DRAFT
Environmental Assessment

US 90 Reconstruction and Widening
From SH 211 to LP 13
Bexar County, Texas

CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060, 0024-08-140

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Texas Department of Transportation, San Antonio District

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 9, 2019, and executed by FHWA and TxDOT.

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List of Acronyms

AADT	Annual Average Daily Traffic
AAMPO	Alamo Area Metropolitan Planning Organization
APE	Area of Potential Effect
AOI	Area of Influence
ARRP	Aquatic Resource Relocation Plan
ASTM	American Society for Testing and Materials
BMP	Best Management Practice
CAA	Clean Air Act
CALF	Closed & Abandoned Landfill Inventory
CFR	Code of Federal Regulations
CGP	Construction General Permit
CMAQ	Congestion Mitigation and Air Quality Improvement program
CMP	Congestion Management Process
CO	Carbon Monoxide
CORRACTS	Resource Conservation & Recovery Act Corrective Action
CSJ	control-section-job
DC	Direct Connector
DHHS	Department of Health and Human Services
EA	Environmental Assessment
EIS	Environmental Impact Statement
EJ	Environmental Justice
EMST	Ecological Mapping System of Texas
EO	Executive Order
EPA	Environmental Protection Agency
EPIC	Environmental Permits, Issues, and Commitments
ETC	estimated time of completion
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM	Farm-to-Market
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FR	Federal Register
FTA	Federal Transit Administration
FWCA	Fish and Wildlife Coordination Act
GIS	Geographic Information Systems
GWCC	Groundwater Contamination Case
HEI	Health Effects Institute
HRSR	Historic Resources Survey Report
I	Interstate Highway
IBWC	International Boundary Water Commission
IHWCA	Industrial and Hazardous Waste Corrective Action
IOP	Innocent Owner/Operator Database
IP	Individual Permit
IRIS	Integrated Risk Information System

ISA	Initial Site Assessment
LEP	Limited English Proficiency
LP	Loop
LPG	Liquid Petroleum Gas
LPST	Leaking Petroleum Storage Tank
MAPO	Meeting with Affected Property Owner
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MOVES	Motor Vehicle Emissions Simulator
mph	miles per hour
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSAT	Mobile Source Air Toxics
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NATA	National Air Toxics Assessment
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
OTHM	Official Texas Historical Marker
PA	Programmatic Agreement
PCN	Pre-construction Notification
PCR	Project Coordination Request
PM	Particulate Matter
PRM	Permittee Responsible Mitigation
PS&E	Plans, Specifications, and Estimates
PSLs	Project Specific Locations
PST	Petroleum Storage Tank
PWC	Parks and Wildlife Code
RCRA	Resource Conservation & Recovery Act
RCRAC	RCRA Corrective Action
RCRAGR06	RCRA - Generator
RCRAT	RCRA Non-CORRACTS Treatment, Storage & Disposal Facilities
ROW	right-of-way
RRC	Railroad Commission of Texas
SAL	State Antiquities Landmark
SEMS	Superfund enterprise Management System
SGCN	Species of Greatest Conservation Need
SH	State Highway
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan

SOV	Single occupancy vehicle
SW3P	Storm Water Pollution Prevention Plan
TAQA	Traffic Air Quality Analysis
TCEQ	Texas Commission on Environmental Quality
TCMP	Texas Coastal Management Plan
TERP	Texas Emissions Reduction Plan
THC	Texas Historical Commission
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TMDL	Total maximum daily load
TNM	Traffic Noise Model
TPDES	Texas Pollutant Discharge Elimination System
TPP	Transportation Planning and Programming
TPWD	Texas Parks and Wildlife Department
TSS	Total Suspended Solids
TWDB	Texas Water Development Board
TxDOT	Texas Department of Transportation
US	United States Highway
USACE	US Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VCP	Voluntary Cleanup Program
VMT	vehicle miles travelled
vpd	vehicles per day

