Final
Environmental Assessment

SL 335, Amarillo District

SL 335 (From FM 2590 to SW 9th Avenue)
CSJs: 0904-02-038, 0275-01-178, 0904-11-058
Randall and Potter County, Texas
July 2017

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

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ACRONYMS

Included below is a list of acronyms used throughout this document and their definitions.

AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACS	American Community Survey
AOI	Area of Influence
APE	Area of Potential Effect
BE	Biological Evaluation
BG	Block Group
BMP	Best Management Practice
BNSF RR	Burlington Northern Santa Fe Railroad
CAA	Clean Air Act
CIA	Community Impact Analysis
CEQ	Council on Environmental Quality
CGP	Construction General Permit
CFR	Code of Federal Regulations
CMP	Congestion Management Process
CO	Carbon Monoxide
CRP	Conservation Reserve Program
CSJ	Control-section-job number
CT	Census Tract
CWA	Clean Water Act
DHHS	United States Department of Health and Human Services
EA	Environmental Assessment
ECOS	Environmental Compliance Oversight System
EFH	Essential Fish Habitat
EJ	Environmental Justice
EMST	Ecological Mapping Systems of Texas
EO	Executive Order
EPA	Environmental Protection Agency
EPIC	Environmental Permits, Issues, and Commitments
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FM	Farm-to-Market
FPPA	Farmland Protection Policy Act
FWCA	Fish and Wildlife Coordination Act
GIS	Geographic Information System
HEI	Health Effects Institute
HIPL	High Plains Ecoregion
IH	Interstate Highway
IRIS	Integrated Risk Information System

ISA	Initial Site Assessment
LEP	Limited English Proficiency
LPST	Leaking Petroleum Storage Tank
LWCF	Land and Water Conservation Fund
MBTA	Migratory Bird Treaty Act
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NATA	National Air Toxic Assessment
NEPA	National Environmental Policy Act
NHL	National Historic Landmark
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOT	Notice of Termination
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
OTHM	Official Texas Historical Marker
PRPC	Panhandle Regional Planning Commission
PSL	Project Specific Location
PST	Petroleum Storage Tank
RCRA	Resource Conservation and Recovery Act
ROW	Right-of-Way
RTHL	Recorded Texas Historic Landmark
SAL	State Antiquities Landmark
SGCN	Species of Greatest Conservation Need
SHPO	State Historic Preservation Officer
SL	State Loop
SW3P	Stormwater Pollution Prevention Plan
SWTB	Southwest Tablelands
TARL	Texas Archeological Research Laboratory
TCAP	Texas Conservation Action Plan
TCEQ	Texas Commission on Environmental Quality
TERP	Texas Emissions Reduction Plan
THC	Texas Historical Commission
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
TxDOT	Texas Department of Transportation
TxDOT ENV	Texas Department of Transportation Environmental Affairs Division
TXNDD	Texas Natural Diversity Database
TWDB	Texas Water Development Board
URARPAPA	Uniform Relocation Assistance and Real Property Acquisitions Policy Act

US	United States Highway
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USCB	United States Census Bureau
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
VPD	Vehicles Per Day
VMT	Vehicle-Miles Traveled

1.0 INTRODUCTION

The Texas Department of Transportation (TxDOT) in conjunction with the Amarillo Metropolitan Planning Organization (MPO) proposes improvements to State Loop 335 (SL 335) from Farm to Market (FM) 2590 to Southwest (SW) 9th Avenue (Ave.) in Potter and Randall County, Texas. The project length is approximately 7.96 miles and is depicted in **Appendix A-1: Project Location Map**.

The proposed SL 335 project would not follow the existing SL 335 alignment between FM 2186 to SW 9th Ave. The new alignment, starting from FM 2590, would involve upgrading two existing roadways: FM 2186 and County Road Helium (Helium Rd.). Near the Randall/Potter County line, the proposed road would veer northeast, on a new location alignment from Helium Rd., crossing IH 40 and BI 40-D to merge with the existing SL 335 near SW 9th Ave. and to a controlled access facility. The proposed project would increase regional and local mobility; provide corridor redundancy; and provide an additional hazardous cargo route between FM 2590 and SW 9th Ave. on the southwest side of the City of Amarillo. A description of the existing and proposed facility is provided below.

1.1 Existing Facility

The existing FM 2186 is a two-lane rural facility with 12-foot (ft.) travel lanes, a 10-ft. shoulder on the eastbound direction and a 6-ft. shoulder on the westbound direction. The total existing right-of-way (ROW) is approximately 100 ft. The existing Helium Rd. is a 20-ft. wide un-paved county road within an approximately 60-ft. wide ROW. From near the Randall/Potter County line, to near SW 9th Ave. there is no existing facility. The existing IH 40 consists of four 12-ft. mainlanes (two in each direction) with 4-ft. inside and 10-ft. outside shoulders. IH 40 contains frontage roads in each direction. Each frontage road consists of two 12-ft. lanes and 4-ft. inside and outside shoulders. The existing IH 40 ROW width varies from approximately 320-ft. to 360-ft. The total existing ROW within the limits of the proposed project is approximately 231 acres.

1.2 Proposed Project

The proposed project consists of upgrading existing roadways and a new location alignment to a controlled access facility including bicycle and pedestrian accommodations. The proposed project would generally follow the FM 2186 alignment west from FM 2590 to Helium Rd. and then follow Helium Road north to near the Randall/Potter County line where it would veer northeast, on a new location alignment, crossing IH 40 and BI 40-D, to merge with the existing SL 335 near SW 9th Ave.

The proposed controlled access facility would include four 12-ft mainlanes (two in each direction) grade separated over intersecting cross streets, two-lane frontage roads with a 12-ft wide inside lane and a 14-ft wide outside shared-use lane, and connecting ramps. The design would accommodate future expansion to an ultimate six-mainlane section. The proposed project would also include curb and gutter along the frontage roads and 6-ft. sidewalks along both sides of the proposed facility. The proposed project would be constructed within a variable ROW width of approximately 304-ft. to 460-ft.

The proposed project would generally be constructed in phases. The general phasing of the project would consist of the construction of the frontage roads including the IH 40

mainlane bridge at level two, then construction of the mainlanes including the SL 335 mainlane bridge at level three, and then finally, the construction of the ultimate condition of the IH 40/SL 335 interchange based on the availability of funding.

The proposed IH 40/SL 335 interchange would consist of an interim and ultimate condition. The interim condition would consist of a three-level interchange, with frontage roads at level one, IH 40 mainlanes at level two, and SL 335 mainlanes at level three. The ultimate condition would include direct connector (DC) ramps over the three-level interchange.

Additionally, improvements along IH 40 to the mainlanes, ramps and frontage roads are proposed to accommodate the IH 40/SL 335 interchange.

The proposed project would include three drainage easements. The first easement would be located in an existing playa lake, on the east side of the proposed SL 335 facility, and south of the future Arden Rd. The second easement would be located in an existing playa lake, on the east side of the proposed SL 335 facility, and south of the existing SW 34th Ave. The third easement would be located on the east side of the proposed SL 335 facility, north of the future 45th Ave., and serve as the outfall for culverts constructed at the intersection of the future 45th Ave. and proposed SL 335. Precise locations of the drainage easements would be finalized during detailed design. The total proposed ROW needed for the proposed project is approximately 268 acres. The total easement acreage is approximately 16 acres. **Typical Sections** and the **Project Layout Map** are included in **Appendix B**.

1.3 Logical Termini and Independent Utility

Coordination with project stakeholders was conducted to determine the termini based on several primary factors including: freight movements, hazardous cargo routes, safety, prioritizing construction segments, improving traffic operations, and mobility as documented in the Loop 335 Corridor Development Study completed in 2014. The project limits for the proposed project consist of rational end points that are major traffic generators with intersecting roadways. As documented in the 2014 study, the proposed improvements are a reasonable expenditure that “stand alone” and do not require additional transportation improvements at either terminus of the proposed project, in order to function with the completion of other phases of the Loop 335 Corridor. Additionally, the proposed project would not restrict the consideration of alternatives for futures phases or other reasonably foreseeable transportation projects; therefore, the project has both logical termini and independent utility.

2.0 PURPOSE AND NEED

2.1 Need for Project

The proposed project is needed because a) SL 335 has become a major arterial that is inadequate to meet future traffic volumes as it no longer functions properly as a link between IH 27 and IH 40 resulting in diminished regional and local mobility; b) SL 335 does not provide an alternate route for freight traffic around the City of Amarillo when

there are service disruptions to IH 40 restricting freight traveling east or west, which affects freight traffic capacity and mobility; and c) the existing western quadrant of SL 335 (Soncy Rd.), from 45th Ave. to Business IH 40, is designated for gas and diesel only vehicles and all hazardous cargo must travel through the IH 27/IH 40 interchange creating a likelihood of potential traffic accidents.

Supporting Facts/Data

A summary of supporting facts for the needs of the project is presented below. For detailed supporting documentation, please refer to the **Purpose and Need Supporting Data Report** which has been uploaded to the TxDOT's Environmental Compliance Oversight System (ECOS) and is available for review at the TxDOT Amarillo District Office.

Between 2000 and 2010, the Census Bureau estimated the city added approximately 17,068 residents to reach a population of 190,695. Rapid commercial and residential development in southwest Amarillo is anticipated to result in a need for transportation improvements to accommodate the corresponding rapid growth in traffic numbers. As development and the number of and type of motorists accessing the project quadrant grows, the mobility within and through the corridor will decrease due to the increased number of and types of vehicles using these facilities.

Freight trucks traveling through the project quadrant must vary their speed due to loads being carried, signalization of numerous intersections on SL 335, and local traffic accessing the surrounding developments. This interaction between freight trucks and local motorists results in increased congestion and degraded functionality of the existing facility. Based on the level of service (LOS) analysis for the Existing 2014 and 2035 No-Build scenarios within project limits, a general deterioration of the LOS at nine intersections along SL 335 is anticipated by 2035. Most the intersections analyzed in the Existing 2014 scenario are operating at LOS C or better. Under the 2035 No-Build scenario, most the intersections would be operating at LOS D, E or F.

Both IH 27 and IH 40 are expected to experience future growth in total freight tonnage. According to TxDOT data, IH 27 is expected to carry up to 25 million tons of freight and IH 40 is expected to carry up to 220 million tons of freight by 2040, compared to 10 million tons (IH 27) and 50 million tons (IH 40) in 2010. This represents an increase of approximately 150 percent and 360 percent respectively for the two interstates between 2010 and 2040.

Future service disruptions to IH 40 within the City of Amarillo will restrict freight movement and create the need for "corridor redundancy" (i.e. additional freeway options) for traffic traveling east or west through the region. The anticipated growth in freight and general traffic coupled with the need for corridor redundancy, the continued growth of the Amarillo metropolitan area, and the City of Amarillo's desire to detour freight traffic around the downtown area justify a need for an alternate freight and hazardous cargo route around the City of Amarillo.

2.2 Project Purpose

The purpose of the proposed project is to improve regional and local mobility and to provide an alternate route for freight traffic and hazardous material cargo around the City of Amarillo.

2.3 Project Funding

The SL 335 proposed project would be funded through the Category DA - Develop Authority and under three separate control-section-job numbers (CSJs): 0904-02-038, 0904-11-058, and 0275-01-178. The project programmed funding for CSJ. 0904-08-038 is $94,000,000; for CSJ. 0904-11-058 is $134,000,000; and for CSJ. 0275-01-178 is $22,000,000, for a total of $250,000,000. The project is listed in the Amarillo Metropolitan Transportation Plan (MTP) 2015-2040. The proposed action is consistent with the City of Amarillo's 2010 Comprehensive Land Use Plan and 2014 Zoning Ordinance. The project MTP pages are included in **Appendix E: Supplemental Data**.

3.0 ALTERNATIVES

3.1 Build Alternative

The Build Alternative would consist of upgrading existing roadways to a new controlled access highway facility (with four-mainlanes grade separated over existing cross streets, frontage roads, connecting ramps, and accommodation for future expansion to an ultimate six-mainlane section), the construction of the interchange of IH 40 with SL 335 consisting of a frontage road system, a proposed IH 40 mainlane bridge, a proposed SL 335 mainlane bridge, and associated direct connectors. Additionally, improvements along IH 40 to the mainlanes, ramps and frontage roads will be shown to accommodate the proposed interchange with IH 40 and SL 335. The proposed project would also include the direct connectors to/from the existing Soncy Rd. The Build Alternative is the preferred Alternative.

Several utilities are present within the project limits. Based on the proposed design, utility relocations would be required throughout the corridor; however, these relocations would be handled so that there would be no substantial impacts to residences and businesses. Utility crossings and potential parallel conflicts include items such as water lines, gas service lines, storm drain lines, fiber optic and overhead electric. Utility agreements and notice to owners would be required for this project. Conflicting utilities would be either adjusted or relocated prior to the construction of the proposed project using standard TxDOT procedures.

3.2 No-Build Alternative

The No-Build Alternative consists of leaving Helium Rd. as it is today, a two-lane un-paved road with no frontage roads, leaving Soncy Rd. as the existing SL 335 corridor, and making no improvements to the IH 40 interchange. The No-Build Alternative would not meet the purpose and need of the proposed project.

4.0 AFFECTED ENVIRONMENT

The proposed project is located in the west/southwest portion of the City of Amarillo in Randall and Potter County, Texas. Residential, commercial, and agricultural properties are located within and adjacent to the proposed project. Representative project photographs are included in **Appendix C**.

4.1 Land Use

A majority of the land use within the study corridor consists of agriculture operations, undeveloped land, and planned development with scattered clusters of residential and commercial developments throughout and higher density developments occurring around IH 40. Approximately 42 percent of the proposed SL 335 corridor consists of agricultural land uses, compared to less than one percent consisting of existing residential developments. However, approximately 27 percent of the corridor consists of planned development that would be comprised primarily of single-family residential development with some commercial development immediately adjacent to the proposed SL 335 facility. Undeveloped land accounts for approximately 29 percent; commercial land makes up approximately 2 percent; and other land uses, including governmental and public, accounts for less than one percent of corridor land uses.

Visual/Aesthetic

Section 136 of the Federal Aid Highway Act of 1970 (Public Law [P.L.] 91-605) requires consideration of aesthetic values in the highway planning process. Aesthetic values would be emphasized with this proposed project. It has always been the policy of TxDOT to build visually pleasing travel ways, coupling beauty with their functional capability. It is anticipated the aesthetic effect would be equal to or better than the existing area.

4.2 Population

According to the U.S. Census Bureau's (USCB) *2010 Census,* the City of Amarillo is the 14th most populous city in Texas. Between 2000 and 2010, the USCB estimated the City of Amarillo added approximately 17,068 residents to reach a population of 190,695. *Census 2010* also reveals continued growth in Randall and Potter County during the same period. From 2000 to 2010, Randall County gained 7,527 new residents and Potter County gained 16,413 new residents which is a percent change of 6.6 and 15.7, respectively.

Household population projections generated by the PRPC indicates steady growth will likely continue to occur in Randall County through the year 2030. The PRPC projects an approximate 13 percent growth in the Randall County population, from 120,725 to 136,725 persons. The PRPC projects Potter County to grow to a population of 158,953 residents by 2030, an increase of 37,880 persons and an approximate increase of 31 percent from its *Census 2010* documented population.

The 26-county PRPC planning area, which represents the Amarillo region, is projected to grow from a population of 427,927 residents to 505,252 residents by 2030, an approximate increase of 18 percent from its *Census 2010* population. In the 2010 Amarillo Comprehensive Plan, Amarillo's population is estimated to be in the range of 240,000 to

270,000 persons by 2040 with an average annual growth rate range from 0.7 percent to 1.1 percent. The projected numbers for the City of Amarillo were the basis for the comprehensive plan and were estimated from a combination of data taken from the Texas Water Development Board (TWDB) and USCB.

The proposed project has taken into consideration future economic and development initiatives. The City of Amarillo's plans have been reviewed to determine some of the economic and development goals relevant to the proposed project which includes the 2010 Amarillo Comprehensive Plan.

4.3 Natural Environment

The proposed project is located in the high plains of the Texas Panhandle. Also named "Llano Estacado," this region is a relatively high and level plateau of sandy to heavy, dark calcareous clay soils over an impervious layer of caliche. The region is characterized by Texas Parks and Wildlife Department (TPWD) as a mixed plain and short-grass prairie and consisting of various vegetation types. The natural vegetation of the area are historically short grasses intermixed with some mesquite shrubs, some tall bunch grasses, yucca, and various herbs. Within the project limits, the natural area has been altered for growing crops such as cotton, wheat, and rye. Some areas were previously in the Conservation Reserve Program (CRP) and revegetated. Currently there are no areas in the CRP. The winters of the Texas High Plains (HIPL) are the coldest in Texas with an average annual temperature of 59 degrees. The Southwest Tablelands (SWTB) ecoregion, also known as part of the Rolling Plains, is characterized as a mixed plain and short-grass prairie and consisting of various vegetation types and prairie dog colonies. The proposed project is located over the Ogallala aquifer which is the largest aquifer in the United States.

5.0 ENVIRONMENTAL CONSEQUENCES

5.1 Issues Excluded from Further Consideration

5.1.1 International Boundary and Water Commission

The project is not located within the floodplain of the Rio Grande; therefore, coordination with the International Boundary and Water Commission would not be required.

5.1.2 Essential Fish Habitat

There are no tidally influenced waters in Randall or Potter County; therefore, there is no requirement to address Essential Fish Habitat (EFH).

5.1.3 Threatened or Impaired Waters

Based on the approved 2012 Texas Integrated Report of Surface Water Quality, formerly called the Texas Water Quality Inventory and 303(d) List, runoff from this project would not discharge directly into a Section 303(d) listed threatened or impaired water, or into a stream within 5 miles upstream of a Section 303(d) listed threatened or impaired water.

5.1.4 Navigable Waters/Lakes, Rivers, Streams

There are no lakes, rivers, or streams that cross the proposed project limits. Because there are no rivers within the proposed project limits, the project would not involve work within or over a navigable water of the U.S., therefore, Section 9 and 10 of the Rivers and Harbors Act does not apply.

5.1.5 Clean Water Act Section 402 – Municipal Separate Storm Sewer System

The project is located within the boundaries of the Phase I City of Amarillo Municipal Separate Storm Sewer System (MS4) and would comply with the applicable MS4 requirements.

5.1.6 Texas Commission on Environmental Quality Section 401 Best Management Practices

This project would not require a U.S. Army Corps of Engineers (USACE) Section 404 Permit; therefore, Section 401 Certification would not be required.

5.1.7 Wild and Scenic Rivers

This project would not involve work within the designated segment of the Rio Grande; therefore, coordination with the National Park Service would not be required.

5.2 Issues Considered in Detail

5.2.1 Community Impacts

A community impacts analysis (CIA) for the proposed project includes analyses of regional and community growth, potential ROW acquisitions, easements, displacements and relocations, public facilities and services, community cohesion, Limited English Proficiency (LEP) population impacts, and Environmental Justice (EJ) population impacts. The following sections summarize information also included in the **Community Impacts Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office. Since the completion of the Community Impacts Technical Report, the USCB has released the *2011-2015 American Community Survey (ACS) 5-year estimates*. The limited English proficiency and low-income population data included in Sections 5.2.1.2 and 5.2.1.5, respectively, have been revised to reflect these latest estimates.

Regional and Community Growth

As discussed in **Section 4.2**, steady population growth is likely to continue through the year 2030 in Randall County, and the entire panhandle region is expected to grow 18 percent. The proposed project would not adversely affect regional and community growth. For additional information on potential induced growth effects, see the **Indirect Effects Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

The proposed project has taken into consideration future economic and development initiatives. The City of Amarillo's plans have been reviewed to determine some of the economic and development goals relevant to the proposed project which includes the 2010 Amarillo Comprehensive Plan as discussed in the **Community Impacts Technical**

Report which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

5.2.1.1 Community Cohesion

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

The proposed improvements would not separate, divide, or isolate any distinct neighborhoods, ethnic groups or other specific groups. Adverse impacts to residential communities adjacent to the proposed project could be attributed to increases in traffic noise, changes in access, and temporary construction impacts. These communities adjacent to the proposed project would include the Greyhawk Landing and Hillside Terrace Estates neighborhoods. Changes in access could potentially affect these subdivisions and one residential property located on Helium Rd. north of Hillside Dr., but access would not be eliminated. Therefore, it is anticipated that the proposed project would increase accessibility overall through improved mobility and safety. Positive impacts to residential communities would include improved mobility, safety, and traffic operations and changes in access (i.e. additional lanes, frontage roads, intersection improvements and bicycle and pedestrian accommodations). Additional information on community cohesion can be found in the **Community Impacts Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

5.2.1.2 Limited English Proficiency

Executive Order (EO) 13166 on LEP calls for all agencies to ensure that their federally conducted programs and activities are meaningfully accessible to LEP individuals. The U.S. Department of Transportation (USDOT) defines LEP persons as individuals with a primary or home language other than English who must, due to limited fluency in English, communicate in their primary or home language if the individuals are to have an equal opportunity to participate effectively in or benefit from any aid, service, or benefit provided by the transportation provider or other USDOT recipient.

LEP populations were reported within the proposed project area within the 20 Census Block Groups (BG) and range from 0 to 8.3 percent. The LEP population consists of 2.2 percent of the total population (approximately 1.2 percent Spanish language, 0.4 percent other Indo-European language, 0.4 percent Asian and Pacific Island language, and 0.2 percent other language speakers). Translation services and other accommodations have been made available to assist LEP populations during public involvement events. Additional information can be found in the **Community Impacts Technical Report** included which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

5.2.1.3 Public Facilities and Services

The proposed project is not anticipated to have adverse impacts to public facilities or services located along the proposed project limits. The Randall County Fire Department Station 2 and two places of worship are located immediately adjacent to the proposed facility along the south side of FM 2186. One school (Hillside Elementary School) is located approximately 2,000-ft. east of the proposed facility. These are the only facilities located adjacent to the proposed project. There is no existing access to the elementary school from the existing Helium Rd. The proposed project would provide access to the future Perry Ave. that would connect access to the school. Access to the fire station and the two places of worship along the south side of FM 2186 would be altered by the proposed project, but would not be eliminated. Motorists attempting to access these facilities would need to access the eastbound frontage road by way of the FM 2186 and SL 335 intersection. Although the existing access would be altered, it is anticipated that the proposed project would provide increased accessibility through improved mobility and safety within and surrounding the proposed project. Additional information on the access of these facilities can be found in the **Community Impacts Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

5.2.1.4 ROW/Easements and Relocations/Displacements

The proposed project would require the acquisition of approximately 268 acres of additional ROW impacting 32 parcels, three permanent easements for drainage purposes, and no potential displacements based upon the current schematic design. No businesses would be displaced or require relocation. A metal structure at a storage facility along IH 40 would be impacted by the proposed project. However, the structural impact would not result in displacement or relocation of the storage facility business. No places of worship or public facilities would be displaced and no displacements are anticipated within EJ or LEP population census areas.

Acquisition and relocation assistance would be in accordance with the TxDOT Right-of-Way Acquisition and Relocation Assistance Program. Consistent with the USDOT policy, as mandated by the Uniform Relocation Assistance and Real Property Acquisitions Policy Act (URARPAPA), as amended in 1987, TxDOT would provide relocation resources (including any applicable special provisions or programs) to all displaced persons without discrimination. Although no displacements or relocations are anticipated because of the proposed project, TxDOT has and would continue to communicate with the affected property owners to provide adequate compensation for impacts to their properties. Additional information can be found in the **Community Impacts Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

5.2.1.5 Environmental Justice

Executive Order 12898 entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” requires each Federal agency to “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.”

All 20 census block groups wholly or partially contained within the proposed project limits report median household incomes greater than the 2017 Department of Health and Human Services (DHHS) poverty guideline of $24,600. The median household income of census block groups comprising the project limits ranged from $30,905 to $112,381 according to the *2011-2015 ACS 5-Year Estimates*. Analysis of the census data and windshield surveys did not result in the identification of low-income neighborhoods near or adjacent to the proposed project.

Potential impacts to EJ populations appears to be applicable in three census areas, Census Tract (CT) 216.08, BG 2, Block 2004; CT 143.00, BG3, Block 3120; and CT 117.00, BG1, Block 1011 (*Census 2010 geography*) which reports a minority population greater than 50 percent of the total population. CT 117.00, BG 1, Block 1011 would be affected by ROW acquisition impacts and potential noise impacts because of the new location section proposed between IH 40 to SW 9th Ave. Because the amount of ROW acquisition and potential traffic noise increase is not specific to only this location, the ROW and potential noise impacts are not determined to be disproportionately high to the EJ population compared to the non-minority population.

Based upon the analysis, the proposed project would not cause disproportionately high and adverse effects on any minority or low-income population in accordance with the provisions of EO 12898 and the Federal Highway Administration (FHWA) Order 6640.23. No further EJ analysis is required. Additional information can be found in the **Community Impacts Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

5.2.2 Section 4(f)

Section 4(f) of the U.S. Department of Transportation Act (USDOT Act) protects publicly owned and accessible parks, recreation areas, and wildlife and waterfowl refuges and historic sites, regardless of ownership and accessibility.

Recreation Trail (Locally known as "Old Soncy Trail")

Old Soncy Rd., previously a two-lane asphalt road, was replaced by TxDOT with SL 335 in the late 1990's and abandoned. Since then, the public utilizes the abandoned road as a hike and bike trail. TxDOT currently utilizes other areas within the Old Soncy Rd. ROW for storage of materials such as concrete traffic barriers, stockpiles of earthen material, etc. Although the abandoned road is used by the public for hike and bike activities, it is within TxDOT ROW that is still officially designated for transportation use. The abandoned road, locally known as "Old Soncy Trail", is located on the west side of SL 335 from Business IH 40 north to approximately 3 miles beyond the limit of the proposed project and is outside of the Amarillo city limits. The trail is unsigned and lacks amenities. Per coordination with the City of Amarillo Parks and Recreation Department, the last Amarillo Hike and Bike Master Plan was formally adopted by the City of Amarillo in 2003 and did not include the Old Soncy Trail. Therefore, the trail has not been officially dedicated or designated as a hike and bike trail.

The proposed project would transition the sidewalk into a shared use path to connect the sections of the Old Soncy Trail that are in conflict with the proposed project.

Amarillo Helium Plant Complex

The NRHP-eligible Amarillo Helium Plant is subject to Section 4(f) evaluation. The plant is nationally significant for its association with helium production in the United States from 1929 through the decommissioning and sale of the facility in 2007, at which time a preservation easement was placed on the property in perpetuity. Six alignments were proposed for the project, five of which were eliminated in favor of the preferred alternative because they were not prudent and/or feasible. The preferred alternative would require 5.96 acres of ROW from the 18.56-acre parcel encompassing the Helium Plant property. It was determined that a Section 4(f) Net Benefit Programmatic approach was most appropriate for the property due to the current condition and use of the property, planned mitigation activities, and because the future do-nothing and avoidance alternatives were deemed infeasible. TxDOT submitted the Determination of Direct effects to the Helium Plant to the Amarillo Historical Preservation Foundation, Preservation Texas, Society for Industrial Archaeology (at Michigan State University), the National Trust for Historic Preservation, and to the Advisory Council on Historic Preservation. Mitigation measures included:

- TxDOT coordination with consulting parties and signatories at 30 percent, 60 percent, and 90 percent stages of design completion;
- TxDOT will prepare a NRHP form for the Amarillo Helium Plant for the THC and property owner to use as they see fit;
- TxDOT will reformat existing research on the history of helium production in the state of Texas and will transmit the information electronically to THC;
- TxDOT will improve the existing pull-off (within existing ROW) to the Helium Plant Historical Marker for easier visitor access; and
- TXDOT will transmit funds to the THC to supplement statewide easement programs, stabilization and preservation efforts, and their grant program. Funds would be available to the property owner to make improvements to the Helium Plant should the property owner choose to apply for them.

The consulting parties had 30 days from receipt of the document to comment on the determination of direct effects and mitigation measures set forth for the Amarillo Helium Plant. For additional information regarding mitigation measures and the preferred alignment, see the **Section 4(f) Net Benefit Programmatic for Historic Sites** checklist (approved June 8, 2017) is available in **Appendix D**.

5.2.3 Section 6(f)

When parkland has been acquired or developed with funds provided by the Land and Water Conservation Fund (LWCF) Act of 1965, and this land is required for highway ROW, a Section 6(f) evaluation process must be followed. Section 6(f) of the LWCF Act is concerned with transportation projects that propose impacts or the permanent conversion of outdoor recreational property that was acquired or developed with LWCF Act grant assistance, which is administered by the TPWD. Properties funded by the LWCF were not identified within the proposed project limits; therefore, a Section 6(f) Evaluation is not required.

5.2.4 Water Resources

The following sections summarize information also included in the **Water Resources Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

5.2.4.1 Groundwater

The TWDB and Texas Commission on Environmental Quality (TCEQ) data were used to identify six water wells within the study area. Four of the six wells were located and identified in the field. One is located on the north side FM 2186 at the City of Amarillo Pump Station and three are located on the east side of Helium Rd. between FM 2186 and IH 40 and no longer appear to be actively pumping water. The two wells not located in the field are located north of Business IH 40 and on the west side of Soncy Rd. north of Business IH 40. According to data from the TWDB, the primary uses of the water wells are for irrigation and public use. The four known wells located in the field would be impacted by the proposed project and would need to be properly plugged in accordance with state statutes. If the other two wells are located as mapped by TWDB within the study area, they would also need to be properly plugged in accordance with state statutes.

5.2.4.2 Wetlands and Jurisdictional Waters of the U.S.

Pursuant to EO 11990 (Protection of Wetlands), Section 404 of the Clean Water Act (CWA), and Section 10 of the Rivers and Harbors Act of 1899, an investigation was conducted to identify potential waters of the U.S., including wetlands, within the study area.

Two manuals [*1987 Corps of Engineers Wetland Delineation Manual* (Technical Report Y-87-1) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region*] were used for identifying potential waters of the U.S., including wetlands based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. National Wetland Inventory (NWI) maps, Geographic Information System (GIS) data, United States Geological Survey (USGS) maps, Federal Emergency Management Agency (FEMA) floodplain maps, and field observations on April 8 and 9, 2015 were utilized to determine the features that are considered potentially jurisdictional waters and wetlands.

There are three playa features located within the study area. One playa is located north of FM 2186 along Helium Rd. Approximately 0.08 acre of impacts may occur to the playa resulting from the construction of an access from the proposed project to the existing Helium Rd. The second playa is located along Helium Rd. south of Hillside Rd. Approximately 7.83 acres of impacts may occur to the playa resulting from the construction of the proposed roadway and retention basin. The third playa is located along Helium Rd. south of SW 34th Ave. Approximately 16.27 acre of impacts may occur resulting from the construction of the proposed roadway and retention basin. The precise acreage of impacts would not be known until final design has been completed.

Playas may be regulated under Section 404 of the CWA if there is a hydrologic or “significant nexus” to navigable waters. For each of the playas, there is not a significant

nexus to navigable water. These features would not be considered jurisdictional and would not be subject to Section 404 of the CWA.

