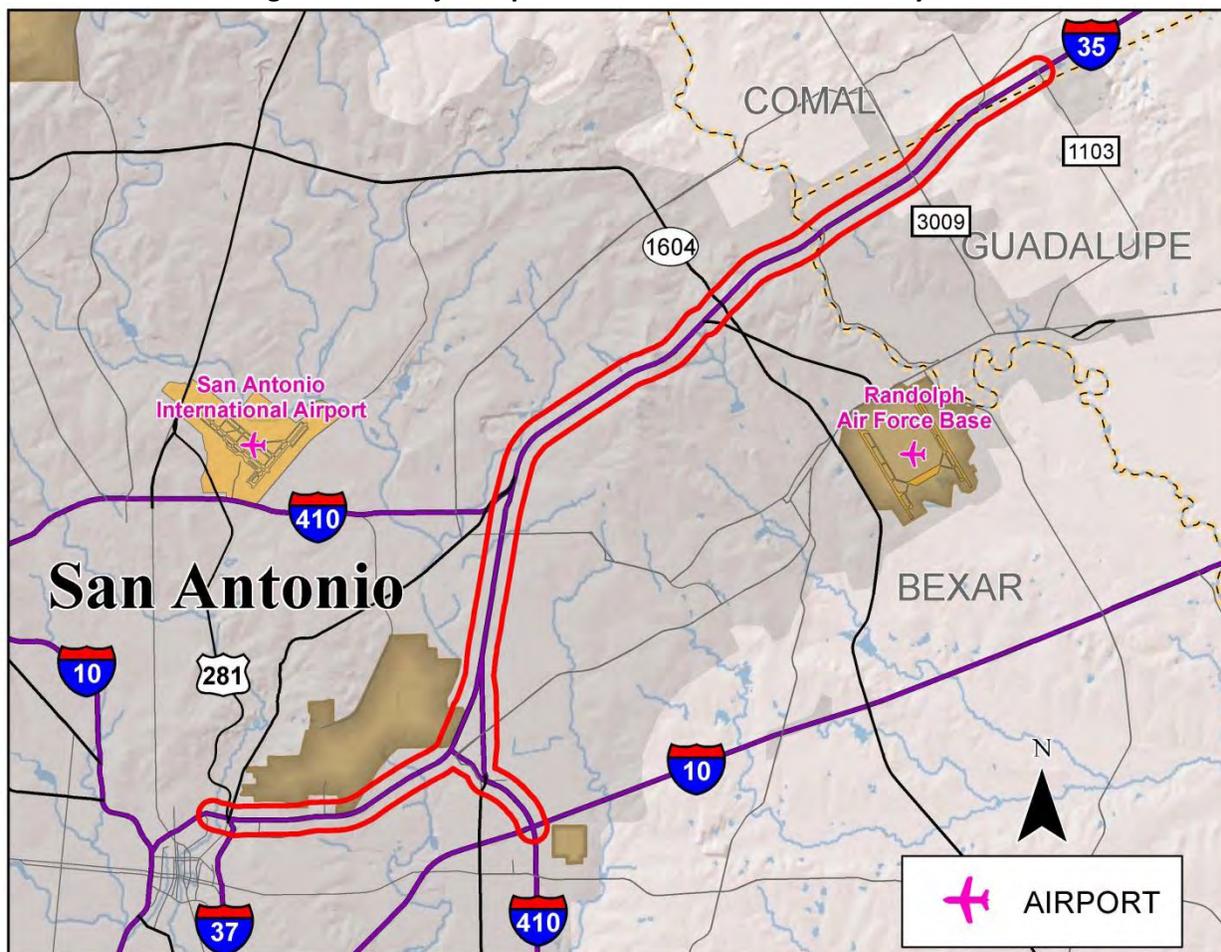
Source: RITA BTS, National Transportation Atlas Database 2011

## 6.6 Air Facilities

There are no airport facilities located in the Study Area. However, Randolph Air Force Base and the San Antonio International Airport are both located near the Study Area and have influences on vehicular travel in the Study Area. The location of these airports in relation to the Study Area is depicted in Figure 6.10. In addition to these major airport facilities, there are several other air facilities, namely

heliports, located in and around the Study Area. These other air facilities are generally associated with area military facilities and hospitals and have minimal impacts on vehicular travel in the Study Area.

**Figure 6.10: Major Airports Located in and around Study Area**



Source: IH 35 PEL Study Team, 2011

## 7. Surface Water

This section summarizes the applicable federal and state water quality regulations for surface water and the surface water resources within the Study Area, including surface drainage characteristics, water quality in surface streams, floodplains and wetlands.

### 7.1 Legal and Regulatory Context

The following federal and state water quality regulations apply to surface water.

#### 7.1.1 Federal Requirements of the Clean Water Act

The Federal Clean Water Act is the principal statute governing impacts to waters of the United States (jurisdictional waters), and applies to the national stream and tributary system, rivers, lakes, estuaries, coastal waters, and wetlands. Jurisdictional waters include all waters that are currently used, used in the

past, or may be susceptible to use in interstate or foreign commerce, including their tributaries and hydrologically connected wetlands. Section 404 of the Clean Water Act, in conjunction with Section 10 of the Rivers and Harbors Act of 1899, regulates discharge of fill into waters of the United States, while the permit system known as the National Pollutant Discharge Elimination System (NPDES) regulates discharge of pollutants.

### **7.1.2 State Water Quality Regulations**

The Texas Surface Water Quality Standards (TSWQS), which apply to all surface water features in the state, are promulgated as Title 30, Chapter 307, of the Texas Administrative Code. The standards were approved by the EPA in accordance with Section 303 of the Clean Water Act (CWA) and, as required by the statute, are updated every three years. The standards are typically designed to protect the most sensitive beneficial use within a water body. The Texas Commission on Environmental Quality (TCEQ) distributes the information provided by the TSWQS and administers compliance with the standards. Five general categories for water use are defined in the TSWQS: Aquatic life use, contact recreation, general use, public water supply, and fish consumption. A waterway “fully supports” a designated use, such as water supply or contact recreation, when water quality criteria and standards set by the state in conformity to Federal standards are met or exceeded for that use.

The TCEQ carries out a regular program of monitoring and assessment to compare conditions in Texas surface waters to established standards and to determine which water bodies are meeting the standards. The results of the assessment are published periodically in the Texas Water Quality Inventory and 303(d) List. The Texas 303(d) List is an overview of the status of surface waters of the state not meeting applicable water quality standards (threatened or impaired), including concerns for public health, fitness for use by aquatic species and other wildlife, and specific pollutants and their possible sources.

As a result of this assessment, the state of Texas must develop action plans to remediate those water bodies that are impaired through the development of a total maximum daily load (TMDL) which determines the maximum amount of pollutants that a water body can receive and still both attain and maintain its water quality standards. The TCEQ monitoring program divides the state’s surface water into river basin data and further divides this data into specific segments which are each allocated a segment identification number. Stream segments in the Study Area that are designated as being threatened or impaired are discussed in **Section 7.2**.

### **7.1.3 Floodplain Regulations**

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP). Bexar, Comal, and Guadalupe counties are all participating members of the NFIP, in accordance with 23 CFR 650 Subpart A – *Location and Hydraulic Design of Encroachment on Flood Plains*. The design studies required by Subpart A “apply to all encroachments and to all actions which affect base flood plains.” Therefore, in order to determine the extent of the flood plains and regulatory floodways in the corridor, Federal Insurance Rate Maps (FIRMs) for all three counties and incorporated cities within them were assessed. The extent of existing floodplains in the Study Area, and specifically the zones which encompass the 100-year flood boundary, are discussed in **Section 7.2**.

#### **7.1.4 Wetlands Regulations**

The EPA, through the United States Army Corps of Engineers (USACE), is charged with the regulation of discharges of dredged or fill material into “waters of the United States” pursuant to the Federal Water Pollution Control Act (FWPCA) of 1972 and subsequently modified to the CWA in 1977. Section 404 of the CWA, overseen by EPA and administered by the USACE, regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The term “waters of the United States,” as defined in 33 CFR 328.3 typically includes rivers, streams, creeks, lakes and adjacent or adjoining wetlands and specifically denotes:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including wetlands; and
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

The term wetlands, as applied in the CWA and by the USACE, includes those areas that are “inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances typically do support, a prevalence of vegetation typically adapted for life in saturated soils”. Inherent in this definition are the presence of three mandatory criteria; hydric soils, hydrophytic vegetation and wetland hydrology.

The USFWS, for the purpose of their classification and inventory of wetlands, define wetlands as “lands transitional between the terrestrial and aquatic system where the water table is usually at or near the surface or the land is covered by shallow water” (Cowardin 1979). Only one of the three parameters required by the USACE is necessary to establish a wetland using the Cowardin classification as applied on the USFWS National Wetland Inventory (NWI) maps, therefore many NWI wetlands are not jurisdictional wetlands. For planning purposes, however, the NWI mapping is a useful tool. The extent of wetlands in the Study Area, as defined by Cowardin, is discussed in **Section 7.2**.

## **7.2 Existing Conditions**

The following summarizes the existing conditions for surface drainage characteristics, water quality in surface streams, floodplains and wetlands within the Study Area.

### **7.2.1 Existing Surface Drainage Characteristics**

The Study Area is located within the San Antonio River Basin and the Guadalupe River Basin which are two of Texas’ 23 major river basins. Their combined drainage areas cover approximately 10,250 square miles of land area. The San Antonio River Basin drains approximately 4,180 square miles of land area and originates in Brackenridge Park in San Antonio, flowing southeastward to its confluence with the Guadalupe River near the Gulf Coast. Principal tributaries to the San Antonio River include the Medina

River, Leon Creek, and Cibolo Creek. The Study Area overlaps with the San Antonio River Basin at the Upper San Antonio and Cibolo Creek Sub-Basins located in the central part of the Basin.

The Guadalupe River Basin drains approximately 6,070 square miles of land area. The headwaters of the Guadalupe River form in southwestern Kerr County and the river flows southeasterly to Guadalupe Bay that is part of the San Antonio Bay System. The Blanco and San Marcos Rivers are major tributaries to the Guadalupe River. The Study Area overlaps with the Guadalupe River Basin at the Middle Guadalupe Sub-Basin located in the south-central part of the Guadalupe River Basin.

As shown in **Table 7.1** and **Appendix B**, there are seven surface drainage systems (streams) in the Study Area. Five of these seven streams cross the Study Area and are crossed by IH 35. Two streams are located within the Study Area, but do not cross the Study Area and are not crossed by IH 35. Streams can be classified as perennial, intermittent and ephemeral.

- Perennial streams flow year-round during a typical year. The water table is located above the stream bed for most of the year and groundwater is a primary source for stream flow. A perennial stream is typically capable of supporting aquatic life.
- Intermittent streams flow during certain parts of the year, typically seasonally, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Rainfall is a supplemental source of flow. Biological constituents are adapted to wet and dry fluctuations.
- Ephemeral streams only flow for short durations after precipitation. Ephemeral beds are located above the water table year- round. Runoff from rainfall is the primary source of flow. Aquatic life is extremely scarce or typically absent.