1.0 INTRODUCTION

The Texas Department of Transportation (TxDOT) San Antonio District is proposing reconstruction and widening of approximately 11.5 miles of existing US Highway (US) 90 from State Highway (SH) 211 to Loop (LP) 13 (also known as Military Drive). The proposed improvements would begin approximately 2.17 miles west of the SH 211 intersection and end approximately 0.7 mile east of the LP 13 intersection. The proposed project would widen the existing roadway from a four-lane divided roadway with intermittent frontage roads to a six-lane expressway with one-way continuous frontage roads in each direction. The proposed project includes the addition of direct connectors (DCs) at LP 1604 as well as improvements to SH 211, Montgomery Road, Hunt Lane, and LP 13 intersections. The proposed improvements would extend north on SH 211 approximately 0.54 mile and south approximately 0.30 mile; extend north on LP 1604 approximately 0.93 mile and south approximately 1.69 miles; extend north on Hunt Lane approximately 0.16 mile and south approximately 0.19 mile; and extend south on LP 13 approximately 0.06 mile. DCs would also be constructed approximately 0.48 mile north and approximately 0.66 mile south at the I-410 intersection; these DCs were previously environmentally cleared by a separate project (CSJ: 0521-05-118). No additional work is proposed for the I-410 intersection under this US 90 project. The existing ROW varies from approximately 270 to 335 feet wide. The project would require approximately 79 acres of additional ROW in a hybrid pattern from the north and south sides, and the proposed ROW would vary from approximately 300 to 590 feet wide.

The purpose of this Environmental Assessment (EA) is to study the potential environmental consequences of the proposed project and determine whether such consequences warrant preparation of an Environmental Impact Statement (EIS). The EA has been prepared to comply with TxDOT's environmental review rules and the National Environmental Policy Act (NEPA). This Draft EA will be made available for public review and, following the comment period, TxDOT will consider any comments submitted. If TxDOT determines there are no significant adverse effects, a finding of no significant impact (FONSI) will be issued and made available to the public. Project location maps are provided as **Figures 1** and **2** in **Appendix A**. Representative photographs of the project area are included in **Appendix B**. The current engineering schematic and layout of the proposed project is included in **Appendix C**. **Figures 3.1** through **3.4** in **Appendix D** provide the existing and proposed typical sections. Plan and Program Excerpts are included in **Appendix E**. Resource specific maps are provided in **Appendix F**. Documentation of agency resource coordination is provided in **Appendix G**. The traffic projections memo is provided in **Appendix H**.

2.0 PROJECT DESCRIPTION

2.1 Existing Facility

The existing US 90 roadway from SH 211 to LP 1604 consists of two 12-foot-wide travel lanes in each direction with 4-foot-wide inside shoulders and 10-foot-wide outside shoulders, with discontinuous frontage roads. The discontinuous frontage roads generally consist of two lanes with one lane in each direction, located on the north side of US 90. Directions of travel are separated by a varied-width, grassy depressed median. At-grade one- to two-lane diamond ramps provide access to major intersecting roads, including SH 211, Montgomery Road, and LP 1604.

The existing US 90 roadway from LP 1604 to I-410 consists of three 12-foot-wide mainlanes, with 6-foot-wide inside shoulders and 10-foot-wide outside shoulders, and two 12- to 14-foot-wide, discontinuous frontage road lanes with 2- to 4-foot-wide shoulders in each direction. Directions of travel are separated by a varied-width, grassy depressed median. At-grade one- to two-lane diamond ramps provide access to major intersecting roads, including LP 1604, Hunt Lane, and I-410. The existing LP 1604 interchange consists of one DC from the southbound LP 1604 mainlanes to the eastbound US 90 mainlanes.

The existing US 90 roadway from I-410 to LP 13 consists of three 12-foot-wide mainlanes with 4-foot-wide inside shoulders and 8-foot-wide outside shoulders in each direction, and two 10- to 19-foot-wide frontage road lanes with 4-foot-wide inside shoulders. Directions of travel are separated by a 17.5-foot-wide concrete median. At-grade one- to two-lane diamond ramps provide access to major intersecting roads, including I-410 and LP 13.

The existing right-of-way (ROW) is approximately 823.6 acres and varies from approximately 270 to 335 feet wide. There are no existing or proposed easements associated with the proposed project. Drainage consists of open ditch and curb and gutter. Existing typical sections are included on **Figures 3.1** and **3.2** in **Appendix D**.

2.2 Proposed Project

The proposed improvements to US 90 from approximately 2.17 mile west of SH 211 to the SH 211 intersection would include adding a deceleration lane for the median cut at the Mechler Lane intersection. The driveway to a private road on the south side of U S90 approximately 0.81 mile west of the SH 211 intersection would be modified to a T-intersection. The proposed eastbound US 90 frontage roads would consist of one to two 11-foot-wide lanes and begin approximately 1.36 miles west of the SH 211 intersection. The proposed westbound US 90 frontage roads would consist of one to two 11-foot-wide lanes and begin approximately 0.89 mile west of the SH 211 intersection. The mainlanes would be widened to three 12-foot-wide lanes in both directions at approximately 0.61 mile west of the SH 211 intersection. Additional culverts are proposed approximately 0.61 mile and 0.25 mile west of the SH 211 intersection.