The jurisdictional status of each playa was also evaluated under the new regulations in anticipation of the implementation of the Clean Water Rule: Definition of "Waters of the United States." Based on the rule, waters located in whole or in part in the 100-year floodplain and that are within 1,500-ft. of the ordinary high water mark (OHWM) of a traditional navigable water, interstate water, the territorial seas, an impoundment, or a tributary, as defined in the rule ("floodplain waters") would be considered jurisdictional. The playas are not located in the 100-year floodplain and are not within 1,500-ft. from the OHWM of a jurisdictional feature (West Amarillo Creek and a tributary to West Amarillo Creek). The nearest playa is approximately 3,700-ft. from Spring Daw, a tributary to the Prairie Dog Town Fork of the Red River. These features would not be considered jurisdictional under the Clean Water Rule.

Coordination under the Fish and Wildlife Coordination Act (FWCA) would not be necessary as the proposed project does not contain any waters subject to Section 404. EO 11990 on wetlands does not apply because no wetlands would be impacted.

The wildlife habitat associated with the playas can be found in the Vegetation and Wildlife Habitat Section and in the **Biological Resources Technical Report** for the proposed project which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

5.2.4.3 Floodplains

FEMA Flood Insurance Rate Maps (FIRMs) were reviewed to determine flood zones within the area for the proposed project. The study area is located within three FIRMS (FEMA Map Number 48381C0205E, June 4, 2010; FEMA Map Number 48381C0065E, June 4, 2010; and FEMA Map Number 48375C0504C, June 4, 2010). There are five locations within the study area which are designated as special flood hazard areas inundated by the 100-year flood as either Zone A, no base flood elevations determined or Zone AE, base flood elevations determined. There are two locations within the study area designated as Zone X (Other Flood Areas) which are: areas of the 500-year flood; areas of the 100-year flood with average depths of less than 1-ft. or drainage areas less than one square mile. The remaining study area is designated as Zone X (Other Areas), areas determined to be outside the 500-year floodplain. Randall and Potter County and the City of Amarillo are participants in the Federal Emergency Management Agency - National Flood Insurance Program. The floodplain areas associated with the proposed project are shown on **Appendix A-2: FEMA Floodplain and USGS Topographic Quadrangle Map.**

The hydraulic design for this project would be in accordance with current FHWA and TxDOT design policies and standards. The proposed project would be in compliance with 23 Code of Federal Regulations (CFR) 650 regarding location and hydraulic design of highway encroachments within the floodplains. The proposed project would comply with EO 11988 which requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains

and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. The mainlanes and frontage roads would be designed to be above the 100-year floodplain at the edge of the travel way. The proposed project would not increase the base flood elevation to a level that would violate applicable floodplain regulations and ordinances. The hydraulic design practices would be in accordance with current TxDOT and FHWA design policies and standards. Coordination with the local floodplain administrator would be required because the project is within the 100-year floodplain. This coordination will be completed prior to the start of construction.

In accordance with EO 11988, the only alternative considered during the course of project development that would avoid encroachment on floodplains was the No-Build alternative. The No-Build alternative was determined to be not practicable and would not meet the purpose and need of the proposed project. Moreover, the proposed project would conform to state floodplain protection standards. The proposed project is being designed to avoid impacts to floodplains to the maximum extent feasible and practicable.

5.2.4.4 Water Quality

Texas Pollution Discharge Elimination System (TPDES)

The proposed project would involve five or more acres of earth disturbance. TxDOT would comply with TCEQ's TPDES Construction General Permit (CGP). A Stormwater Pollution Prevention Plan (SW3P) would be implemented, and a construction site notice would be posted on the construction site. A Notice of Intent (NOI) and a Notice of Termination (NOT) would be required.

Potential impacts to surface water quality may arise during construction activities. During construction, spills would be mainly limited to fuels (i.e., petrochemicals) and lubricants used for construction equipment. Construction in the immediate area of wetlands and waters can be assumed to generate additional sediment loads to the water bodies if bare earth is exposed for an extended period and not controlled using erosion control facilities. During operation, the use of fertilizers, herbicides and/or pesticides could result in reduce water quality due to runoff.

The proposed project and associated activities would be implemented, operated, and maintained using Best Management Practices (BMPs) to control the discharge of pollutants from the project site. Wherever and whenever it is necessary, feasible, and practical BMPs would be incorporated during construction of the proposed project. For example, permanent vegetation (seeding mix) would be utilized for stabilization where necessary for erosion control.

5.2.5 Biological Resources

The study area consists of the existing and proposed project limits and is within the HIPL and the SWTB Ecoregions as described in the 2012 Texas Conservation Action Plan (TCAP). The HIPL and SWTB have been converted from historical short and midgrass prairies with abundant wildlife to mostly farmland, oil and gas exploration, wind power generation, and some urban development.

The TCAP identifies issues associated with new transportation projects which may negatively affect species of greatest conservation need (SGCN) populations, rare

communities, and the habitats on which they depend in this region. Transportation improvements, whether upgrades of existing facilities or new construction, may disconnect intact habitats, contribute to stormwater pollution, and provide barriers to wildlife movements. Other issues noted include the use of non-native seed sources to stabilize disturbed areas after construction and potential impacts to playas.

The proposed transportation improvements are not expected to alter existing travel corridors to aquatic and terrestrial wildlife. After construction is completed, the areas of bare ground resulting from the construction activity would be reseeded/revegetated according to TxDOT standards.

A Biological Evaluation (BE) and a **Biological Resources Technical Report** has been uploaded into ECOS and is available for review at the TxDOT Amarillo District office. A summary from the technical report is included in the following sections. Since the completion of the BE and technical report, design changes have occurred and the summary information below has been revised to reflect these changes.

5.2.5.1 Threatened and Endangered Species

The Endangered Species Act (ESA) affords protection for federally-listed threatened and endangered species and, where designated, critical habitat for these species. The U.S. Fish and Wildlife Service (USFWS) maintains a list of federally threatened and endangered species of potential occurrence for each Texas County. The Official USFWS list was obtained on May 1, 2017 and lists the least tern, whooping crane, and Arkansas River shiner as potentially occurring in the Randall or Potter Counties. Although these species have the potential for occurring in the county, the project area contains no suitable habitat such as braided streams, rivers, wetlands, or grasslands interspersed with shrubs for either species. The proposed project would have no effect on any of the federally-listed species.

TPWD maintains a list of threatened and endangered species (both state and federally-listed) and state species of concern for each Texas County. Based on the evaluation performed for the BE, the proposed project is not within the range and suitable habitat of state protected species. The proposed project would have no impact on state-listed species. If any individuals of state-listed species are observed within the project area during construction, care would be taken to avoid harming them; therefore, no impacts to state-listed species would occur because of the proposed project.

TPWD also maintains special species lists through the Texas Natural Diversity Database (TXNDD) by county. The TXNDD is a geo-referenced database of documented occurrences of rare, threatened and endangered species of Texas maintained by TPWD. Data was obtained from TPWD on April 30, 2015 and reviewed for the proposed project. Data was also obtained from TPWD on April 24, 2017 to determine if documentation of any additional species had occurred. The occurrences identified on the 2017 data were the same as those included in the 2015 data. The TXNDD review met all the requirements of the TxDOT-TPWD Memorandum of Agreement (MOA) for sharing and maintaining TXNDD information. The search radius was 10 miles from the proposed project limits. There are 14 known element occurrences of state or federally-listed species or managed

areas within 10 miles of the proposed project. There are six element occurrences for prairie dog towns recorded within 10 miles of the proposed project and seven element occurrences within 1.5 miles of the proposed project. A prairie dog town, not included in the TXNDD data, is located within the study area on the south side of Business IH 40 in the eastern part of the old Helium Plant. BMPs from the TxDOT Programmatic Agreement (PA) will be utilized for the listed species that could occur within the study area. Per BMPs, if burrows are to be excavated/directly impacted coordinate with the TPWD Wildlife Habitat Assessment (WHAB) Program. BMP's for the prairie dog will be implemented for the project and are detailed in the Environmental Permits, Issues, and Commitments (EPIC) sheet. There is one element occurrence for the Texas garter snake within 10 miles of the proposed project. The TXNDD is a potential presence database that cannot be interpreted as presence/absence data.

5.2.5.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, egg in part or in whole, without a federal permit issued in accordance within the Act's policies and regulations. Migratory patterns would not be affected by the proposed project. If migratory birds are encountered on-site during project construction, adverse impacts on protected birds, active nests, eggs, and/or young would be avoided. The contractor would remove all old migratory bird nests from October 1 to February 15 from any structure where work is performed. In addition, the contractor would be prepared to prevent migratory birds from building nests between February 15 and October 1, per the EPIC sheet.

5.2.5.3 Vegetation and Wildlife Habitat

Vegetation

Based on the field surveys conducted on April 8 and 9, 2015, adjustments were made to the Ecological Mapping Systems of Texas (EMST) vegetation values to better reflect existing conditions. The habitat types were updated based on the April 2017 schematic design. The existing habitat types in the study area consist of approximately 251.80 acres of urban habitat, 121.29 acres of mixed, arid, sand grassland, 96.14 acres of agriculture, 22.09 acres of disturbed prairie, 24.18 acres of playa, and no CRP or other improved grassland within the study area. Because detailed design is not available at this time, all habitat within the study area is considered impacted.

Agriculture areas are those areas that have been altered in the past and utilized for row crops and livestock grazing. There are approximately 96.14 acres within the study area. Typical row crops for the area are cotton, wheat, and sorghum. The area near the playa may have been altered in the past for row crops, but it currently appears to be utilized for other agricultural purposes such as livestock grazing.

There are three playas that are mapped within the study area and total approximately 24.18 acres. However, due to urbanization the large mapped playa south of Hillside Rd. has been partially filled by developers which affect certain species that utilize the playa for a water and vegetation source. Typical vegetation within and around the perimeter of the playas include western wheatgrass (*Pascopyrum smithii*), buffalograss (*Bouteloua*

dactyloides), purple threeawn (*Aristida purpurea*), and pale spikerush (*Eleocharis macrostachya*). Vegetation that was observed within, and around the playas, included kochia (*Kochia spp*.), old world bluestem (*Bothriochloa ischaemum*), buffalograss, and the Texas sunflower (*Helianthus praecox*). The proposed project intersects and impacts approximately 24.18 acres of playa habitat. Once the project advances through detailed design, final impact acreages would need to be determined.

Urban areas contain trees, shrubs, and grasses associated with residential and commercial properties or unmaintained adjacent properties. There is approximately 251.80 acres of urban habitat within the study area. The vegetated areas within the existing SL 335 ROW are considered urban as it has been manipulated for transportation use.

Disturbed prairie areas are those areas modified by construction activities where urban development has been plotted. Approximately 22.09 acres of disturbed prairie is within the study area. Typical vegetation in these disturbed areas of this region include western wheatgrass, purple threeawn, sideoats grama, and buffalograss. The only area considered disturbed prairie in the study area is west of Helium Road and south of Hillside Road.

Mixed, Arid, and Sand Grasslands are comprised of a mixture of shortgrass and mixed grass prairies. Approximately 121.29 acres would be potentially impacted. This would exceed the MOU PA threshold. In this area, there have also been CRP/other improved grassland initiatives, grassland systems usually consisting of introduced species. Vegetation of native shortgrass prairie features blue grama (*Bouteloua gracilis*), sand sagebrush (*Artemisia filifolia*), western wheatgrass, and alkali sacaton (*Sporobolus airoides*). Vegetation that was observed in the area included buffalograss, sprangletop (*Leptochloa dubia*), and sideoats grama (*Bouteloua curtipendula*). This habitat type is located within the southern and northern portion of the study area. These areas were previously in the CRP.

Texas Parks and Wildlife Department Coordination Summary

In accordance with Title 43 of the Texas Administrative Code, Part 1, Chapter 2, Subchapter G, of the MOU between TxDOT and TPWD, several coordination triggers are used to determine whether coordination with TPWD is required. **Table 5-1** contains the triggers and project specific information.

Table 5-1: TPWD Coordination Triggers

Trigger	Applies to the Project?	Explanation
The project is within the range of a state threatened or endangered species or SGCN, as identified by the TPWD county list, and there is suitable habitat for the species within the project area unless BMPs as defined in the MOU are implemented as provided by a programmatic agreement.	Yes	The proposed project is within the range for the Baird's sparrow, plains spotted skunk, black-tailed prairie dog, and the Texas Horned Lizard and suitable habitat is present. Pursuant to the TXDOT TPWD MOU on BMPs, TXDOT will implement BMPs for the Texas Horned Lizard, plains spotted skunk, black-tailed prairie dog, and Bird BMPs for Baird's sparrow. The BMPs will be added to the EPIC sheet for the proposed project and shared with the contractor.
The project may adversely impact important remnant vegetation based on the judgment of a qualified biologist or as mapped in the TXNDD.	No	No important remnant vegetation was identified within the project area by project biologists or by the TXNDD.
The project requires a nationwide permit with pre-construction notification or an individual permit issued by the USACE.	No	No jurisdictional waters present within the project ROW.
The project includes in the TxDOT ROW or conservation, construction, or drainage easement, more than 200 linear feet of stream channel for each single and complete crossing of one or more of the following that is not already channelized or otherwise maintained: a) channel realignment; or b) stream bed or stream bank excavation, scraping, clearing, or other permanent disturbance.	No	No stream channels present within the ROW.
The project contains known isolated wetlands outside existing TxDOT ROW that would be directly impacted by the project.	No	No wetlands exist in the project area.
The project may impact at least 0.10 acre of riparian vegetation based on the judgment of a qualified biologist or as mapped in the EMST.	No	No riparian vegetation occurs within the project area; therefore, none would be impacted.
The project disturbs habitat in an area equal to or greater than the area of disturbance indicated in the *Threshold Table Programmatic Agreement*.	Yes	The proposed project would impact agriculture; mixed, arid, sand grassland; and playa EMST mapped habitat types above the thresholds.

Source: Project Team, April 8 and 9, 2015 and April 24, 2017.

Early coordination with TPWD was initiated and completed on July 28, 2015 as documented in **Appendix D: Interagency Coordination**. Through coordination, TPWD recommended avoiding impacts to prairie dogs or utilizing a prairie dog relocation specialist to relocate the individuals, use a silt fence to delineate the construction zone and exclude prairie dogs, avoid disturbing burrowing owl habitat during nesting season, perform a survey for the Mexican mud plantain (*Heteranthera mexicana*), perform surveys for three bat species that may have habitat in the project area, and minimizing potential

impacts to playas. TxDOT will include these commitments on the EPIC sheet for the proposed project.

Due to design changes since the initial coordination with TPWD in 2015, additional coordination occurred and was completed on May 2, 2017. See **Appendix D: Interagency Coordination** for documentation. TPWD provided two comments regarding the playa located south of SW 34th Ave. TPWD recommended that PSLs not be placed in the playa and that long-term water quality BMPs be utilized to minimize pollution from roadway runoff. TxDOT agreed with these recommendations and will include these commitments on the EPIC sheet for the proposed project.

Wildlife

Overall, there is minimal habitat for wildlife species beyond the limits of most of the study area due to urban development and altering of native habitat for agricultural purposes. Minimal woody vegetation is present within the project limits which would be removed because of the proposed project. These areas are associated with urban development. No long-term impacts to wildlife populations are anticipated because of the proposed project. In areas temporarily impacted, wildlife species adapted to urban areas would likely re-colonize the available habitat areas after construction. Due to overall lack of available habitat within the study area, the impacts to wildlife would be considered minor.

Invasive Species and Beneficial Landscaping Practices

Permanent soil erosion control features would be constructed as soon as feasible during the early stages of construction through proper sodding and/or seeding techniques. Disturbed areas would be restored and stabilized as soon as the construction schedule permits and temporary sodding would be considered where large areas of disturbed ground would be left bare for a considerable length of time. In accordance with EO 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping, seeding and replanting with TxDOT approved seeding specifications that comply with EO 13112 would be done where possible. Moreover, abutting turf grasses within the ROW would reestablish throughout the project limits. Soil disturbance would be minimized to ensure that invasive species would not establish in the ROW.

5.2.6 Topography and Soils

According to the Amarillo West and Buffalo Stadium USGS topographic quadrangles, on the south side of IH 40 the area slopes to the south from an elevation of approximately 3,750-ft. above mean sea level (msl) to an elevation of approximately 3,690-ft. above msl at FM 2590. North of IH 40 the area slopes to the north from an elevation of approximately 3,750-ft. above msl to approximately 3,640-ft. above msl at the northern limit of the study area. According to the Natural Resource Conservation Service's (NRCSs) Soil Survey of Randall County, Texas (1970), there is one general soil types within the study area for the county. The Pullman association is nearly level to gently sloping deep soils that have a loamy surface layer and a firm clay subsoil. According to the NRCS Soil Survey of Potter County, Texas (1974), there are two general soil types within the study area for the county. The Acuff-Paloduro-Olton is nearly level to sloping, deep, non-calcareous and calcareous loamy soils and the Pullman is nearly level to gently sloping deep non-calcareous loamy soils.

Farmland Protection Policy Act (FPPA)

The proposed project would convert approximately 196 acres of currently farmed soils (154 directly and 42 indirectly). The proposed project would convert farmland subject to the FPPA to a non-agricultural, transportation use. The assessment score on Section VI of form NRCS-CPA-106 was 33, which would result in a total assessment score of less than 160. No further consideration for protection is required and no additional sites need to be evaluated. The completed form is part of the BE which has been uploaded to the ECOS for the proposed project.

5.2.7 Cultural Resources

Below is a summary of the cultural resources impact analysis associated with the proposed project. More detailed information is on file at the TxDOT Amarillo District.

5.2.7.1 Historical Resources

The area of potential effect (APE) for the proposed project was determined to follow the existing ROW where no additional ROW is proposed, 150-ft. from proposed ROW along the existing transportation corridor; and 300-ft. from the proposed ROW for the new alignment areas in accordance with the First Amended Programmatic Agreement for Transportation Undertakings 2015 (PA-TU). Additionally, an historic age-range was established for the proposed project and was determined to include any structure constructed in 1972 or before. A search of the *Texas Historic Sites Atlas* maintained by the Texas Historical Commission (THC) was conducted to identify National Register of Historic Places (NRHP) properties or districts, National Historic Landmarks (NHLs), Recorded Texas Historic Landmarks (RTHLs), Official Texas Historical Markers (OTHMs), State Antiquities Landmarks (SALs), cemeteries, or other cultural resources that may have been previously recorded in the APE or the 1,300-ft study area surrounding the APE.

A Research Design and Historic Resources Survey Report (HRSR) were prepared for the proposed project. A total of 54 historic-age resources on 24 parcels were identified within the APE, including Amarillo Helium Plant which was previously determined eligible for listing in the NRHP. No additional properties were recommended as eligible for inclusion in the NRHP. Drainage easements and additional ROW have been added to the proposed project since the HRSR was submitted in 2015, changing the APE. Only one additional parcel was impacted by the expanded APE; however, there are no buildings or structures located on the parcel so no additional survey work was required. Due to the changes in the expanded APE, a new Historic Project Coordination Request was completed for the project and approved on July 5, 2017.

5.2.7.2 Archaeological Resources

A search of the Texas Archeological Sites Atlas (Atlas) maintained by the Texas Historical Commission (THC) and the Texas Archeological Research Laboratory (TARL) was conducted in order to identify archeological sites, historical markers (Recorded Texas Historic Landmarks or RTHLs), properties or districts listed on the National Register of Historic Places (NRHP), State Antiquities Landmarks (SALs), cemeteries, or other cultural resources that may have been previously recorded in or near the APE, as well as previous surveys undertaken in the area. Per TxDOT requirement, a review of a one-kilometer

buffer area around each specific project APE was undertaken to provide insight into the types of known and potential historic properties that may be impacted by the project.

According to the Atlas survey coverage data, one archeological survey has been conducted within the APE and two others fall within the one-kilometer buffer area either terminating at or running along portions of the APE. The surveys include a 1987 TxDOT survey along South Soncy Rd. that terminates at FM 2186, a survey conducted in 2012 by SWCA Environmental Consultants (SWCA) for the Federal Energy Regulatory Commission (FERC) that terminates at the western edge of the APE just south of IH 40, and a 1990 TxDOT survey from IH 40 northward along the portion of North Soncy Rd. in the APE including the north project terminus and beyond. No cultural resources were identified in any of these surveys.

In addition, there are no previously recorded archeological sites or other resources within the APE or the one-kilometer buffer area around the APE, but two historical markers are present within the one-kilometer buffer zone. These include the Amarillo Helium Plant just north of the FM 2186 near the right angle curve that will become the north leg of SL 335, and the marker for the City of Amarillo, located just east of the APE along Business IH 40 (Route 66) near the north terminus of the APE. The Helium Plant marker is misplotted on the Atlas and is actually located approximately 5 miles north of the marked Atlas location about 362-ft. west of the proposed intersection of SL 335 and North Amarillo Rd.

Due to geological conditions and soils present, which could preserve archeological historic properties, TxDOT recommended a survey for the APE. An intensive survey was conducted on July 27 to 30, 2015, under Texas Antiquities Permit 7325. Both shovel testing and mechanical trenching were utilized during the survey. Shovel test units were focused in areas where ground surface visibility was below 30 percent. Soils appeared to be of sufficient depth to contain subsurface cultural materials, and/or previous disturbance appeared minimal. Mechanical trenching was conducted at the perimeters of the three playas in the APE. A small portion of the proposed ROW crosses the now closed Amarillo Helium Plant, which is a National Register of Historic Places (NRHP) eligible property. The majority of the proposed ROW falls in agricultural fields in various states of use (fallow, plowed, mowed, crops). No archeological sites or isolated artifacts were documented during the survey. All materials (notes, photographs, administrative documents, and other project data) generated from this work will be curated at the Center for Archaeological Studies (CAS) at Texas State University where they will be made permanently available to future researchers as per 13 TAC 26.16-17.

Due to the design changes that occurred since the completion of the archeological survey in 2015, a TxDOT staff archaeologist reviewed the changes in proposed ROW and the 2015 archaeological APE on May 3, 2017. The TxDOT staff archaeologist concluded that the additional 9.0 acres of proposed ROW and the addition of 16.0 acres of proposed easements did not change the finding of “no archaeological historic sites affected” from the 2015 intensive survey. The recommendation after review was that “no State Antiquities Landmarks affected, no survey or further work is warranted, no additional consultation required, and the project may advance…” No further archaeological survey or further work is warranted and no additional consultation with SHPO is required.

TxDOT initiated tribal consultation on May 19, 2015 for which the comment period ended on June 26, 2015. Additional tribal coordination was initiated on May 12, 2017 for which the comment period ended on June 12, 2017. No objections were received during the tribal comment periods.

5.2.8 Air Quality

5.2.8.1 Transportation Conformity/Ozone

The project is located in Randall and Potter County, which are in an area in attainment or unclassifiable for all national ambient air quality standards (NAAQS); therefore, the transportation conformity rules do not apply.

5.2.8.2 Carbon Monoxide (CO)

Based on the TPP approved traffic (March 2017) for the proposed project, traffic for the design year 2035 is projected to be 25,840 vehicles per day (vpd) along SL 335 and 39,500 vpd along IH 40. A prior TxDOT modeling study and previous analyses of similar projects demonstrated that it is unlikely that a carbon monoxide standard would ever be exceeded as a result of any project with an average annual daily traffic (AADT) below 140,000. The AADT projections for the project do not exceed 140,000 vpd; therefore, a Traffic Air Quality Analysis was not required.

5.2.8.3 Congestion Management Process

This project is located in an area that is in attainment or unclassifiable for all NAAQS; therefore, a congestion management process (CMP) analysis is not required.

5.2.8.4 Mobile Source Air Toxics

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act (CAA) Amendments of 1990, whereby Congress mandated that the Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (https://www.epa.gov/iris/). In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 2011 National Air Toxics Assessment (NATA) (https://www.epa.gov/national-air-toxics-assessment). These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority MSAT, the list is subject to change and may be adjusted in consideration of future EPA rules.

Motor Vehicle Emissions Simulator (MOVES)

According to EPA, MOVES2014 is a major revision to MOVES2010 and improves upon it in many respects. MOVES2014 includes new data, new emissions standards, and new functional improvements and features. It incorporates substantial new data for emissions, fleet, and activity developed since the release of MOVES2010.

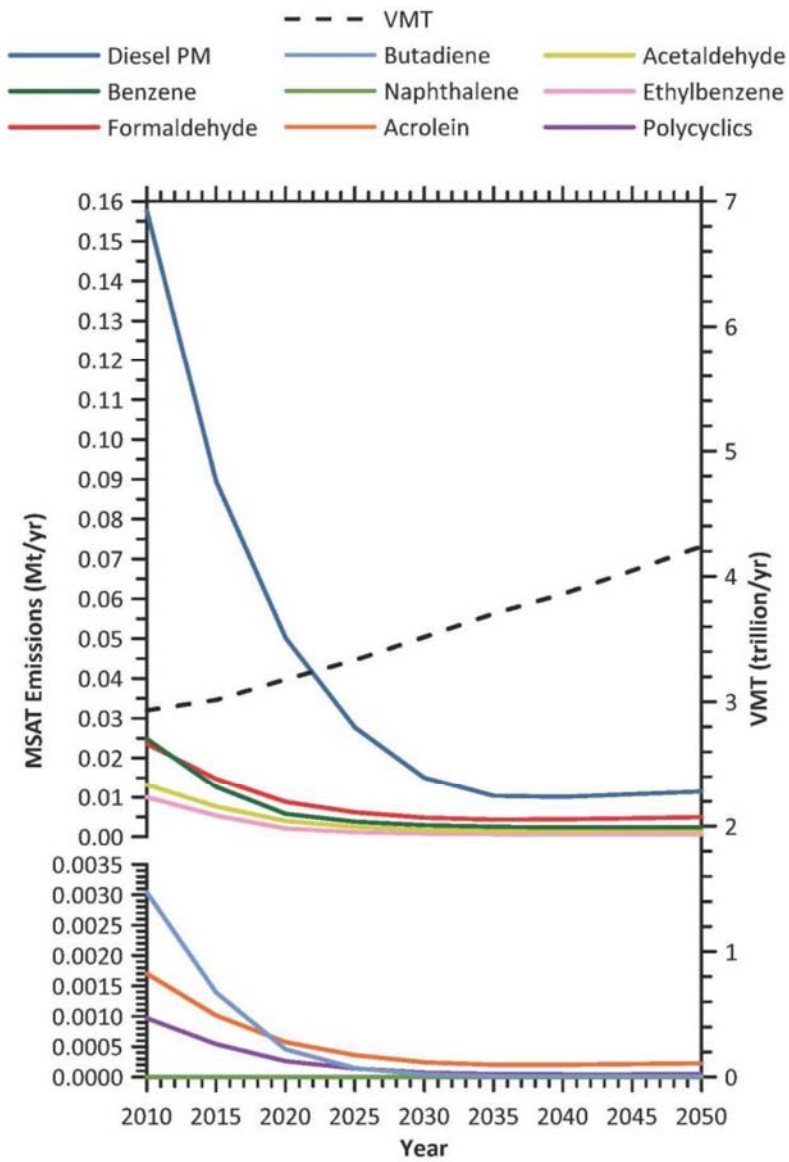
These new emissions data are for light-and heavy-duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES2014 also adds updated vehicles sales, population, age distribution, and vehicle miles traveled (VMT) data. MOVES2014 incorporates the effects of here new Federal emissions standard rules not included in MOVES2010.

These new standards are all expected to impact MSAT emissions and include Tier 3 emissions and fuel standards starting in 2017 (79 FR 60344), heavy-duty greenhouse gas regulations that phase in during model years 2014-2018 (79 FR 60344), and the second phase of light duty greenhouse gas regulations that phase in during years 2017-2025 (79 FR 60344).

Since the release of MOVES2014, EPA has released MOVES2014a. In the November 2015 MOVES2014a Questions and Answers Guide (https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100NNR0.txt), EPA states that for on-road emissions, MOVES2014a adds new options requested by users for the input of local VMT, includes minor updates to the default fuel tables, and corrects an error in MOVES2014 brake wear emissions. The change in brake wear emissions results in small decreases in PM emissions, while emissions for other criteria pollutants remain essentially the same as MOVES2014.

Using EPA's MOVES2014a model, as shown in **Graph 5-1**, FHWA estimates that even if VMT increases by 45 percent from 2010 to 2050 as forecast, a combined reduction of 91 percent in the total annual emissions for the priority MSAT is projected for the same time period.

Graph 5-1: Projected National MSAT Emission Trends 2010-2050 for Vehicles Operating on Roadways Using EPA's MOVES2014a Model



Source: EPA MOVES2014a model runs conducted by FHWA, September 2016.
Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorological, and other factors.

Diesel PM is the dominant component of MSAT emissions, making up 50 to 70 percent of all priority MSAT pollutants by mass, depending on calendar year. Users of MOVES2014a will notice some differences in emissions compared with MOVES2010b. MOVES2014a is based on updated data on some emissions and pollutant processes compared to MOVES2010b, and also reflects the latest Federal emissions standards in place at the time of its release. In addition, MOVES2014a emissions forecasts are based

on lower VMT projections than MOVES2010b, consistent with recent trends suggesting reduced nationwide VMT growth compared to historical trends.

MSAT Research

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of the NEPA. The FHWA, EPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this emerging field.

Project Specific MSAT Assessment

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives, found at: http://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobile_source_air_toxics/msatemissions.pdf

For each alternative in this document, the amount of MSAT emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for the Build Alternative is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the Build Alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to EPA's MOVES2014 model, emissions of all of the priority MSAT decrease as speed increases. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 90 percent between 2010 and 2050 (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, October 12, 2016 – (https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/index.cfm). Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all cases.

The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore,

under each alternative there may be localized areas where ambient concentrations of MSAT could be higher under the Build Alternative than the No Build Alternative. The localized increases in MSAT emissions would likely be most pronounced along the new location roadway section of SL 335 and near the new IH 40 and SL 335 interchange. However, the magnitude and the duration of these potential increases compared to the No Build alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. In sum, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region- wide MSAT levels to be significantly lower than today.

Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts Analysis
In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The U.S. Environmental Protection Agency (EPA) is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, https://www.epa.gov/iris/). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). A number of HEI studies are summarized in Appendix D of FHWA's Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents (https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/index.cfm).
Among the adverse health effects linked to MSAT compounds at high exposures are; cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI Special Report 16, https://www.healtheffects.org/publication/mobile-source-air-toxics-

critical-review-literature-exposure-and-health-effects or in the future as vehicle emissions substantially decrease.

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable. It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (Special Report 16, https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA states that with respect to diesel engine exhaust, "[t]he absence of adequate data to develop a sufficiently confident dose-response relationship from the epidemiologic studies has prevented the estimation of inhalation carcinogenic risk (EPA IRIS database, Diesel Engine Exhaust, *Section II.C*.
https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0642_summary.pdf

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

Construction Emissions

During the construction phase of this project, temporary increases in PM and MSAT emissions may occur from construction activities. The primary construction-related emissions of PM are fugitive dust from site preparation, and the primary construction-related emissions of MSAT are diesel particulate matter from diesel powered construction equipment and vehicles.

The potential impacts of particulate matter emissions will be minimized by using fugitive dust control measures contained in standard specifications, as appropriate. The Texas

Emissions Reduction Plan (TERP) provides financial incentives to reduce emissions from vehicles and equipment. TxDOT encourages construction contractors to use this and other local and federal incentive programs to the fullest extent possible to minimize diesel emissions. Information about the TERP program can be found at: https://www.tceq.texas.gov/airquality/terp.