<b>Table 7.1: Existing Streams in the Study Area</b>			
<b>Streams</b>	<b>Length (mi)</b>	<b>Location Description</b>	<b>Classification</b>
San Antonio River	0.6	Crosses Study Area	Perennial
Salado Creek	0.6	Crosses Study Area	Perennial
Pershing Creek	0.2	Within Study Area, does not cross	Intermittent
Walzem Creek	0.8	Crosses Study Area	Intermittent
Beitel Creek	0.7	Within Study Area, does not cross	Intermittent
Salitrillo Creek	0.5	Crosses Study Area	Intermittent
Cibolo Creek	0.7	Crosses Study Area	Intermittent

Source: National Hydrography Dataset, 2010.

Two of the streams in the Study Area are classified as perennial and five are classified as intermittent. There are no ephemeral streams in the Study Area. The streams in the Study Area are described briefly below and are shown in **Appendix B**:

- Approximately 0.6 miles of the San Antonio River, which is a perennial stream, crosses the southernmost part of the Study Area, and is crossed by IH 35 between Broadway Avenue and St. Mary’s Street.
- Approximately 0.6 miles of Salado Creek, which is a perennial stream crosses the southern part of the Study Area, and is crossed by IH 35 south of the Corporation Drive/IH 35 intersection.
- Approximately 0.2 miles of Pershing Creek, which is an intermittent stream, is located within the southern part of the Study Area, but does not cross the Study Area and is not crossed by IH 35.
- Approximately 0.8 miles of Walzem Creek, which is an intermittent stream, crosses the central part of the Study Area, and is crossed by IH 35 south the Walzem Road/IH 35 intersection.
- Approximately 0.7 miles of Beitel Creek, which is an intermittent stream, is located within the central part of the Study Area, but does not cross the Study Area and is not crossed by IH 35.
- Approximately 0.5 miles of Salitrillo Creek, which is an intermittent stream, crosses the northern part of the Study Area, and is crossed by IH 35 south the Loop 1604/IH 35 intersection.
- Approximately 0.7 miles of Cibolo Creek, which is an intermittent stream, crosses the northern part of the Study Area, and is crossed by IH 35 at the Bexar and Guadalupe County line.

**7.2.2 Existing Water Quality in Surface Streams**

According to the Draft 2010 Texas Integrated Report for Clean Water Act Section 303(d) list and the official TCEQ Segments at the segment level for the state of Texas as listed in Title 30, Chapter 307 of the TAC (also known as the Surface Water Quality Standards), there are presently three stream segments in the Study Area that are designated as being impaired.

<b>Table 7.2: Impaired Streams in the Study Area</b>	
<b>Impaired Stream</b>	<b>Length (mi)</b>
Upper San Antonio River	0.6
Salado Creek	0.6
Mid Cibolo Creek	0.7

Source: TCEQ 2010.

As shown in **Table 7.2** and **Appendix B**, the stream segments in the Study Area that are classified as impaired include the Upper San Antonio River, Salado Creek and Mid Cibolo Creek. The Upper San Antonio River crosses the southernmost part of the Study Area and is crossed by IH 35 between Broadway Avenue and St. Mary’s Street. Salado Creek crosses the southern part of the Study Area and is crossed by IH 35 south of the Corporation Drive/IH 35 intersection. Mid Cibolo Creek crosses the northern part of the Study Area and is crossed by IH 35 at the Bexar and Guadalupe County line.

### 7.2.3 Existing Floodplains

Approximately 602 acres, or 7.7 percent of the Study Area, are located within a floodplain. The types of floodplains in the Study Area is shown in **Table 7.3** and the locations are shown in **Appendix B**.

<b>Table 7.3: Floodplains in the Study Area</b>	
<b>Flood Plain</b>	<b>Area (Ac)</b>
Zone A (100-Year Floodplain)	35
Zone AE (100-Year Floodplain)	370
100-Year Floodplain (Future)	7
500-Year Floodplain	190
<b>Total:</b>	<b>602</b>

Source: FEMA, 2011.

Flood hazard areas were identified using the National Flood Hazard Layer (NFHL 2011) that were acquired from FEMA. The floodplain areas located within the Study Area include 35 acres within Zone A and 370 acres in Zone AE of the existing 100-year floodplain, seven acres within the future 100-year floodplain (where flooding is likely to occur in the future based on expected development), and 190 acres within the 500-year existing floodplain. The locations of these floodplains within the Study Area are briefly described below:

- Floodplain areas within Zone A of the existing 100-year floodplain are located at four locations in the northern part of the Study Area. These locations are:
  - Approximately 0.75 miles southwest of Cibolo Creek (Bexar and Guadalupe County line) to the southeast of IH 35;
  - Approximately 1 mile northeast of the Cibolo Creek to the northwest of IH 35;
  - Approximately 2.75 miles northeast of Cibolo Creek to the northwest of IH 35; and
  - Approximately 4.5 miles northeast of Cibolo Creek northwest of IH 35.
- Floodplain areas within Zone AE of the existing 100-year floodplain are located at 12 locations within the Study Area. These locations are:
  - At the San Antonio River located at the southern end of the Study Area;
  - Approximately 2 miles east of the San Antonio River in the southern part of the Study Area;
  - At Salado Creek in the southern part of the Study Area;
  - Approximately 2 miles northeast of Salado Creek to the west of IH 35;
  - At Walzem Creek in the central part of the Study Area;

- Approximately 0.25 miles north of Walzem Creek in the western part of the Study Area;
  - Approximately 1 mile north of Walzem Creek;
  - At Beitel Creek in the central part of the Study Area to the west of IH 35;
  - At Salitrillo Creek in the northern part of the Study Area;
  - Approximately 0.5 miles southwest of Cibolo Creek in the northern part of the Study Area, at Cibolo Creek;
  - Approximately 0.5 miles northeast of Cibolo Creek, and
  - Approximately 2.5 and 3.25 miles northeast of Cibolo Creek to the southeast of IH 35.
- Floodplain areas within the future 100-year floodplain are located at two locations within the Study Area. These locations are:
    - Approximately 0.25 miles north of Walzem Creek in the central part of the Study Area; and
    - One mile north of Walzem Creek in the central part of the Study Area.
  - Floodplain areas within the 500-year floodplain are located at four locations within the Study Area. These locations are:
    - At Walzem Creek in the central part of the Study Area to the east of IH 35;
    - At Cibolo Creek and southwest of Cibolo Creek in the northern part of the Study Area;
    - Approximately 0.75 miles northeast of Cibolo Creek; and
    - Approximately 3.5 miles northeast of Cibolo Creek to the southeast of IH 35.

#### 7.2.4 Existing Wetlands

The wetland data in **Table 7.4** shows the approximate size and type of wetlands in the Study Area, as defined by Cowardin et al. (1979), based on NWI data. As shown in **Table 7.4**, wetlands cover approximately 20.3 acres, or 0.3 percent, of the Study Area. **Appendix B** shows the approximate locations of wetlands in the Study Area.

<b>Table 7.4: Wetlands in the Study Area</b>		
<b>NWI</b>	<b>Description</b>	<b>Area (Ac)</b>
PEM1A	Palustrine Emergent Persistent Temporary Flooded	0.3
PEM1Ch	Palustrine Emergent Persistent Seasonally Flooded Diked/Impounded	3.3
PSS1A	Palustrine Scrub-Shrub Broad-Leaved Deciduous Temporary Flooded	9.5
PSS1Ah	Palustrine Scrub-Shrub Broad-Leaved Deciduous Temporary Flooded	0.4
PUBFx	Palustrine Unconsolidated Bottom Semipermanently Flooded Excavated	1.2
PUBHh	Palustrine Unconsolidated Bottom Permanently Flooded Diked/Impounded	0.9
PUSAh	Palustrine Unconsolidated Shore Temporary Flooded Dike/Impounded	3.0
PUSCh	Palustrine Unconsolidated Shore Seasonally Flooded	1.2
PUSCcx	Palustrine Unconsolidated Shore Seasonally Flooded Excavated	0.5
<b>Total:</b>		<b>20.3</b>

Source: USFWS, 2010.

Below is a brief description of wetlands within the Study Area:

- Approximately 0.3 acres of wetlands that are classified as *Palustrine Emergent Persistent Temporary Flooded (PEM1A)* wetlands are located in the southern part of the Study Area approximately 0.1 miles northeast of Salado Creek to the southeast of IH 35.
- Approximately 3.3 acres of wetlands that are classified as *Palustrine Emergent Persistent Seasonally Flooded Diked/Impounded (PEM1Ch)* wetlands are located at three locations in the Study Area. These locations are approximately 1.75 miles southwest of Salado Creek to the south of IH 35; approximately 0.75 mile southwest of Salado Creek to the southeast of IH 35; and 1.25 miles northeast of Salado Creek.
- Approximately 9.5 acres of wetlands that are classified as *Palustrine Scrub-Shrub Broad-Leaved Deciduous Temporary Flooded (PSS1A)* wetlands are located in the central part of the Study Area at Beitel Creek to the west of IH 35.
- Approximately 0.4 acres of wetlands that are classified as *Palustrine Scrub-Shrub Broad-Leaved Deciduous Temporary Flooded Diked/Impounded (PSS1Ah)* wetlands are located in the central part of the Study Area approximately 1.0 mile southwest of Salitrillo Creek.
- Approximately 1.2 acres of wetlands that are classified as *Palustrine Unconsolidated Bottom Semipermanently Flooded Excavated (PUBFx)* wetlands are located in the southern part of the Study Area approximately 0.5 miles northeast of Salado Creek to the southeast of IH 35.
- Approximately 0.9 acres of wetlands that are classified as *Palustrine Unconsolidated Bottom Permanently Flooded Diked/Impounded (PUBHh)* wetlands are located in the southern part of the Study Area approximately 0.1 miles northeast of Salado Creek to the northwest of IH 35.
- Approximately 3.0 acres of wetlands that are classified as *Palustrine Unconsolidated Shore Temporary Flooded Dike/Impounded (PUSAh)* wetlands are located at seven locations in the Study Area. These locations are approximately 1.5 miles northeast of Beitel Creek in the central part of the Study Area to the northwest of IH 35; approximately 0.25 miles northeast of Salitrillo Creek in the central part of the Study Area to the northwest of IH 35; approximately 1.5 miles southwest of FM 1103 at the northern end of the Study Area to the northwest of IH 35; approximately 0.25 miles southwest of FM 1103 at the northern end of the Study Area to the northwest of IH 35; approximately 0.2 miles southwest of FM 1103 at the northern end of the Study Area to the southeast of IH 35; approximately 0.5 miles southwest of FM 1103 at the northern end of the Study Area to the southeast of IH 35; and approximately 0.2 miles northeast of FM 1103 at the northern end of the Study Area to the southeast of IH 35.
- Approximately 1.2 acres of wetlands that are classified as *Palustrine Unconsolidated Shore Seasonally Flooded (PUSCh)* wetlands are located at three locations in the Study Area. These locations are to the west of Beitel Creek in the central part of the Study Area to the northwest of IH 35; approximately one mile southwest of Salitrillo Creek to the northwest of IH 35; and approximately 1.25 miles southwest of FM 1103 to the southeast of IH 35.