The proposed improvements to US 90 from SH 211 to LP 1604 would reconstruct the existing mainlanes to include three 12-foot-wide mainlanes in each direction with 10-foot-wide inside and outside shoulders, as well as construct two one-way, 11-foot-wide frontage road lanes in each direction with 4-foot-wide inside shoulders and 5-foot-wide outside shoulders. Directions of travel would be separated by a raised concrete barrier. At the SH 211 and Montgomery Road intersections, the mainlanes would remain at-grade and SH 211 and Montgomery Road would remain elevated. This would involve the removal of the existing at-grade diamond ramps, reconfiguration and construction to an X-ramp pattern. A west-to-eastbound turnaround would also be added to the east side of the US 90 and SH 211 intersection. A one-way 14-foot-wide cloverleaf ramp would be constructed for southbound SH 211 to connect to eastbound US 90 mainlanes. At the LP 1604 intersection, the mainlanes would be reconstructed at-grade and LP 1604 would remain elevated. Proposed DC construction is proposed at the existing interchange to facilitate direct access between US 90 and LP 1604 mainlanes. This would involve the removal of the existing at-grade diamond ramps, reconfiguration and construction to an X-ramp pattern, and construction of the proposed DCs.

The proposed improvements to US 90 from LP 1604 to I-410 would include widening the existing mainlanes by adding one 12-foot-wide lane in each direction for three 12-foot-wide travel lanes in each direction. The other improvements would include widening the westbound frontage road and reconstruction of the eastbound frontage road to include two 11-foot-wide frontage road lanes in each direction with 4-foot-wide inside shoulders and 5-foot-wide outside shoulders. Directions of travel would be separated by a raised, concrete barrier. At the Hunt Lane intersection, Hunt Lane would remain elevated above the US 90 mainlanes. This would involve the removal of the at-grade ramps, ramp reconfiguration, and construction of new ramps. At the I-410 intersection, the US 90 mainlanes would remain elevated above the existing at-grade ramps. DCs would also be constructed at the I-410 intersection. The DCs were previously environmentally cleared by a separate project (CSJ: 0521-05-118). No additional work is proposed for the I-410 intersection under this US 90 project. This would involve the removal of the existing diamond ramps, reconfiguration and construction to an X-ramp pattern.

The proposed improvements from I-410 to LP 13 include reconstruction of the existing mainlanes to include three 12-foot-wide mainlanes in each direction, one additional mainlane in the eastbound direction, and one additional frontage road lane in the eastbound direction. The mainlanes would consist of three 12-foot-wide lanes in each direction with 10-foot-wide inside and outside shoulders. Frontage roads would consist of two 11-foot-wide lanes in each direction. Directions of travel would be separated by a raised, concrete barrier. At the LP 13 intersection, the US 90 mainlanes would remain elevated over the LP 13 at-grade lanes. Ramps west of the LP 13 intersection would be removed, reconfigured, and constructed to an X-ramp pattern. Ramps extend approximately 0.7 mile east of the LP 13 intersection and would be reconstructed in the existing X-ramp configuration.

Additional auxiliary lanes would be constructed along the frontage roads in some locations. These lanes would be formed from the ramps of the DCs between the SH 211 and LP 1604, LP 1604 and I-410, and I-410 and LP 13 intersections to accommodate traffic volumes and would assist with mobility and operation of the intersections.

The proposed US 90 project from approximately 2.17 miles west of SH 211 to approximately 0.7 mile east of LP 13 would require approximately 79 acres of proposed ROW and would vary from approximately 300 to 590 feet wide. There are no existing or proposed easements associated with the proposed improvements. Drainage would consist of open ditch and curb and gutter. The proposed improvements would potentially displace one residential structure, one residential outbuilding, and one commercial outbuilding (**Photos 7** and **8** in **Appendix B**).