However, considering the temporary and transient nature of construction-related emissions, the use of fugitive dust control measures, the encouragement of the use of TERP, and compliance with applicable regulatory requirements; it is not anticipated that emissions from construction of this project will have any significant impact on air quality in the area.

5.2.9 Hazardous Materials

A hazardous materials Initial Site Assessment (ISA) was completed in April 2015 and a **Hazardous Materials Technical Report** was completed in July 2015. The documents included the review of topographic and ROW maps, aerial photographs, a regulatory database search and review, and a site visit. Six hazardous materials sites were identified because of the ISA, including sites with Petroleum Storage Tanks (PSTs), a Resource Conservation & Recovery Act- Generator Facilities (RCRAGR06) site, and an Industrial and Hazardous Waste (IHW) site. The regulatory database search also listed a Leaking Petroleum Storage Tank (LPST), a Voluntary Cleanup Program (VCP) site, an Affected Property Assessment Report (APAR) site all associated with the Amarillo Helium Plant located on Business IH 40, one block north of IH 40. The low risk sites identified are summarized below and additional details can be reviewed in the **Hazardous Material Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

- **Coyote Corner** – located at 8800 Soncy Rd. and identified as a PST (ID# 77501). The facility has one 20,000 gallon tank with multiple compartments in use. The tank currently contains 15,000 gallons of gasoline and 5,000 gallons of diesel
- **Holmes Construction** – located at 8772 S. Coulter St. and identified as a PST (ID# 68242). The facility has three active above ground tanks, including a 4,000 gallon gasoline tank, a 6,000 gallon diesel tank, and an 8,000 gallon diesel tank, all currently in use.
- **Sundown Campground** – located at 10801 W. IH 40 and identified as a PST (ID# 23726). The facility has no active PSTs but had two underground PSTs that were removed from the ground. Both underground tanks were installed in 1979 and removed from the ground in 1990 with no reported leaks.
- **Gander Mountain** – located at 10300 W. IH 40 and identified as a RCRAGR06 (ID# TXR000081471) and IHW (ID#130733) site. The facility has a conditionally exempt small quantity generator of ignitable waste, corrosive waste, reactive waste, barium, lead, 2,4-Dinitrtoluene, and Methyl Ethyl Ketone. No violations, enforcements, or corrective actions have been reported. Status is inactive as a waste generator.
- **City Machine and Welding**– located at 9701 Business Loop IH 40 and identified as a RCRAGR06 (ID#TXD988087623) and IHW (ID#36206) site. City Machine and Welding is a conditionally exempt small quantity generator of corrosive waste,

cadmium, chromium, trichlorethylene, and spent halogenated solvents. City Machine and Welding has had five violations, including three in 2005, two in 2009 and one each in 1997, 2000, and 2003. They have also had four enforcements, including a written informal one in 2009 and verbal ones in 1997, 2000, and 2003. It is a conditionally exempt small quantity generator that is currently inactive.

In April 2017, the proposed project corridor was reviewed to address potential impacts from hazardous materials due to the changes in proposed ROW and addition of easements. No additional sites of concern were identified. None of the hazardous material locations identified during the site survey are anticipated to affect future project construction.

5.2.10 Traffic Noise

A traffic noise analysis was prepared in accordance with TxDOT's FHWA approved 2011 *Guidelines for Analysis and Abatement of Roadway Traffic Noise.* Existing and predicted traffic noise levels were estimated at receiver locations listed in **Table 5-2** (**Appendix B, Project Layout Map**) that represent land use activity areas adjacent to the proposed project that might be impacted by traffic noise and potentially benefit from feasible and reasonable noise abatement.

Table 5-2: Traffic Noise Levels [dB(A) Leq]

Receiver	NAC Category	NAC dB(A) Leq	Existing	Predicted (2035)	Change (+/-)	Noise Impact
R1 – House	B	67	56	60	+4	No
R2 – House	B	67	53	59	+6	No
R3 – Hindu Temple Building	D	52	40	40	0	No
R4 – Journey Church Playground	C	67	49	54	+5	No
R5 – Journey Church Building	D	52	40	40	0	No
R6 – House	B	67	53	54	+1	No
R7 – House	B	67	46	59	+13	Yes
R8 – House*	B	67	63	58	-5	No

Source: Study Team, April 2017.
**A negative change of noise levels was determined for R8 because although the receiver is adjacent to the project, it is also adjacent to Business IH 40 (West Amarillo Blvd.) which was not included in the predicted model because it is not part of the proposed project.*

The proposed project would result in a traffic noise impact at one representative receiver location and the following noise abatement measures were considered: traffic management, alteration of horizontal and/or vertical alignments, acquisition of undeveloped property to act as a buffer zone and the construction of noise walls.

Before any abatement measure can be proposed for incorporation into the project, it must be both feasible and reasonable. In order to be "feasible", the abatement measure must be able to reduce the noise level at greater than 50 percent of impacted, first row receivers by at least 5 dB(A); and to be "reasonable" it must not exceed the cost-effectiveness criterion of $25,000 for each receiver that would benefit by a reduction of at least 5 dB(A) and the abatement measure must be able to reduce the noise level to at least one impacted, first row receiver by at least 7 dB(A).

R7: This receiver represents a separate, individual residence along the new location section of the project. Noise walls that would achieve the minimum feasible reduction of 5 dB(A) while achieving a 7 dB(A) noise reduction design goal the residence would exceed the reasonable, cost-effectiveness criterion of $25,000.

None of the above noise abatement measures would be both feasible and reasonable; therefore, no abatement measures are proposed for this project. Results of the analysis are included in the **Traffic Noise Technical Report** prepared in May 2017 which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

To avoid noise impacts that may result from future development of properties adjacent to the project, local officials responsible for land use control programs must ensure, to the maximum extent possible, no new activities are planned or constructed along or within the following predicted (2035) noise impact contours shown in **Table 5-3**. The locations included in **Table 5-3** have areas of undeveloped land, based on visual evidence and building permit research completed in May of 2017.

Table 5-3: Traffic Noise Contours [dB(A) Leq]

Location		Land use	Impact Contour	Distance from ROW
North of SL 335	From FM 2590 to Helium Rd.	NAC Categories B&C	66	25 ft
		NAC Category E	71	0 ft
East of SL 335	From FM 2186 and SW 34th Ave.	NAC Categories B&C	66	0 ft
		NAC Category E	71	0 ft
	From IH 40 to SW 9th Ave.	NAC Categories B&C	66	0 ft
		NAC Category E	71	0 ft
West of SL 335	From IH 40 to SW 9th Ave.	NAC Categories B&C	66	0 ft
		NAC Category E	71	0 ft

Source: Study Team, April 2017.

Noise associated with the construction of the project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. However, construction normally occurs during daylight hours when occasional loud noises are more tolerable. None of the receivers are expected to

be exposed to construction noise for a long duration; therefore, any extended disruption of normal activities is not expected. Provisions will be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

A copy of this traffic noise analysis would be available to local officials. On the date of approval of this document (Date of Public Knowledge), FHWA and TxDOT are no longer responsible for providing noise abatement for new development adjacent to the project.

5.2.11 Indirect Impacts

An indirect effects analysis for the proposed project was conducted using a four-step approach in accordance with the *Practitioner's Handbook: Assessing Indirect Effects and Cumulative Impacts under National Environmental Policy Act (NEPA)* by the American Association of State Highway and Transportation Officials (AASHTO) (April 2011). The **Indirect Effects Technical Report** has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

In summary, the analysis found that although an existing roadway facility is currently present in the project area, conversion of that roadway from a non-freeway to a freeway facility has the potential to enhance development and accessibility by improving mobility and travel time for the surrounding environment. The City of Amarillo, Randall and Potter County have experienced a slow, but steady growth (approximately 3 to 5 percent, respectively from 2010 to 2013) which is anticipated to continue. Overall, the proposed project is not anticipated to substantially alter this trend and would result in induced growth effects through an increased rate of potential development within or surrounding the proposed project for the reasonable and foreseeable future.

Several of the vegetation areas, within the area of influence (AOI), would be indirectly affected by the proposed project from an induced rate of development of areas. The largest area within the AOI consists of urban areas. These urban areas consist of residential, commercial and roadway developments and include approximately 5,040 acres within the AOI. Unlike these urbanized areas, other areas identified within the AOI would likely be indirectly impacted from induced growth effects. Additional information is provided in the **Indirect Effects Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

Land use planning practices implemented by the City of Amarillo and included in the current Comprehensive Plan would help manage any indirect impacts within the study area, including impacts related to an accelerated rate of development and growth. Examples of regulatory growth and development management techniques include subdivision regulations, zoning ordinances and land development regulations. The responsibility of transportation providers such as TxDOT, local and regional agencies, developers and local governments would be to implement development and transportation systems that would complement land use or development management techniques currently in place. Indirect impacts would be amicable with local government and regional planning efforts.

5.2.12 Cumulative Effects

Council on Environmental Quality (CEQ) regulations (40 CFR § 1508.7) defines cumulative impacts (i.e., effects) as "the impact on the environment which results from the incremental impact of the proposed action when added to other past, present and reasonably foreseeable future actions." The purpose of a cumulative effects analysis is to view the direct and indirect impacts of the proposed project within the larger context of past, present, and future activities that are independent of the proposed project, but which are likely to affect the same resources in the future. This approach allows the evaluation of the incremental impacts of the proposed project considering the overall health and abundance of selected resources. The evaluation process for each resource considered may be expressed in shorthand form as follows:

BASELINE CONDITION (historical and current)	+	FUTURE EFFECTS (expected projects)	+	PROJECT IMPACTS (direct and indirect)	=	CUMULATIVE EFFECTS

The following five-step approach as described in TxDOT's *Cumulative Impacts Analysis Guidelines* (2014), was utilized to assess the potential cumulative effects of the past, present, and reasonably foreseeable actions to the resources in the project area:

1. Resource Study Area, Conditions and Trends;
2. Direct and Indirect Effects on Each Resource from the Proposed Project;
3. Other Actions – Past, Present, and Reasonably Foreseeable – and their Effect on Each Resource;
4. The Overall Effects of the Proposed Project Combined with other Actions; and
5. Mitigation of Cumulative Effects.

All the resource categories considered in this EA are candidates for cumulative effects analysis. The initial step of the cumulative effects analysis uses information from the evaluation of direct and indirect impacts in the selection of environmental resources that should be evaluated for cumulative effects. TxDOT's Guidance states: "If a project will not cause direct or indirect impacts on a resource, it will not contribute to a cumulative impact on that resource." CEQ guidance recommends focusing on key resource issues of national, regional, or local significance. To identify potential issues, consider whether the resource is:

- Protected by legislation or resource management plans;
- Ecologically important;
- Culturally important;
- Economically important; or
- Important to the well-being of a human community.

Applying the above criteria, the resources or environmental issues considered for the cumulative effects analysis are listed in **Table 5-4**. As recommended by CEQ guidance, specific indicators of each resource's condition are identified and shown. The use of indicators of a resource's health, abundance, and/or integrity are helpful tools in formulating quantitative or qualitative metrics for characterizing overall impacts to

resources. These indicators are also key aspects of each resource that have already been evaluated in terms of the project's direct and indirect impacts and facilitate greater consistency and objectivity in the analysis of cumulative effects.

Table 5-4: Resources Considered for the Cumulative Impacts Analysis

Resource or Topic Evaluated	TxDOT/CEQ Criteria[1]			Included for Cumulative Impacts Analysis (Yes or No)	Explanation for Including or Excluding the Resource or Topic from Cumulative Effects Analysis
	Would the Resource or Topic be Directly or Indirectly Impacted? (Yes or No)	Would the Direct or Indirect Impacts be Substantial?	Is the Resource in Poor or Declining Health? (Yes or No)		
Air Quality	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated. The proposed project is located in an area that is in attainment or unclassifiable for NAAQS.
Biological Resources					
T&E	No	No	Yes	No	Excluded because neither direct nor indirect impacts are anticipated.
MBTA	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Vegetation and Wildlife Habitat	Yes	No	Yes	Yes	Included because direct and indirect impacts are anticipated. The proposed project would impact agriculture and grasslands; disturbed prairie and playa habitat types.
Invasive Species and Beneficial Landscaping Practices	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Topography and Soils	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Socio-economic Resources					
Regional and Community Growth	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Community Cohesion	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
EJ Populations	No	No	No	No	Excluded because direct impacts are not considered substantial, would not be disproportionate, and no indirect impacts are anticipated.
LEP Populations	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.

[1] In accordance with TxDOT (2010) and CEQ (2007) selection criteria for limiting the scope of cumulative impacts analysis.

Resource or Topic Evaluated	TxDOT/CEQ Criteria[1]			Included for Cumulative Impacts Analysis (Yes or No)	Explanation for Including or Excluding the Resource or Topic from Cumulative Effects Analysis
	Would the Resource or Topic be Directly or Indirectly Impacted? (Yes or No)	Would the Direct or Indirect Impacts be Substantial?	Is the Resource in Poor or Declining Health? (Yes or No)		
Public Facilities and Services	Yes	No	No	No	Excluded because no indirect impacts are anticipated and direct impacts are associated with access changes which would not warrant a cumulative effects analysis.
ROW/Easements and Relocations/Displacements	Yes	No	No	No	Excluded because no displacements are anticipated and ROW acquisitions/easements would not warrant a cumulative effects analysis.
Cultural Resources					
Historic Properties	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Archeological Resources	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Hazardous Materials					
Hazardous Materials	Yes	No	No	No	Excluded because direct impacts are not considered significant and no indirect impacts associated with hazardous materials is anticipated and would not warrant a cumulative effects analysis.
Traffic Noise					
Traffic Noise	Yes	No	No	No	Excluded because direct impacts are not considered significant and no anticipated indirect impacts would warrant a cumulative effects analysis.
Section 4(f) and 6(f)					
Section 4(f) Properties	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Section 6(f) Properties	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Water Resources					
Groundwater	Yes	No	No	No	Excluded because direct impacts are not considered significant and no indirect impacts are anticipated to warrant a cumulative effects analysis.

Resource or Topic Evaluated	TxDOT/CEQ Criteria[1]			Included for Cumulative Impacts Analysis (Yes or No)	Explanation for Including or Excluding the Resource or Topic from Cumulative Effects Analysis
	Would the Resource or Topic be Directly or Indirectly Impacted? (Yes or No)	Would the Direct or Indirect Impacts be Substantial?	Is the Resource in Poor or Declining Health? (Yes or No)		
International Boundary and Water Commission	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Essential Fish Habitat	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Threatened or Impaired Waters	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Navigable Waters/Lakes, Rivers, Streams	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Clean Water Act, Storm water	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
TCEQ Section 401 BMPs	No	No	No	No	Excluded because TCEQ Section 401 BMPs are not an issue that warrant a cumulative effects analysis.
Wild and Scenic Rivers	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
Wetlands and Jurisdictional Waters of the U.S.	Yes	No	No	Yes	Proposed construction is anticipated to have permanent direct impacts to three playas. Potential playa impacts would be incorporated into the cumulative effects analysis for vegetation.
Floodplains	Yes	No	No	No	Excluded because direct impacts are not considered significant and no anticipated indirect impacts would warrant a cumulative effects analysis.
Water Quality	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.
TPDES	No	No	No	No	Excluded because neither direct nor indirect impacts are anticipated.

Source: Project Team, May 2017.

The resources eligible for a cumulative impacts analysis include vegetation and wildlife habitat including the playas. Cumulative impacts are analyzed in terms of the specific resource being affected. Direct impacts to these resources are addressed in **Section 5.0 Environmental Consequences**.

The following sections describe steps 1 through 5 for the resources eligible for the cumulative impacts analysis.

Step 1: Resource Study Area, Conditions and Trends

The Resource Study Area (RSA) would encompass areas for all the resources included in the cumulative impacts analysis. Using aerial imagery and natural resource features, the RSA was determined as shown in **Appendix A-3: Cumulative Impacts Resource Study Area**. A combination of the watershed sub-basin boundary and estimated boundaries of the playas and urbanized development was used to delineate the RSA. These boundaries were utilized because these areas include playa areas of concern and drainage areas that influence the type of vegetation. Only specific drainage areas that would be associated with the proposed project and potential induced developments were included. The total area of the RSA is approximately 12,500 acres. The timeframe included in this cumulative impacts analysis for both resources would be from 1960 through 2035 which are the years in which SL 335 was first constructed and the design year of the proposed project respectively. The timeframe was determined to provide a sufficient time range to determine reasonable and foreseeable actions to be included in the cumulative impacts analysis.

Within the RSA, the existing habitat types in the proposed project limits consist of approximately 2,200 acres of urban areas, 6,800 acres of agricultural and grassland areas, 2,700 acres of disturbed prairie and 500 acres of playas. Habitat types and associated acreages were estimated using the TPWD EMST Mapper and aerial imagery. Agricultural and grassland areas are areas that have been altered in the past and utilized for row crops and livestock grazing. Typical row crops for the area are cotton, wheat, and sorghum. Urban areas are developed for urban use and may contain trees, shrubs, and grasses associated with residential and commercial properties or unmaintained adjacent properties. Playas are low lying areas intermittently covered with water. The extent of vegetative cover for playas changes rapidly both short and long-term. During field reconnaissance performed in April and June 2015, different water levels were observed between the two dates of field work. In April, no water was observed at one specific playa located at Helium Rd. and SW 34th Ave. whereas in June, the playa held a significant amount of water. Photos and additional details can be viewed in the **Biological Resources Technical Report** which has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

The current trend for development for the City of Amarillo is concentrated mostly in the southwestern portion of the city limits and is encompassed within the RSA. It is anticipated that the trend would continue through 2035 and that the vegetation and wildlife habitat would be impacted as the area is developed for residential, commercial and transportation purposes. Agricultural areas would also be converted to developments for urban use and vegetation and row crops would be replaced by urbanized development.

Step 2: Direct and Indirect Effects on Each Resource from the Proposed Project

Direct impacts to vegetation and playas are discussed in **Section 5.2**. Approximately 268 acres of additional ROW and 16 acres of proposed easement would be required for the proposed project.

Urbanized areas within the RSA provide minimal habitat for wildlife; however, certain species that have adapted more readily to co-exist with an urban environment can utilize some of these vegetated areas. Overall, there is minimal habitat for wildlife species due to urban development and altering of native habitat for agricultural purposes. Minimal woody vegetation is present within the project limits which would be removed because of the proposed project. No long-term impacts to wildlife populations are anticipated as a result of the proposed project. In areas temporarily impacted, wildlife species adapted to urban areas would likely re-colonize the available habitat areas after construction. Due to overall lack of suitable habitat within the RSA, the direct impacts to wildlife would be considered minor.

Direct impacts to the playas are anticipated because of the proposed project. There are three playa features located within the study area. A total of 24.18 acres of the playas would be impacted from the proposed project. As described in the **Water Resources Technical Report**, these playas are not considered jurisdictional and would not require Section 404 permitting.

As discussed in the **Indirect Effects Technical Report** and summarized in **Section 5.2.12**, there are potential indirect impacts to vegetation and playa areas because of induced growth and future development. Agricultural areas, playa habitat areas, vegetation and row crops would be impacted by development for residential and commercial purposes because of the proposed project.

Step 3: Other Actions – Past, Present, and Reasonably Foreseeable – and their Effect on Each Resource

Past actions within the RSA include roadway construction and residential and commercial development. The SL 335 roadway facility was first constructed in 1960. Since then, several roadway improvements have occurred. The residential developments east of the proposed project were developed in the 1990s.

Currently, the City of Amarillo, Potter and Randall County are experiencing a slow, but steady population growth. This growth trend as well as continuing urbanized development within the RSA would affect the vegetation and wildlife habitat. Although past developments have already encroached on existing wildlife habitat, this encroachment will continue to replace vegetation with urbanized development.

The City of Amarillo planning department identified areas of planned development located within the RSA. Although the schedule of construction is unknown at this time, the development is likely to occur in five to ten years and would be for residential development with some commercial development. Planned developments are anticipated to occur in the undeveloped areas immediately east of the proposed project from SW 45th Ave. to FM 2186 and south of SL 335 between FM 2590 and Coulter St. Although some urban

development currently exists within these areas, this portion of the RSA is predominately undeveloped and used for agricultural purposes. If these areas are developed, approximately 2,400 acres of potential impact would result from these actions. This total acreage would include approximately 1,450 acres of agricultural and grassland, 150 acres of playa and 300 acres of disturbed prairie vegetation may be impacted.

In addition, future phases of the SL 335 Corridor project are proposed to connect to the proposed project. In the future, approximately 30 miles of SL 335 may be converted to a limited access freeway that would further directly impact undisturbed areas, as well as indirectly through additional induced urban development in the area. Urban development could include preserving and enhancing playa and vegetated areas to use as recreational areas. Like the playa east of the proposed project (northeast of the Soncy Rd. and 77th Ave. intersection), there is potential for vegetated areas to be maintained for recreational use by nearby urban residential populations.

Step 4: The Overall Effects of the Proposed Project Combined with other Actions

As described in **Table 5-5**, cumulative effects from past development, the proposed project, and future developments would impact this resource over time through conversion of undisturbed grasslands, agricultural land, playa, and other vegetation to urbanized developments and localized plantings typically found in urbanized environments. Approximately 4,372 acres could be impacted from cumulative effects because of the proposed project.

Table 5-5: Cumulative Impacts within the RSA

Type of Action	Vegetation and Habitat Areas (acres)
Past Action	
Previously Developed and Impacted Areas	2,274
Present Action	
Proposed Project Area	284
Future Action	
Potential Development Areas	1,814
Total Area of Impact	**4,372**

Source: Project Team, May 2017.

As shown in **Table 5-5**, past actions have contributed to conversion of approximately 50 percent of the total area of impacts. Although induced growth effects from the proposed project would result in accelerated development of planned actions independent of the proposed project, the resulting permanent impacts to vegetation and habitat would be considered beyond repair and could not be reversed once development occurs. The overall cumulative impacts to vegetation and habitat areas is considered moderate in the context of the entire RSA because it constitutes approximately 35 percent of the total area.

Step 5: Mitigation of Cumulative Effects

Efforts would be taken through local, state and federal regulations to avoid and minimize any adverse effects from development or future activities. Additional BMPs such as seeding and replanting in accordance with TxDOT approved seeding specification could help mitigate effects from transportation projects. Similar activities of landscaping and planting where feasible could be performed to help mitigate for areas developed for urban use. Future city, county or local plans could help avoid and minimize impacts to these natural resources from future developments or activities. As included in the Amarillo Comprehensive Plan, preserving open spaces and unique natural features including multiple playas was identified as one of the goals identified by the city. Furthermore, the plan discusses the unique recreational potential of the playa areas. Coordination with TPWD would be recommended to determine impacts to playa habitat in accordance with the MOU between TxDOT and TPWD. Additional coordination with TPWD and USFWS would be conducted as part of all future SL 335 environmental documents to determine avoidance and minimization opportunities as well as any necessary mitigation for direct impacts to vegetation, playa habitat and wildlife habitat. Additional impacts associated with induced development would be the responsibility of developers in coordination with the City of Amarillo and local agencies.

6.0 INTERAGENCY COORDINATION AND PUBLIC INVOLVEMENT

TxDOT uses a systematic interdisciplinary approach to project planning to assure full consideration is given to all appropriate social, economic, and environmental effects of proposed highway projects. Interdisciplinary planning contributes to effective decisions in the best public interest by supporting balanced consideration of safe and efficient transportation needs and national, state, and local environmental protection goals. Engineering analyses and alternative designs are prerequisite components of interdisciplinary planning for this proposed project.

TxDOT has been planning and developing the SL 335 Corridor since 1998 in close coordination with the Amarillo MPO, the City of Amarillo and numerous local stakeholders as well as with state and federal and agencies.

6.1 Interagency

TPWD

TxDOT has completed coordination with TPWD. Early coordination with TPWD was initiated and completed on July 28, 2015. Due to design changes, additional coordination occurred and was completed on May 2, 2017. TxDOT will continue to coordinate with TPWD during the detailed phase, as needed. See **Appendix D: Interagency Coordination** for documentation.

Cultural Resources

Coordination for Section 106 and Antiquities Code of Texas was initiated in 2015 and concurrence was received on October 29, 2015. A second round of tribal coordination took place in June 2017 due to design changes since the project was last coordinated in 2015. No objections were received during either round of the tribal coordination.

Coordination with THC regarding the effects determination for historic properties was initiated in 2015. Based on the coordination, it was determined that a Section 4(f) was needed for the Helium Plant. TxDOT prepared and submitted the Determination of Direct effects to the Helium Plant to the Amarillo Historical Preservation Foundation, Preservation Texas, Society for Industrial Archaeology (at Michigan State University), the National Trust for Historic Preservation, and to the Advisory Council on Historic Preservation. The consulting parties had 30 days from receipt of the document (dated April 13, 2017) to comment on the determination of direct effects and mitigation measures set forth for the Amarillo Helium Plant. These groups were not required signatory parties to the MOA, but they were provided the opportunity to be concurring parties and sign the document. See **Appendix D: Interagency Coordination** for documentation.

Floodplains

Coordination with local floodplain administrator is required because the project is within the 100-year floodplain. This coordination will be completed prior to the start of construction.

Other

Other agency coordination (e.g., TCEQ, USFWS, and USACE) is not required at this time.

6.2 Public

A public meeting was held on April 7, 2015 as part of the EA and design schematic process. The public meeting was held at Ascension Academy, 9301 Ascension Parkway, Amarillo, TX 79119. This venue was determined based on proximity to the proposed project, capacity, and ample nearby parking.

The public meeting was held from 6 p.m. to 8 p.m. in an open house format that included a formal presentation and an opportunity for public comment. The total attendance was 114 persons, including three elected officials, 8 public officials, 80 members of the public, 20 project team members, and three media representatives.

Nineteen comments were received during the public comment period, which ended Friday, April 17, 2015. Fifteen of the comments expressed support for the proposed project. Those comments were noted and the commenter was thanked for their support of the project. Concerns expressed included the availability of land for an alternate alignment, risks to public safety, reduction in property value due to traffic noise impacts and the aesthetics of a major highway, access during construction, status of current utilities and the number of driveways that would be allowed.

TxDOT thoroughly analyzed and responded to all comments received within the 10-day comment period and all comments were satisfactorily addressed. The comments received from the public meeting were considered during the evaluation of the alternatives and as part of future project development. A public meeting summary has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

A second public meeting was held as part of the EA and design schematic process at Hillside Christian Church – Amarillo West Campus, 6100 Soncy Road, Amarillo, Texas,

79119 on November 14, 2016. This venue was determined based on proximity to the proposed project, capacity, and ample nearby parking.

The public meeting was held from 6 p.m. to 8 p.m. in an open house format that included a formal presentation and an opportunity for public comment. Total public meeting attendance was approximately 90 persons, including one elected official, 67 members of the public, 20 project team members, and two media representatives.

Twelve comments were received during the public comment period, which ended Thursday, November 24, 2016. Seven of the comments received expressed support for the proposed project. Those comments were noted and the commenter was thanked for their support of the project. Concerns expressed included the future of Old Soncy Trail, an existing city water well, and current traffic conditions on Soncy Road.

TxDOT thoroughly analyzed and responded to all comments received within the 10-day comment period and all comments were satisfactorily addressed. The comments received from the public meeting were considered during the evaluation of the alternatives and as part of future project development. A public meeting summary has been uploaded to ECOS and is available for review at the TxDOT Amarillo District Office.

A public hearing was held at the TxDOT District Office, Building H, 5715 Canyon Drive, Amarillo, Texas 79110 on June 8, 2017. This venue was determined based on proximity to the proposed project, capacity, and ample nearby parking.

The public hearing was held from 6:00 p.m. to 8:00 p.m. An Open House was held from 6:00 p.m. to 6:30 p.m., followed by a formal presentation and an opportunity for public comment. A total of 45 members of the general public, 6 elected officials, and 1 media representative attended the hearing. One comment expressed their agreement with the project, one comment expressed concern with raised medians on Soncy Rd., and the four other comments were regarding concern about the proposed shared use lane and bicycle safety. TxDOT sent a response to each of the commenters. The Public Hearing Summary and Analysis Report, including notices, materials presented, transcript, and all public comments along with TxDOT responses, is on file at the TxDOT Amarillo District Office.

Copies of the TxDOT Relocation Assistance booklet, TxDOT State Purchase of ROW booklet, and copies of the Draft Environmental Assessment for the proposed project were also on display and available for review. During the preparation for the public hearing, reasonable steps, such as the publication of bilingual announcements in local papers that informed the public of the opportunity to request the presence of an interpreter (for language or other special communication needs) at the public hearing were taken to ensure that such persons have meaningful access to the programs, services, and information that TxDOT provides. Among other material, bilingual brochures on Title VI the Civil Rights Restoration Act of 1987 were available at the public hearing. The Civil Rights Restoration Act of 1987 provides that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the

benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

7.0 MITIGATION/PERMITS/ENVIRONMENTAL COMMITMENTS

The proposed project would involve more than five acres of earth disturbance. TxDOT would comply with TCEQ's TPDES CGP. A SW3P would be prepared and implemented, and a construction site notice would be posted on the construction site. A NOI would be required.

During construction, BMPs, including temporary erosion, sedimentation, and water pollution controls would be implemented. All temporary erosion controls would comply with TxDOT Standard Specifications and would be in place, according to the construction plans, prior to commencement of construction-related activities. The contractor would take appropriate measures to prevent, minimize, and control the spill of fuels, lubricants, and hazardous materials in the construction staging area.

During construction, efforts would be taken to avoid and minimize disturbance of vegetation and soils. All disturbed areas would be revegetated, according to TxDOT specifications, as soon as it becomes practicable. In accordance with EO 13112 on Invasive Species, the Executive Memorandum on Beneficial Landscaping, and the 1999 FHWA guidance on invasive species, all revegetation would, to the extent practicable, use only native species. Further, BMPs would be used to control and prevent the spread of invasive species.

TxDOT would take all appropriate actions to prevent the take of migratory birds, their active nests, eggs or young using proper phasing of the project or other appropriate actions.

There is no suitable habitat for state- or federal-listed threatened or endangered species in the project area. If any individuals of state-listed species are observed within the project area during construction, care would be taken to avoid harming them; therefore, no impacts to state-listed species would occur as a result of the proposed project.

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

If unanticipated archeological deposits are encountered during construction, work in the immediate area would cease, and TxDOT archeological staff would be contacted to initiate post-review discovery procedures.