- Approximately 0.5 acres wetlands that are classified as *Palustrine Unconsolidated Shore Seasonally Flooded Excavated (PUSC<sub>x</sub>)* wetlands are located in the northern part of the Study Area approximately 0.4 miles northeast of Cibolo Creek to the northwest of IH 35.

## **8. Groundwater**

This section summarizes the regulatory framework for groundwater and groundwater resources that are located within the Study Area. The artesian zones of the Edwards and Trinity Aquifers are located within the Study Area. Because of the intimate interconnection between the Edwards and Trinity Aquifers, groundwater attributes for both systems are discussed in this section

### **8.1 Legal and Regulatory Context**

The following is a description of regulatory authority over the Edwards and Trinity Aquifers.

#### **8.1.1 Texas Commission on Environmental Quality (TCEQ)**

The TCEQ regulates development within the Edwards Aquifer Contributing Zone (EACZ) and the Edwards Aquifer Recharge Zone (EARZ). The regulations are specified in 30 TAC 213 and are commonly referred to as the “Edwards Rules” or the “Edwards Aquifer Rules”. The intent of the Edwards Rules is to protect Edwards Aquifer groundwater quality. These rules also result in some protection to Trinity groundwater. To the extent that these rules regulate stormwater runoff quality within the contributing zone of an aquifer, the TCEQ indirectly protects water quality that recharges the Trinity Aquifer within the EACZ. This water within the Trinity Aquifer may then in turn recharge the Edwards Aquifer in certain areas.

The TCEQ regulations for the EARZ and EACZ require the use of temporary and permanent best management practices (BMPs) for the treatment of stormwater runoff from areas of impervious cover. The regulations require the removal of 80 percent of total suspended solids (TSS) in stormwater runoff from the increase in impervious cover. TCEQ rules also require the use of secondary containment Above Ground Storage Tanks (AST) and Underground Storage Tanks (UST) within the outcrop areas of the Trinity and EARZ. The TCEQ implements rules by requiring the submittal and approval of Contributing Zone Plans (CZPs) and Water Pollution Abatement Plans (WPAPs) before beginning a regulated activity.

The Study Area is not located within the contributing or recharge zones of the Edwards or Trinity Aquifers and thus the Edwards Aquifer Rules are not applicable.

#### **8.1.2 Edwards Aquifer Authority (EAA)**

The EAA reviews CZPs and WPAPs submitted to TCEQ and provides comments to the TCEQ, for consideration in TCEQ's review of the plans. The EAA has imposed a ban on USTs within the EARZ and size limitations on ASTs. The EAA also regulates construction standards for water wells and requires permits for construction, modification, or plugging of Edwards Aquifer wells. The EAA was created by the Edwards Aquifer Authority Act in 1993, but due to legal challenges was not in operation until 1996. The major functions of the EAA include the regulation of pumping from the Edwards Aquifer and protection of groundwater quality. Since the Study Area is located in the artesian zone, it would not require CZP or WPAP.

The EAA has prepared a Draft Edwards Aquifer Habitat Conservation Plan (EAHCP) in support of an application for an Incidental Take Permit (ITP) for eight animal and one plant species listed as threatened or endangered by the USFWS. The ITP would cover nine federally listed species that depend upon water in or directly discharged from the Edwards Aquifer. These species are listed below:

- Fountain darter (*Etheostoma fonticola*)
- San Marcos gambusia (*Gambusia georgei*)
- San Marcos salamander (*Eurycea nana*)
- Texas blind salamander (*Eurycea rathbuni*)
- Comal Springs riffle beetle (*Heterelmis comalensis*)
- Comal Springs dryopid beetle (*Stygoparnus comalensis*)
- Peck's cave amphipod (*Stygobromus pecki*)
- Texas wild-rice (*Zizania texana*)
- Whooping crane (*Grus americana*)

All of the above species are listed as endangered by the USFWS except the threatened San Marcos salamander. Cagle's map turtle (*Graptemys caglei*), a candidate for listing, is also included in the EAHCP and would be covered under the ITP if listed in the future. Although the Study Area is located within the EAHCP Area, the project is not within the range of the species noted and appropriate habitat for these species does not exist in the project area.

### **8.1.3 United States Fish and Wildlife Service (USFWS)**

Although USFWS has no authority over the aquifers, it is included herein because as mentioned above the USFWS has listed nine species as threatened or endangered that rely on water within or discharged from the Edwards Aquifer. The EAHCP being developed by the EAA addresses protection of these species.

### **8.1.4 U.S. Environmental Protection Agency (EPA)**

The EPA designated the Edwards Aquifer as a Sole Source Aquifer in 1975. A Sole Source Aquifer is an aquifer that supplies 50 percent or more of the drinking water to an area. The EPA has the authority to review federally funded projects within the recharge zone of the Edwards Aquifer. Funding for such projects is dependent on the satisfaction of the EPA that sufficient water quality safeguards are planned. As mentioned previously, the Study Area is not located within the recharge or contributing zones of the Edwards Aquifer and thus these regulations would not apply to the project.

## **8.2 Existing Conditions**

As shown in **Table 8.1** and **Appendix B**, the majority of the Study Area is covered by Artesian Zones of the Edwards and Trinity Aquifers; these are zones where water is confined in an aquifer under pressure so that the water will rise in the well casing or drilled hole above the bottom of the confining layer overlying the aquifer. As noted previously, the Study Area does not fall in the contributing or recharge zones of the Edwards or Trinity Aquifers.

<b>Table 8.1: Aquifers in the Study Area</b>		
<b>Aquifer Zone</b>	<b>Area (Ac)</b>	<b>Percent of Study Area</b>
Edwards Aquifer Artesian Zone	7,226	93
Trinity Aquifer Artesian Zone	6,921	89

Source: TWDB, 2011.

Approximately 7,226 acres, or 93 percent of the Study Area, is located within the Edwards Aquifer Artesian Zone, and approximately 6,921 acres, or 89 percent of the Study Area, is located within the Trinity Aquifer Artesian Zone. Therefore, the Study Area is almost completely within both the Edwards Aquifer Artesian Zone and the Trinity Aquifer Artesian Zone. The only portions of the Study Area that are not included in the Edwards Aquifer Artesian Zone are the northernmost part of the Study Area and the southernmost part of the Study Area at IH 410, and the only portion that is not included in the Trinity Aquifer Artesian Zone is the southern part of the Study Area at IH 410. As mentioned previously, the TCEQ only regulates development in the contributing and recharge zones, and the EPA only regulates development in the recharge zone of the Edwards Aquifer. Therefore, these regulations are not relevant to projects developed in the PEL Study Area, since it is located only in the artesian zones of the aquifers.

## **9. Air Quality / Area Emissions**

This section summarizes the applicable federal, state and local regulations for air quality, as well as the existing status of compliance with the air quality standards for the Study Region (Bexar, Comal and Guadalupe counties).

### **9.1 Legal and Regulatory Context**

Air quality is regulated nationally by the EPA. The EPA delegates authority to the TCEQ Office of Air Quality for monitoring and enforcing air quality regulations in Texas. The TCEQ can delegate some authority to local municipalities.

In compliance with the Federal Clean Air Act of 1970 and the Clean Air Act Amendments of 1977 and 1990 (CAAA), the EPA promulgated and adopted the National Ambient Air Quality Standards (NAAQS) to protect public health, safety, and welfare from known or anticipated effects of six pollutants. The six NAAQS pollutants, as reported by the EPA (2009), include ozone, lead, carbon monoxide, sulfur dioxide, nitrogen dioxide and particulate matter. These are discussed below.

- **Ozone** - Ozone is not emitted directly into the air but is formed through chemical reactions between precursor emissions of volatile organic compounds and nitrogen oxides in the presence of sunlight. Both volatile organic compounds and nitrogen oxides are emitted by transportation and industrial sources. Volatile organic compounds are emitted from sources as diverse as

automobiles, chemical manufacturing, dry cleaners, paint shops and other sources using solvents.

- **Lead** - The main sources of lead emissions are lead gasoline additives, non-ferrous smelters and battery plants. Emissions from on-road vehicles decreased 99 percent between 1970 and 1995 due primarily to the use of unleaded gasoline. Additional reduction of lead emissions are anticipated as a result of the EPA’s Multimedia Lead Strategy issued in February 1991.
- **Carbon Monoxide** - The largest source of carbon monoxide emissions comes from motor vehicle exhaust. This explains why high concentrations of carbon monoxide generally occur in areas of heavy traffic congestion. In some cities, as much as 95 percent of all carbon monoxide emissions emanate from automobile exhaust.
- **Sulfur Dioxide** - Sources of sulfur dioxide result largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.
- **Nitrogen Dioxide** - The two major emissions sources of nitrogen dioxide are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.
- **Particulate Matter (PM-10 and PM-2.5)** - Particulate matter (i.e., dust, dirt, soot, smoke and liquid droplets) are directly emitted into the air by sources such as factories, power plants, cars, construction activities, fires and natural windblown dust.

**Table 9.1** lists the NAAQS for these six pollutants. The EPA and the TCEQ regulate air quality in the state of Texas. As required by the CAAA, the EPA reevaluates the NAAQS every five years. When the pollutant level within an area exceeds the NAAQS, the EPA designates the area as “nonattainment” for the pollutant. In addition, the EPA also develops regulations to reduce air pollutants from specific sources, including both industry and motor vehicles. Local municipalities, as well as the TCEQ, may adopt more stringent air quality standards than the EPA. The TCEQ, and the counties within the Study Area, observe the EPA’s NAAQS.