The control-section-job (CSJ) numbers associated with the proposed project are 0024-07-059, 0024-08-138, and 0024-08-143, as well as ROW CSJs (RCSJs) 0024-07-060 and 0024-08-140. Federal regulations require that federally funded transportation projects have logical termini [23 Code of Federal Regulations (CFR) §771.111(f)(1)]. Simply stated, this means that a project must have rational beginning and end points. Those end points may not be created simply to avoid proper analysis of environmental impacts. In accordance with 23 CFR §771.111(f)(1), the logical termini of the project have been defined as the major crossroads of SH 211 to the west and LP 13 to the east. Both interchanges are key locations that provide motorists access to and from US 90. The proposed project includes construction transitions located approximately 2 miles west of SH 211 and approximately 0.7 mile east of LP 13. These construction transitions are needed to accommodate ramp revisions (ingress

and egress to US 90), access to the SH 211 and I-410 interchanges, and rehabilitation of mainlanes east of the I-410 for US 90 improvements.

The logical termini were originally listed as SH 211 and I-410 in the environmental technical reports and the reports did not include the CSJ 0024-08-143 or RCSJs 0024-07-060 and 0024-08-140. However, the study area for all environmental analyses has always been from approximately 2.17 miles west of SH 211 to approximately 0.7 mile east of LP 13, and therefore, would not change the findings in the environmental technical reports. The eastern logical terminus was changed and the additional three CSJs were added to the project to assure all project activities and ROW were accounted for and to match what has been modeled in local planning documents. The logical termini have been revised to SH 211 and LP 13 in this draft EA and a memorandum explaining the changed logical terminus and additional CSJs have been added to the project file in ECOS. These changes have not changed the findings of any environmental analyses.

Federal regulations require that a project has independent utility and be a reasonable expenditure even if no other transportation improvements are made in the area [23 CFR §771.111(f)(2)]. This means a project must be able to provide benefit by itself, and that the project not compel further expenditures to make the project useful. Stated another way, a project must be able to satisfy its purpose and need with no other projects being built. Because the proposed project stands alone, it does not irretrievably commit federal funds for other future transportation projects and provides congestion relief between SH 211 and LP 13 by adding additional travel lanes and constructing continuous frontage roads; therefore, it has been determined that the project has independent utility.

Federal law prohibits a project from restricting consideration of alternatives for other reasonably foreseeable transportation improvements [23 CFR §771.111(f)(3)]. This means that a project must not dictate or restrict any future roadway alternatives. The proposed project would not predetermine or preclude future work on US 90 and would not restrict the consideration of future transportation improvements. The proposed project would widen the existing transportation corridor and maintain access to adjacent properties and cross streets. The current engineering schematic and layout of the proposed project is included in **Appendix C**, and proposed typical sections are provided on **Figures 3.3** and **3.4** in **Appendix D**.

The proposed project is included in the Alamo Area Metropolitan Planning Organization's (AAMPO) 2045 Metropolitan Transportation Plan (MTP). According to the MTP, the proposed project would be funded with state and federal money estimated at $110 million (**Appendix E**).

3.0 PURPOSE AND NEED

3.1 Need

The proposed improvements are needed to accommodate the projected increase in traffic along the roadway, and improve mobility, access to adjacent properties, and connectivity.

3.2 Supporting Facts and/or Data

According to projections approved by TxDOT's Transportation Planning and Programming (TPP) Division, travel demand is projected to increase on US 90 from Jungman Road to Old Highway 90 and on LP 1604 from Potranco Road to Farm-to-Market (FM) 143 between the years 2022 (under the no-build conditions) and 2042 (under the build conditions). Traffic along US 90 within the project limits is anticipated to increase by approximately 52.3 percent, and traffic along LP 1604 within the project limits is anticipated to increase by approximately 43.7 percent. Projected average daily traffic volumes in the years 2022 and 2042 are shown in **Table 1** and included in the traffic projections memo in **Appendix H**.

Table 1: US 90 Average Daily Traffic Projections

	2022 (no-build condition)	2042 (build condition)
US 90 Mainlanes		
From Jungman Road to SH 211	41,500	69,700
From SH 211 to LP 1604	59,400	100,800
From LP 1604 to I-410	76,000	112,500
From I-410 to Old Highway 90	85,000	115,900
LP 1604 Mainlanes		
From Potranco Road to FM 143	46,000	66,100

Source: Pape-Dawson Engineers Traffic Memo (September 17, 2017) (**Appendix H**)

According to population projections taken from the Texas Water Development Board (TWDB), the population of San Antonio is projected to increase approximately 25 percent from 1,528,129 in 2020 to 1,910,744 in 2040 (TWDB 2020a). The population of Bexar County is projected to increase approximately 25 percent from 1,974,041 in 2002 to 2,468,254 in 2040 (TWDB 2020b).