Environmental Permits, Issues, and Commitments

Several measures designed to either protect or enhance the environment are specifically included in the plans for the proposed SL 335 project. These measures would be coordinated with the construction contractor using EPIC sheets. These measures are:

- Comply with City of Amarillo MS4 permit.
- Coordination with local floodplain administrator is required because the project is within the 100-year floodplain. This coordination will be completed prior to the start of construction.
- Invasive and alien vegetation would be controlled by following the guidance and provisions of EO 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscape Practices. The proposed seed mixture (both grasses and forbs) would be in accordance with Item 164, seeding for Erosion Control in TxDOT's Standard Specifications for the construction of Highways, Streets, and Bridges.
- Proper maintenance and idling of construction equipment and water sprinkling during construction would be observed to control emissions of particulate matter.
- Good housekeeping measures, as well as grade management techniques would be observed to help ensure that proper precautions are in place throughout construction of the proposed project.
- Provisions would be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems. Notify city and local safety officials of proposed road closures or detours. Detour timing and necessary rerouting of emergency vehicles shall be coordinated with proper local officials. Lane closures and detours are to comply with TxDOT requirements and Manual of Uniform Traffic Control Devices.
- No hazardous materials would be stored in the ROW.
- A SW3P, construction site notice, NOI, and NOT would be required.
- The MBTA of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, egg in part or in whole, without a Federal permit issued in accordance within the Act's policies and regulations. Migratory patterns would not be affected by the proposed project. If migratory birds are encountered on-site during project construction, adverse impacts on protected birds, active nests, eggs, and/or young would be avoided. The contractor would remove all old migratory bird nests from October 1 to February 15 from any structure where work will be done. In addition, the contractor would be prepared to prevent migratory birds from building nests between February 15 and October 1, per the EPIC sheet.
- The following BMP’s from the TPWD TXDOT BMP MOU will be implemented for the following species:
    - Baird’s sparrow
        - Not disturbing, destroying, or removing active nests, including ground nesting birds, during the nesting season;
        - Avoiding the removal of unoccupied, inactive nests, as practicable;

        - Preventing the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair;
        - Not collecting, capturing, relocating, or transporting birds, eggs, young, or active nests without a permit.
    - Plains spotted skunk
        - The contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered, and to avoid unnecessary impacts to dens.
    - Texas horned lizard
        - The contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered. This should include avoiding harvester ant mounds in the selection of Project Specific Locations where feasible.
    - Black-tailed prairie dog (BTPD)
        - Should BTPDs establish burrows in suitable habitat in the existing and proposed ROW before or during construction, the following BTPD BMPs will be followed: a) If burrows are to be excavated/directly impacted, coordinate with TPWD WHAB; b) When a construction zone is adjacent to a BTPD colony, erect barriers to discourage BTPD moving through or into the construction area; c) When seeding or re-vegetation is planned in an area adjacent to a BTPD colony, a vegetative barrier should be considered in the planting to discourage dispersal into the ROW.
- Per coordination with TPWD, TxDOT would avoid impacts to prairie dogs or utilize a prairie dog relocation specialist to relocate the individuals, use silt fencing to delineate construction zones and exclude prairie dogs, avoid disturbing burrowing owl habitat during nesting season, perform a survey for the Mexican mud plantain (Heteranthera mexicana), perform surveys for three bat species that may have habitat in the project area, and minimize potential impacts to playas. PSLs would not be placed in the playas and long-term water quality BMPs would be utilized at the playas.
- If unanticipated archaeological deposits are encountered during construction, work in the immediate area will cease, and TxDOT archaeological staff will be contacted to initiate post-review discovery procedures.
- If any species on the Randall County or Potter County threatened and endangered species list is sighted in the project area during construction, stop construction and notify the Area Engineer.

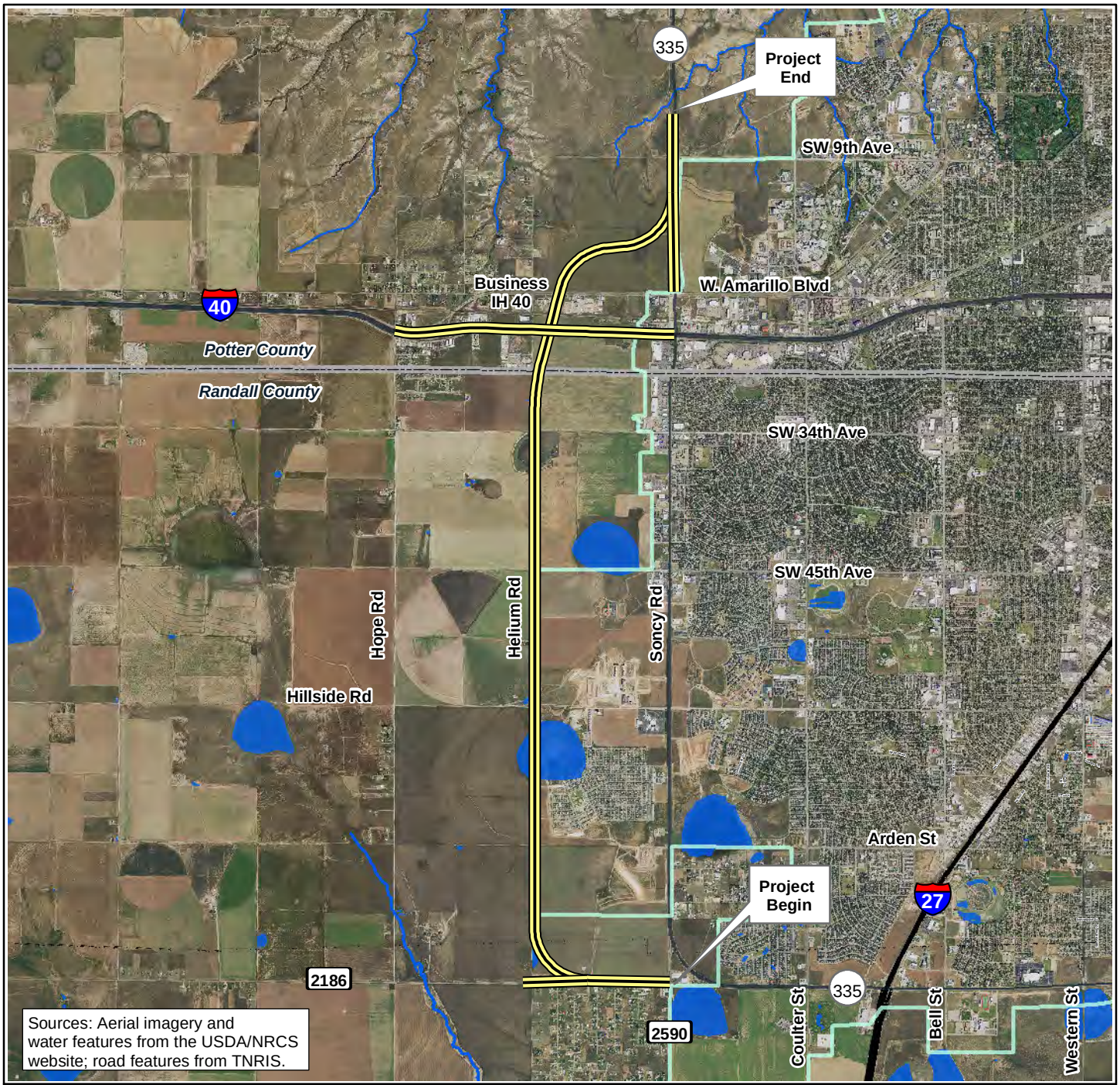
8.0 CONCLUSION

The engineering, social, economic, and environmental investigations conducted thus far indicate that the proposed design option best meets the purpose and need of the proposed project and would result in no significant impacts to the quality of the human or natural environment. It was determined that the No-Build alternative would not meet the purpose and need of the proposed project. Implementation of the proposed project would

not be a major federal action significantly affecting the quality of the human environment and thus, the determination of a Finding of No Significant Impact (FONSI) for this project is anticipated.

APPENDIX A: MAPS

APPENDIX A-1 PROJECT LOCATION MAP
APPENDIX A-2 FEMA FLOODPLAIN / USGS TOPOGRAPHIC QUADRANGLE MAP
APPENDIX A-3 CUMULATIVE IMPACTS RESOURCE STUDY AREA



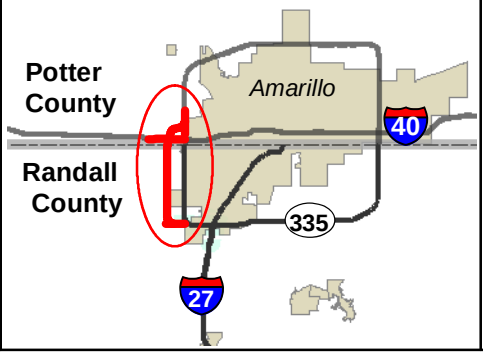
N

0 1 2 Miles

Texas Department of Transportation

Legend

- Project Limits
- Amarillo City Limits
- County Boundary
- Playa

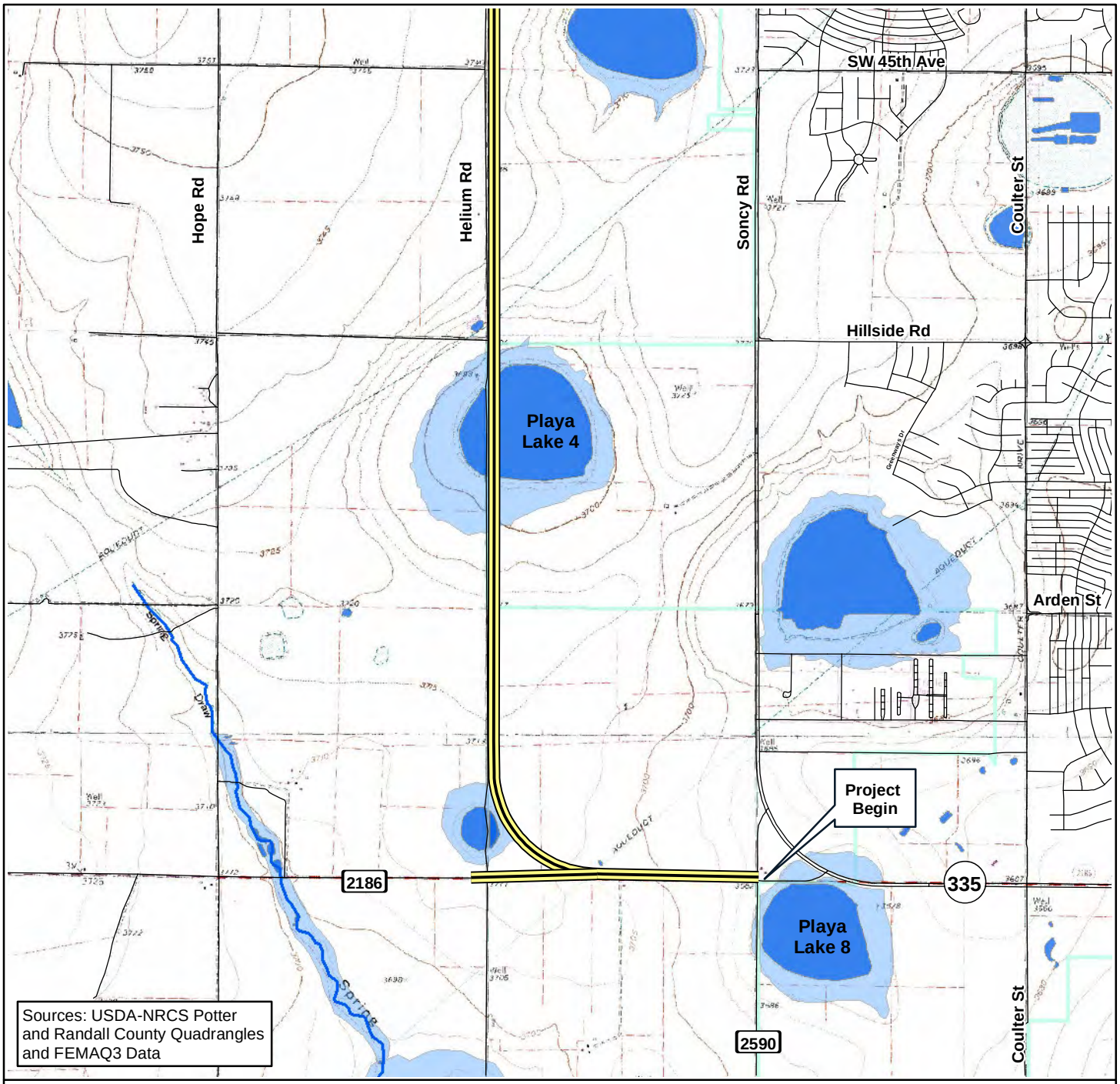


APPENDIX A-1
PROJECT LOCATION MAP

SL 335
From FM 2590 To SW 9th Avenue

Environmental Assessment

Potter and Randall County, Texas



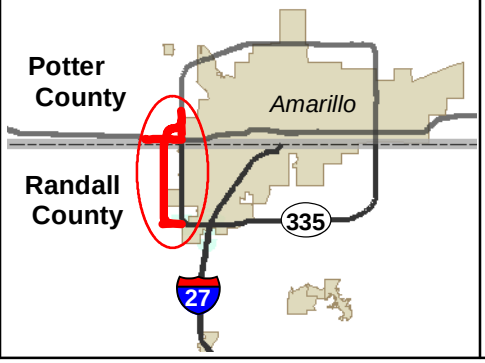
N

0 0.5 1 Miles

Texas Department of Transportation

Legend

- Project Limits
- Amarillo City Limits
- County Boundary
- FEMA 100-Year Floodplain
- Playa
- Stream

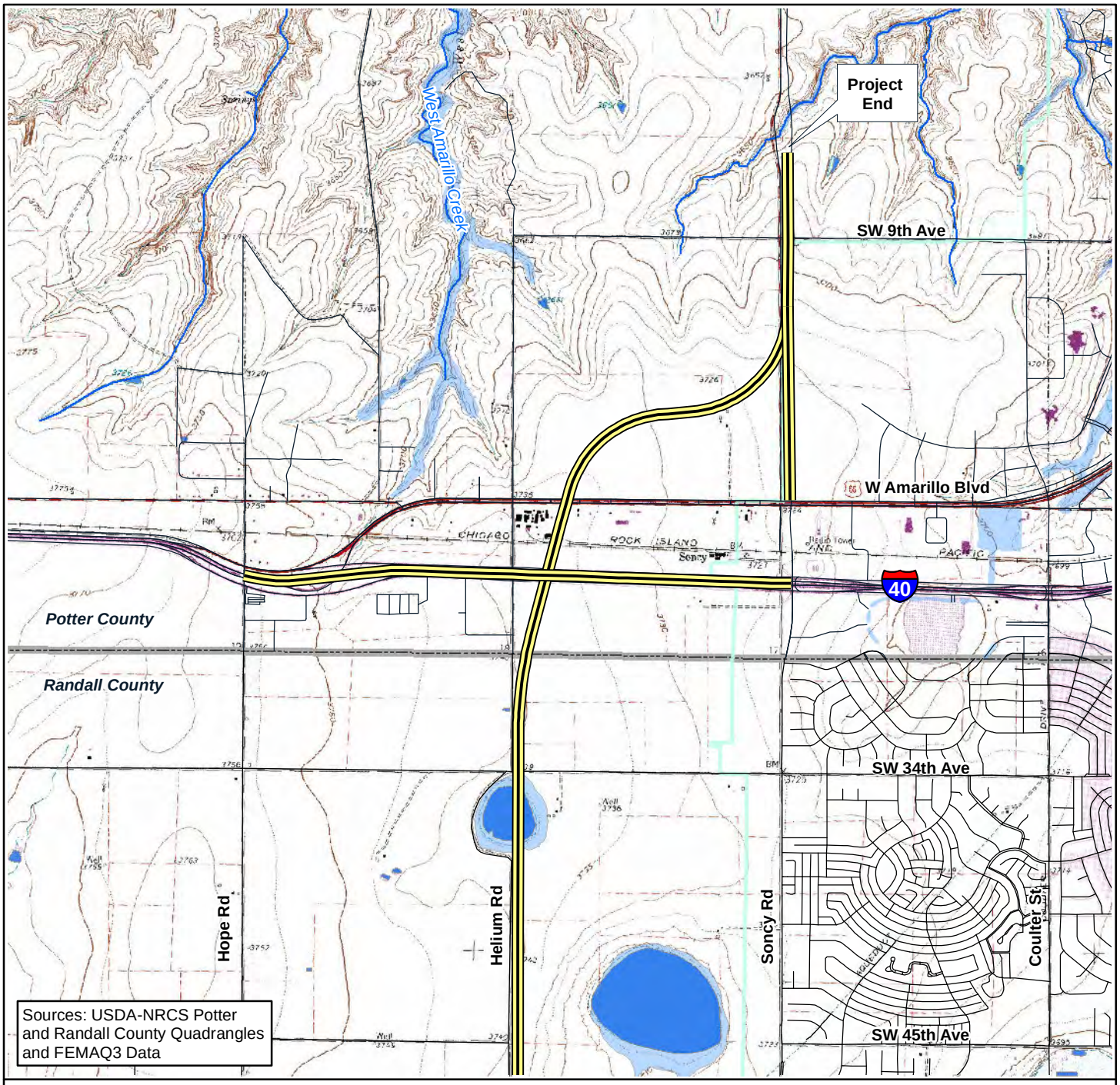


APPENDIX A-2
FEMA FLOODPLAIN AND USGS TOPOGRAPHIC QUADRANGLE
Sheet 1 of 2

SL 335
From FM 2590 to SW 9th Ave

Environmental Assessment

Potter and Randall County, Texas



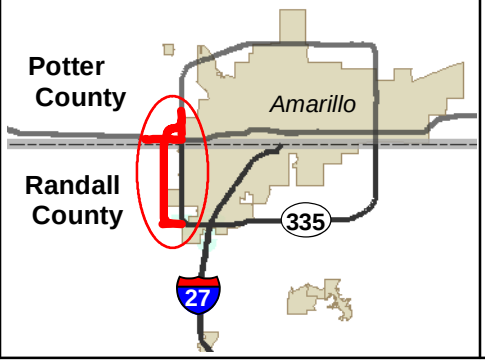
N

0 0.5 1 Miles

Texas Department of Transportation

Legend

- Project Limits
- Amarillo City Limits
- County Boundary
- FEMA 100-Year Floodplain
- Playa
- Stream

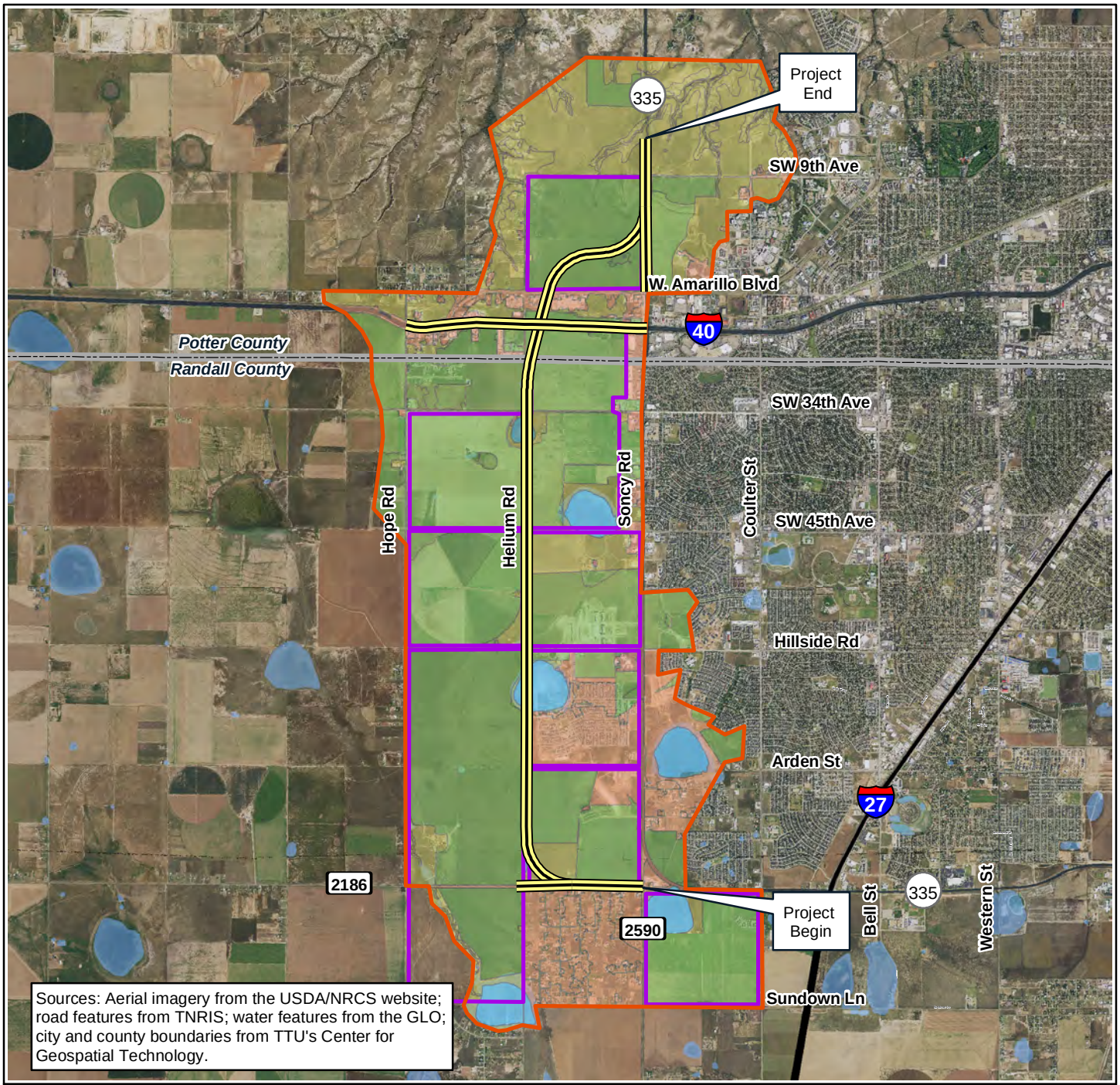


APPENDIX A-2
FEMA FLOODPLAIN AND USGS TOPOGRAPHIC QUADRANGLE
Sheet 2 of 2

SL 335
From FM 2590 to SW 9th Ave

Environmental Assessment

Potter and Randall County, Texas



N

0 1 2 Miles

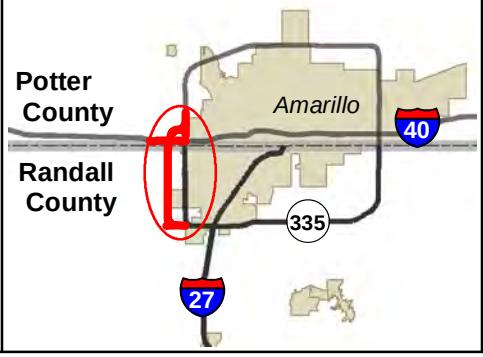
Texas Department of Transportation

LEGEND

- Project Limits
- Resource Study Area
- Planned Development Areas

Vegetation Type

- Agriculture and Grasslands
- Disturbed Prairie
- Playa
- Urban



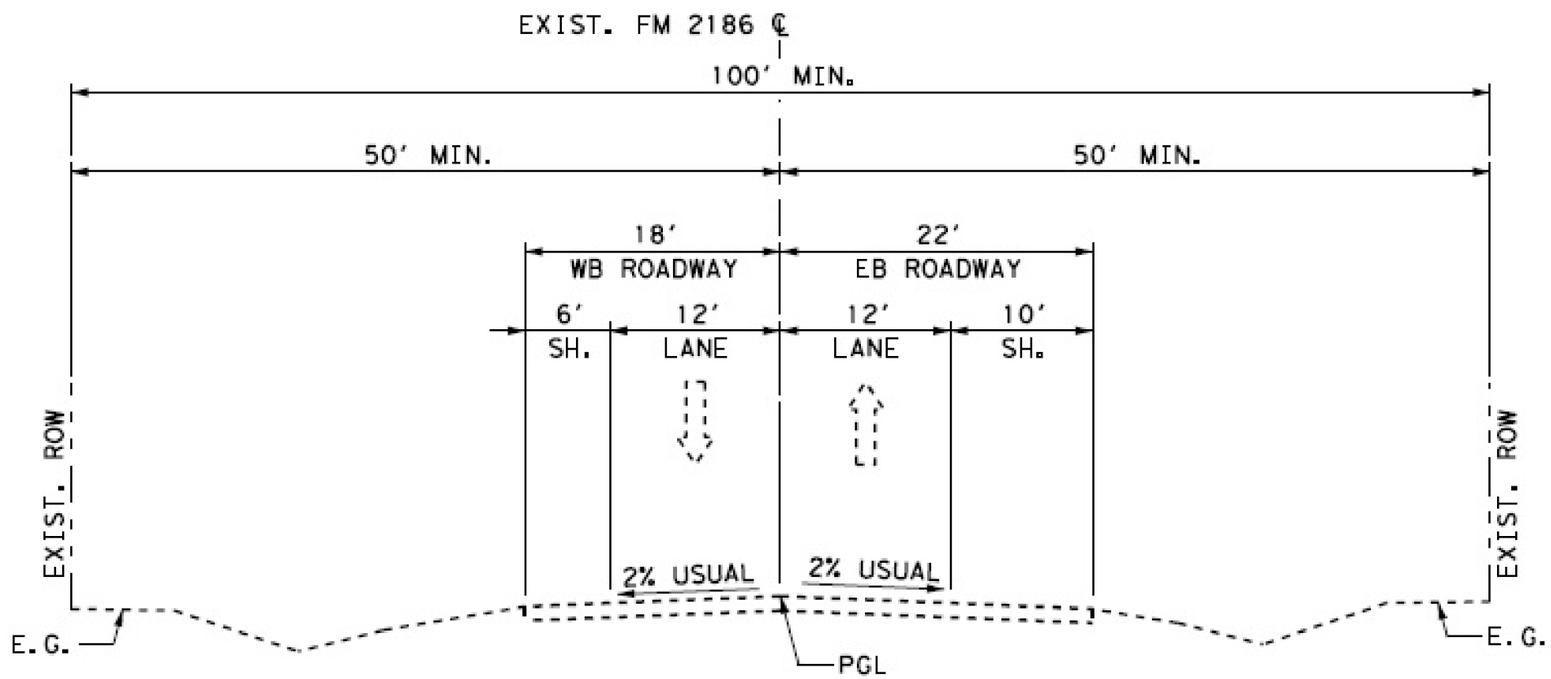
APPENDIX A-3
CUMULATIVE IMPACTS
RESOURCE STUDY AREA

SL 335
From FM 2590 to SW 9th Ave

Environmental Assessment

Potter and Randall County, Texas

APPENDIX B: TYPICAL SECTIONS AND PROJECT LAYOUT MAP



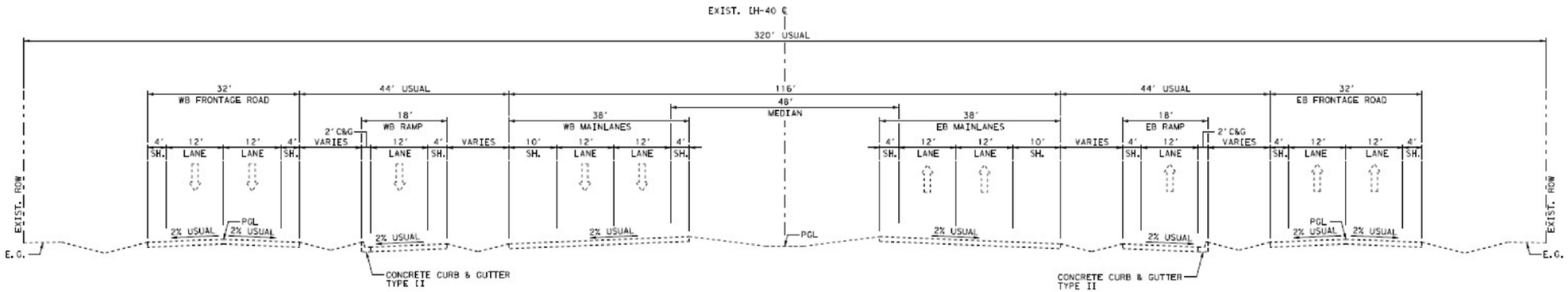
EXIST. FM 2186
2-LANE RURAL MAJOR COLLECTOR

APPENDIX B
TYPICAL SECTIONS
Sheet 1 of 6

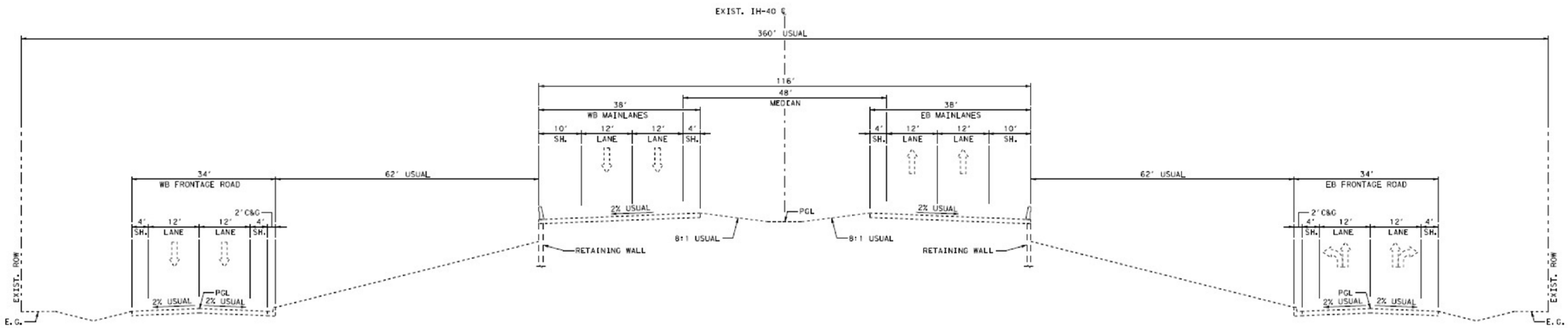
SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Randall and Potter County, Texas



EXIST. IH 40
4-LANE URBAN FREEWAY
AT-GRADE CONDITION



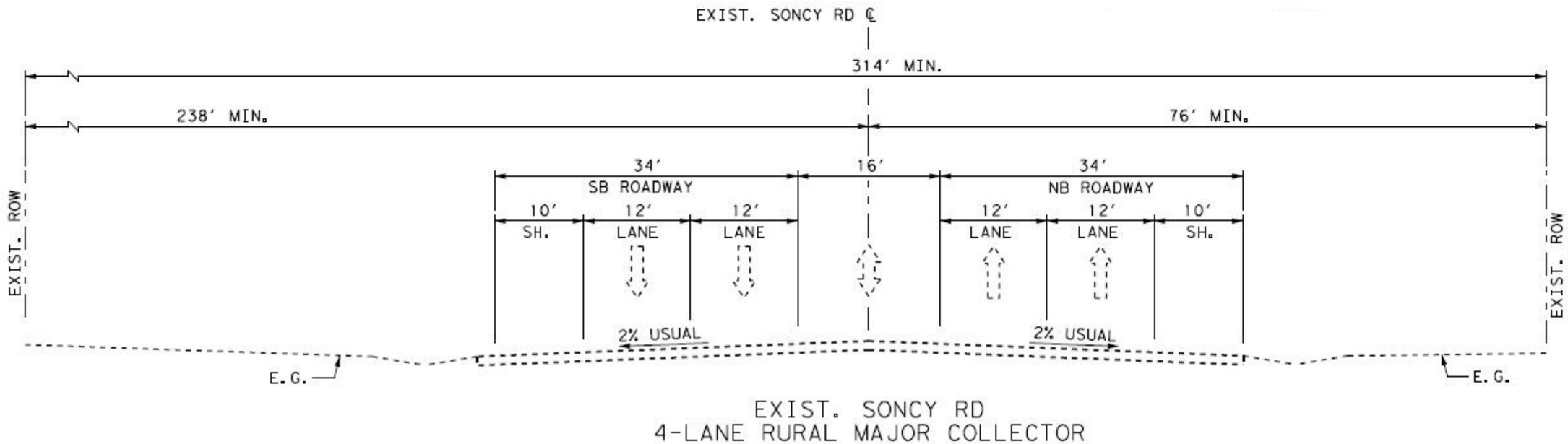
EXIST. IH 40 - AT INTERSECTION
4-LANE URBAN FREEWAY
INTERSECTION APPROACH CONDITION