<b>Table 9.1: National Ambient Air Quality Standards</b>				
<b>Pollutant</b>	<b>Primary Standards *</b>		<b>Secondary Standards**</b>	
	<b>Level</b>	<b>Averaging Time</b>	<b>Level</b>	<b>Averaging Time</b>
Carbon Monoxide	9 ppm (10 mg/m <sup>3</sup> )	8-hr: Not to be exceeded more than once per year.	None	
	35 ppm (40 mg/m <sup>3</sup> )	1-hr: Not to be exceeded more than once per year.		
Lead	0.15 µg/m <sup>3</sup> (Final rule signed on October 15,	Rolling 3-month average.	Same as Primary	
	1.5 µg/m <sup>3</sup>	Quarterly average.	Same as Primary	

Table 9.1: National Ambient Air Quality Standards				
Pollutant	Primary Standards *		Secondary Standards**	
	Level	Averaging Time	Level	Averaging Time
Nitrogen Dioxide	0.053 ppm (100 µg/m <sup>3</sup> )	Annual (arithmetic mean)	Same as Primary	
	0.100 ppm	1-hr: To attain this standard, the 3-yr average of the 98 <sup>th</sup> percentile of the daily maximum 1-hr average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).	None	
Particulate Matter (PM10)	150 µg/m <sup>3</sup>	24-hr: Not to be exceeded more than once per year on average over 3 years.	Same as Primary	
Particulate Matter (PM2.5)	15.0 µg/m <sup>3</sup>	Annual (arithmetic mean): To attain this standard, the 3-yr average of the weighted annual mean PM <sup>2.5</sup> concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m <sup>3</sup> .	Same as Primary	
	35 µg/m <sup>3</sup>	24-hr: To attain this standard, the 3-yr average of the 98th percentile of 24-hr concentrations at each population-oriented monitor within an area must not exceed 35 µg/m <sup>3</sup> (effective December 17, 2006).	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hr: To attain this standard, the 3-yr average of the fourth-highest daily maximum 8-hr average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008)	Same as Primary	
	0.08 ppm (1997 standard)	8-hr: (a) To attain this standard, the 3-yr average of the fourth-highest daily maximum 8-hr average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm. (b) The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard. (c) EPA is in the process of reconsidering these	Same as Primary	
	0.12 ppm	1-hr: (a) EPA revoked the 1-hr ozone standard in all areas, although some areas have continuing obligations under that standard ("anti-backsliding"). (b) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is < 1	Same as Primary	

Table 9.1: National Ambient Air Quality Standards				
Pollutant	Primary Standards *		Secondary Standards**	
	Level	Averaging Time	Level	Averaging Time
Sulfur Dioxide	0.03 ppm	Annual (arithmetic mean)	0.5 ppm (1300 µg/m <sup>3</sup> )	3-hr: Not to be exceeded more than once per
	0.14 ppm	24-hr: Not to be exceeded more than once per year.		
	0.075 ppm	To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed .075 ppm (Final rule signed June 2, 2010).	None	

Source: USEPA 2011b.

\*Primary NAAQS: the levels of air quality that the EPA judges necessary, with an adequate margin of safety, to protect the public health.

\*\*Secondary NAAQS: the levels of air quality that the EPA judges necessary to protect the public welfare from any known or anticipated adverse effects.

ppm: parts per million, µg/m<sup>3</sup>: Micrograms per cubic meter, mg/m<sup>3</sup>: Milligrams per cubic meter

The primary pollutants from motor vehicles are ozone precursors that include volatile organic compounds (VOC) and nitrogen oxides (NOx), particulate matter (PM10) and carbon monoxide (CO). VOC and NOx can combine under the right conditions in a series of photochemical reactions to form ozone (O3). VOC emissions result from the operation of internal combustion engines and are generally more pronounced in the immediate vicinity of the roadway.

## 9.2 Existing Conditions

The Study Area includes parts of Bexar, Comal and Guadalupe counties. The 2011 ozone season, which ended on October 31, 2011, found the Alamo region (which includes Bexar, Comal and Guadalupe counties) in attainment of the 2008 EPA standard for allowable ground-level ozone, the major air pollutant in this region. Attainment is based on the three-year average of the fourth-highest eight-hour average ozone concentrations measured at area pollution monitors. The Alamo region remains in compliance with the NAAQS standards as long as the three-year average does not exceed the current three-year average of 75 parts per billion (ppb, **Table 9.2**). The fourth-highest eight-hour daily reading at a regulatory monitor was 79 ppb in 2011 at the San Antonio Northwest site; because the fourth-highest reading at this site was 75 ppb in 2009 and 72 ppb in 2010, the current three-year average is 75 ppb.

**Table 9.2: Fourth-Highest Eight-Hour Average Ozone Concentrations in San Antonio**

Year	Ozone Concentration, Part Per Billion (ppb)
2009	75.0
2010	72.0
2011	79.0
<b>Three-Year Average</b>	<b>75.0</b>

Source: Alamo Area Council of Governments (AACOG) 2011.

San Antonio still maintains its status as the largest U.S. city in full compliance with all national air quality standards; however, unless there is a lower level in 2012 when compared to 2011, the San Antonio area will be in violation of the 2008 ozone standard of 75ppb for the years 2010 through 2012. During the 2011 ozone season, which stretched from April through October, the San Antonio area exceeded the level at which ozone pollution is considered potentially harmful to those in sensitive groups (including children, those with lung ailments, and those who work strenuously outside) a total of seven times.

## 10. Traffic Noise

FHWA's Regulation 23 CFR 772 provides procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways approved pursuant to Title 23 U.S.C.

TxDOT has developed *Guidelines for Analysis and Abatement of Roadway Traffic Noise* (April 2011) for use on highway projects. The guidance was developed in accordance with the recently updated 23 CFR 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise* (June 2010) and the FHWA *Highway Traffic Noise Analysis and Abatement Guidance* (January 2011). This guidance was developed by TxDOT and reviewed and concurred with by the FHWA, and replaces the 1997 TxDOT noise guidance.

Sound from highway traffic is generated primarily from a vehicle's tires, engine and exhaust. It is commonly measured in decibels and is expressed as "dB." As an urbanized area, traffic noise comprises much of the ambient background noise environment in the study area.

Sound occurs over a wide range of frequencies. However, not all frequencies are detectable by the human ear; therefore, an adjustment is made to the high and low frequencies to approximate the way an average person hears traffic sounds. This adjustment is called A-weighting and is expressed as "dBA."

Also, because traffic sound levels are never constant due to the changing number, type and speed of vehicles, a single value is used to represent the average or equivalent sound level and is expressed as "Leq."<sup>5</sup>

The traffic noise analysis typically includes the following elements:

- Identification of land use activity areas that might be impacted by traffic noise.
- Determination of existing noise levels.
- Prediction of future noise levels.
- Identification of possible noise impacts.
- Consideration and evaluation of measures to reduce noise impacts.

As listed in **Table 10.1**, FHWA and TxDOT have established the following Noise Abatement Criteria (NAC) for various land use activity areas that are used as one of two means to determine when a traffic noise impact will occur. Land uses in the Study Area are described in **Section 2** and shown in **Appendix A**.

<b>Table 10.1: FHWA and TxDOT Noise Abatement Criteria</b>				
<b>Activity Category</b>	<b>Activity Criteria</b>		<b>Evaluation Location</b>	<b>Activity Description</b>
	<b>FHWA (dB(A)Leq)</b>	<b>TxDOT (dB(A)Leq)</b>		
A	57	56	Exterior	Lands on which serenity and quiet are of extraordinary 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	66	Exterior	Residential
C	67	66	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings.

<sup>5</sup> Leq is the equivalent steady-state sound level that, in a given time period, contains the same acoustic energy as a time-varying sound level during the same period. Leq is used for all traffic noise analyses for TxDOT roadway projects.

Table 10.1: FHWA and TxDOT Noise Abatement Criteria				
Activity Category	Activity Criteria		Evaluation Location	Activity Description
	FHWA (dB(A)Leq)	TxDOT (dB(A)Leq)		
D	52	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, and television studios.
E	72	71	Exterior	Hotels, motels, offices, restraints/bars, and other developed lands, properties or activities not included in A-D or F.
F	--	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	--	--	--	Undeveloped lands that are not permitted

Source: TxDOT's Guidelines for Analysis and Abatement of Roadway Traffic Noise 2011.

NOTE: Primary consideration is given to exterior areas (Category A, B, C, or E) where frequent human activity occurs. However, interior areas (Category D) 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.

The methods outlined in the FHWA and TxDOT noise regulations and guidance would be applied to model the existing and projected future conditions for noise during a project-level NEPA study that would follow the IH 35 PEL Study.

## 11. Hazardous Materials

A review of listed regulated hazardous materials sites located within the Study Area was conducted to identify those sites that could potentially affect future improvements in the Study Area. Hazardous waste is defined by the EPA as waste that is dangerous or potentially harmful to our health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges. They can be discarded commercial product, like cleaning fluids or pesticides, or the by-products of manufacturing processes.

### 11.1 Legal and Regulatory Context

Hazardous materials are regulated by the *Resource Conservation and Recovery Act (RCRA)* (42 USC §6901 et seq., 1976) and the *Comprehensive Environmental Response, Compensation, Liability Act (CERCLA)* (42 USC §9601 et seq., 1980) and are characterized as reactive, toxic, infectious, flammable,

explosive, corrosive, or radioactive. Potential hazardous waste sites include landfills, dumps, pits, lagoons, salvage yards, and industrial sites, as well as above ground and below ground storage tanks.

In November 2006, the EPA issued the final *All Appropriate Inquiries (AAI) Rule – Environmental Site Assessments, Phase I Investigations* that established the specific regulatory requirements and standards for conducting AAI to qualify for one of the three landowner liability protections under the CERCLA Brownfields Amendments. The purpose of a Phase I Environmental Site Assessment is to identify Recognized Environmental Conditions (REC) associated with the subject property. A REC is the presence or likely presence of any hazardous substances or petroleum products on the subject property under conditions that indicate an existing release, a past release or a material threat of a release of any hazardous substances or petroleum products into structures on the subject property or into the ground, groundwater, or surface water of the subject property. The term does not include:

*“...de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies” [American Society for Testing and Materials (ASTM) E 1527-05 2005].*

Sites meeting the criteria of (1) having the potential to or having had releases of hazardous materials and/or petroleum products and (2) existing within ASTM Standard E 1527-05, Environmental Site Assessments: Phase I Environmental Site Assessment Process search distances were considered as sites that could potentially affect alternative selection in the IH-35 corridor Study Area limits. The Study Area is defined as the current IH 35 and IH 410 right-of-way within the limits of the study and one-quarter mile on either side of the existing facility centerlines (see **Appendix D**).

## **11.2 Methodology**

A review of listed regulated hazardous materials sites located in the Study Area was conducted to identify the known presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into the ground, groundwater, or surface water in the Study Area. A records search for applicable information was conducted, the information plotted and reviewed, and a windshield survey performed to visually assess the Study Area for potential RECs. This regulated hazardous materials assessment is not a Phase I Environmental Site Assessment to satisfy the ASTM E1507-05 requirements, nor was a technical memorandum deemed necessary for this planning-level study as specific alternatives have yet to be developed.