A traffic operational analysis was conducted to analyze the current level of service (LOS) for the No-Build scenario, as well as the projected LOS for the Build scenario. Level of Service (or LOS) is a measure of traffic flow and congestion and is given a ranking from A to F, with A being the best and F being the worst (**Insert 1**).

Insert 1. LOS Definitions

LOS Rating	Definition
LOS A	• Free-flow operation
LOS B	• Reasonably free-flow • Ability to maneuver is only slightly restricted • Effects of minor incidents still easily absorbed
LOS C	• Speeds at or near free-flow speeds • Freedom to maneuver slightly restricted • Queues may form behind significant blockages
LOS D	• Speeds decline slightly with increasing flows • Density increases more quickly • Freedom to maneuver is more noticeably limited • Minor incidents can lead to queuing
LOS E	• Operation near capacity • Limited usable gaps in traffic stream • Operations become volatile • Any disruption leads to queuing
LOS F	• Breakdown in flow • Queues form behind breakdown points • Demand > Capacity

The LOS for the No-Build scenario would be at a LOS F along the entire corridor. The Build scenario would produce varying LOSs along the corridor, but the average LOS would be improved to a LOS C (Harper 2020; LJA 2020).

Additionally, the current US 90 roadway has intermittent frontage roads requiring adjacent parcels to access the US 90 roadway by entering the mainlanes directly. The proposed project would provide frontage roads for improved and safer access to the US 90 roadway by allowing vehicles lanes for acceleration and deceleration when entering or exiting the US 90 roadway.

3.3 Purpose

The purpose of the proposed project (the Build Alternative) is to accommodate existing and future traffic volumes and improve mobility and connectivity along US 90 between SH 211 and LP 13.

4.0 ALTERNATIVES

4.1 Build Alternative

The Build Alternative, as described in **Section 2.2**, would widen the existing roadway from a four-lane divided roadway with intermittent frontage roads to a six-lane expressway with one-way continuous frontage roads in each direction. The Build Alternative would meet the need and purpose of the project by improving mobility and reducing congestion along US 90.

4.2 No-Build Alternative

Under the No-Build Alternative, the existing facilities would operate as they currently do and normal maintenance activities would continue. There would be no substantial adverse environmental impacts associated with this alternative. However, the No-Build Alternative would not reduce congestion or improve mobility, access to adjacent properties, or connectivity; therefore, it would not address the need and purpose of the proposed project. The Build Alternative is the preferred alternative; however, the No-Build Alternative is carried forward in this EA to provide a baseline for comparison to the Build Alternative.

4.3 Preliminary Alternatives Considered but Eliminated from Further Consideration

The project area east of LP 1604 consists of adjacent urban and military areas and west of LP 1604 suburban and rural areas. LP 1604 is in the approximate middle of the proposed project with the project extending approximately 5.5 miles to the west and east.

Preliminary alternatives that would require ROW acquisition completely north or south of US 90 were dismissed early in the process due to the increased potential for displacements and impacts to land use. Efforts were made to identify a recommended alternative that would minimize proposed ROW, minimize displacements, result in fewer utility relocations, and result in fewer environmental impacts.

US 90 East of LP 1604

The alignment east of LP 1604 is constrained by adjacent urban development. Multiple businesses and neighborhoods are located directly north of US 90 and Lackland and Medina Training Annex and Lackland Air Force Base are located directly south of US 90.

Therefore, the proposed alignment within this portion of the project follows the existing alignment as there would be minimal room for ROW acquisition or deviation from the existing alignment. A narrow strip of additional ROW would be required north of US 90 near Kriewald Road and a narrow strip of additional ROW would be required south of US 90 between I-410 and LP 13 to accommodate the proposed improvements. No displacements are anticipated east of LP 1604.

US 90 West of LP 1604

The US 90 project west of LP 1604 can be broken into three sub-areas based on the existing cross streets:

- US 90 from LP 1604 to Montgomery Road (2.3 miles)
- US 90 from Montgomery Road to SH 211 (1.6 miles)
- US 90 from SH 211 to western project limit (1.5 miles)

Each area has different constraints which resulted in a best fit proposed alignment west of LP 1604.

For the US 90 sub-area from LP 1604 to Montgomery Road, shifting the alignment to the south would result in encroachment into a neighborhood subdivision, potential drainage issues, and increased impacts to waters of the US. Shifting the alignment to the north would result in displacing a residential

structure and two commercial structures (including one gas station) and would require relocating utilities. Therefore, to minimize encroachment into the subdivision and to avoid additional displacements to the north, the proposed alignment would be centered along the existing alignment, requiring additional ROW from both sides of the roadway to minimize impacts.