APPENDIX B
TYPICAL SECTIONS
Sheet 2 of 6

SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Randall and Potter County, Texas

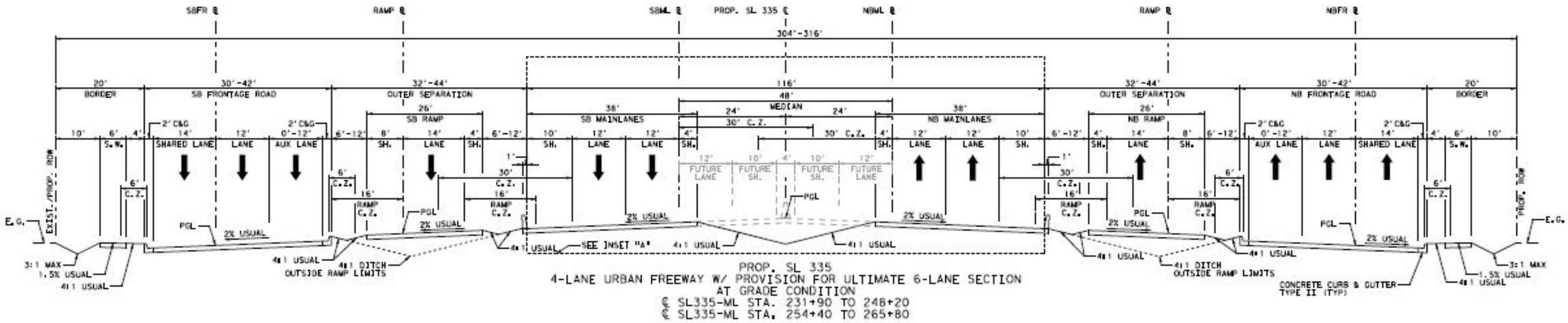


APPENDIX B
TYPICAL SECTIONS
Sheet 3 of 6

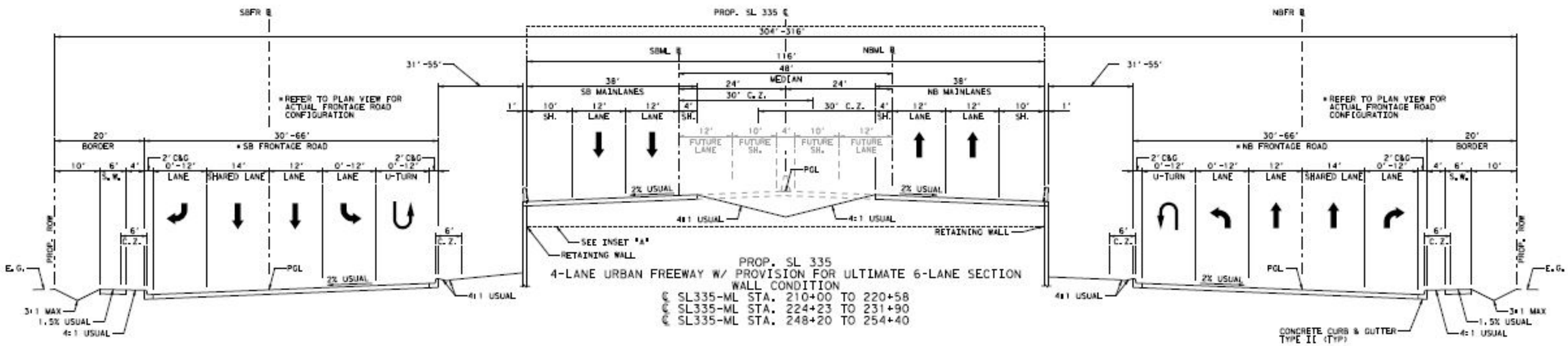
SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Randall and Potter County, Texas



PROP. SL 335
4-LANE URBAN FREEWAY W/ PROVISION FOR ULTIMATE 6-LANE SECTION
AT GRADE CONDITION
℄ SL335-ML STA. 231+90 TO 248+20
℄ SL335-ML STA. 254+40 TO 265+80



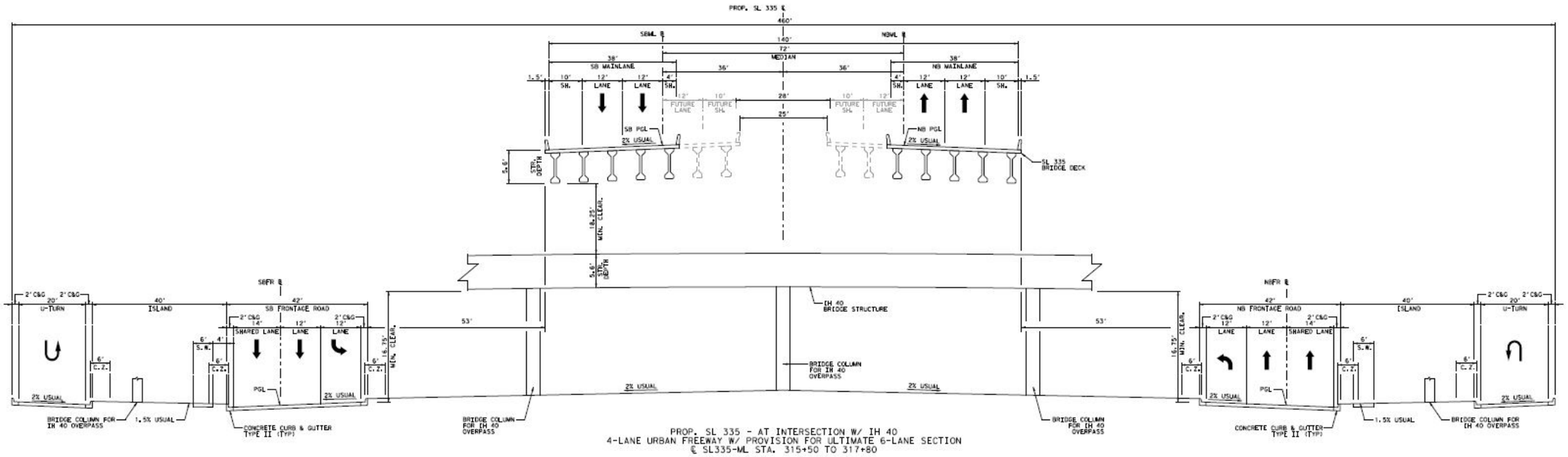
PROP. SL 335
4-LANE URBAN FREEWAY W/ PROVISION FOR ULTIMATE 6-LANE SECTION
WALL CONDITION
℄ SL335-ML STA. 210+00 TO 220+58
℄ SL335-ML STA. 224+23 TO 231+90
℄ SL335-ML STA. 248+20 TO 254+40

APPENDIX B
TYPICAL SECTIONS
Sheet 4 of 6

SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Randall and Potter County, Texas



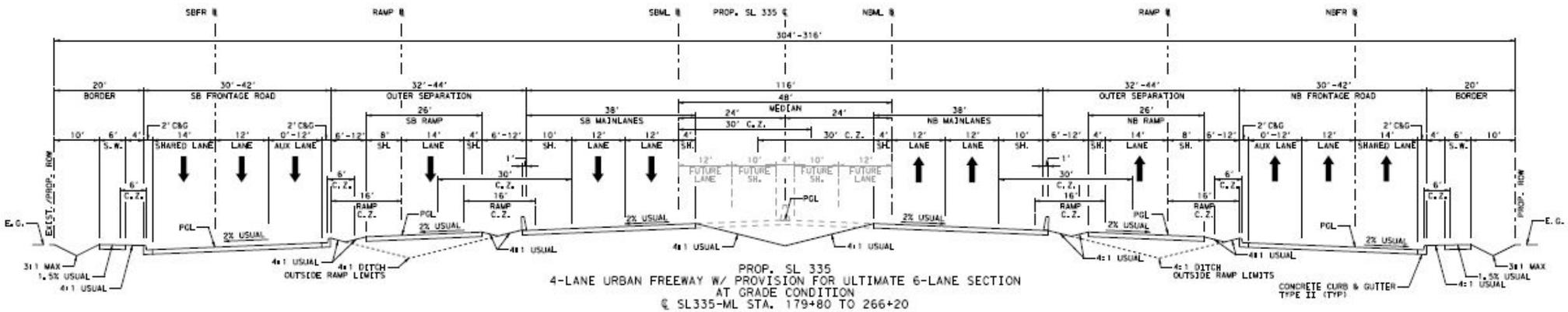
PROP. SL 335 - AT INTERSECTION W/ IH 40
4-LANE URBAN FREEWAY W/ PROVISION FOR ULTIMATE 6-LANE SECTION
℄ SL335-ML STA. 315+50 TO 317+80

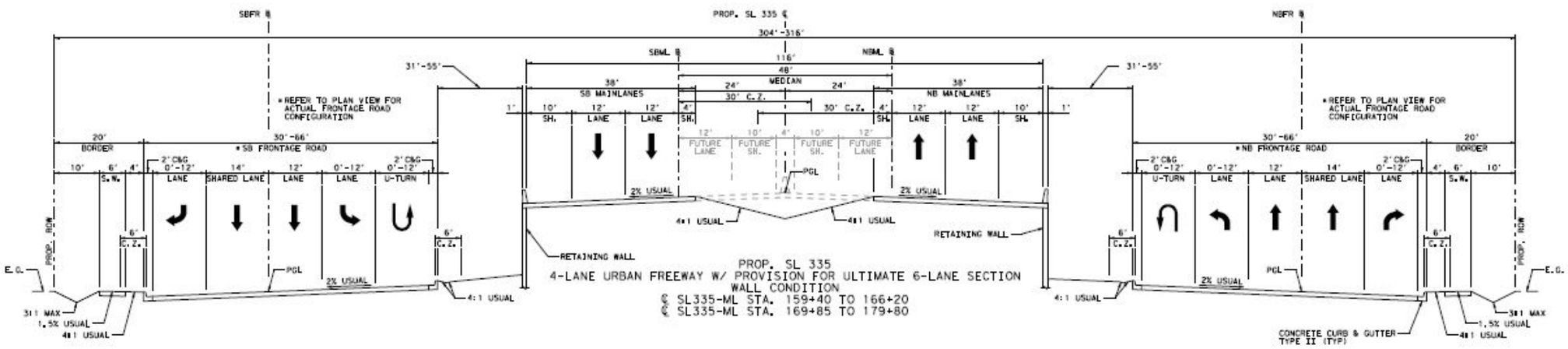
APPENDIX B
TYPICAL SECTIONS
Sheet 5 of 6

SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Randall and Potter County, Texas



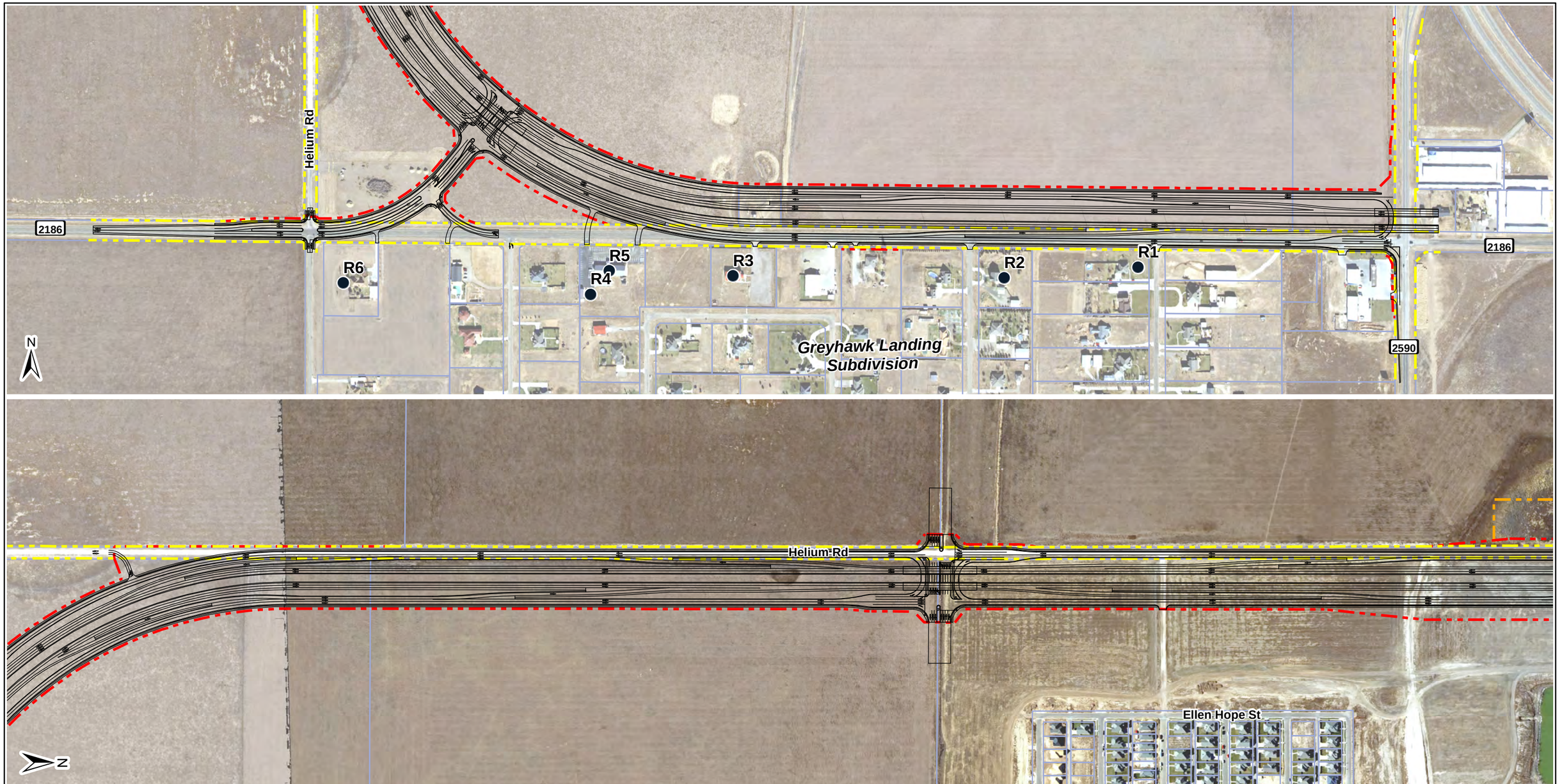


APPENDIX B
TYPICAL SECTIONS
Sheet 6 of 6

SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Randall and Potter County, Texas



LEGEND

- Existing ROW
- Proposed ROW
- Proposed Drainage Easement
- Proposed Pavement
- Property Line
- Playa Lake
- County Boundary
- Impacted Noise Receiver
- Non-Impacted Noise Receiver

0 250 500 1,000
Feet

Sheet Index

**The extent of each sheet is highlighted in RED.*

Source: TNRIS transportation data; USDA_NRCS 2014 NAIP imagery and water features; Potter-Randall Appraisal District parcel data; and USGS National Map data

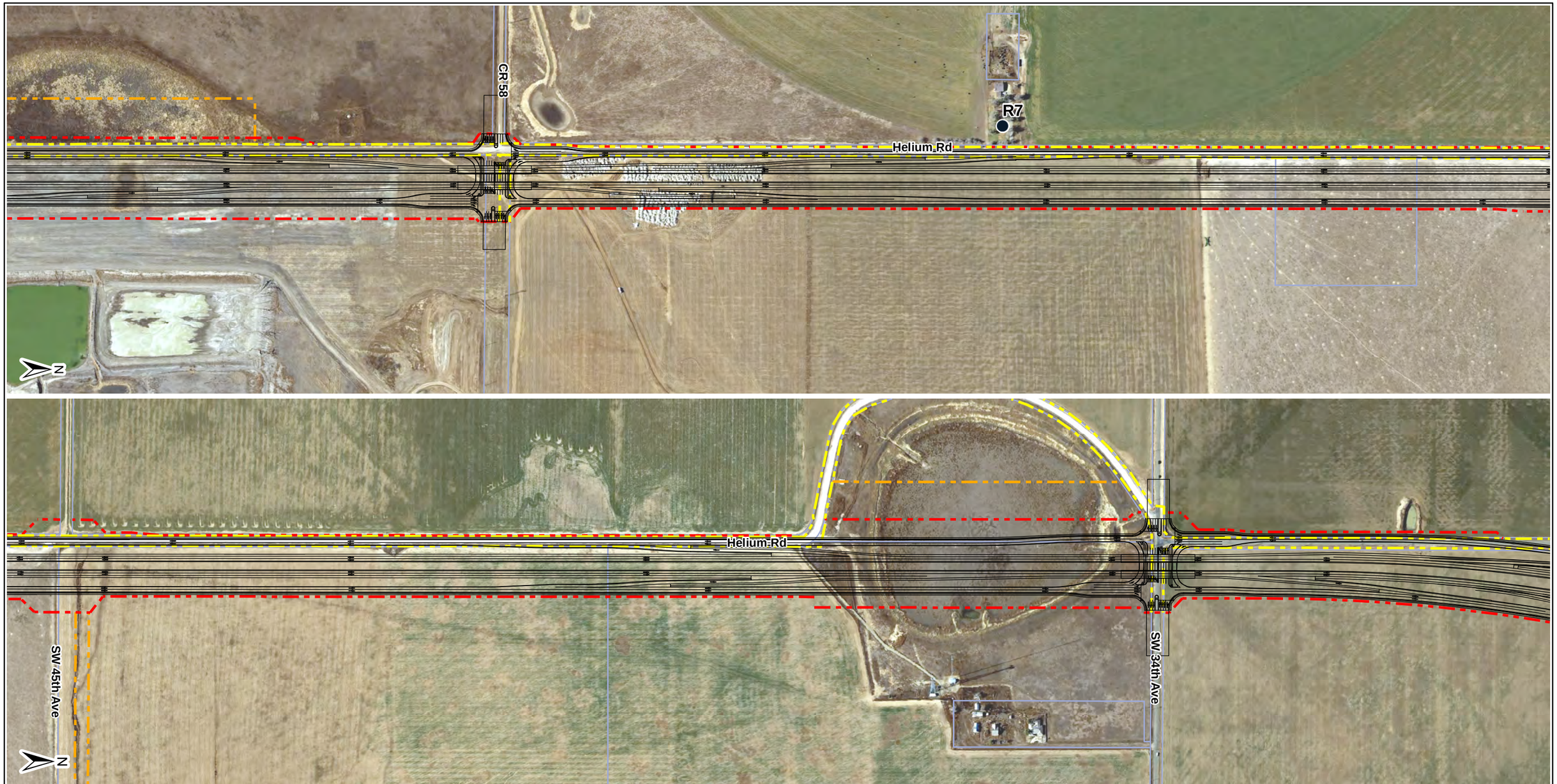
Based on April 2017 Design Schematic

APPENDIX B: PROJECT LAYOUT MAP
Sheet 1 of 4

SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Potter and Randall County, Texas



LEGEND

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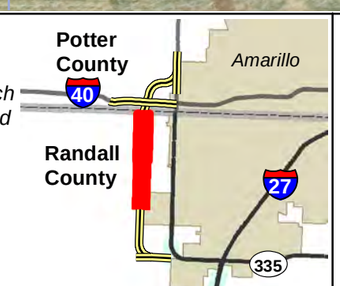


Source: TNRIS transportation data; USDA_NRCS 2014 NAIP imagery and water features; Potter-Randall Appraisal District parcel data; and USGS National Map data

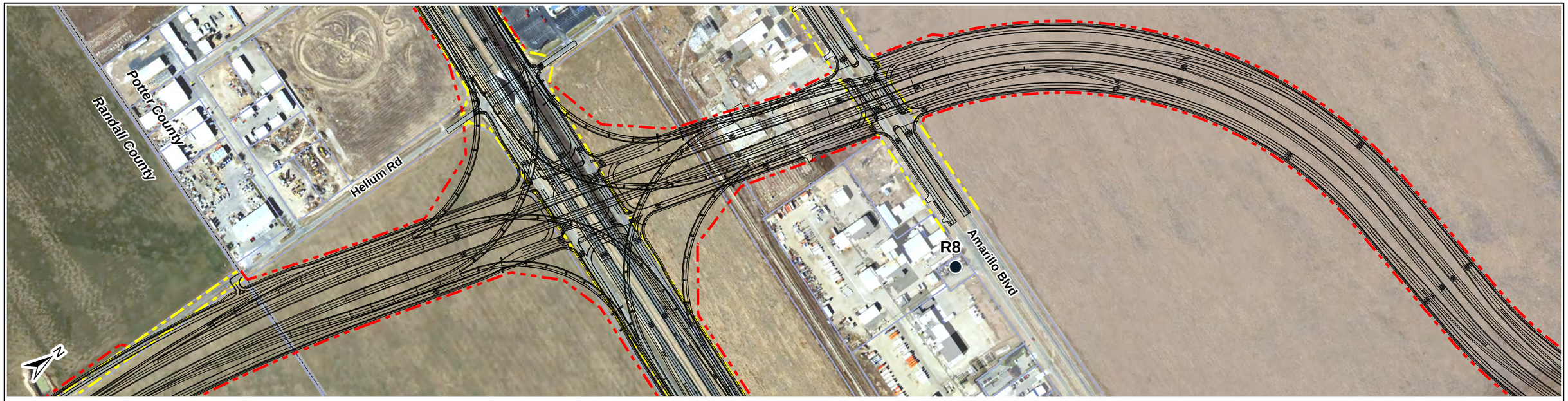
Based on April 2017 Design Schematic

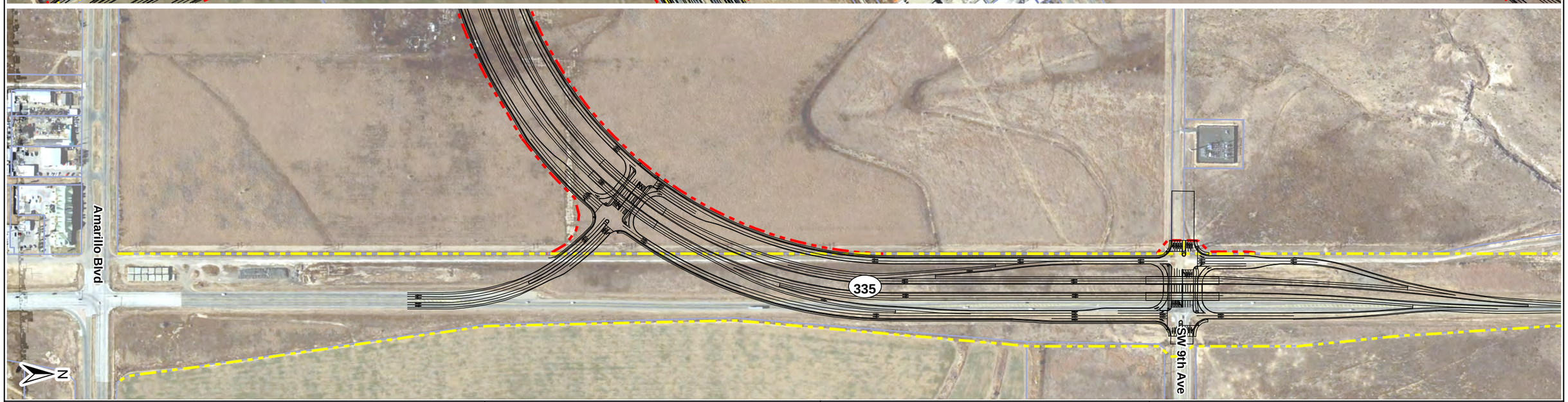
APPENDIX B: PROJECT LAYOUT MAP
Sheet 2 of 4

SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Potter and Randall County, Texas





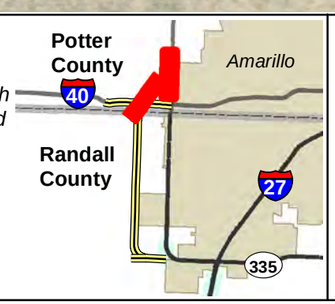
LEGEND

- Existing ROW
- Proposed ROW
- Proposed Drainage Easement
- Proposed Pavement
- Property Line
- Playa Lake
- County Boundary
- Impacted Noise Receiver
- Non-Impacted Noise Receiver

0 250 500 1,000
Feet

Sheet Index

**The extent of each sheet is highlighted in RED.*



N

Source: TNRIS transportation data; USDA_NRCS 2014 NAIP imagery and water features; Potter-Randall Appraisal District parcel data; and USGS National Map data

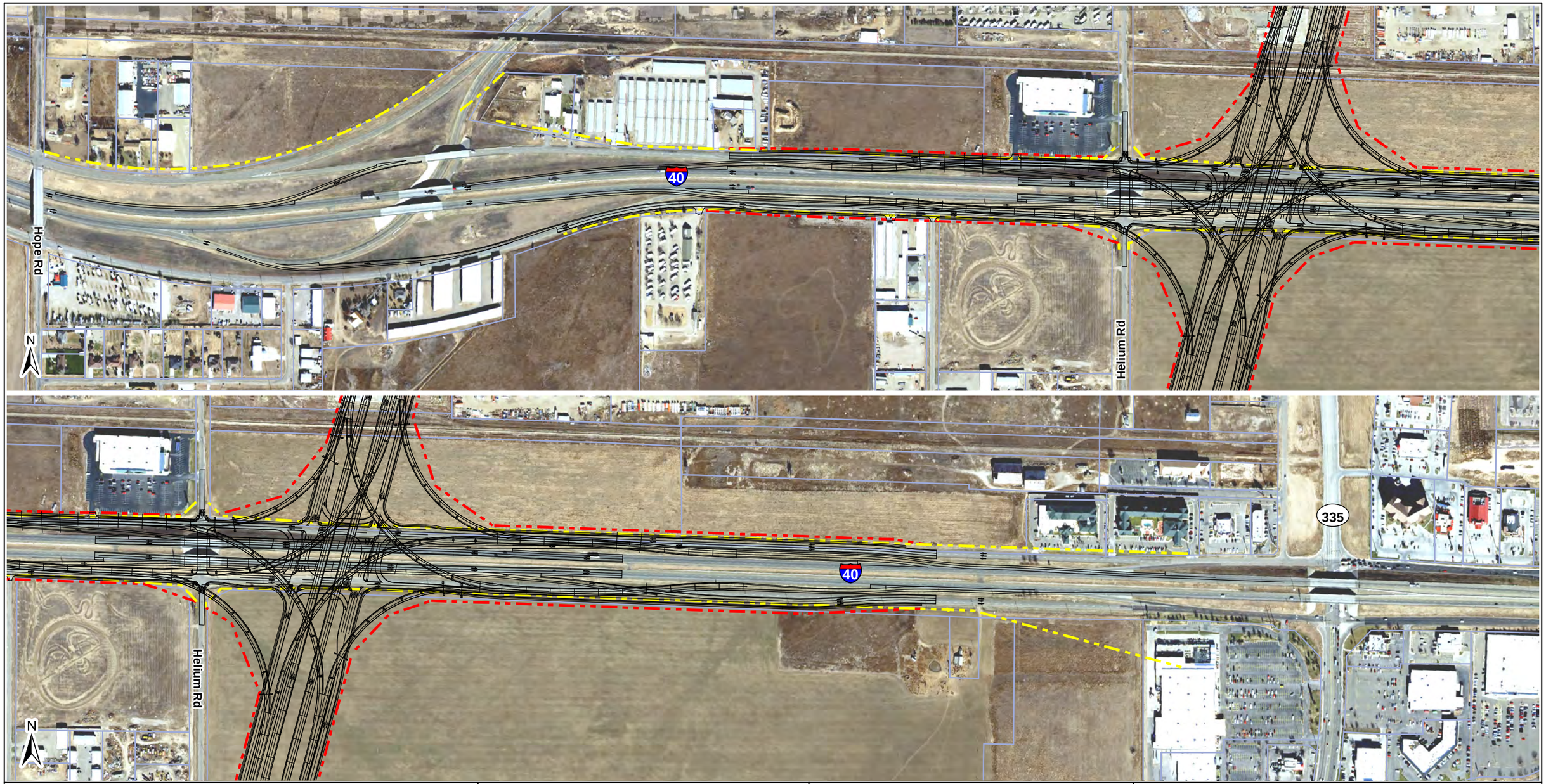
Based on April 2017 Design Schematic

APPENDIX B: PROJECT LAYOUT MAP
Sheet 3 of 4

SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Potter and Randall County, Texas



LEGEND

- Existing ROW
- Proposed ROW
- Proposed Drainage Easement
- Proposed Pavement
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- Non-Impacted Noise Receiver

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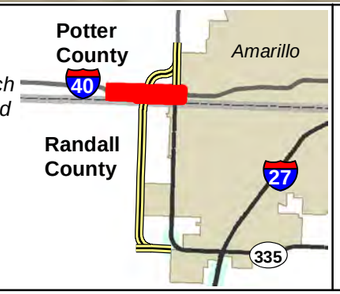

Source: TNRIS transportation data; USDA_NRCS 2014 NAIP imagery and water features; Potter-Randall Appraisal District parcel data; and USGS National Map data

Based on April 2017 Design Schematic

APPENDIX B: PROJECT LAYOUT MAP
Sheet 4 of 4

SL 335
From FM 2590 to SW 9th Avenue

Environmental Assessment

Potter and Randall County, Texas

APPENDIX C: PROJECT PHOTOGRAPHS

Appendix C
Project Photographs

1. Looking west along FM 2186. Photo taken in April 2015.

2. Looking north along Helium Road along proposed alignment. Photo taken in April 2015.

3. Looking north/northeast from Helium Road at proposed alignment and adjacent residential development. Photo taken in April 2015.

4. Looking northeast along Helium Road south of Hillside Road along proposed alignment and at area mapped by the NWI as a playa. Photo taken April 2015.

5. Looking north from Helium Road toward SW 34th Avenue at playa. Photo taken in June 2015.

6. Looking northeast from Helium Road toward IH along proposed alignment. Photo taken in April 2015.

7. Looking northeast from the old Helium Plant shipping dock along proposed alignment. Photo taken in April 2015.

8. Looking southwest from existing SL 335 ROW toward Business IH 40 along proposed alignment. Photo taken in April 2015.

9. Looking south on SL 335 where proposed alignment merges with SL 335. Photo taken in June 2015.

10. Looking north from west of SL 335 where proposed alignment merges with SL 335 at the Old Soncy Trail. Photo taken in April 2015.

APPENDIX D: INTERAGENCY COORDINATION

TPWD Coordination (2015)
TPWD Coordination (2017)
Section 106 and Antiquities Code of Texas
Antiquities Code of Texas and the National Preservation Act of 1966
Section 106 Review: Determination of Direct Effects
Section 4(f) Net Benefit Programmatic for Historic Sites Checklist

Scott Inglish

From: Sue Reilly <Sue.Reilly@tpwd.texas.gov>
Sent: Tuesday, July 14, 2015 4:29 PM
To: John Wimberley
Subject: SL 335 Phase II, CSJ 0904-02-038
Attachments: burrowing owls.pdf

John,

I got your message today. Sorry for the delay. Please call or email if you have questions.