A records search for “reasonably ascertainable” information from applicable federal, state, and local databases was conducted by Geo-Search, Inc. (GeoSearch 2011). “Reasonably ascertainable” information as defined in ASTM E1507-05 is information that is publicly available, obtainable from its source within reasonable time and cost constraints, and practically reviewable (i.e., in a form that yields relevant information to the property being considered without the need for extraordinary analysis or irrelevant data). The scope of the search was completed using ASTM standards and was further refined

to within one-quarter mile on either side of the approximate centerlines and a 1-mile radius from the extent of any proposed interchange. The records reviewed included:

### **Federal Records**

- Aerometric Information Retrieval System / Air Facility Subsystem, AIRSAFS
- Biennial Reporting System, BRS
- Clandestine Drug Laboratory Locations, CDL
- EPA Docket Data, DOCKETS
- Federal Engineering Institutional Control Sites, EC
- Emergency Response Notification System, ERNSTX
- Facility Registry System, FRSTX
- Hazardous Materials Incident Reporting System, HMIRSR06
- Integrated Compliance Information System (Formerly Dockets), ICIS
- Integrated Compliance Information System National Pollutant Discharge Elimination System, ICISNPDES
- Material Licensing Tracking System, MLTS
- National Pollutant Discharge Elimination System, PDESRO6
- PCB Activity Database System, PADS
- Permit Compliance System, PCSRO6
- CERCLIS Liens, SFLIENS
- Section Seven Tracking System, SSTS
- Toxics Release Inventory, TRI
- Toxic Substance Control Act Inventory, TSCA
- No Longer Regulated RCRA Generator Facilities, NLRRCRAG
- Resource Conservation & Recovery Act - Generator Facilities, RCRAGR06
- Brownfields Management System, BF
- Comprehensive Environmental Response, Compensation & Liability Information System, CERCLIS
- Land Use Control Information System, LUCIS
- No Further Remedial Action Planned Sites, NFRAP
- No Longer Regulated RCRA Non-CORRACTS TSD Facilities, NLRRCRAT
- Open Dump Inventory, ODI
- Resource Conservation & Recovery Act - Treatment, Storage & Disposal Facilities, RCRAT
- Delisted National Priorities List, DNPL
- Department Of Defense Sites, DOD
- Formerly Used Defense Sites, FUDS
- No Longer Regulated RCRA Corrective Action Facilities, NLRRCRAC
- National Priorities List, NPL
- Proposed National Priorities List, PNPL
- Resource Conservation & Recovery Act - Corrective Action Facilities, RCRAC
- Record Of Decision System, RODS

### **State and Local Records**

- Groundwater Contamination Cases, GWCC
- Historic Groundwater Contamination Cases, HISTGWCC
- TCEQ Liens, LIENS
- Municipal Setting Designations, MSD
- Notice Of Violations, NOV
- State Institutional/Engineering Control Sites, SIEC01
- Spills Listing, SPILLS
- Dry Cleaner Registration Database, DCR
- Industrial And Hazardous Waste Sites, IHW
- Permitted Industrial Hazardous Waste Sites, PIHW
- Petroleum Storage Tanks, PST
- Affected Property Assessment Reports, APAR
- Brownfields Site Assessments, BSA
- Closed & Abandoned Landfill Inventory, CALF
- Innocent Owner / Operator Database, IOP
- Leaking Petroleum Storage Tanks, LPST
- Municipal Solid Waste Landfill Sites, MSWLF
- Railroad Commission VCP And Brownfield Sites, RRCVCP
- Radioactive Waste Sites, RWS
- Tier II Chemical Reporting Program Facilities, TIERII
- Voluntary Cleanup Program Sites, VCP
- Recycling Facilities, WMRF
- State Superfund Sites, SF

### **Tribal Records**

- Underground Storage Tanks On Tribal Lands, USTR06
- Leaking Underground Storage Tanks On Tribal Lands, LUSTRO6
- Open Dump Inventory On Tribal Lands, ODINDIAN
- Indian Reservations, INDIANRES

Other historical information normally reviewed, such as Sanborn Maps, topographic and aerial photographs, and interviews conducted under ASTM Standard E 1507-05 for Phase I Environmental Site Assessments for innocent landowner protection under CERCLA in property transfers, were not a part of this process. Such reviews and interviews under ASTM Standard E 1507-05 and adherence to 40 CFR 312 Innocent Landowners, Standards for Conducting All Appropriate Inquires are more appropriate in a future project-level study. During any future project development phase, including NEPA, field verification and agency coordination with regard to hazardous materials sites will be necessary.

### **11.3 Existing Conditions**

Sites were identified from available (“reasonably ascertainable”) federal, state, and local databases. A total of 732 sites within the search radius were identified as meeting the review criteria. **Tables 11.1** and **11.2** indicate the number of sites per database. A detailed analysis of each site is necessary to assess how that site might affect alternatives proposed within the Study Area. For future NEPA-level studies, sites will be considered on the Target Property if their location falls within the proposed right-of-way. A site will be considered adjacent if it was located within the search area (within one mile of the proposed centerline) but outside of the proposed right-of-way.

**Table 11.1: Federal Regulated Material Sites Identified From Records Search**

Database	Acronym	Search Radius (miles)	Target Property	1/8 Mile (> TP)	1/4 Mile (> 1/8)	Total
AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIR FACILITY SUBSYSTEM	AIRSAFS	0.0200	1	0	0	1
BIENNIAL REPORTING SYSTEM	BRS	0.0200	2	0	0	2
CLANDESTINE DRUG LABORATORY LOCATIONS	CDL	0.0200		0	0	0
EPA DOCKET DATA	DOCKETS	0.0200		0	0	0
FEDERAL ENGINEERING INSTITUTIONAL CONTROL SITES	EC	0.0200		0	0	0
EMERGENCY RESPONSE NOTIFICATION SYSTEM	ERNSTX	0.0200	2	0	0	2
FACILITY REGISTRY SYSTEM	FRSTX	0.0200	1	0	0	1
HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM	HMIRSR06	0.0200		0	0	0
INTEGRATED COMPLIANCE INFORMATION SYSTEM (FORMERLY DOCKETS)	ICIS	0.0200		0	0	0
INTEGRATED COMPLIANCE INFORMATION SYSTEM NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	ICISNPDES	0.0200		0	0	0
MATERIAL LICENSING TRACKING SYSTEM	MLTS	0.0200		0	0	0
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	NPDESR06	0.0200		0	0	0
PCB ACTIVITY DATABASE SYSTEM	PADS	0.0200		0	0	0
PERMIT COMPLIANCE SYSTEM	PCSR06	0.0200		0	0	0
CERCLIS LIENS	SFLIENS	0.0200		0	0	0
SECTION SEVEN TRACKING SYSTEM	SSTS	0.0200		0	0	0
TOXICS RELEASE INVENTORY	TRI	0.0200		0	0	0

**Table 11.1: Federal Regulated Material Sites Identified From Records Search**

Database	Acronym	Search Radius (miles)	Target Property	1/8 Mile (> TP)	1/4 Mile (> 1/8)	Total
TOXIC SUBSTANCE CONTROL ACT INVENTORY	TSCA	0.0200		0	0	0
NO LONGER REGULATED RCRA GENERATOR FACILITIES	NLRRCRAG	0.1250		9	0	9
RESOURCE CONSERVATION & RECOVERY ACT - GENERATOR FACILITIES	RCRAGR06	0.1250	1	11	0	12
BROWNFIELDS MANAGEMENT SYSTEM	BF	0.5000		0	2	2
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION & LIABILITY INFORMATION SYSTEM	CERCLIS	0.5000	2	6	1	9
LAND USE CONTROL INFORMATION SYSTEM	LUCIS	0.5000		0	0	0
NO FURTHER REMEDIAL ACTION PLANNED SITES	NFRAP	0.5000	1	6	1	8
NO LONGER REGULATED RCRA NON-CORRACTS TSD FACILITIE	NLRRCRAT	0.5000		1	0	1
OPEN DUMP INVENTORY	ODI	0.5000		0	0	0
RESOURCE CONSERVATION & RECOVERY ACT - TREATMENT, STORAGE & DISPOSAL FACILITIES	RCRAT	0.5000		0	0	0
DELISTED NATIONAL PRIORITIES LIST	DNPL	1.000		0	0	0
DEPARTMENT OF DEFENSE SITES	DOD	1.000	1	0	0	1
FORMERLY USED DEFENSE SITES	FUDS	1.000		0	0	0
NO LONGER REGULATED RCRA CORRECTIVE ACTION FACILITIES	NLRRCRAC	1.000		0	0	0
NATIONAL PRIORITIES LIST	NPL	1.000		0	0	0
PROPOSED NATIONAL PRIORITIES LIST	PNPL	1.000		0	0	0

<b>Table 11.1: Federal Regulated Material Sites Identified From Records Search</b>						
<b>Database</b>	<b>Acronym</b>	<b>Search Radius (miles)</b>	<b>Target Property</b>	<b>1/8 Mile (&gt; TP)</b>	<b>1/4 Mile (&gt; 1/8)</b>	<b>Total</b>
RESOURCE CONSERVATION & RECOVERY ACT - CORRECTIVE ACTION FACILITIES	RCRAC	1.000		0	0	0
RECORD OF DECISION SYSTEM	RODS	1.000		0	0	0
<b>TOTAL FEDERAL SITES</b>			<b>11</b>	<b>33</b>	<b>4</b>	<b>48</b>

Source: GeoSearch Radius Report, December 9, 2011.

<b>Table 11.2: State, Local, and Tribal Regulated Material Sites Identified From Records Search</b>						
<b>Database</b>	<b>Acronym</b>	<b>Search Radius (miles)</b>	<b>Target Property</b>	<b>1/8 Mile (&gt; TP)</b>	<b>1/4 Mile (&gt; 1/8)</b>	<b>Total</b>
GROUNDWATER CONTAMINATION CASES	GWCC	0.0200	1	0	0	1
HISTORIC GROUNDWATER CONTAMINATION CASES	HISTGWCC	0.0200		0	0	0
TCEQ LIENS	LIENS	0.0200		0	0	0
MUNICIPAL SETTING DESIGNATIONS	MSD	0.0200		0	0	0
NOTICE OF VIOLATIONS	NOV	0.0200	1	0	0	1
STATE INSTITUTIONAL/ENGINEERING CONTROL SITES	SIEC01	0.0200		0	0	0
SPILLS LISTING	SPILLS	0.0200	10	0	0	10
DRY CLEANER REGISTRATION DATABASE	DCR	0.2500		3	2	5
INDUSTRIAL AND HAZARDOUS WASTE SITES	IHW	0.2500	3	98	75	176
PERMITTED INDUSTRIAL HAZARDOUS WASTE SITES	PIHW	0.2500		1	0	1
PETROLEUM STORAGE TANKS	PST	0.2500	9	136	66	211
AFFECTED PROPERTY ASSESSMENT REPORTS	APAR	0.5000	3	6	2	11

<b>Table 11.2: State, Local, and Tribal Regulated Material Sites Identified From Records Search</b>						
<b>Database</b>	<b>Acronym</b>	<b>Search Radius (miles)</b>	<b>Target Property</b>	<b>1/8 Mile (&gt; TP)</b>	<b>1/4 Mile (&gt; 1/8)</b>	<b>Total</b>
BROWNFIELDS SITE ASSESSMENTS	BSA	0.5000		0	2	2
CLOSED & ABANDONED LANDFILL INVENTORY	CALF	0.5000	4	4	5	13
INNOCENT OWNER / OPERATOR DATABASE	IOP	0.5000		0	0	0
LEAKING PETROLEUM STORAGE TANKS	LPST	0.5000	23	61	38	122
MUNICIPAL SOLID WASTE LANDFILL SITES	MSWLF	0.5000		2	3	5
RAILROAD COMMISSION VCP AND BROWNFIELD SITES	RRCVCP	0.5000		0	0	0
RADIOACTIVE WASTE SITES	RWS	0.5000		0	0	0
TIER II CHEMICAL REPORTING PROGRAM FACILITIES	TIERII	0.5000	2	61	55	118
VOLUNTARY CLEANUP PROGRAM SITES	VCP	0.5000		5	3	8
RECYCLING FACILITIES	WMRF	0.5000		0	0	0
STATE SUPERFUND SITES	SF	1.000		0	0	0
<b>TOTAL STATE AND LOCAL SITES</b>			<b>56</b>	<b>377</b>	<b>251</b>	<b>684</b>
<b>TOTAL FEDERAL, STATE AND LOCAL SITES</b>			<b>67</b>	<b>410</b>	<b>255</b>	<b>732</b>

Source: GeoSearch Radius Report, December 9, 2011.