For the US 90 sub-area from Montgomery Road to SH 211, shifting the alignment to the south would require relocating a 24-inch water main pipe and other utilities, would potentially displace a restaurant, and would require additional ROW from 20 parcels. Keeping the alignment along the existing alignment and requiring additional ROW from both sides of the roadway would result in the same impacts of relocating a 24-inch water main pipe, would potentially displace a restaurant, and would require additional ROW from 20 parcels. Shifting the alignment to the north would require additional ROW from 10 parcels. Therefore, to avoid impacts to utilities and the displacement, and to reduce impacts to parcels, the alignment was shifted to the north.

For the US 90 sub-area from SH 211 to the western project limit, shifting the alignment to the south would require relocating utilities, would potentially displace a commercial business and a residential structure, and would require additional ROW from 20 parcels. Keeping the alignment along the existing alignment and requiring additional ROW from both sides of the roadway would result in the same impacts of relocating utilities, would potentially displace a commercial business and a residential structure, and would require additional ROW from 20 parcels. Shifting the alignment to the north would require additional ROW from five parcels. Therefore, to avoid impacts to utilities and displacements, and to reduce impacts to parcels, the alignment was shifted to the north.

In summary, the recommended alignment west of LP 1604 would consist of requiring additional ROW from both sides of US 90 from LP 1604 to Montgomery Road, and requiring additional ROW north of US 90 from Montgomery Road to the western project limit. West of LP 1604, the proposed ROW would result in one residence, one outbuilding associated with displaced residence, and one commercial outbuilding.

5.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

In support of this EA, the following technical reports were prepared:

- Scope Development Tool
- Project Description Memorandum
- Community Impacts Assessment Technical Report Form
- Archeological Background Study Form
- Project Coordination Request (PCR) for Historical Studies Project Form
- Historical Studies Research Design
- Historic Resources Survey Report (HRSR)
- Surface Water Analysis Form
- Section 404/10 Impacts Table
- Wetland Delineation Technical Report
- Biological Evaluation Form
- Tier 1 Site Assessment Form

- Species Analysis Form
- Species Analysis Spreadsheet
- Congestion Management Process (CMP) Report
- Conformity Report Form
- Hazardous Materials Initial Site Assessment (ISA) Form
- Traffic Noise Analysis Technical Report
- Indirect and Cumulative Impacts Technical Report
- Documentation of Public Meetings

These technical reports, maps showing the project location and design, and other information regarding the project are on file and available for inspection and may be copied upon request at the TxDOT San Antonio District Office. A Public Hearing Summary Report will also be prepared after the public hearing is conducted and will be on file at the TxDOT San Antonio District Office.

5.1 Right-of-Way/Displacements

The Build Alternative would require approximately 79 acres of proposed ROW. See **Appendix C** for the project schematic to see where ROW would be required. The proposed project would result in potential displacements, subject to final design considerations. See **Figure 4.3** in **Appendix F** for the location of potential displacements. The proposed project would potentially impact one residential structure, one residential outbuilding (associated with the displaced residential structure), and one commercial outbuilding (**Photos 7** and **8** in **Appendix B**); however, it was determined that comparable residential properties are available within the community and that the displaced commercial outbuilding would most likely relocate on the same property. None of the potentially displaced structures exhibit unique needs which would preclude them from relocating in the area. ROW acquisition and relocation would be conducted in accordance with the Federal Uniform Relocation and Real Property Acquisition Policies Act of 1970 (Uniform Act).

The No-Build Alternative would not require the acquisition of ROW, nor would it result in relocations.

5.2 Land Use

The proposed project includes improvements to an existing transportation corridor that runs through the western portion of the City of San Antonio and western Bexar County, Texas. The general land use adjacent to the proposed project consists of residential, commercial, religious, public, military, and medical properties, as well as agricultural and developed properties. Lackland Air Force Base is located in the eastern portion of the project and south of US 90. Development is concentrated in the eastern portion of the project area, with more rural properties located along the western portion of the project area. Induced growth impacts are addressed in **Section 5.15**, Induced Growth.

The No-Build Alternative would not result in changes to land use.