Thank you for submitting the following project for early coordination: SL 335 from Fm 2590 to Southwest 9th Street, approximately 7.8 miles, in the western portion of the city of Amarillo (CSJ 0904-02-038). This project consists of upgrading existing roadways to a new controlled access highway, with some new location from IH-40 northeast to SW 9th Street. The project includes 245.4 acres of new ROW with a minimum ROW width of 305 feet. The highway will include frontage roads, ramps, grade separations over intersecting cross-streets, and a 4-mainlane section with a provision for future expansion to an ultimate 6-mainlane section. TxDOT has made the following commitments:

1. Bird BMPs.
2. Species BMPs for black-tailed prairie dog, plains spotted skunk, swift fox, and Texas horned lizard.

TPWD has the following recommendations:

1. TPWD recommends that TxDOT consult early in the project with and utilize a prairie dog relocation specialist who is familiar with safe, humane methods to relocate prairie dogs and who is also capable of recognizing and protecting burrowing owls; one example is Lynda Watson (telephone (806)799-5806). Time of year and construction timing can be very important for prairie dog relocation, and an early consultation with a specialist will enable TxDOT to implement a plan that will do the least harm to prairie dogs and burrowing owls.

   Burrowing owls may inhabit the project area year round, particularly in locations such as prairie dog burrows and culverts. Avoiding impacts to burrowing owls may be achieved in conjunction with measures used to avoid impacts to prairie dogs, e.g. project timing and passive measures. Burrowing owls use burrows year round, and nesting season is mid-March through September. TPWD prefers TxDOT avoid disturbing habitat during nesting season. If disturbance is planned during nesting season, TPWD recommends TxDOT survey for burrowing owls in order to locate their nests. Surveys are most effective at dawn and dusk, during weather that is conducive to observing owls outside their burrows. If nests are located, TPWD recommends TxDOT wait for chicks to fledge before disturbing the nest and adjacent foraging habitat. If owls are in the project area outside of nesting season, it may be possible to encourage them to move to other nearby available habitat. Additional information on burrowing owls is attached.

   TPWD recommends avoiding impacts to prairie dog colonies if possible. If avoiding impacts is not possible, TPWD recommends minimizing impacts by reducing the road footprint on the prairie dog colonies. For isolated colonies to be impacted, TPWD recommends relocating the prairie dogs. For the portion of the larger colony to be impacted, timing is essential. TPWD recommends relocating the prairie dogs in the project area immediately before construction, as prairie dogs will recolonize available burrows quickly. In all scenarios, the use of black silt fencing to delineate the construction zone and exclude prairie dogs is recommended. The black silt fence should be 24 inches above ground, buried a minimum of 6 inches into soil, and maintained by duct tape patching to avoid light passing through the silt fence. Opaque silt fence is necessary to provide an effective visual barrier for prairie dogs, and therefore discourage them from recolonizing the construction site.

2. The Mexican mud plantain, *Heteranthera mexicana*, may grow on the edges of playa lakes. TPWD recommends surveying for the plant on the margins of the playas in the project area in June-December, after sufficient rainfall. Surveys are best performed during morning hours, when flowers are easy to see. If specimens are found, please contact TPWD to discuss potential relocation or seed harvesting. TPWD also requests that data be submitted to the TxNDD for any populations identified, even if the populations are within the project footprint.

3. There are three bat species that may have habitat in the project area: Western small-footed bat, Pale Townsend's big-eared bat, and cave myotis. TPWD recommends surveying for bats in bridges and concrete culverts that will be disturbed or demolished. If bats are present, TPWD recommends ensuring that bats have nearby habitat or provide habitat for the bats, then exclude bats from the building or bridge. TPWD can provide more information on bat exclusion and habitat if needed.

4. Playa lake functions include water infiltration, flood control, and habitat for plants and animals. TPWD recommends avoiding impacts to playa lakes so that they can maintain their functions. If the road cannot be designed to go around the playa lakes in the project area, TPWD recommends spanning the playa lakes.

Please confirm that TxDOT's commitments are correctly identified above and respond to indicate whether TxDOT can commit to implementing the additional recommendations provided.

Thank you,

Sue Reilly
Transportation Assessment Liaison
TPWD Wildlife Division
512-389-8021

Texas Department of Transportation
125 EAST 11TH STREET | AUSTIN, TEXAS 78701-2483 | (512) 463-8588 | WWW.TXDOT.GOV

MEMORANDUM

Date: 7/28/2015

To: Sue Reilly
Transportation Assessment Liaison
Texas Parks & Wildlife Department
Wildlife Division-Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, TX 78744

From: John Wimberley
Environmental Coordinator
TxDOT - Amarillo District
5715 Canyon Drive
Amarillo, TX 79110

Subject: Comments on Early Coordination Response for CSJ 0904-02-038 SL 335 in Randall and Potter Counties

Dear Ms. Reilly:

The following is the Amarillo District response to comments received from Texas Parks & Wildlife (TPWD) dated 7/14/2015.

Recommendation 1: TPWD recommends that TxDOT consult early in the project with and utilize a prairie dog relocation specialist who is familiar with safe, humane methods to relocate prairie dogs and who is also capable of recognizing and protecting burrowing owls; one example is Lynda Watson (telephone (806)799-5806). Time of year and construction timing can be very important for prairie dog relocation, and an early consultation with a specialist will enable TxDOT to implement a plan that will do the least harm to prairie dogs and burrowing owls.

Response 1: TxDOT agrees to consult early in the project with a prairie dog relocation specialist as noted. The use of a relocation specialist will be addressed in the project's commitments section of the environmental document.

Recommendation 2: TPWD recommends avoid disturbing habitat during burrowing owl nesting season. If disturbance is planned during nesting season, TPWD recommends TxDOT survey for burrowing owls in order to locate their nests. Surveys are most effective at dawn and dusk, during weather that is conducive to observing owls outside their burrows. If nests are located, TPWD recommends TxDOT wait for chicks

to fledge before disturbing the nest and adjacent foraging habitat. If owls are in the project area outside of nesting season, it may be possible to encourage them to move to other nearby available habitat.

Response 2: TxDOT agrees to consult early in the project with a specialist who may be capable of recognizing and protecting burrowing owls as noted. The use of the specialist will be addressed in the project's commitments section of the environmental document.

Recommendation 3: TPWD recommends avoiding impacts to prairie dog colonies if possible. If avoiding impacts is not possible, TPWD recommends minimizing impacts by reducing the road footprint on the prairie dog colonies. For isolated colonies to be impacted, TPWD recommends relocating the prairie dogs. For the portion of the larger colony to be impacted, timing is essential. TPWD recommends relocating the prairie dogs in the project area immediately before construction, as prairie dogs will recolonize available burrows quickly. In all scenarios, the use of black silt fencing to delineate the construction zone and exclude prairie dogs is recommended. The black silt fence should be 24 inches above ground, buried a minimum of 6 inches into soil, and maintained by duct tape patching to avoid light passing through the silt fence. Opaque silt fence is necessary to provide an effective visual barrier for prairie dogs, and therefore discourage them from recolonizing the construction site.

Response 3: TxDOT agrees to attempt to minimize the impacts on the prairie dog colonies. TxDOT will attempt to time the move to make it as non-intrusive as possible. TxDOT will use silt fencing to delineate the construction zone and exclude prairie dogs as TPWD has recommended. These actions will be addressed in the project's commitment section of the environmental document.

Recommendation 4: The Mexican mud plantain, *Heteranthera mexicana*, may grow on the edges of playa lakes. TPWD recommends surveying for the plant on the margins of the playas in the project area in June-December, after sufficient rainfall. Surveys are best performed during morning hours, when flowers are easy to see. If specimens are found, please contact TPWD to discuss potential relocation or seed harvesting. TPWD also requests that data be submitted to the TxNDD for any populations identified, even if the populations are within the project footprint.

Response 4: TxDOT agrees to carry out surveys for the Mexican Mud plantain during the projected time frames. If specimens are noted, TxDOT will contact TPWD to discuss further actions.

Recommendation 5: There are three bat species that may have habitat in the project area: Western small-footed bat, Pale Townsend's big-eared bat, and cave myotis. TPWD recommends surveying for bats in bridges and concrete culverts that will be disturbed or demolished. If bats are present, TPWD recommends ensuring that bats have nearby habitat or provide habitat for the bats, then exclude bats from the building or bridge. TPWD can provide more information on bat exclusion and habitat if needed.

Response 5: Since this is a new location highway there is only one bridge (overpass at I-40 and Helium Rd) that may be impacted. If work on this bridge is necessary TxDot agrees to survey for bats. TxDOT will contact TPWD for more information on bat exclusion and habitat if bats are present.

Recommendation 6: Playa lake functions include water infiltration, flood control, and habitat for plants and animals. TPWD recommends avoiding impacts to playa lakes so that they can maintain their functions. If the road cannot be designed to go around the playa lakes in the project area, TPWD recommends spanning the playa lakes.

Response 6: The current project schematic calls for the roadway to bisect playa lake 1, just south of the 34th Street intersection. In order to minimize impacts to this playa lake, the schematic calls for spanning the lake as recommended. Since the new alignment uses the current Helium Road, which bisects playa lake 4, the schematic proposes raising the roadway above the 100-year flood plain. Culverts will be installed to allow for natural water flow and drainage underneath the new roadway, which minimizes the impact to this playa lake as recommended.

Thank you for your comments and recommendations. If you have any questions, please contact me at (806) 356-3249 or at john.wimberley@txdot.gov.

Sincerely,

John Wimberley

John Wimberley
Environmental Coordinator
TxDOT – Amarillo District
P.O. Box 7368
Amarillo, Texas 79110

From: Sue Reilly
To: John Wimberley
Subject: RE: Possible Changes in Design on CSJ 0904-02-038 SL 335 Segment B2
Date: Tuesday, May 02, 2017 11:21:05 AM

John,

Thank you for submitting the following project for early coordination: SL 335 Segment B2 design changes (CSJ 0904-02-038). TPWD appreciates TxDOT's commitment to implement the practices listed in the attachment sent April 28, 2017. Based on a review of the documentation, the avoidance and mitigation efforts described, and provided that project plans do not change, TPWD considers coordination to be complete. However, please note it is the responsibility of the project proponent to comply with all federal, state, and local laws that protect plants, fish, and wildlife.
According to §2.204(g) of the 2013 TxDOT-TPWD MOU, TxDOT agreed to provide TXNDD reporting forms for observations of tracked SGCN (which includes federal- and state-listed species) occurrences within TxDOT project areas. Please keep this mind when completing project due diligence tasks. For TXNDD submission guidelines, please visit the following link:
http://tpwd.texas.gov/huntwild/wild/wildlife_diversity/txndd/submit.phtml

Thank you,

Sue Reilly
Transportation Assessment Liaison
TPWD Wildlife Division
512-389-8021

From: John Wimberley [mailto:John.Wimberley@txdot.gov]
Sent: Friday, April 28, 2017 10:53 AM
To: Sue Reilly
Subject: RE: Possible Changes in Design on CSJ 0904-02-038 SL 335 Segment B2

I have attached TxDOT's response to your recommendations for the possible changes in design for this project and I will be waiting for your response. I have also put a hard copy of this letter in the mail to you today for your records.
Thank you,
John

John Wimberley
Environmental Coordinator
TxDOT-Amarillo District
Business (806) 356-3249

From: Sue Reilly [mailto:Sue.Reilly@tpwd.texas.gov]
Sent: Monday, April 24, 2017 5:18 PM

To: John Wimberley
Subject: RE: Possible Changes in Design on CSJ 0904-02-038 SL 335 Segment B2

John,

Thank you for the update.
Playas provide wetland habitat for waterfowl and other wildlife, as well as recharge for the aquifer. Their ecological and hydrological functions are significant in the panhandle. TPWD recommends preserving as much function as possible in playas in the project area; for roadways, avoiding playas altogether is ideal, followed by spanning. If those options are not feasible, please minimize impacts to the playa as much as possible. Firstly, ensure that contractors do not place PSLs in the playa to reduce temporary impacts. Secondly, ensure that water quality is maintained. Roadway runoff can include toxic chemicals. If runoff from the road will enter the playa, placing long-term water quality BMPs will help reduce some of the pollution. Although the Edwards Rule does not apply for this project, the following resource may be useful in finding BMPs for water quality, as the goal is to keep pollutants out of the aquifer.
https://www.tceq.texas.gov/publications/rg/rg-348
Minimizing the amount of impervious cover in the playa is essential.

Thank you,

Sue Reilly
Transportation Assessment Liaison
TPWD Wildlife Division
512-389-8021

From: John Wimberley [mailto:John.Wimberley@txdot.gov]
Sent: Tuesday, April 11, 2017 3:57 PM
To: Sue Reilly
Subject: Possible Changes in Design on CSJ 0904-02-038 SL 335 Segment B2

We had completed coordination on this project back in July 2015, but there has been a very recent design change that affects one of your recommendations on this coordination. Design engineers have produced a 90% schematic, just recently reviewed by me, that shows a design change to cover the worst case scenario for crossing playa lake 1 just south of the 34th Street Intersection. In our original coordination, playa 1 was to be spanned by SL 335, but this latest schematic shows that SL 335 will cross this playa at ground level, including roughly 8 of the 25 acres of the playa in TxDOT ROW and controlled access freeway. This project has not been environmentally cleared, but we hope to have our Sufficient for Further Processing milestone for the EA document completed by May 11, 2017. The final decision as to which alternative will be used for crossing playa 1 has not been made at this time and this project is schedule to let in March of 2019. Do you have any additional comments or recommendations that you would like for us to consider? I have attached the final TPWD Coordination Report completed for this project for your reference.
Thank you,
John

John Wimberley
Environmental Coordinator

Texas Department of Transportation

5715 CANYON DRIVE | AMARILLO, TEXAS 79110 | (806) 356-3200 | WWW.TXDOT.GOV

MEMORANDUM

Date: 4/28/2017

To: Sue Reilly
Transportation Assessment Liaison
Texas Parks & Wildlife Department
Wildlife Division-Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, TX 78744

From: John Wimberley
Environmental Coordinator
TxDOT – Amarillo District
5715 Canyon Drive
Amarillo, TX 79110

Subject: Comments on Possible Changes in Design on CSJ 0904-02-038 SL 335 Segment B2

Dear Ms. Reilly:

The following is the Amarillo District response to comments received from Texas Parks & Wildlife (TPWD) dated 4/24/2017.

Recommendation 1: TPWD recommends that TxDOT ensure that contractors do not place PSLs in the playa to reduce temporary impacts.

Response 1: TxDOT agrees to ensure that contractors do not place PSLs in the playa to reduce impacts to the playa.

Recommendation 2: TPWD recommends maintenance of water quality in the playa by placing long-term water quality BMPs that will help minimize pollution from roadway runoff.

Response 2: TxDOT agrees to use BMPs that will help to minimize roadway runoff into the playa. These will include appropriate erosion control structures being placed at the both edges of the roadway during construction, according to the SW3P page in the project plans. Post-construction roadway runoff protection will be provided by permanent vegetative filter strips that will be seeded and established on TxDOT ROW adjacent to the playa.

Thank you for your comments and recommendations. If you have any questions, please contact me at (806) 356-3249 or at john.wimberley@txdot.gov.

Sincerely,

John Wimberley
Environmental Coordinator
TxDOT – Amarillo District
5715 Canyon Drive
Amarillo, TX 79110

Texas Department of Transportation®
DEWITT C. GREER STATE HIGHWAY BLDG. • 125 E. 11TH STREET • AUSTIN, TEXAS 78701-2483 • (512) 463-8585

October 29, 2015

RE: Section 106 and Antiquities Code of Texas Consultation: PA-TU and MOU: Amarillo District: Amarillo, Potter, and Randall Counties: State Loop 335 Improvements from FM 2590 to SW 9th Avenue CSJs: 0904-02-038, 0904-11-058, and 0275-01-178: Cox/McLain Environmental Consultants Draft Intensive Survey Report
Texas Antiquities Permit No. 7325

Patricia A. Mercado-Allinger
Division of Archeology
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711

Dear Ms. Mercado-Allinger:

In accord with the First Amended Programmatic Agreement among the Federal Highway Administration, the Texas Department of Transportation, the Texas State Historic Preservation Officer (TSHPO), and the Advisory Council on Historic Preservation Regarding the Implementation of Transportation Undertakings (PA-TU), as well as the Memorandum of Understanding (MOU) between the Texas State Historic Preservation Officer and TxDOT, we are initiating Section 106 and Antiquities Code of Texas consultation for the proposed undertaking.

The proposed project consists of upgrading and extending the existing State Loop 335 (SL 335) from Farm-to-Market (FM) 2590 to Southwest (SW) 9th Avenue, a distance of approximately 7.8 miles. The proposed project would generally follow the FM 2186 alignment west from FM 2590 to Helium Road and then from Helium Road north to Interstate Highway 40 (IH 40). From IH 40 northeast to SW 9th Avenue the proposed project would be new-location until it merges with the existing Soncy Road south of SW 9th Avenue. The new highway would include frontage roads, ramps, grade separations over intersecting cross streets, and a 4-mainlane section with a provision for future expansion to an ultimate 6-mainlane section. The construction of the interchange of IH 40 with the proposed SL 335 consists of a frontage road system, a proposed IH 40 main lane bridge, a proposed SL 335 main lane bridge, and associated direct connectors between the proposed SL 335 and IH 40. The proposed IH 40 and SL 335 bridges would be constructed to the ultimate 6-lane section, but will be striped for 4-lanes to accommodate future expansion of IH 40 and SL 335. Additionally, improvements along IH 40 to the main lanes, ramps and frontage roads will accommodate the proposed SL 335/IH 40 interchange. The proposed project would also include improvements to Soncy Road as it connects to/from the proposed SL 335 roadway. Approximately, 246 acres of proposed new right of way (ROW) would be required.

The undertaking's area of potential effects (APE) is defined as the proposed 300 to 1,050 foot wide SL 335 ROW beginning at FM 2590 and extending 7.8 miles northeast to SW 9th Avenue. According to typical roadway design, vertical impacts would extend to a maximum depth of up to 25 feet for the overpass supports and no more than 6 feet below the current ground surface for the remainder of the project. The APE encompasses a total of 473 acres and includes a total of 246 acres of proposed new ROW. Please see the attached intensive archeological report for locational details of the existing and proposed new ROW.

Your office issued Texas Antiquities Permit No. 7325 to Cox/McLain Environmental Consultants

(CM) to conduct an intensive archeological survey of the APE. The investigation consisted of pedestrian survey of the entire APE as well as the excavation of twelve shovel tests and seven backhoe trenches. No prehistoric archeological remains were observed. However, the investigators documented the presence of the inactive historical Amarillo Helium Plant Complex as well as portions of an active municipal irrigation/aqueduct complex overlapping onto the APE. The investigators' report states that the helium plant is a National Register of Historic Places (NRHP) eligible property. The NRHP eligibility status of the irrigation/aqueduct complex has yet to be determined. No other historical resources were identified within the APE. Both the helium plant and irrigation/aqueduct complexes are considered historic structure issues and not archeological resources. Therefore, the Section 106 and Antiquities Code of Texas consultation for these two resources shall be conducted with your office by TxDOT Historical Structures staff in a separate letter. The CM investigators have recommended that no further archeological work is warranted for the undertaking. A draft copy of that report is attached for your review

TxDOT seeks your concurrence that the archeological inventory of the undertaking is complete, for a finding of no historic archeological properties affected, and no further archeological work or consultation is required. In addition, TxDOT seeks your concurrence that the attached report is adequate and that the stipulations set forth in the Antiquities Code of Texas have been fulfilled. Please signify your concurrence by signing on the signature line provided below.

In the event that archeological materials are discovered during construction, construction in the immediate area shall cease, and the TSHPO will be contacted to initiate accidental discovery procedures in accordance of the terms of the Programmatic Agreement among the Texas Historical Commission, the Federal Highway Administration, and the Texas Department of Transportation. If you have any questions, please contact me at 416-2640. Thank you for your consideration in this matter.

Sincerely,

Jon Budd, TxDOT Staff Archeologist

Concurrence by; _____ Date: 10-29-15
For Mark Wolfe, State Historic Preservation Officer and Executive Director

Attachments

TEXAS HISTORICAL COMMISSION
real places telling real stories

13 November 2015

Dr. Mark Brown
Environmental Affairs Division
Texas Department of Transportation
125 E. 11th Street
Austin, Texas 78701-2483

Re: Project review under Antiquities Code of Texas and the National Historic Preservation Act of 1966
Proposed construction of Loop 335, Amarillo, Potter County, Texas (TxDOT/FHWA) CSJ 0904-02-038

Dear Dr. Brown,

Thank you for submitting information on the above-referenced project, the relocation of SL 335 on new ROW west of Amarillo. This letter serves as official comment on the proposed undertaking from Texas' State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC).

THC staff led by Linda Henderson reviewed the materials, primarily focusing on the part of the project that will traverse the historic Amarillo Helium Plant, which has previously been determined eligible for listing in the National Register of Historic Places at the national level of significance. We concur with the findings that there are no other historic properties within the project's Area of Potential Effect. When it transferred out of federal ownership in October 2007, the entire parcel associated with the Helium Plant was placed under a preservation covenant. Subsequently, the Excell Helium Plant was also transferred out of federal ownership, and our agreement with the General Services Administration at that time explicitly referenced the protections at the Amarillo Helium site as sufficient to protect and convey the nationally important history of helium production in the Texas Panhandle. With that in mind, we find it is not appropriate to revisit the previous determination that the entire Amarillo Helium parcel is significant and protected in perpetuity by the 2007 covenant. We do not concur with the report's findings that the eastern portion of the parcel is non-contributing to, and excluded from, a potential historic district.

We also do not concur with the assessment of effects presented to us and find that the project will have adverse direct and indirect effects that will alter the character-defining features of the property. Both from within and outside the property, which is perhaps best experienced from the historic alignment of Route 66 on its north boundary, the resources will be adversely affected by the proposed project. Given that there is little development in the vicinity, there seem to be a number of viable alternatives that should be considered instead of the proposed route we have received. Previous conversations about this project indicated prudent and feasible alternate routes that could avoid the historic property, and we look forward to reviewing those plans if this project moves forward.

Thank you again for your coordination with our office and for your agency's efforts to protect the state's irreplaceable cultural and architectural heritage. Please contact us with any questions: linda.henderson@thc.state.tx.us or 512/463-5851.

Sincerely,

Linda Henderson, Historian
For: Mark Wolfe, State Historic Preservation Officer

Texas Department of Transportation
125 EAST 11TH STREET | AUSTIN, TEXAS 78701-2483 | (512) 463-8588 | WWW.TXDOT.GOV

April 13, 2017

SECTION 106 REVIEW: DETERMINATION OF DIRECT EFFECTS
Potter and Randall County / Amarillo District
Facility: SL 335
From: FM 2590 to SW 9th Avenue
CSJs: 0904-02-038, 0904-11-058, 0275-01-178

Charles Lynch, President
Amarillo Historical Preservation Foundation
1000 S Polk, Amarillo, TX 79101

Evan Thompson
Executive Director
Preservation Texas
P.O. Box 12832 Austin, TX 78711

Amanda Gronhovd
Society for Industrial Archeology
Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

Betsy Merritt
National Trust for Historic Preservation
2600 Virginia Ave. NW, Suite 1100,
Washington, DC 20037

MaryAnn Naber
FHWA Liaison
Advisory Council on Historic Preservation
401 F Street NW, Washington, DC 20001

Ladies and Gentlemen:

Introduction
The Texas Department of Transportation (TxDOT), Amarillo District, proposes upgrading existing roadways to a new controlled-access highway corridor from Farm-to-Market Road (FM) 2590 to Southwest (SW) 9th Avenue, a distance of approximately 7.8 miles, in the western portion of the City of Amarillo, in Potter and Randall Counties, Texas. The proposed project would generally follow the FM 2186 alignment west from FM 2590 to Helium Road, and then along Helium Road north to Interstate Highway (IH) 40. From IH 40 northeast to SW 9th Avenue, the proposed project would be on new location until it merges with the existing Soncy Road south of SW 9th Avenue. The new controlled access highway would include frontage roads, ramps, grade separations over intersecting cross streets, and a four-mainlane section, with a provision for future expansion to an ultimate six-mainlane section. The construction of the interchange of IH 40 with the proposed SL 335 consists of a frontage road system, a proposed IH 40 mainlane bridge, a proposed SL 335 mainlane bridge, and associated direct connectors between the proposed SL 335 and IH 40. Additionally, improvements along IH 40 to the mainlanes, ramps, and frontage roads would be included to accommodate the proposed SL 335/IH 40 interchange. The proposed project would also include improvements to connect to/from the existing Soncy Road. There would be approximately 245 acres of new right-of-way (ROW) acquired for the project of which 5.966 acres would be required from the Amarillo Helium Plant Historic District. See attached schematics.

Please note that TxDOT will construct this project in phases. This phase is the construction of at- grade frontage roads and elevated mainlanes through the Amarillo Helium Plant Historic District and bridges to carry the Loop 335 mainlanes across I-40 and BUI-40. As funds and traffic growth permit, TxDOT will construct direct connectors that are part of an "ultimate build." This letter, however, *solely coordinates direct effects* under Section 106 of project in the National Register of Historic Places eligible Amarillo

Helium Plant Historic District. TxDOT historians will coordinate indirect effects at the 30%, 60%, and 90% design stages and will reopen Section 106 review for the direct connectors.
TxDOT historians previously coordinated the eligibility of historic-age resources in the Area of Potential Effects (APE) with the State Historic Preservation Officer (SHPO) on October 16, 2015. The coordination package and SHPO's response dated November 13, 2015 are attached.

Description of the Historic Properties

Per the attached survey, and based on SHPO comments dated November 13, 2015, TxDOT historians evaluated Resource #s1A-24D through the application of the Criteria of Eligibility for listing in the National Register of Historic Places (NRHP) and accepted the US. Bureau of Land Management's determination that the following resources contribute to the **NRHP eligible** Amarillo Helium Plant Historic District: Resources 11a-11aa. Please see the survey report for a resource inventory and character defining features.[1] Contrary to the survey report's recommendations, however, the NRHP district boundary consists of the Helium Plant's entire legal parcel. As is noted in the survey report, page 12, the Helium Plant's deed includes a perpetual preservation covenant held by the Texas Historical Commission.

TxDOT historians reaffirm that all other evaluated historic-age resources (constructed before 1974) in the project APE lack sufficient integrity to convey a significant historical event, association with a person of transcendent importance, embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master. Please see the inventory in the attached survey report for individual eligibility evaluations.

Evaluation of Alternatives

TxDOT historians and engineers evaluated eight alternatives in order to avoid and minimize harm to the Amarillo Helium Plant: No Build; Modify Existing alignment; Helium Road A; Helium Road B; Helium Road D; Hope Road; Dowell Road; and Helium Road C. See attached Alternatives Map and Decision Matrix.

The No Build and Modification of the Existing Alignment alternatives are not viable because they do not meet the project requirements such as traffic improvements and provision of freight and hazardous materials routes. Helium Road A is not constructible as a matter of sound engineering because there is insufficient distance between Soncy Road and a Loop 335/I-40 interchange. Helium Road B and D meet the project requirements; they cost an extraordinary amount more than the preferred alternative and thus are not a prudent use of public resources. The Hope and Dowell Road alternatives neither meet the project requirements because they are too far west to divert traffic from Soncy Road nor are they a prudent use of public resources as they cost $178.4 million and $232.7 million more, respectively, than the preferred alternative. See attached Decision Matrix.

Helium Road C is the preferred alternative as it meets the project needs and purpose and is the least expensive (except for No Build).

A detailed analysis of the alternatives is available on request.

Determination of Effects

In accordance with 36 CFR 800.5, TxDOT Historians applied the *Criteria of Adverse Effect* and determined that the proposed project poses **adverse effects** to historic resources.

- Direct Effects: The project adversely affects contributing resources of the Amarillo Helium Plant Historic District, namely 11y and 11aa as the proposed frontage roads would require their complete or partial demolition.

[1] See *Report for Historical Studies Survey (DRAFT) SL 335, Amarillo District From FM 2590 to SW 9th Avenue CSJ: 0904-02-038, 0904-11-058, 0275-01-178 Potter & Randall Counties, Texas. October 15, 2015.*

- Indirect Effects: Project activities pose indirect effects. The viewshed from the remaining contributing resources will change. TxDOT historians cannot fully assess the nature and extent of the indirect effects until additional design work is completed. Consequently, at the 30%, 60%, and 90% design stages TxDOT will contact you and SHPO to discuss, and coordinate if appropriate, indirect effects to the Amarillo Helium Plant.

- Cumulative Effects: TxDOT finds no cumulative effect to historic properties in the APE. TxDOT does not anticipate that the proposed project will accelerate or change growth patterns in the area. In addition, the Amarillo Helium Plant is protected from future effects due to the presence of a preservation covenant on the property, held in perpetuity by the Texas Historical Commission.

Measures to Minimize and Mitigate Effects

Efforts to minimize harm to the Amarillo Helium Plant are an integral part of the project planning and development process. TxDOT engineers minimized the cross-section of the proposed Loop 335 alignment to avoid the modest, but contributing, guardhouse (11o) and well shed (11z) in the southeast corner of the parcel.

Further, TxDOT consulted with SHPO, the Advisory Council on Historic Preservation (ACHP), and interested parties on the development of an Memorandum of Agreement (MOA) to mitigate the adverse effect:

-TxDOT shall consult with the Signatories and the Consulting Parties on minimization of effects at the 30%, 60%, and 90% project design stages.

-TxDOT shall prepare a National Register Nomination for the Amarillo Helium Plant and present copies to the Helium Plant's owner and the THC to use as they see fit. The National Register nomination would include photographs of the small cylinder area (11aa) as it is an under documented contributing feature that would be directly impacted by the proposed construction.

-TxDOT shall reformat existing research on the history of helium production in Texas for electronic distribution by the THC and Consulting Parties.

-TxDOT shall construct a pull-off in its existing right-of-way that would improve access to the THC historical marker in front of the Helium Plant.

-TxDOT shall provide Consulting Parties and SHPO a 30-day period to comment on educational materials produced by TxDOT under this MOA.

Perhaps more importantly, TxDOT will pay SHPO a total of $698,110.00 to

- supplement the state-wide covenant and easement-monitoring program ($198,110.00).

- fund preservation planning ($200,000.00) and building stabilization and rehabilitation ($300,000.00) through the Texas Preservation Trust Fund (TPTF) grant program should the owner apply for the funds.

Public Involvement

The National Historic Preservation Act, as implemented at 36 CFR 800, requires involvement of the public in the Section 106 review process. TxDOT disclosed the presence of the Helium Plant at a public meeting conducted on November 14, 2016 and sought comment. Furthermore, it sought public comment on a draft of the MOA. See attached summary reports. Of the comments that mentioned the Helium Plant, all supported constructing Loop 335, Segment B-2, through the Helium Plant. TxDOT received no comments on the draft terms of the MOA. TxDOT also identified consulting parties and sought their perspective on mitigation and the provisions of the MOA.