At the planning level of analysis it is not feasible to conduct any field verification activities for hazardous materials data, and thus the data presented is limited to the database search results listed above. Future project-specific environmental analyses would examine hazardous materials in a greater level of detail required by NEPA.

## 12. Threatened and Endangered Species

The project area is characterized primarily by maintained freeway right-of-way and urban and suburban wildlife habitat supporting non-listed species. These include cotton rat, skunk, raccoon, cottontail rabbit, mourning and white-winged dove, mockingbird, grackle, pigeon, and coyote. It is relatively unlikely that threatened and/or endangered species occur in the study area due to lack of suitable

habitat, however, several listed species have the potential to occur. As presented in the Endangered Species Act of 1973 (ESA), as amended, the terms *endangered* and *threatened* are defined as follows:

*Endangered species* - any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man; and,

*Threatened species* - any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

This section summarizes the applicable federal and state regulations for the listing and monitoring procedures of threatened and endangered species within the Study Region. Additionally, lists of existing threatened and endangered species occurring in, potentially occurring in, and/or potentially impacted by activities occurring in the Study Region are provided.

## **12.1 Legal and Regulatory Context**

The following federal and state regulations apply to threatened and endangered species.

### **12.1.1 Federal – U.S. Fish and Wildlife Service (USFWS)**

Some plant and animal species are listed under federal and/or state laws and regulations intended to protect species threatened with extinction. Species listed by the federal government as threatened, endangered, or proposed for such listing are protected under the ESA, as amended. The ESA prohibits non-permitted take of species listed and proposed for listing under this law; “take” is defined in ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such activity. The USFWS has administrative authority for enforcement of the ESA relative to non-marine species; the National Marine Fisheries Service (NMFS) has enforcement authority relative to marine and anadromous species. The *Migratory Bird Treaty Act of 1918*, as amended, extends federal protection to migratory bird species; among other activities, non-regulated “take” of migratory birds is prohibited under this Act in a manner similar to the ESA prohibition of “take” of threatened and endangered species.

Specific habitats for threatened and endangered species may be designated as “critical habitat” under the ESA. Federal agencies are required to ensure that actions authorized, funded, or carried out by the agency are not likely to result in the destruction or adverse modification of critical habitats.

### **12.1.2 State – Texas Parks and Wildlife Department (TPWD)**

Plant and animal species may also be listed as endangered or threatened under laws and regulations established by the State of Texas. Threatened and endangered wildlife species are listed and protected by the State as described in Chapters 67 and 68 of the Texas Parks and Wildlife (TPW) Code, and in Title 31, Sections 65.171 – 65.176 of the TAC; threatened and endangered plant species are listed and protected as described in Chapter 88 of the TPW Code, and in Title 31, Sections 69.01 – 69.9 of the TAC. In general, the State of Texas prohibits non-permitted take, possession, transportation, or sale of state-designated threatened or endangered wildlife species, and prohibits the commerce in threatened

and endangered plants and the non-permitted collection of such plants from public land. Enforcement of Texas’ threatened and endangered species laws and regulations is the responsibility of the TPWD.

## 12.2 Existing Conditions

As shown in **Table 12.1**, there are 43 threatened and/or endangered species considered by USFWS and/or TPWD as occurring in, potentially occurring in, or potentially impacted by activities occurring in the Study Region (Bexar, Comal, Guadalupe Counties). Additionally, twelve of the species listed in **Table 12.1** have known critical habitat within Bexar and/or Comal Counties; however, none of these species have critical habitat located in the Study Area. According to the USFWS (2008), the project area overlies Karst Zones 3 (Areas that probably do not contain listed invertebrate karst species) and 5 (Areas that do not contain listed invertebrate karst species).

Common Name	Scientific Name	County	Federal Status	State Status
[Unnamed] Ground Beetle	<i>Rhadine infernalis</i>	Bexar [CH]	E	
[Unnamed] Ground Beetle	<i>Rhadine exilis</i>	Bexar [CH]	E	
Black-capped Vireo	<i>Vireo atricapilla</i>	Bexar, Comal	E	E
Braken Bat Cave Meshweaver	<i>Cicurina venii</i>	Bexar [CH]	E	
Cokendolpher Cave Harvestman	<i>Texella cokendolpheri</i>	Bexar [CH]	E	
Comal Springs Dryopid Beetle	<i>Stygopamus comalensis</i>	Bexar, Comal [CH]	E	
Comal Springs Riffle Beetle	<i>Heterelmis comalensis</i>	Bexar, Comal [CH]	E	
Fountain Darter	<i>Etheostoma fonticola</i>	Bexar, Comal	E	E
Golden-cheeked Warbler	<i>Setophaga chrysoparia</i>	Bexar, Comal	E	E
Government Canyon Bat Cave Meshweaver	<i>Cicurina vespera</i>	Bexar [CH]	E	
Government Canyon Bat Cave Spider	<i>Neoleptoneta microps</i>	Bexar [CH]	E	
Helotes Mold Beetle	<i>Batrisodes venyivi</i>	Bexar [CH]	E	
Madla’s Cave Meshweaver	<i>Cicurina madla</i>	Bexar [CH]	E	
Peck’s Cave Amphipod	<i>Stygobromus pecki</i>	Bexar, Comal [CH]	E	E
Robber Barron Cave Meshweaver	<i>Cicurina baronia</i>	Bexar [CH]	E	
San Marcos Blind Salamander	<i>Eurycea nana</i>	Bexar, Comal	T	
Texas Blind Salamander	<i>Typhlomolge rathbuni</i>	Bexar, Comal	E	
Texas Wild-Rice	<i>Zizania texana</i>	Bexar, Comal	E	

**Table 12.1: Threatened and Endangered Species Considered by USFWS and/or TPWD as Occurring In, Potentially Occurring In, or Potentially Impacted by Activities Occurring in the Study Region\***

Common Name	Scientific Name	County	Federal Status	State Status
Whooping Crane	<i>Grus americana</i>	Bexar, Comal, Guadalupe	E	E
Cascade Caverns Salamander	<i>Eurycea latitans complex</i>	Bexar, Comal		T
Comal Blind Salamander	<i>Eurycea tridentifera</i>	Bexar, Comal		T
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Bexar, Comal, Guadalupe		T
Interior Least Tern	<i>Sterna antillarum athalassos</i>	Bexar, Guadalupe	[E]	E
Peregrine Falcon	<i>Falco peregrinus</i>	Bexar, Comal, Guadalupe		T
White-faced Ibis	<i>Plegadis chihi</i>	Bexar		T
Wood Stork	<i>Mycteria americana</i>	Bexar, Guadalupe		T
Zone-tailed Hawk	<i>Buteo albonotatus</i>	Bexar, Comal		T
Toothless Blindcat	<i>Trogloglanis pattersoni</i>	Bexar		T
Widemouth Blindcat	<i>Satan eurystomus</i>	Bexar		T
Black Bear	<i>Ursus americanus</i>	Bexar, Comal		T
Gray Wolf	<i>Canis lupus</i>	Bexar	[E]	E
Red Wolf	<i>Canis rufus</i>	Bexar, Comal, Guadalupe	[E]	E
False Spike Mussel	<i>Quadrula mitchelli</i>	Bexar, Comal, Guadalupe		T
Golden Orb	<i>Quadrula aurea</i>	Bexar, Comal, Guadalupe		T
Texas Fatmucket	<i>Lampsilis bracteata</i>	Bexar, Comal, Guadalupe		T
Texas Pimpleback	<i>Quadrula petrina</i>	Bexar, Guadalupe		T
Texas Horned Lizard	<i>Phrynosoma cornutum</i>	Bexar, Comal, Guadalupe		T
Texas Indigo Snake	<i>Drymarchon melanurus erebennus</i>	Bexar		T
Texas Tortoise	<i>Gopherus berlandieri</i>	Bexar, Guadalupe		T
Timber/Canebrake Rattlesnake	<i>Crotalus horridus</i>	Bexar, Guadalupe		T
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Comal, Guadalupe		T
Jaguarundi	<i>Herpailurus yaguarondi</i>	Comal	[E]	E
Cagle's Map Turtle	<i>Graptemys caglei</i>	Comal, Guadalupe		T

Source: USFWS 2011, 2012 and TPWD 2011. \*E = endangered, T = threatened, [CH] = critical habitat has been designated in this county for this species. [E] indicates a species that has been listed as endangered by USFWS but is not considered by that agency as occurring in the Study Region.

A search of TPWD's Texas Natural Diversity Database (TNDD 2011) revealed one site occurrence for Guadalupe Bass (*Micropterus treculi*) within the Study Area. This species is considered "rare" by TPWD but does not have regulatory protection as a threatened or endangered species. There were no other TNDD site occurrences for the Study Area. Additionally, as per guidance provided in the TxDOT-TPWD Memorandum of Agreement (2007), a search for TNDD site occurrences within 1.5 miles of the Study Area was conducted. This search revealed three site occurrences: Toothless Blindcat (*Trogloglanis pattersoni*), Widemouth Blindcat (*Satan eurystomus*), and a bird rookery. The two blindcat species are listed as threatened by TPWD. These species live deep within the Edwards Aquifer and are observed above ground rarely when removed from the aquifer by artesian flow or pumping. The TNDD rookery site occurrence is not specifically identified as containing threatened or endangered species.

## **13. Natural Areas and Preserves**

This section summarizes the methodology that was used to gather data on the natural areas and preserves that are relevant to or located within the Study Area.

### **13.1 Methodology**

Data on natural areas and preserves were gathered from several sources, including the Texas Natural Diversity Database (TNDD, 2011), the Grassland Reserve Program data from the NRCS (2011), the Farm Ranch Land Reserve Program data from the NRCS (2011), and Wildlife Refuge data from USFWS (2011). A windshield survey of the Study Area was also conducted in October, 2011.

### **13.2 Existing Conditions**

No natural areas or preserves are located within the Study Area.

## **14. Parklands and Recreation Areas**

This section summarizes the legal and regulatory framework for parklands and recreation areas and the existing parkland and recreation areas that are included in the Study Area.