5.3 Farmlands

The proposed project would convert farmland subject to the Farmland Protection Policy Act (FPPA) to a nonagricultural, transportation use. However, the combined scores of the relative value of the farmland on Part VI of the FPPA Form NRCS-CPA 106 were less than 60; the scores and the site

assessment do not warrant further consideration for protections (**Appendix G**). Therefore, coordination with the National Resources Conservation Service (NRCS) for the FPPA was not required for the Build Alternative.

The No-Build Alternative would not require coordination with the NRCS.

5.4 Utility Relocation

It is reasonably foreseeable that utilities will have to be relocated as a result of this project. The impacts resulting from removal of any utilities from within the existing US 90 ROW have been considered as part of the project impacts under each of the resource area subheadings within this EA. Additionally, if utilities will be relocated within the US 90 ROW, then the impacts resulting from reinstallation of the utilities within the US 90 ROW has also been considered as part of the project impacts under each of the resource area subheadings within this EA. To the extent that the owner of any displaced utility determines to reinstall the displaced utility at a location outside of the US 90 ROW, such location will be determined by the owner of the utility subject to the rules and policies governing the utility relocation process.

The No-Build Alternative would not impact existing utilities.

5.5 Bicycle and Pedestrian Facilities

The existing US 90 facility has intermittent shared use lanes and sidewalks throughout the project corridor, mostly along the north side of US 90. The proposed project would construct shared use lanes throughout the corridor and would construct sidewalks throughout most of the project corridor to accommodate bicycle and pedestrian traffic. The proposed improvements will comply with TxDOT's Guidelines for Emphasizing Bicycle and Pedestrian Accommodations and with the US Department of Transportation's Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations (March 11, 2010).

The No-Build Alternative would not result in impacts or benefits to bicycle or pedestrian facilities.

5.6 Community Impacts

The *Community Impacts Assessment Technical Report Form*, dated April 2020, concluded that the Build Alternative is not expected to result in substantial adverse impacts to access and travel patterns, community cohesion, or environmental justice (EJ) or limited English proficiency (LEP) populations.

According to the U.S. Census Bureau (US Census Bureau 2010), 67 blocks within the community study area indicate half or more of the population as minorities. Most of the census blocks with predominantly minority populations indicate higher percentages of Hispanic or Latino or Black or African American populations. One Block Group has a median household income below the US department of Health and Human Services (DHHS) poverty level (DHHS 2020). There are Spanish-speaking LEP populations, Asian and Pacific Island Language-speaking LEP populations, and Other Languages-speaking LEP populations within the community study area as well.

The proposed project would displace one residential structure as well as an outbuilding associated with the residence (**Photos 7** and **8** in **Appendix B**, **Figure 4.3** in **Appendix F**). Comparable housing is

available within 10 miles of the displaced residence. An outbuilding associated with a farming business would also be displaced as a result of the proposed improvements. The displacement does not serve a specific population, and it is anticipated the outbuilding would not be able to relocate to another property due to the nature of the business; however, it is anticipated the outbuilding would be able to relocate on the same property. See **Figures 4.1** through **4.8** in **Appendix F** for the locations of community features and potential displacements.

The proposed improvements would include constructing continuous frontage roads, removing two median breaks, and constructing additional mainlanes and frontage roads along LP 1604 south of US 90 while removing left turn access from Pue Road onto the southbound LP 1604 mainlanes. The proposed improvements are anticipated to improve mobility and access and reduce congestion. Access would be maintained to all adjacent properties. The existing access would remain and additional, more direct access would be constructed, reducing travel times.

The proposed project would maintain the existing US 90 alignment and would not create a new separation since there is already an existing separation with the existing US 90 roadway. Also, the addition of sidewalks and shared use lanes would also allow for more pedestrian and bicycle travel.

Although the project area does contain EJ populations, impacts are not expected to be disproportionately high or adverse due to the fact that displacements and changes in access and travel patterns would occur in other areas within the study area where there are predominantly non-minority populations. The proposed improvements are anticipated to benefit the entire community. No neighborhoods would be separated and no businesses would be displaced.

TxDOT has complied and will continue to comply with Executive Order (EO) 13166 by offering to meet the needs of persons requiring special communication or accommodations in all future public involvement activities and notices. Public involvement/outreach will be conducted in a manner such that all interested parties will be given an opportunity to provide both verbal and written comments concerning the proposed project. This may include but is not limited to: letters sent to adjacent property owners to notify them of the public hearing and notice of the public hearing in newspapers, comment forms, and language interpretation at the hearing (if requested). Therefore, the requirements of EO 13166 will be met.