Conclusion

In accordance with 36 CFR 800, I hereby request your signed concurrence with TxDOT's findings of effect and mitigation. Please return a signed copy of this correspondence for our files within **30** calendar days.

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

Thank you for your cooperation in this federal review process. If you have any questions or comments concerning these evaluations, please call me at (512) 416-2600.

Sincerely,

Mark M. Brown
Historic Preservation Specialist
Historical Studies Branch
Environmental Affairs Division

thru: Bruce Jensen, Cultural Resources Section Director, BJ

Checklist
Section 4(f) Net Benefit Programmatic for Historic Sites

Project: State Loop 335, Segment B-2

Limits: Farm-to-Market (FM) 2590 to Southwest (SW) 9th Avenue

County: Potter and Randall Counties

District: Amarillo

Control Section Job Number (CSJ): 0904-02-038, 0275-01-178, 0904-11-058

Property Name: Amarillo Helium Plant Historic District

Strategically located along U.S. Route 66 and a branch of the Rock Island Railroad, the nationally significant Amarillo Helium Plant Historic District is a few miles from the helium-rich Cliffside natural gas field. When completed in 1929 it was the world's only helium production facility. After 1943, helium production shifted to other facilities and the Amarillo plant focused on research and administration. Congress authorized the privatization of helium production in 1966 and the Amarillo plant was sold in 2007.

The Amarillo Helium Plant Historic District currently consists of 27 inventoried resources with three zones numbered 11a through 11 aa. (See Report for Historical Studies Survey (DRAFT) SL 335, Amarillo District From FM 2590 to SW 9th Avenue CSJ: 0904-02-038, 0904-11-058, 0275-01-178 Potter & Randall Counties, Texas. October 15, 2015.) The front zone contains the administration, production, and major support buildings. The back zone includes the water tower, wells, cooling, shipping, storage, and smaller support facilities. The empty zone is undeveloped and currently occupied by prairie dogs and a parking lot. See Attachment 3.

Several of the front zone buildings face north and look across a large field on the far side of Business I-40, formerly US Route 66. These include the administration building, a machine shop, and two laboratories. Most of the buildings directly involved in the actual process of helium extraction (as opposed to support operations like shipping) are located along an internal east-west street south of those fronting Business I-40 (BUI-40).

The back zone includes other facilities like storage sheds, parking, internal rail lines, and the guard house. Some of these, like 11u, 11r, and 11x, were partially demolished to their foundations before the plant was sold.

In assessing the relative significance of the inventoried resources and the impact the proposed project will have on the historic district overall, it is useful to remember that each resource played its role. Nevertheless, the majority of the resources in the front zone more clearly convey the main stories that embody the site's significance. Others are somewhat redundant, such as 11y, the New Loading Dock and Shipping Warehouse, in the back zone or are associated with themes better interpreted elsewhere in the facility.

Observations during TxDOT and Texas Historical Commission staff a site visit along with informal reports from TxDOT engineers document the overall condition of the facility suffers from lack maintenance:
-extensive animal and bird related damage
-extensive window and sash damage
-peeling paint and interior wall treatments
Since acquiring the property in 2010, the owner sought to secure the perimeter and replaced the roof of the guardhouse (11o). Further, and perhaps most importantly, TxDOT district engineers report that the roof and floors of the administration building (11c) are unstable. To date, declining condition has outpaced preservation efforts.

Official with Jurisdiction: Mark Wolfe, State Historic Preservation Officer

Size of 4(f) Property: 18.56 acres

ROW Required: 5.96 acres

Easement Required: 0.0 acres

Describe the 4(f) impact: Direct impacts to two contributing resources and adverse indirect visual effects.

The environmental review, consultation and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated 12-16-14, and executed by FHWA and TxDOT.

I. Description of Project Scope/Need and Purpose Statement

Description of the Proposed Action
The Texas Department of Transportation (TxDOT), Amarillo District proposes upgrading existing roadways to a new controlled access highway corridor from Farm-to-Market (FM) 2590 to Southwest (SW) 9th Avenue, a distance of approximately 7.8 miles, in the western portion of the City of Amarillo in Potter and Randall Counties, Texas. The proposed project would generally follow the FM 2186 alignment west from FM 2590 to Helium Road and then Helium Road north to Interstate Highway 40 (I-40). From I-40 northeast to SW 9th Avenue, the proposed project would be on new location until it merges with the existing Soncy Road south of SW 9th Avenue. The new controlled access highway would include frontage roads, ramps, grade separations over intersecting cross streets, and a 4-mainlane section with a provision for future expansion to an ultimate 6-mainlane section. The proposed I-40 / SL 335 interchange consists of a frontage road system, a proposed I-40 mainlane bridge, a proposed SL 335 mainlane bridge, and associated direct connectors between the proposed SL 335 and I-40. The proposed I-40 and SL 335 bridges would be to the ultimate 6-lane section, but will be striped for 4-lanes to accommodate future expansion of I-40 and SL 335. Additionally, improvements along I-40 to the mainlanes, ramps and frontage roads will be included to accommodate a five-level ultimate build SL 335/I-40 interchange. The proposed project would also include improvements to connect to/from the existing Soncy Road. The project would require approximately 289.4 acres of new right-of-way.

Need for Project
The proposed project is needed because of:

- Diminished regional and local mobility under projected conditions,
- A lack of adequate corridor redundancy, including alternative freight corridors, and,
- A lack of an additional route for hazardous cargo around the City of Amarillo.

Supporting Facts/Data

Regional and Local Mobility
SL 335 has become a major arterial and no longer functions properly as a link between I-27 and I-40 on the western side of the City of Amarillo. As development and the number of and type of motorists accessing this quadrant grows, the mobility within and through the corridor will decrease due to the increased number of and types of vehicles using these facilities.

According to the 2010 U.S. Census, the City of Amarillo is the 14th most populous city in Texas. Between 2000 and 2010, the Census Bureau estimated the city added approximately 17,068 residents to reach a population of 190,695. Household population projections generated by the Panhandle Regional Planning Commission (PRPC) indicates a steady growth would likely continue to occur in Potter and Randall

Counties through the year 2030 of 31 and 13 percent, respectively. The 26-county PRPC planning area is projected to grow from a population of 427,927 residents to 505,252 residents by 2030, an approximate increase of 18 percent from its Census 2010 population.

In conjunction with the population growth trends, rapid commercial and residential development add to the need for improved mobility in the southwest quadrant of the city. New residential subdivisions are already planned and platted west of Soncy Road from SW 45th Street south to FM 2186. The City of Amarillo Zoning maps show that commercial development is also anticipated to occur in this area to serve the growing residential population.

This rapid commercial and residential development in southwest Amarillo will result in a need for transportation improvements to accommodate the corresponding rapid growth in traffic numbers. The proposed project would enhance mobility and relieve congestion within those areas for residential and commercial traffic while keeping them separated from the majority of the heavy freight traffic that would utilize a separate freeway loop system.

Traffic Operations

The interaction between vehicles traveling through the area, including heavy freight trucks hauling items such as wind turbine parts and oil field equipment, and motorists accessing the surrounding developments will continue to increase as evidenced by the projected population growth above; therefore, there is a need to address overall functionality, movement, and safety within the corridor. Freight trucks traveling through this quadrant must vary their speed due to loads being carried, signalization of numerous intersections on SL 335, and local traffic accessing the surrounding developments. This interaction between freight trucks and local motorists results in increased congestion and degraded functionality of the existing facility.

Congestion can best be described in terms of level of service (LOS) and travel speeds along a roadway. The LOS is a qualitative measure of describing operational conditions within a traffic stream or at an intersection, generally described in terms of such factors as speed and travel time, freedom to manoeuvre, traffic interruptions, comfort and convenience, and safety. The LOS terms are designated from A through F (A being the best and F the worst) and cover the entire range of traffic operations that may occur. Based on the LOS analysis for the Existing 2014 and 2035 No-Build scenarios within project limits, a general deterioration of the LOS at nine intersections along SL 335 is anticipated by 2035. The majority of the intersections analysed in the Existing 2014 scenario are operating at LOS C or better. Under the 2035 No-Build scenario, the majority of the intersections would be operating at LOS D, E or F. The table below shows the LOS for the AM and PM peak traffic hours for each intersection. The table included in Attachment 1 shows the LOS for the morning and afternoon peak-traffic hours for selected intersections.

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Freight Corridor

I-40 runs from Southern California to North Carolina and provides regionally-important freight connections in Oklahoma City, Albuquerque, and in the City of Amarillo. I-27 is listed as part of the Ports to Plains Corridor, providing a freight corridor from the Lower Rio Grande Valley to Denver, Colorado.

The Texas Freight Mobility Plan and The Ports-to-Plains Alliance indicate a substantial amount of freight movement through the Amarillo region, and a real need for infrastructure improvements to meet this demand. The majority of freight that travels to Amarillo continues on through and beyond the city in the same direction. Both I-27 and I-40 are expected to experience future growth in total freight tonnage. According to TxDOT data, I-27 is expected to carry up to 25 million tons of freight and I-40 is expected to

carry up to 220 million tons of freight by 2040, compared to 10 million tons (I-27) and 50 million tons (I-40) in 2010. This represents an increase of approximately 150% and 360% respectively for the two interstates between 2010 and 2040.

Corridor Redundancy and Alternative Freight Corridors
Future service disruptions to I-40 within the City of Amarillo will restrict freight movement and create the need for "corridor redundancy" (i.e. additional freeway options) for traffic traveling east or west through the region. In order to maintain the needed regional capacity for the growing freight traffic within the region, an alternative freight corridor will be necessary to avoid these service disruptions, which could include I-40 roadway construction projects, major vehicle accidents, etc.

The Texas Freight Mobility Plan states that TxDOT should identify and implement strategies that will improve safety and reduce crash rates, fatalities, and injuries associated with freight movement on the Texas Freight Network. An objective to meet this is to build safety, security and resiliency factors into transportation infrastructure designs and investment decisions and ensure all the Primary Texas Highway Freight Network have alternate routes, especially for oversize/overweight vehicles, in the event of natural or man-made disasters.

The anticipated growth in freight and general traffic coupled with the need for corridor redundancy, the continued growth of the Amarillo metropolitan area, and the City of Amarillo's desire to detour freight traffic around the downtown area creates a need for an alternative route around the City of Amarillo.

Hazardous Cargo Route
Hazardous cargo is a significant part of regional freight movement. The only continuous routes for hazardous cargo through Amarillo is on I-27 and I-40, both of which are designated as hazardous material routes. The existing western quadrant of SL 335 (Soncy Road) is designated as gas and diesel only from Business I-40 south to 45th Avenue.

All hazardous material cargo must therefore travel through the I-27/I-40 interchange located in a residential area just south of the central business district, as there is no alternate route. This interchange was built by the Texas Highway Department in October 1959 (dedicated as I-40 in 1968) and does not meet current design standards. The existing design results in greatly reduced speeds for hazardous material cargo haulers to navigate the connection from I-27 to I-40. All hazardous material cargo traffic travelling north on I-27 and wanting to go west on I-40 would have to go through the interchange. This would be the same for traffic traveling east on I-40 and wanting to travel south on I-27. Routing hazardous cargo through this interchange increases the likelihood of potential traffic accidents resulting in serious crashes or cargo spills. Any hazardous material release would result in multi-lane or total road closure, as well as the potential need to evacuate the surrounding residential neighbourhoods.

As freight traffic increases, so does the need for an additional hazardous cargo route that bypasses the I-27/I-40 interchange. Upgrading SL 335 to a limited access freeway would allow for the designation of SL 335 as an additional route for hazardous cargo around Amarillo.

Project Purpose
The purpose of the proposed project is to address the needs identified above by:

- Increasing regional and local mobility;
- Providing corridor redundancy, including alternative freight corridors, and,
- Providing an additional hazardous cargo route around the City of Amarillo.

II. Determination of Applicability

All must result in a Yes answer for this checklist to be used.

Yes	No	
☒	☐	1. Does the proposed transportation project use a Section 4(f) historic site?
☒	☐	2. Does the proposed project include all appropriate measures to minimize harm and subsequent mitigation necessary to preserve and enhance those features and values of the property that originally qualified the property for Section 4(f) protection.
☒	☐	3. Has the official(s) with jurisdiction over the Section 4(f) property agreed in writing with the assessment of the impacts; the proposed measures to minimize harm; and the mitigation necessary to preserve, rehabilitate and enhance those features and values of the Section 4(f) property; and that such measures will result in a net benefit to the Section 4(f) property?
☒	☐	4. Has the Administration determined that the project facts match those set forth in the Applicability, Alternatives, Findings, Mitigation and Measures to Minimize Harm, Coordination, and Public Involvement sections of this programmatic evaluation?

III. Identify additional Section 4(f) properties in the project area

Either exception, de minimis, or another programmatic

None

Comments: None

IV. Alternatives Considered/Findings

1. **Do Nothing:** The Do Nothing Alternative is not feasible and prudent because *(Verify that the following applies)*:

   ☒ The Do-Nothing Alternative is not feasible and prudent because it would neither address nor correct the transportation need cited as the NEPA purpose and need, which necessitated the proposed project.

   Recommendation (Mandatory)
   This alternative is determined to fail the Section 4(f) prudent and feasible standard and is not recommended.

2. **Improvement without Using Adjacent Section 4(f) Lands:** It is not feasible and prudent to avoid Section 4(f) lands by roadway design or transportation system management because implementing such measures would result in *(Indicate all that apply)*:

   ☒ Substantial adverse community impacts to adjacent homes, businesses or other improved properties

   ☒ Substantially increased roadway or structure cost

☐ Unique engineering, traffic, maintenance, or safety problems

☐ Substantial adverse social, economic, or environmental impacts

☒ A substantial missed opportunity to benefit a Section 4(f) property

☒ The project not meeting identified transportation needs

☒ Impacts, costs, or problems would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands.

Recommendation (Mandatory)
This alternative is determined to fail the Section 4(f) prudent and feasible standard and is not recommended.

3. **Alternative on New Location:** It is not feasible and prudent to avoid Section 4(f) lands by constructing on new alignment because *(Indicate all that apply)*:

☒ The new location would not address or correct the problems cited as the NEPA purpose and need, which necessitated the proposed project

☐ The new location would result in substantial adverse social, economic, or environmental impacts.

☒ The new location would substantially increase costs or engineering.

☒ Such problems, impacts, costs, or difficulties would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands.

Recommendation (Mandatory)
This alternative is determined to fail the Section 4(f) prudent and feasible standard and is not recommended.

V. Measures to Minimize Harm

Indicate all that apply, but a minimum of one must be selected.

☒ The proposed action includes all possible planning to minimize harm

☒ The proposed action includes all possible mitigation measures

☒ The official with jurisdiction has agreed to the proposed mitigation in writing

VI. Public Involvement

☒ Public involvement to present the proposed use of the Section 4(f) property has been conducted. Date of Public Involvement: November 14, 2016

VII. Mitigation Commitment

Describe mitigation agreed to in consultation with official with jurisdiction (if applicable):

-TxDOT shall consult with the Signatories and the consulting parties on minimization of effects at the 60% and 90% project design stages.

-TxDOT shall prepare a NRHP nomination for the Amarillo Helium Plant and present copies to the Helium Plant's owner and the THC to use as they see fit.

-TxDOT shall reformat existing research on the history of helium production in Texas for electronic distribution by the THC and consulting parties.

-TxDOT shall construct a pull-off in its existing right-of-way that would improve access to the THC historical marker in front of the Helium Plant.

-TxDOT shall provide consulting parties and SHPO a 30-day period to comment on educational materials produced by TxDOT under this MOA.

TxDOT will pay SHPO a total of $698,110.00 to

- supplement the state-wide covenant and easement-monitoring program ($198,110.00).

- fund preservation planning ($200,000.00) and building stabilization and rehabilitation ($300,000.00) through the Texas Preservation Trust Fund (TPTF) grant program should the owner apply for the funds.

VII. Summary and Approval

The environmental review, consultation and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated 12-16-14, and executed by FHWA and TxDOT.

The proposed project meets all the applicability criteria set forth by the Federal Highway Administration's (FHWA) guidance for Programmatic Evaluation for Transportation Projects That Have a Net Benefit to a Section 4(f) Property. All alternatives set forth in the subject programmatic were fully evaluated and the findings made are clearly applicable to this project. There are **no feasible and prudent alternatives** to the use or take from the historic site.

The project includes all possible planning to minimize harm. The Texas Department of Transportation (TxDOT) will include the measures to minimize harm as environmental commitments in the applicable National Environmental Policy Act (NEPA) document and Environmental Compliance Oversight System (ECOS) for the proposed project.

The following **MUST** be attached to this checklist to ensure proper documentation of the Programmatic Section 4(f):

1. Brief project description
2. Explanation of how the property will be used
3. A detailed map of the Section 4(f) property including:
    a. Current and proposed ROW
    b. Property boundaries
4. Comparative alternatives analysis chart
5. Concurrence letter from Official with Jurisdiction.

VIII. TxDOT Approval Signatures

District Reviewer Certification

I reviewed this checklist and all attached documentation and confirm that the proposed project meets the requirements of 23 CFR 774 for a Programmatic Section 4(f) finding.

John Humberley — 6/5/17

District Reviewer — Date

ENV Technical Expert Reviewer Certification

I reviewed this checklist and all attached documentation and confirm that the proposed project meets the requirements of 23 CFR 774 for a Programmatic Section 4(f) finding.

RMDobrasko, for — 6/8/2017

CRM Division Director — Date

TxDOT-ENV Programmatic Section 4(f) Final Approval

Based upon the above considerations, this Programmatic Section 4(f) satisfies the requirements of 23 CFR 774.

8 Jun 2017

TxDOT-ENV Deputy Director or Designee — Date

Attachment 1: Brief Project Description

Description of the Proposed Action

The Texas Department of Transportation (TxDOT), Amarillo District proposes upgrading existing roadways to a new controlled access highway corridor from Farm-to-Market (FM) 2590 to Southwest (SW) 9th Avenue, a distance of approximately 7.8 miles, in the western portion of the City of Amarillo in Potter and Randall Counties, Texas. The proposed project would generally follow the FM 2186 alignment west from FM 2590 to Helium Road and then Helium Road north to Interstate Highway 40 (I-40). From I-40 northeast to SW 9th Avenue, the proposed project would be on new location until it merges with the existing Soncy Road south of SW 9th Avenue. The new controlled access highway would include frontage roads, ramps, grade separations over intersecting cross streets, and a 4-mainlane section with a provision for future expansion to an ultimate 6-mainlane section. The proposed I-40 / SL 335 interchange consists of a frontage road system, a proposed I-40 mainlane bridge, a proposed SL 335 mainlane bridge, and associated direct connectors between the proposed SL 335 and I-40. The proposed I-40 and SL 335 bridges would be to the ultimate 6-lane section, but will be striped for 4-lanes to accommodate future expansion of I-40 and SL 335. Additionally, improvements along I-40 to the mainlanes, ramps and frontage roads will be included to accommodate a five-level ultimate build SL 335/I-40 interchange. The proposed project would also include improvements to connect to/from the existing Soncy Road. The project would require approximately 289.4 acres of new right-of-way.

Notes on Setting

Project area topography is level, but generally sloping north and south from I-40 before draining east. Playa lakes west of Soncy Road and roughs (incipient badlands) north of Business I-40 punctuate the flatness of the southern plains. A high voltage transmission line runs along the 9th Avenue section line. Design standards require new construction through playa lakes and roughs maintain and meet vertical profile design criteria.

Level of Service (LOS) for the Morning and Afternoon Peak Traffic Hours: Selected Intersections

Intersection	Existing 2014		2035 No-Build	
	AM Peak Hour Overall LOS	PM Peak Hour Overall LOS	AM Peak Hour Overall LOS	PM Peak Hour Overall LOS
SW 9th Ave at Loop 335	A	A	A	F
I-40 Business at Loop 335	B	C	C	F
Westgate Pkwy at Loop 335	D	C	D	F
W 34th Ave at Loop 335	C	D	E	F
Legend Ave at Loop 335	A	A	E	C
SW 45th Ave at Loop 335	B	C	E	F
Hillside Road at Loop 335	B	B	D	D
W 77th Ave at Loop 335	A	A	D	E
W 81st Ave at Loop 335	A	A	D	F

Attachment 2: Explanation of How the Section 4(f) Property Will Be Used

Use of the Amarillo Helium Plant Historic District

The preferred alternative, Helium Road C, requires 5.96 acres from within the 18.56 aces parcel that comprise the entire historic district. By constructing the Helium Road C alternative, TxDOT would demolish all or part of two contributing resources (Inventory numbers11y and 11aa). It will also change the viewshed to and from the remaining contributing resources.

Description of the Section 4(f) Property

Strategically located along U.S. Route 66 and a branch of the Rock Island Railroad, the nationally significant Amarillo Helium Plant Historic District is a few miles from the helium-rich Cliffside natural gas field. When completed in 1929 it was the world's only helium production facility. After 1943, helium production shifted to other facilities and the Amarillo plant focused on research and administration. Congress authorized the privatization of helium production in 1966 and the Amarillo plant was sold in 2007.

The Amarillo Helium Plant Historic District currently consists of 27 inventoried resources with three zones numbered 11a through 11 aa.[1] The front zone contains the administration, production, and major support buildings. The back zone includes the water tower, wells, cooling, shipping, storage, and smaller support facilities. The empty zone is undeveloped and currently occupied by prairie dogs and a parking lot. See Attachment 3.

Several of the front zone buildings face north and look across a large field on the far side of Business I-40, formerly US Route 66. These include the administration building, a machine shop, and two laboratories. Most of the buildings directly involved in the actual process of helium extraction (as opposed to support operations like shipping) are located along an internal east-west street south of those fronting Business I-40 (BUI-40).

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[1] See *Report for Historical Studies Survey (DRAFT) SL 335, Amarillo District From FM 2590 to SW 9th Avenue CSJ: 0904-02-038, 0904-11-058, 0275-01-178 Potter & Randall Counties, Texas*. October 15, 2015.

The back zone includes other facilities like storage sheds, parking, internal rail lines, and the guard house. Some of these, like 11u, 11r, and 11x, were partially demolished to their foundations before the plant was sold.[2]

In assessing the relative significance of the inventoried resources and the impact the proposed project will have on the historic district overall, it is useful to remember that each resource played its role. Nevertheless, the majority of the resources in the front zone more clearly convey the main stories that embody the site's significance. Others are somewhat redundant, such as 11y, the New Loading Dock and Shipping Warehouse, in the back zone or are associated with themes better interpreted elsewhere in the facility.

Observations during TxDOT and Texas Historical Commission staff a site visit along with informal reports from TxDOT engineers document the overall condition of the facility suffers from lack maintenance:

-extensive animal and bird related damage

-extensive window and sash damage

-peeling paint and interior wall treatments

Since acquiring the property in 2010, the owner sought to secure the perimeter and replaced the roof of the guardhouse (11o). Further, and perhaps most importantly, TxDOT district engineers report that the roof and floors of the administration building (11c) are unstable. To date, declining condition has outpaced preservation efforts.

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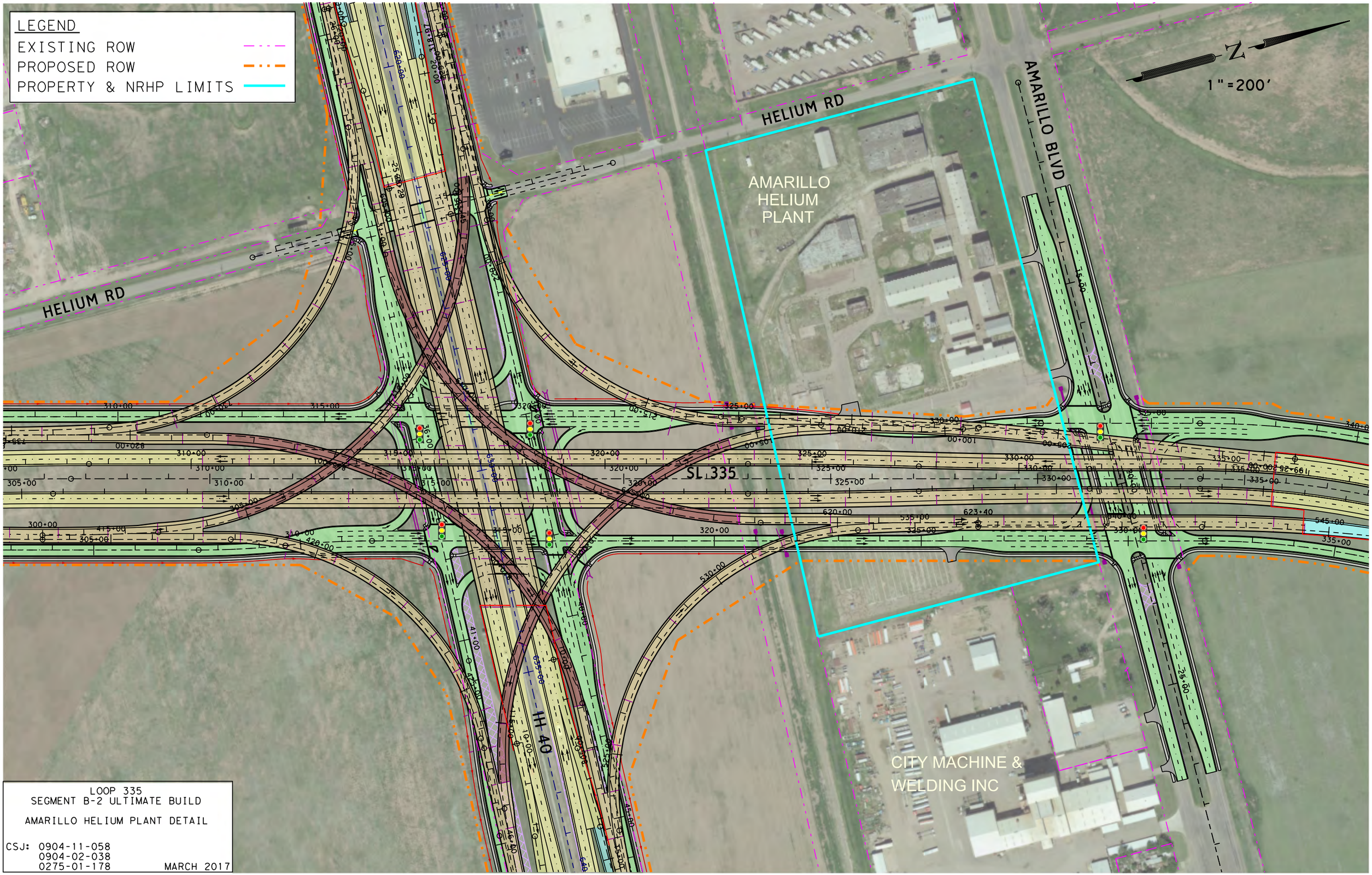
[2] All but the concrete foundation of the warehouse, 11y, was removed before sale. Since the July 2015 field survey, however, the current owner demolished the foundation. Per FHWA policy, TxDOT historians are conducting this Section 4(f) analysis as if 11y was in the same condition as it was at the time of the survey.