### **14.1 Legal and Regulatory Context**

The impacts on parks and recreational facilities resulting from federally funded transportation projects are regulated. These regulations require that proposed transportation projects include a full evaluation to avoid impacts to these recreational resources. If there are no avoidable alternatives, then the project must include all possible planning to minimize harm. If any affected parkland has been funded by the Land and Water Conservation Fund Act (LWCF), the property acquired must be replaced in-kind. Therefore, the parklands analysis of any environmental document must identify parklands on, adjacent to, or near project rights-of-way that could be potentially impacted directly or indirectly by the proposed project.

### 14.1.1 Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966, codified in Federal law at 49 U.S.C. §303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation land, wildlife and waterfowl refuges, and historic sites” (US GPO 2012a).

Section 4(f) specifies that “the Secretary [of Transportation] may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- 1) There is no prudent and feasible alternative to using that land; and
- 2) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.
- 3) OR, the Section 4(f) use is *de minimis*”.

*De minimis* impacts are those that, after consideration of any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), do not adversely affect the activities, features or attributes of the Section 4(f) property.

Section 4(f) further requires consultation with Department of the Interior and, as appropriate, involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

In general, a Section 4(f) “use” (23 CFR 774.17; US GPO 2012b) occurs when:

- 1) Section 4(f) land is permanently incorporated into a transportation facility (i.e., direct use);
- 2) There is a temporary occupancy of Section 4(f) land that is adverse in terms of the section 4(f) preservationist purposes as determined by specified criteria (i.e., temporary use); and
- 3) Section 4(f) land is not incorporated into the transportation project, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired (i.e., constructive use).

### **14.1.2 Section 6(f)**

Section 6(f) of the *Land and Water Conservation Fund Act of 1965* (16 USC 4601-4 *et seq.*)<sup>6</sup> affords protection from actions, programs and policies of any agency. The purpose of the LWCF is to assist in preserving, developing, and assuring accessibility to outdoor recreation resources and to strengthen the health and vitality of U.S. citizens by providing funds and authorizing federal assistance to states in planning, acquiring and developing land and water recreation areas and facilities, and by providing funds for federal acquisition and development of outdoor recreation lands and other areas.

Section 6(f) of the act requires that all properties “acquired or developed, either partially or wholly, with LWCF funds” must be maintained as such in perpetuity. Section 6(f)(3) states that those properties acquired or developed with LWCF funds shall not be converted to a use other than public outdoor recreation without the approval of the Secretary of the Department of the Interior (DOI), acting through the National Park Service (NPS) and at the request of the state delegate/State Liaison Officer (AASHTO 2011).

Section 6(f) of the LWCF prohibits the conversion of property acquired or developed with LWCF grants to a non-recreational purpose without the approval of the DOI’s NPS. Section 6(f) further directs DOI to assure that replacement lands of equal fair market value, location, and usefulness are provided as conditions to such conversions. Consequently, where conversions of Section 6(f) lands are proposed for highway projects, replacement lands will be necessary.

There is an overlap between Section 4(f) and Section 6(f). Lands acquired and/or developed with LWCF funds are generally public parks or recreation areas, and therefore, are both Section 4(f) properties and subject to the requirements of Section 6(f). In identifying Section 4(f) properties, it is important to determine whether Section 6(f) LWCF funds were used to purchase all or part of the Section 4(f) property, or to develop a specific part of the property.

The LWCF Act states that replacement land "of at least equal fair market value and or reasonably equivalent usefulness and location" be provided where Section 6(f) property or features are converted to other uses. Therefore, when considering mitigation for a resource that is both a Section 4(f) property and a Section 6(f) resource, those mitigation measures should take into consideration the Section 6(f) requirements in addition to the Section 4(f) requirements, so that both statutes can be addressed.

### **14.1.3 Texas Parks and Wildlife Code**

Chapter 26 of the Texas Parks and Wildlife Code, *Protection of Public Parks and Recreational Lands*, outlines the criteria for “use” or “taking” as related to impacts to parks and other recreational areas. Similar to the FHWA/FTA Section 4(f) regulations, the code specifies that the state may not approve any program or project that requires the use or taking of any public land designated and used prior to the

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<sup>6</sup> NPS compliance regulations related to Section 6(f) can be found at 36 CFR Part 59.

arrangement of the program or project as a park, recreation area, scientific area, wildlife refuge, or historic site, unless it is determined that:

- i. There is no feasible and prudent alternative to the use or taking of such land; and
- ii. The program or project includes all reasonable planning to minimize harm to the land, as a park, recreation area, scientific area, wildlife refuge, or historic site, resulting from the use or taking.

A determination related to the criteria above may only be made after notice is given and a hearing conducted. The process for providing notice and conducting hearings are specified in the code.

## 14.2 Existing Conditions

The existing parklands and recreation areas within the Study Area were identified using data collected during a windshield survey that was conducted in October 2011, as well as reviewing 2011 data from the City of San Antonio and Universal City. There is no parkland within the Study Area in the cities of Windcrest, Live Oak, Selma, or Schertz, or belonging to Bexar County. There are five parklands and recreation areas that are completely within or partly within the Study Area. None of these parklands are considered Section 6(f) resources. These parklands and recreation areas represent a total of 52.8 acres in size, or 0.7 percent of the Study Area. The locations for each of the parks and recreation areas in the Study Area are listed in **Table 14.1** and shown in **Appendix A**.

<b>Table 14.1: Parks and Recreation Areas in the Study Area</b>				
<b>Name</b>	<b>Classification</b>	<b>Owner</b>	<b>Acres within Study Area</b>	<b>Total Acres</b>
Pershing Park	Neighborhood Park	City of San Antonio	2.4	2.4
Ruth Woodard Park	Community Park	City of San Antonio	5.4	5.4
Salado Creek Greenway South	Greenway	City of San Antonio	11.7	247
Jack White Park	Greenway	City of San Antonio	17.7	59
Olympia Hills Golf Course*	Golf Course	Universal City	15.6	Unknown
<b>Total</b>			<b>52.8</b>	

Source: City of San Antonio 2011.

\*Public Golf Course located during windshield survey and through Bexar County parcel data.

Parklands and recreation areas within the Study Area are briefly described below:

- Pershing Park, which is a 2.4-acre Neighborhood Park that is owned by the City of San Antonio, is completely within the Study Area and is located in the southern part of the Study Area to the north of IH 35 between North New Braunfels Avenue and North Walters Street.
- Ruth Woodard Park, which is a 5.4-acre Community Park that is owned by the City of San Antonio, is completely within the Study Area and is located in the southern part of the Study Area to the southeast of the North Walters Street/IH 35 intersection.

- Approximately 11.7 acres of the Salado Creek Greenway South, which is a 247-acre greenway that is owned by the City of San Antonio, is located within the Study Area. The portion of Salado Creek South that is located within the Study Area is located to the southeast of IH 35/IH 410 S interchange.
- Approximately 17.7 acres of Jack White Park, which is a 59-acre greenway that is owned by the City of San Antonio, is located within the Study Area. The portion of Jack White Park that is located within the Study Area is located to the northwest of the IH 35/IH 410 S interchange.
- Approximately 15.6 acres of the Olympia Hills Golf Course, which is owned by Universal City, is located within the Study Area. The portion of the Olympia Hills Golf Course that is located within the Study Area is located southeast of IH 35 to the west of the Bexar and Guadalupe County line.

## 15. Historic and Cultural Resources

This section summarizes the historic and cultural resources data collection and analysis conducted for the IH 35 PEL Study. A description of the legal and regulatory context and the methodology used in this analysis, as well as a summary of the historic and cultural resources identified in the Study Area are provided below. A technical report with detailed information on the identified resources and the historic context of the area is located in **Appendix E, IH 35 PEL Study for the San Antonio Region - Historic Resources Data Collection Report**. Most of the PEL Study Area consists of previously disturbed ground (IH 35 ROW) where undocumented or intact archeological site occurrence is unlikely. The report does not include archeological research which would be conducted during a project-level NEPA study.

### 15.1 Legal and Regulatory Context

The documentation of historic resources in this report will be used to inform any subsequent project-level NEPA study. NEPA requires consideration of important historic, cultural, and natural aspects of our national heritage. During the NEPA process, important aspects of our national heritage that may be present in the Study Area must also be considered under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (US GPO 2012c). This act requires Federal agencies to “take into account” the “effect” that an undertaking will have on “historic properties.” Historic properties are defined as those included in or are eligible for inclusion in the National Register of Historic Places (NRHP) and may include structures, buildings, districts, objects, and sites. In accordance with the Advisory Council on Historic Preservation (ACHP) regulations pertaining to the protection of historic properties (36 CFR 800.4), Federal agencies are required to identify and evaluate historic-age resources for NRHP eligibility and assess the effects that the undertaking would have on historic properties. During NEPA, a historic resource review would be completed under terms of the December 2005 Programmatic Agreement for Transportation Undertakings (PA-TU) among the FHWA, SHPO, ACHP, and TxDOT (or the agreement in effect at that time).

Any project that is proposed as a result of the IH 35 PEL Study would also fall under the purview of the Antiquities Code of Texas (ACT), because it could involve “lands owned or controlled by the state of Texas or any city, county, or local municipality thereof.” As a proposed project could involve state purchase of right-of-way or lands belonging to local municipalities and counties, under jurisdiction of the

ACT, historic properties would also be considered under provisions of the Memorandum of Understanding (MOU) between the SHPO and TxDOT. The ACT allows for all such properties to be considered as State Archeological Landmarks (SAL), and requires that each be examined in terms of possible “significance.” Significance standards for the code are clearly outlined under Chapter 26 of the Texas Historical Commission’s (THC) Rules of Practice and Procedure for the ACT and closely follow those of the Secretary of the Interior’s Standards and Guidelines. Section 4(f) (see **Section 14.1.1**) would also apply to projects requiring US DOT approval.

Of the jurisdictions abutting the Study Area, the THC currently recognizes only the City of San Antonio as a Certified Local Government (CLG). As a CLG, the City of San Antonio administers a local Landmarks program. The purpose of the program is to identify properties that exhibit outstanding historical, cultural, architectural, or archaeological significance. City of San Antonio designated Historic Landmarks may not be demolished without approval of the City’s Historic and Design Review Commission.

Cemeteries are protected from any disturbance by Section 711.035 of the Health and Safety Code. Under some circumstances, cemeteries of historic-age (50 years or older) may also be protected as historic properties under the NHPA or ACT. TxDOT has adopted a Cemetery Policy to ensure conformance to legal and regulatory requirements. The TxDOT Cemetery Policy may be found in **Appendix E**.

## **15.2 Methodology**

Research was conducted by an architectural historian (historian) pre-certified in TxDOT classifications 2.8.1 (Surveys, Research & Documentation of Historic Buildings, Structures, and Objects) and 2.11.1 (Historical and Archival Research). The historian conducted desktop review of online resources as well as review of reports prepared for TxDOT for previous projects located within the Study Area.

To develop the historic context, in addition to identifying properties located within the Study Area, the historian reviewed previously designated historic properties located close to (generally within 150 feet of) the Study Area. The historian reviewed the online Texas Historical Commission Historic Sites Atlas to identify NRHP, Recorded Texas Historic Landmarks (RTHL), SAL, Official Texas Historical Markers (OTHM), and neighborhood surveys within and near the Study Area. The City of San Antonio Historic Preservation Office Website and the San Antonio Conservation Society Website were also reviewed. To identify farms and ranches that might require additional research during a later study, the historian reviewed the Texas Department of Agriculture website information on agricultural properties honored through the Family Land Heritage Program. For specific properties, such as Fort Sam Houston and Brooke Army Medical Center, military websites provided historical data. The Online Handbook of Texas and Texas Transportation Museum site also provided valuable data. Cemetery information was gathered from the *I-35 Cemetery Database Update Report* published by TxDOT in February 2011.

## **15.3 Existing Conditions**

Below is a summary of historic resources identified within the Study Area. Detailed description of the resources and mapped locations are included in **Appendix E**.

### **15.3.1 Historic Properties Located within the Study Area**

Within the Study Area, there are four properties listed in the NRHP or previously determined eligible to list in the NRHP.

The two properties currently listed in the NRHP are:

- Old Lone Star Brewery
- Fort Sam Houston Historic District

Two properties determined to be NRHP-eligible during a June 12, 2007 TxDOT Windshield Survey for IH 35 at Walters St. (CSJ# 0017-10-231) are:

- Two education buildings on one parcel at 308 Stafford Street
- One commercial building located at 409 Seguin Street

All four properties are historic properties as defined by Section 106 of the NHPA and Section 4(f).

### **15.3.2 Properties Recognized by the State as Historically Significant**

If not already evaluated, any properties recognized by the state to be historically significant would also need to be evaluated to determine if they are also eligible for listing in the NRHP. One property in Selma within the Study Area is designated by the state to be a SAL, the Harrison and Brown Stage Stop. If a SAL property that is not currently listed in the NRHP would be affected by a proposed transportation project, the SAL would be evaluated to determine NRHP eligibility during a project-level NEPA study.

### **15.3.3 Properties Recognized by Cities as Historically Significant**

The City of San Antonio currently designates over 2,000 properties as Historic Landmarks. Some properties designated as City of San Antonio Landmarks are also listed in the NRHP. Within the Study Area, there are 44 City of San Antonio Historic Landmarks and one City of San Antonio Historic District (Government Hill) that are not concurrently listed in the NRHP. The City also recognizes the Old Lone Star Brewery Historic District, which includes more land than the Old Lone Star Brewery parcel listed in the NRHP. If a City of San Antonio Historic Landmark, not concurrently listed in the NRHP, would be affected by a proposed transportation project, the Landmark would be evaluated to determine NRHP eligibility during a project-level NEPA study.

### **15.3.4 Cemeteries**

Two cemeteries were identified within the Study Area. The cemeteries are: Our Lady of Perpetual Help #1; and Our Lady of Perpetual Help #2. Both cemeteries are located in Selma.

## **16. Utilities/Transmissions**

This section summarizes the utilities/transmissions that are located in the Study Area.

### **16.1 Transmission Lines**

There are 20 transmission lines that are completely within or partly within the Study Area. Eleven of these 20 lines cross IH 35 (Platts, 2011). The locations for each of the transmission lines in the Study Area are listed in **Table 16.1** and shown in **Appendix A**.

<b>Table 16.1: Transmission Lines in the Study Area</b>			
<b>Location</b>	<b>Study Area Location</b>	<b>Crossing IH 35</b>	<b>Kilovolts (kV)</b>
W of the AT&T Pkwy/IH 35 Interchange	Southern	Yes	115-161
SE of the IH 10/IH 410 S Interchange	Southern	No	Below 100
NW of the IH 10/IH 410 S Interchange	Southern	Yes	115-161
Between IH 10/IH 410 S and IH 35/IH 410 Interchange	Southern	No	Below 100
N of IH 410 S/IH 35 Interchange to Lenark Dr W of IH 35	Southern	No	115-161
Northern Part of IH 35/IH 410 S Interchange	Southern	Yes	115-161
E of Eisenhauer/IH 35 Interchange to Randolph Blvd	Southern	No	Below 100
N of Lenark Dr	Southern	Yes	Below 100
SE of the Walzem Rd/IH 35 Interchange	Southern	No	Below 100
E of the Walzem Rd/IH 35 Interchange to N of Windcrest Dr	Southern	No	Below 100
S of the IH 410 W/IH 35 Interchange	Southern	Yes	Below 100
Between IH 410 W/IH 35 Interchange and Thousand Oaks Dr	Central	Yes	Below 100
Between IH 410 W/IH 35 Interchange and Thousand Oaks Dr	Central	Yes	115-161
SW of O Conner Rd/IH 35 Interchange to SE of Toepperwein	Central	No	Below 100
NW of the N Weidner Rd/IH 35 Interchange	Central	No	Below 100
SW of the O Connor Rd/IH 35 Interchange	Central	Yes	115-161
SW of the O Connor Rd/IH 35 Interchange	Central	Yes	345-450
N of Loop 1604/IH 35 Interchange to Bexar and Guadalupe	Northern	No	Below 100
S of Old Wiederstein Rd/IH 35 Interchange	Northern	Yes	115-161
S of Old Wiederstein Rd/IH 35 Interchange	Northern	Yes	345-450

Source: Platts 2011.

## 16.2 Power Stations

There are no power stations located in the Study Area (Platts, 2011).

## 17. Mine and Quarry Locations

One aggregate materials quarry operated as G.E.M. Materials is located within the Study Area at Retama Park and IH-35 as verified by windshield survey.

## 18. Prime Farmland

This section summarizes the applicable federal and state regulations for prime farmland and the existing prime farmland resources within the Study Area.

### 18.1 Legal and Regulatory Context

The Farmland Protection Policy Act (FPPA), as detailed in Subtitle I of Title XV of the Agricultural and Food Act of 1981, provides protection to prime and unique farmlands, as well as farmlands of statewide or local importance. Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to producing food, feed, forage and oilseed crops. Such soils have properties that

are favorable for the production of sustained high yields. Prime farmland soils typically produce the highest yields with a minimum input of energy and economic resources and farming these soils has been found to keep damage to the environment at a minimum. Prime farmland soils usually exist where adequate precipitation is available, and where mean temperature and length of growing season are favorable. The pH level of prime soils is neither extremely acidic nor extremely alkaline. These soils are fairly permeable to water and air, contain very few rocks and are not excessively erodible by wind or water. Prime soils are not saturated for long periods, nor are they subject to frequent flooding during the growing season. Slopes are generally less than 6 percent.

Prime farmland can include cropland, pastureland, rangeland or forestland, but does not include land converted or dedicated to urban, industrial, transportation or water uses. Statewide and locally important farmlands are defined by the appropriate state or local agency as important for the production of food, feed, fiber, forage or oilseed crops. Unique farmlands, defined as lands other than prime farmland that, when properly managed, have combined conditions to produce sustained high quality and high yields of specialty crops, such as citrus, nuts, fruits, and vegetables, are not recognized by the Natural Resources Conservation Service (NRCS) in the state of Texas.

## 18.2 Existing Conditions

As shown in **Table 18.1**, prime farmland soils occupy approximately 5,218 acres or 66.8 percent of the Study Area. The soils that are associated with prime farmlands within the Study Area are:

- Branyon clay, 0 to 1 percent slopes (HtA);
- Austin silty clay, 1 to 3 percent slopes (AuB);
- Lewisville silty clay, 0 to 1 percent slopes (LvA);
- Branyon clay, 1 to 3 percent slopes (HtB);
- Houston Black gravelly clay, 3 to 5 percent slopes (HuC);
- Austin silty clay, 3 to 5 percent slopes (AuC);
- Lewisville silty clay, 1 to 3 percent slopes (LeB);
- Lewisville silty clay, 1 to 3 percent slopes (LvB);
- Houston Black gravelly clay, 1 to 3 percent slopes (HuB);
- Barbarosa silty clay, 0 to 1 percent slopes (BaA);
- Houston Black clay, 1 to 3 percent slopes (HoB);
- Loire clay loam, 0 to 2 percent slopes, occasionally flooded (Fr);
- Heiden clay, 1 to 3 percent slopes (HeB);
- Houston Black gravelly clay, 3 to 5 percent slopes (HpC);
- Houston Black clay, 1 to 3 percent slopes (HsB); and
- Tinn clay, 0 to 1 percent slopes, occasionally flooded (Tc).

<b>Table 18.1: Prime Farmland Soils in the Study Area</b>		
<b>Soil Map Unit</b>	<b>Acres Within Study Area</b>	<b>Percent of Study Area</b>
HtA	1,308.4	16.8
AuB	1,027.9	13.2
LvA	935.3	12.0
HtB	468.8	6.0
HuC	426.1	5.5
AuC	350.8	4.5
LeB	171.4	2.2
LvB	152.4	2.0
HuB	149.7	1.9
BaA	89.0	1.1
HoB	55.0	0.7
Fr	42.5	0.5
HeB	29.2	0.4
HpC	8.2	0.1
HsB	4.1	0.1
Tc	0.1	0.0
<b>Total</b>	<b>5,218.5</b>	<b>66.8</b>

Source: NRCS 2009. Note: This table includes land that is already occupied by roadway ROW and dedicated to urban development.

Prime farmland soils that are within roadway ROW or dedicated to urban development are not subject to the requirements of the FPPA. Therefore, although 66.8% (5,218.5 acres) of the Study Area contains prime farmland soils, this percentage falls to 8.8% (684 acres) when roadway ROW and areas dedicated to urban development are removed.

## **19. Conclusion**

This inventory and preliminary evaluation of the potentially affected social, economic, and natural environment in the IH 35 PEL Study Area will provide the baseline information to be used in further project development efforts and environmental studies (NEPA). The resources described in this report were examined at the planning level of analysis using information that was reasonably attainable.

Throughout the report, guidance is provided where further study and evaluation would be necessary during a project-level NEPA study. For example, Section 3 of this report describes the socioeconomic factors of the study area and states that the information contained within this planning level analysis could be incorporated into environmental justice studies and language needs assessments should projects be proposed for the IH 35 PEL Study Area and advance to a project-level NEPA study. Section 10 of this report provides a description of FHWA and TxDOT traffic noise regulations and guidance and recommends that the methods outlined be applied to model the existing and projected future

conditions for noise during a project-level NEPA study. Section 11 provides a review of listed regulated hazardous materials sites located within the Study Area. At the planning level of analysis, it was not feasible to conduct field verification activities for hazardous materials data and future project-specific environmental analyses would need to examine hazardous materials in a greater level of detail required by NEPA. Section 15 summarizes the historic and cultural resources in the IH 35 PEL Study Area, noting that this report does not include archeological research which would be conducted during a project-level NEPA study. Therefore, all resources described in this report will be re-examined at a project-specific level of analysis in any future studies.

The information provided in this report about the environmental resources in the planning area is based on a broad, planning-level analysis of the Study Area. This document should serve as a starting point for more detailed, project-level environmental analyses. The data presented in this report will be refined and updated, as necessary, in future studies.

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