Attachment 3: A Detailed Map of the Section 4(f) Property Including:

Current and Proposed ROW
Property Boundaries
Contributing Resources

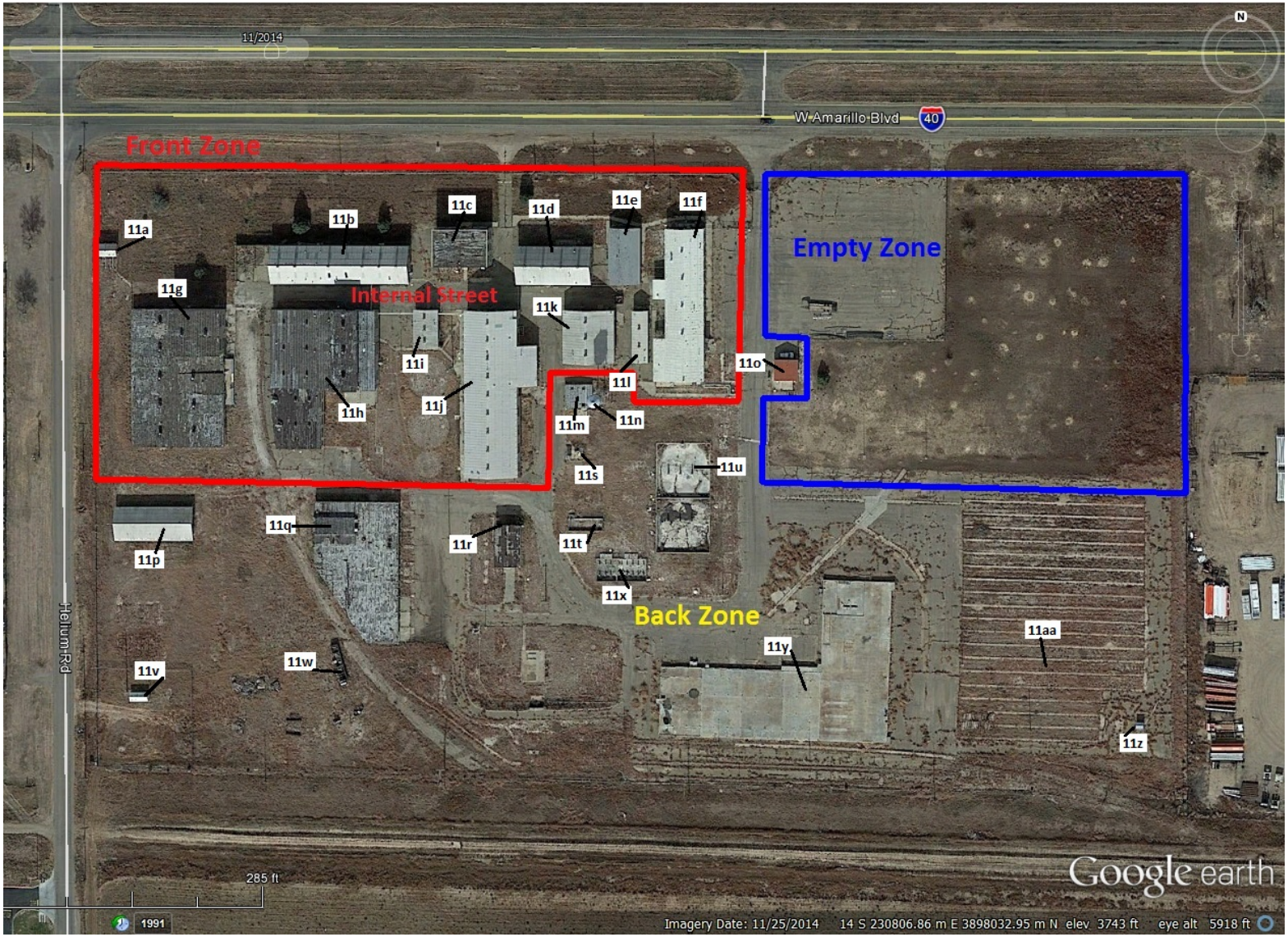


LOOP 335
SEGMENT B-2 ULTIMATE BUILD

AMARILLO HELIUM PLANT DETAIL

CSJ: 0904-11-058
0904-02-038
0275-01-178

MARCH 2017



N

Resource ID	Name	Year Built
11a	Navy Building	1929
11b	Machine & Welding Shop	1929
11c	Administration	1929
11d	Laboratory (1)	1929
11e	Engineering Building	1943
11f	Laboratory (2)	1947
11g	CO2 Removal & Cylinder Storage	1929
11h	Separation Building & Loading Dock	1929
11i	Change Room	1929
11j	Power House	1929
11k	Garage	1929
11l	Laboratory Annex	1947
11m	Settling Basin	1928-1940
11n	Water Tank	1928-1940
11o	Guard House	1962
11p	Storage Shed	1929
11q	High Pressure Storage	1929
11r	Pump House	1942
11s	Shed	ca 1975
11t	Cooling Tower	1941-1955
11u	Oxidation/Fire Ponds	1928-1940
11v	Water Well (1)	1928-1940
11w	Unknown – potentially trash disposal	ca 1950
11x	Cooling Tower	1941-1955
11y	New Loading Dock & Shipping Warehouse	1947; 1956
11z	Water Well (2)	1928-1940
11aa	Small Cylinder Storage Area	1928-1953

Attachment 4: Comparative Alternatives Analysis

Decision Matrix

Detailed Analysis

Decision Matrix: Loop 335, Segment B-2
CSJ: 0904-02-038

Alternative	Traffic Operations	Mobility	Connectivity	Corridor Redundancy	Freight Corridor	Hazardous Materials	Displacements a: Number b: Cost (except ROW)	ROW a: Acres b: Cost	Construction a: Feasibility b: Cost	Total Cost (Displacements, ROW, Construction)[1]	Other Environmental Impacts
No Build	No	No	No	No	No	No	a: N/A b: N/A	a: N/A b: N/A	a: Yes b: None	N/A	N/A
Modify Existing Alignment	No	No	Yes	No	No	No	a: 19 Comm b: 122.1 mill	a: 76.9 ac b: $67 mill	a: Yes b: $ 226 mill	$415.1 mill	-Negative impacts to commercial businesses during construction -Negative impacts to community cohesion
Helium Road A Far East	No	No	No	No	No	No – too close to existing and planned residential & commercial development	a: 1 City Well b: $500,000	a: 275.6 ac b: $33.7 mill	a: No–insufficient distance to Soncy Rd intersection b: N/A	N/A	N/A
Helium Road B	Yes	Yes	Yes	Yes	Yes	Yes	a: 2 Comm, 1 City Well b: $6.25 mill	a: 283.3 ac b: $34.6 mill	a: Yes b: $ 310 mill	$350.9 mill	-Bridge required for playa lake
Helium Road C (Preferred)	Yes	Yes	Yes	Yes	Yes	Yes	a: 1 Helium Property, 1 City Well b: $500,000+	a: 289.4 ac b: $35.4 mill	a: Yes b: $250 mill	$286.4 mill	-Adverse effect to Helium plant -Bridge required for playa lake
Helium Road D	Yes	Yes	Yes	Yes	Yes	Yes	a: 3 Comm, 1 Residential, City Well b: $19.1 mill	a: 307.4 ac b: $37.6 mill	a: Yes b: $330 mill	$386.7 mill	-Impacts to community cohesion -Bridge required for playa lake
Hope Road	No – will not divert traffic from Soncy Rd.	No – will not divert traffic from Soncy Rd.	No – extra travel distance from Soncy Rd will not improve access to medical center	Yes	Yes	Yes	a: 5 Comm, 14 Residential, 1 City Well b: $7.9 mill	a: 379.5 ac b: $46.4 mill	a: Yes b: $411 mill	$465.3 mill	-Adverse indirect visual effects to Cadillac Ranch -WOUS[2] impacts with possible bridge -Impacts to community cohesion
Dowell Road	No – will not divert traffic from Soncy Rd.	No – will not divert traffic from Soncy Rd.	No – extra travel distance from Soncy Rd will not improve access to medical center	Yes	Yes	Yes	a: 2 Comm, 1 Residential, 1 City Well b: $1.85 mill	a: 451.7 ac b: $55.2 mill	a: Yes b: $462 mill	$519.1 mill	-Adverse indirect visual effects to Cadillac Ranch -Playa lake impacts (Individual Permits from USACE[3] for jurisdictional wetlands requiring 2 yrs to obtain)

[1] Cost estimate does not include utility relocations.
[2] Water of the United States
[3] United States Army Corps of Engineers

PROPOSED ACTION AND AVOIDANCE ALTERNATIVES

As mentioned above, 23 CFR 774 requires consideration of alternatives that avoid the use of a Section 4(f) property. These alternatives, per FWHA guidance for programmatic Net Benefit 4(f)[3] include the following: 1) do nothing, 2) improve the facility in a manner that addresses the purpose and need without the use of the Section 4(f) resource, or 3) build a new facility at a new location without the use of the Section 4(f) resource. TxDOT considered more than three alternatives in compliance with the need to do all possible planning given the significance of the Amarillo Helium Plant:

1. **Do nothing**
    - No Build: Continue to use Soncy Road between FM 2156 and SW 9th Street as Loop 335.

2. **Improve the facility in a manner that addresses the purpose and need without use of the Section 4(f) resource**
    - Modify Existing alignment. Rebuild Soncy Road between FM 2156 and SW 9th Street as Loop 335 to accommodate additional traffic.

3. **Building a new facility at a new location without the use of the Section 4(f) resource**
    - Helium Road A: This alignment proceeds north from FM 2156 along Helium Road and turns northeast towards SW 9th Street near SW 34th Street. It would cross I-40 approximately 2,600 feet west of Soncy Road and passes through a currently under developed lot before crossing W Amarillo Boulevard (Old Route 66).
    - Helium Road B: This alignment proceeds north from FM 2156 along Helium Road and turns northeast towards SW 9th Street near SW 34th Street. It would cross I-40 approximately 3,800 feet west of Soncy Road and passes through two industrial facilities before crossing W Amarillo Boulevard (Old Route 66).
    - Helium Road D: This alignment proceeds north from FM 2156 along Helium Road and turns northeast towards SW 9th Street after crossing W Amarillo Boulevard.
    - Hope Road: This alignment proceeds north from FM 2156 along Hope Road and turns northeast towards SW 9th Street near about a mile north of I-40. It would cross I-40 approximately 2 miles west of Soncy Road.
    - Dowell Road: This alignment proceeds north from FM 2156 along Dowell Road. It would cross I-40 approximately 3 miles west of Soncy Road and turns northeast towards SW 9th Street about a mile north of I-40.

4. **Building a new facility at a new location requiring the use of the Section 4(f) resource**
    - Helium Road C: This alignment proceeds north from FM 2156 and turns northeast towards SW 9th Street. It would cross I-40 approximately 4,900 feet

[3] See: <https://www.environment.fhwa.dot.gov/4f/4fnetbenefits.asp> Accessed January 30, 2017.

west of Soncy Road pass through the eastern section of the Amarillo Helium Plant before crossing W Amarillo Boulevard (Old Route 66).

The analysis below evaluates alternatives from east to west excepting that of the Preferred Alternative, Helium Road C, is last. Appendix A is an aerial photograph overlaid with these alternative proposals. Appendix B is a Decision Matrix that summarizes the alternative analysis.

No Build

Mobility and connectivity will continue to decrease on Soncy Road due to the increased number and types of vehicles using this roadway to access the southwest quadrant of the City. The interaction between freight traffic traveling through the area and motorists accessing the surrounding residential and commercial developments will continue to increase, further degrading the functionality of the existing facility. The no-build alternative would not address concerns for traffic operations, mobility, and connectivity.

Freight trucks traveling through this quadrant will be required to vary their speed given the size of their loads, the signalization on Soncy Road, and the trucks' interactions with local traffic accessing the surrounding commercial and residential developments. The no-build alternative would not address the needs for an alternative freight corridor, corridor redundancy, or a hazardous cargo route.

Because the No Build Alternative would not address traffic operations, mobility, connectivity, freight corridor, corridor redundancy, or hazardous cargo it is not considered a prudent alternative.

Modify Existing Alignment

The existing Soncy Road alignment has a right-of-way (ROW) width of 120 feet from I-40 south to 0.1 miles south of the 45th Street Intersection. From that point south to FM 2590, the ROW width is 200 feet. Converting Soncy Road to a controlled access freeway requires 305 feet ROW and thus approximately 76.9 acres of new ROW. The new ROW would be from the west side of the existing alignment as it has more tracts that are open and fewer residences than the east side.

Modifying Soncy Road to a controlled access freeway would require at least 19 commercial displacements: 2 banks, 8 restaurants, 4 retail stores, 2 gas stations, and 3 auto dealerships. In addition, the land west of Soncy Road between FM 2186 and Arden Road is platted into a housing subdivision with plans in the near future for residential housing construction to begin there. In addition, at least 2 churches, an auto dealership, 2 large retail outlets, and a number of smaller strip mall businesses would lose a major portion of their parking space.

This alternative would require enormous utility relocation costs. There is a major overhead electrical transmission line currently running north to south just west of the existing ROW boundary from I-40 to just south of 45th Street that would require relocation as would overhead and underground utility lines at each major intersection where a grade separation structure was needed. (Estimating utility relocation costs would require a disproportionate effort given that the alternative does not meet several of the project needs. See attached Decision Matrix.)

Grade separation structures would be needed at 34th Street, 45th Street, Hillside Road, and Arden Road, as well as a third level grade separation structure at I-40 that would stay elevated until it crosses BI-40, just as would be needed for the preferred Helium Road C Alternative.

Widening Soncy Road without use of the Amarillo Helium Plant would improve system connectivity as it would improve travel time to and from the medical district. It would, however, neither decrease the number of vehicles traveling on Soncy Road, nor reduce interactions be between trucks and cars, nor (by definition) provide a redundant corridor, nor provide a freight corridor, nor reduce risks associated with hazardous materials. Thus, it would not address connectivity, freight corridor, corridor redundancy, or hazardous cargo needs. It would require 76.9 acres of new ROW at the cost of approximately $67 million. In sum, the alternative costs a minimum estimated $128.7 million over that of the preferred alternative. This alternative would cause severe community disruption to ongoing businesses and residential properties. For these reasons, modifying the existing alignment is not a prudent alternative.

Helium Road A Alternative:

This alignment would require a new interchange with I-40 approximately 2,400 feet west of I-40's existing South Soncy Road interchange. TxDOT engineers have concluded that this distance is insufficient to connect the proposed interchange consistent with current design standards.

It would also conflict with the current project under construction that includes bridge replacement at Soncy Road and relocation of existing ramps in the vicinity. Furthermore, the City of Amarillo has recently extended its water and sewer lines to the north from 34th Street to IH 40 west of the new Sam's store in the vicinity of this alignment, which has opened up the property in that area for new commercial development.

As would all build alternatives, Helium Road A would displace a city water facility along FM 2958.

Therefore, the Helium Road A Alternative is not considered feasible as a matter of sound engineering judgement.

Helium Road B Alternative:

This alignment will result in the displacement of at least two existing businesses (City Machine and Welding and Cryogenic Research and Development) and a city water facility. The same group owns City Machine & Welding and Cryogenic Research and Development. According to the business owners, the facilities are such that their operations must be physically adjacent. Acquisition of the land, buildings, other facilities, and relation for both businesses is estimated at $6.65 million. Although not included in the current design cost estimate, some design requirements of the future ultimate-build, five-level interchange impose physical requirements on the current project. The ultimate design of the I-40 and SL335 interchange would require a major re-design of the ramps and interchange at I-40 and Soncy Road to the east at an estimated cost of $60 million.

The total estimated cost for this alternative is $349.1 million, including displacements, new ROW (including displacement ROW), and construction.

Therefore, the Helium Road B Alternative is not prudent as it costs an estimated $62.7 million over that of the preferred alternative.

Helium Road D Alternative:

This alignment, which moves SL 335 to west of Helium Road between 34th Ave. and the Potter County line, would require ROW from at least three existing businesses -- Holmes Construction, Gander Mountain, and an RV park in addition to one residence and a city well. See Table 3. The ultimate design of the I-40 and SL 335 interchange would not have the required geometric spacing with Hope Road and the grade separation of BI-40 and I-40 to the west. This alternative would thus require major reconstruction of the current BI-40 and I-40 interchange at an estimated cost of $30 Million. Further, due to the topography in the northern part of this alignment area, two additional bridge structures will be required to maintain and meet vertical profile design criteria, at a cost of approximately $25 million each. This alignment would also require displacements from a portion of the residential neighborhood north of IH 40 and west of Helium Road.

The estimated direct cost for the businesses, residences, and bridges excluding any reconstruction of the grade separation between BI-40 and I-40 is approximately $77.35 million.

The total estimated cost for this alternative is $386.7 million, including displacements, new ROW (including displacement ROW), and construction. This is $100.3 million more than the preferred alternative.

This alternative results in additional construction costs of an extraordinary magnitude when compared to the preferred Helium Road C alternative and thus, is not prudent.

Hope Road Alignment Alternative:
This alignment will affect at least 14 residential, 5 commercial property owners, and a city well. Topography to the north and east along this alignment would require at least 3 bridges to maintain and meet vertical profile design criteria at a cost of approximately $25 million each. A Hope Road alignment has the following limitations and issues:

1) This alternate route would cut through the middle of a residential area north of BI-40, negatively affecting community cohesion.
2) This alternate route is so far west, that it will not divert traffic from Soncy Road driving to the residential or commercial areas of southwest Amarillo.
3) Following the alignment to the north poses at least two problems. There is currently a high voltage electrical transmission line running east to west along the north section line all the way east to 9th Avenue and on to Soncy Road. Avoiding the transmission lines would require turning the road alignment to the northeast from a point further south and would require additional residential displacements to the east and/or west of Girl Scout Road.
4) Spring Draw, a tributary of the Prairie Dog Town Fork of the Red River, crosses the southwest corner of the south-most section of land involved in this alternate alignment. These conditions might require the construction of an additional bridge. A United States Army Corps of Engineers (USACE) permit might be required as the Prairie Dog Town Fork is a Water of the United States (WOUS). This represents additional environmental impacts.
5) The ultimate design of the I-40 and SL 335 interchange would not have the required geometric spacing with the grade separation of BI-40 and I-40 to the east and would require its major reconstruction at an estimated cost of $30 Million.
6) This alignment would have additional costs because it requires two miles of additional ROW on the east-west sections on the north and south ends of the route beyond what the preferred alternative requires, plus the additional costs for two new miles of freeway.

The total estimated cost for this alternative is $465.3 million, including displacements, new ROW, and construction.

Therefore, the Hope Road Alternative is not prudent as it would not address traffic operations, mobility, and connectivity and costs reach an extraordinary magnitude of $178.9 million over that of the preferred alternative.

Dowell Road Alignment Alternative:
This alignment will affect at least one residence, two commercial properties, and a city well. Topography to the north and east along this alignment would require at least four bridges to maintain and meet vertical profile design criteria at a cost of approximately $25 million each. A Dowell Road alignment has the following limitations and issues:

1) This alignment would require 5 miles of new location roadway where no county road or FM roadway currently exists. This alignment would also result in major impacts to three playa lakes intersected by the proposed freeway. USACE individual permits would be required on the two larger playas, as Spring Creek that flows through them, is a WOUS, and those playas, as a result are jurisdictional waters. Impacts to those two playas would require individual permits from the USACE. This represents additional environmental impacts.
2) This alternate route is so far west, that it will not divert traffic from Soncy Road driving to the residential or commercial areas of southwest Amarillo or to commuters trying to access the medical center. Consequently, it would not address traffic operations, mobility, and connectivity.
3) This alignment would have additional costs from four miles of additional ROW on the east-west sections on the north and south ends of the route beyond the preferred alternative's requirements, plus the additional costs for four new miles of freeway.

The total estimated cost for this alternative is $519.1 million, including displacements, new ROW, and construction – almost double the preferred alternative.

Therefore, the Dowell Road Alternative does not meet the project purpose and need and results additional construction costs of an extraordinary magnitude when compared to the Helium Road C alternative and thus, is not prudent.

Helium Road C (Preferred) Alternative:

The Helium Road C Alternative's location would be 4,900 feet west of Soncy Road. Unlike the Helium Road A Alternative, this distance is sufficient for the proposed entrance and exit ramps, ramp lengths on I-40 to meet FHWA interstate design standards for vertical and horizontal alignments, weaving distance, and design speed. Further, it would not require reconstruction of the interchange at Soncy and would the Helium Road B Alternative. This alignment would displace a city water facility and use of 5.96 acres (or 33%) of the historic Amarillo Helium Plant. Disruption to the surrounding community would be minimal and would not require remediation of hazardous materials.

At completion of the project, the balance of the helium plant's parcel would be comprised of 12.6 acres or 67.7%.

This alternative would increase the historic helium facility's public visibility and accessibility. It also offers the greatest potential to reverse the Helium Plant's currently declining condition. The total estimated cost for this alternative is $286.4 million, including displacements, new ROW, and construction.

Helium Road C is both feasible and prudent and it would result in a net benefit for the Amarillo Helium Plant.

Measures to Minimize and Mitigate Harm

Efforts to minimize harm to the Amarillo Helium Plant are an integral part of the project planning and development process. TxDOT engineers minimized the cross-section of the proposed Loop 335 alignment to avoid the modest, but contributing, guardhouse (11o) and well shed (11z) in the southeast corner of the parcel.

Further, TxDOT has extensively consulted with SHPO, Advisory Council on Historic Preservation, and the consulting parties on the development of an Memorandum of Agreement (MOA) with the following main provisions:

-TxDOT shall consult with the Signatories and the consulting parties on minimization of effects at the 30%, 60%, and 90% project design stages.

-TxDOT shall prepare a NRHP nomination for the Amarillo Helium Plant and present copies to the Helium Plant's owner and the THC to use as they see fit. The National Register nomination would include photographs of the small cylinder area (11aa) as it is an under documented contributing feature that would be directly impacted by the proposed construction.

-TxDOT shall reformat existing research on the history of helium production in Texas for electronic distribution by the THC and consulting parties.

-TxDOT shall construct a pull-off in its existing right-of-way that would improve access to the THC historical marker in front of the Helium Plant.

-TxDOT shall provide consulting parties and SHPO a 30-day period to comment on educational materials produced by TxDOT under this MOA.

Perhaps more importantly, TxDOT will pay SHPO a total of $698,110.00 to

- supplement the state-wide covenant and easement-monitoring program ($198,110.00).

- fund preservation planning ($200,000.00) and building stabilization and rehabilitation ($300,000.00) through the Texas Preservation Trust Fund (TPTF) grant program should the owner apply for the funds.

Summary:

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

This project meets all the applicability criteria set forth by FHWA's guidance for Historic Net Benefit Programmatic Section 4(f) Evaluation. All alternatives set forth in the subject programmatic were fully evaluated and the findings made are clearly applicable to this project. There are **no feasible and prudent alternatives** to the use of the historic resource. The project includes all possible planning to minimize harm. The project will result in a net benefit to the overall enhancement and preservation of the Amarillo Helium Plant Historic District, when compared to the no-build or avoidance alternatives, and the present condition of the property. TxDOT will include the measures to minimize harm as environmental commitments in the applicable NEPA document and Environmental Compliance Oversight System (ECOS) for the project.

Attachment 5: Concurrence Letter from Official with Jurisdiction

15 May 2017

Dr. Mark Brown
Environmental Affairs Division
Texas Department of Transportation
125 E. 11th Street
Austin, Texas 78701-2483

Re: Project review under the National Historic Preservation Act of 1966 and Section 4(f)
Proposed construction of Loop 335, Amarillo, Potter and Randall Counties, Texas (TxDOT/FHWA)
CSJ 0904-02-038

Dear Dr. Brown,

Thank you for submitting information on the above-referenced project: the Texas Department of Transportation's (TxDOT) construction of SL 335 on new Right of Way west of Amarillo between Farm-to-Market Road 2590 and Southwest 9th Avenue. This letter serves as official comment on the proposed undertaking from Texas' State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC).

THC staff led by Linda Henderson reviewed the materials you provided to our office on April 14, 2017. As you know from ongoing conversation, we have waited to hear from the other consulting parties before sending our response. As stated in our November 2015 letter for this same project, our review focused on project impacts to the historic Amarillo Helium Plant, previously determined eligible for listing in the National Register of Historic Places at the national level of significance. THC holds a permanent preservation covenant on the Amarillo Helium Plant property, and this project will have an adverse effect to the property. We concur with the findings that there are no other historic properties within the project's Area of Potential Effect.

Since November 2015, our two agencies have worked with other consulting parties on resolving the adverse effects this project will have on the Amarillo Helium Plant. In addition to the Advisory Council on Historic Preservation, these other parties are the National Trust for Historic Preservation, Preservation Texas, the Amarillo Historical Preservation Foundation, and the Society for Industrial Archeology. Through a Memorandum of Agreement (MOA), drafted but still unsigned, THC and the other consulting parties have reached an agreement with TxDOT on appropriate mitigation for the direct and indirect adverse effects, although information on the project will continue to be coordinated at the 30%, 60%, and 90% design stages to ensure minimization of indirect effects.

GREG ABBOTT, GOVERNOR • JOHN L. NAU, III, CHAIR • MARK WOLFE, EXECUTIVE DIRECTOR
P.O. BOX 12276 • AUSTIN, TEXAS • 78711-2276 • P 512.463.6100 • F 512.475.4872 • TDD 1.800.735.2989 • www.thc.state.tx.us

The Executive Committee of the THC met in April and voted to release the portion of the covenant needed for the SL 335 project based on the compensatory measures outlined in the MOA. Should the measures under the MOA change, we may need to reopen coordination. As noted in your letter, TxDOT will consult at the 30%, 60%, and 90% design stages

In its most recent coordination, TxDOT also notes its intent to pursue a *Net Benefit* determination under Section 4(f) regulations (23 CFR 774). As the Official with Jurisdiction under Section 4(f), based on the mitigation described in the project MOA, THC agrees that TxDOT has met the requirements for *Net Benefit.*

Thank you again for your coordination with our office and for your agency's efforts to protect the state's irreplaceable cultural and architectural heritage. Please contact us with any questions: linda.henderson@thc.texas.gov or 512/463-5851.

Sincerely,

Mark Wolfe

Mark Wolfe, State Historic Preservation Officer

Cc: MaryAnn Naber, Advisory Council on Historic Preservation
Elizabeth Merritt, National Trust for Historic Preservation
Evan Thompson, Preservation Texas
Charles Lynch, Amarillo Historical Preservation Foundation
Amanda Gronhovd, Society for Industrial Archeology

APPENDIX E: SUPPLEMENTAL DATA (MTP PAGES)

Table 5 .2
Project List – Amarillo Metropolitan Transportation Plan 2015-2040

MPO ID	Facility	From / At	To	Description	Status	Timing	YOE Total Project Cost X $1000
A15001	IH 27	26th Ave Overpass	IH 40	Ramp Improvement NB IH 27 to EB/WB IH40,EB IH 40 to SB IH 27 Ancestor:	Short	2015	$4,000
A15002	BI 40D	Various Intersections		ITS: Upgrade traffic signals			$2,281
NOTES:	This is a multi-phase project			Ancestor: A0A012			
Phase 1	BI 40D	Various Intersections in Amarillo		Rehab traffic signals	Short	2015	$760
Future Phase(s)	BI 40D	Various Intersections		ITS: Upgrade traffic signals	Short	2015	$1,521
A15003	IH 27	Rockwell Rd	Western St	Widen Freeway to 6 Lane Section By Adding 2 Additional Lanes		2015	$7,000
NOTES:	This is a multi-phase project			Ancestor: A0A053			
Phase 1	IH 27	Loop 335 (Hollywood)		Widen Freeway to 6 Lane Section By Adding 2 Additional Lanes	Short	2015	$7,000
Phase II	IH 27	Western St	Loop 335(Hollywood)	Widen Freeway to 6 Lane Section By Adding 2 Additional Lanes	Illustrative		
Future Phase(s)	IH 27	Loop 335(Hollywood)	Rockwell Rd	Widen Freeway to 6 Lane Section By Adding 2 Additional Lanes	Illustrative		
A15004	SL 335	.2 Miles East of IH 27	FM 2590	Construct Frontage Roads & Drainage			$49,543
NOTES:	This is a multi-phase project			Ancestor: A0A122			
Phase 1	SL 335	.2 Miles East of IH 27	FM 2590	Construct Frontage Roads & Drainage	Short	2015	$6,400
Future Phase(s)	SL 335	.2 Miles East of IH 27	FM 2590	Construct Frontage Roads & Drainage Phase II	Short	2015	$43,143
A15005	SL 335	FM 2590	Potter County Line	Convert Non freeway to freeway Stage II (mainlanes/Intersect) Ancestor:	Short	2015	$30,000
A15006	SL 335	Randall County Line	SW 9th Ave	Convert Non freeway to freeway Stage II (mainlanes/Intersect) Ancestor:	Short	2015	$20,000

MPO ID	Facility	From / At	To	Description	Status	Timing	YOE Total Project Cost X $1000
A15007	RM 1061	Coulter St	FM 2381	Widen Existing Roadway Ancestor: A0A092		2015	$6,250
A15008	IH 40	Helium Rd	East of SL 335 (Soncy)	Ramp Improvements Ancestor:	Short	2015	$3,000
A15093	SL 335	FM 2590	Potter County Line	New Location Non Freeway Phase II Stage I (Frt Rd/Drain) Ancestor:	Short	2015	$11,000
A15094	SL 335	Randall County Line	SW 9th Ave	New Location Non Freeway Phase II Stage I (Frt Rd/Drain) Ancestor:	Short	2015	$4,000
A15500	Various	Federal / State		Rehab and Maintenance Ancestor: A0A500	Short	2015	$29,100
A15501	Various	City Of Amarillo		Rehab and Maintenance Ancestor: A0A501	Short	2015	$312,924
A15502	Various	Potter County		Rehab and Maintenance Ancestor: A0A502	Short	2015	$33,842
A15503	Various	Randall County		Rehab and Maintenance Ancestor: A0A503	Short	2015	$33,958
A15504	Various	Federal / State		Rehab Bridge & Approaches Ancestor: A0A504	Short	2015	$21,291
A15505	Various	Federal / State		Intersections Improvements Ancestor: A0A505	Short	2015	$7,224
A15506	Various	City Of Amarillo		Intersections Improvements Ancestor: A0A506	Short	2010	$6,519

MPO ID	Facility	From / At	To	Description	Status	Timing	YOE Total Project Cost X $1000
A15067	IH 27	0.1 mi north of IH 40	SW 45th Ave	Reconstruct with direct connect IH 40 to IH 27 Ancestor: A0A054	Illustrative	2015	$22,812
NOTES:	This is a multi-phase project						
	IH 27	Potter County Line	SW 45th Ave	Reconstruct with direct connect IH 40 to IH 27	Illustrative	2015	
	IH 27	0.1 mi north of IH 40	Randall County Line	Upgrade to interstate standards	Illustrative	2015	
A15068	IH 27	Loop 335(Hollywood)		Add EB,WB,NB,& SB direct connect ramps Ancestor: A0A055	Illustrative	2015	$38,020
A15069	IH 27 NFR	Loop 335(Hollywood)	Western St	Widen existing frontage roads Ancestor: A0A008	Illustrative	2015	$12,720
NOTES:	This is a Multiphase Project.						
Phase I	IH 27 NFR	Bell St	Loop 335(Hollywood)	Widen existing frontage roads	Illustrative	2015	$2,479
Future Phase	IH 27 NFR	Western St	Loop 335(Hollywood)	Widen existing frontage roads	Illustrative	2015	$10,241
A15070	IH 40	At Bell, Avondale, and Washington St in Amarillo		Interstate Drainage Improvements Ancestor: A0A014	Illustrative	2015	$6,083
A15071	IH 40	Loop 335 (Soncy)	Hope Rd	Add additional lanes EB &WB Ancestor: A0A057	Illustrative	2015	$30,720
A15072	IH 40	Loop 335 (Soncy)		Add turnaround on west side of interchange Ancestor: A0A058	Illustrative	2015	$2,281
A15073	IH 40	IH 27		Upgrade all interchange ramps to concrete Ancestor: A0A059	Illustrative	2015	$22,812
A15074	IH 40	IH 40/US 287 Split	Ross St	Reconstruct existing roadway Ancestor: A0A060	Illustrative	2015	$28,135

MPO ID	Facility	From / At	To	Description	Status	Timing	YOE Total Project Cost X $1000
A15075	IH 40	Ross/Osage, Georgia St, Western St, & Coulter St		Lengthen Bridges Ancestor: A0A061	Illustrative	2015	$3,042
A15076	IH 40	Loop 335 (Lakeside)		3-level interchange as per 1998 Value Enginering Study Report Ancestor: A0A062	Illustrative	2015	$14,052
A15077	IH 40	Carson County Line	Hope Rd	Landscaping/Beautification Improvements Ancestor: A0A063	Illustrative	2015	$4,562
A15078	IH 40	Western St		Add refuge lane for existing turnaround Ancestor: A0A064	Illustrative	2015	$3,042
A15079	IH 40	Carson County line	Hope Rd	Upgrade ramps to current design standards Ancestor: A0A065	Illustrative	2015	$22,812
A15080	IH 40	Georgia st		Replace Exit ramp Ancestor: A0A066	Illustrative	2015	$4,366
A15081	IH 40	At Whitaker Rd and Lakeside Dr		Build turnarounds Ancestor: A0A067	Illustrative	2015	$6,844
A15082	IH 40 NFR	Loop 335(Soncy)	Helium Rd	Widen existing roadway w C&G, Storm drains Ancestor: A0A068	Illustrative	2015	$7,604
A15083	Jackrabbit Rd	IH 40	NE 8th Ave	Add 2 Lanes Ancestor: A0A070	Illustrative	2015	$3,346

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MPO ID	Facility	From Limit	To Limit	Project Description	Status	Timing	YOE Total Project Cost X 1000 Illustrative
A15094	VA	Randall County Line	SW 9th Ave	New Location Freeway, Construct Interchange, Main Lanes and Frontage Roads	Illustrative		$11,400
NOTES:				Ancestor:			
A15134	IH 40	B IH 40D	SL 335	Rehab, New Structures, Ramps & Associated Work	Short		$1,064
NOTES:				Ancestor:			
A15136	IH 40	Bell Street		Replace Bridges with 1 Bridge	Short	2017	$5,167
NOTES:				Ancestor:			
A15138	IH 27	26th Ave		Repair Bearings, Backwall, Approaches and Erosion	Short	2017	$2,254
NOTES:				Ancestor:			
A15139	IH 27	26th Ave		Widen, Repair Bearings, Backwall, Approaches	Short	2017	$2,254
NOTES:				Ancestor:			
A15144	IH 27	North of 34th Ave	Potter County Line	Ramp and Frontage Road Improvements	Short	2017	$1,256
NOTES:				Ancestor:			
A15145	IH 27	Randall County Line	North of 26th Ave	Ramp and Frontage Road Improvements	Short	2017	$1,256
NOTES:				Ancestor:			
A15146	IH 40	West of Bell St	East of Bell St	Frontage Road Improvements	Short	2017	$1,480
NOTES:				Ancestor:			
A15159	SL 335	FM 2590	West of Coulter	B1 Phase II: Construct Main Lanes and Frontage Roads	Short	2023	$12,000
NOTES:				Ancestor:			
A15160	SL 335	East of Coulter St	IH 27	B1 Phase III: Construct Main Lanes and Main lane Bridge at IH 27 (3rd Level)	Short	2026	$15,000