5.7 Visual/Aesthetic Impacts

Using the Federal Highway Administration's (FHWA's) *Visual Impact Assessment for Highway Projects* guidance (FHWA-HI-88-054), an analysis of the potential visual impact of the proposed project was conducted. Visual impacts are defined as a change in the aesthetic value resulting from the introduction of modifications to the landscape. The project vicinity has been evaluated in terms of project impacts on visual character and scenic (visual) quality.

In an effort to determine the visual resource effects of the proposed project, an analysis of the landscape components affected by the proposed project was conducted. The regional landscape in the project area is a mix of developed and rural properties. No substantial changes to the vegetation surrounding the roadway corridor are anticipated as a direct result of the proposed project.

In order to determine the scale and dominance of the proposed project, the schematic was used to evaluate changes in elevation and potential impacts to the current viewshed in the project vicinity. The scale and dominance of the proposed structures were determined to be compatible with the project surroundings due in large part to the fact that a distinct transportation corridor within the project viewshed has already been established by the existing roadways. The existing transportation corridors would not be substantially altered or realigned under the Build Alternative.

Due to the aesthetic compatibility of the proposed improvements to the existing transportation features, the construction of a visual barrier was determined to not be necessary.

The No-Build Alternative would not result in visual impacts.

5.8 Cultural Resources

Cultural resources are structures, buildings, archeological sites, districts (a collection of related structures, buildings, and/or archeological sites), cemeteries, and objects. Both federal and state laws require consideration of cultural resources during project planning. At the federal level, NEPA and the National Historic Preservation Act (NHPA) of 1966, among others, apply to transportation projects such as this one. In addition, state laws such as the Antiquities Code of Texas apply to these projects. Compliance with these laws often requires consultation with the Texas Historical Commission (THC)/Texas State Historic Preservation Officer (SHPO) and/or federally-recognized tribes to determine the project's effects on cultural resources. Evaluation of impacts to cultural resources has been conducted under Section 106 of the NHPA in accordance with the Programmatic Agreement among FHWA, TxDOT, the Texas State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation Regarding the Implementation of Transportation Undertakings.

5.8.1 Archeology

Based on the results of an *Archeological Background Study,* dated September 2019, one site (41BX1749) was found within the APE to be eligible for listing on the National Register of Historic Places (NRHP) (see **Figures 5.1** and **5.2** in **Appendix F** for APE search radius used). It was initially recommended that portions of the Area of Potential Effect (APE) within the proposed ROW, as well as portions of the existing TxDOT ROW along LP 1604, be subjected to an intensive survey. However, after further investigation, a previous archeological survey for another project (IH 410 from SH 16 to Culebra Road) determined this one site (41BX1749) identified within the US 90 project's APE was not eligible (Figueroa et al. 2008). It was also determined the US 90 project would not affect historic archeological properties or cemeteries. No further archeological investigations were required. See **Appendix G** for copies of coordination.

Consultation requests were also sent to the following tribes: Kickapoo Traditional Tribe of Texas, Kickapoo Tribe of Oklahoma, Mescalero Apache Tribe, Wichita and Affiliated Tribes, Absentee Shawnee Tribe of Oklahoma, Alabama-Quassarte Tribal Town, Caddo Nation, Seminole Nation of Oklahoma, Tonkawa Tribe of Oklahoma, Alabama-Coushatta Tribe of Texas, Apache Tribe of Oklahoma, Comanche Nation of Oklahoma. All correspondence will be uploaded to ECOS (**Appendix G**).

In the event that unanticipated archeological deposits are encountered during construction, work in the immediate area will cease and TxDOT archeological staff will be contacted to initiate post-review discovery

procedures under the provisions of the Programmatic Agreement (PA) and the Memorandum of Understanding (MOU) between TxDOT and the THC.

The No-Build Alternative would not impact archeological resources.

5.8.2 Historic Properties

TxDOT historians reviewed the NRHP, the list of SALs, the list of RTHLs, and TxDOT files and found no historically significant resources previously documented within the APE. The TxDOT Section 106 Programmatic Agreement defines the APE for this project as 150 feet from the proposed ROW and existing ROW for all project segments within the existing ROW. TxDOT conducted a historic resources survey to evaluate whether any previously unknown historic-age properties within the APE have historical significance. Initial reporting indicates that there are no historic properties within the APE, but the surveys' finalization and coordination under Section 106 is still pending. See **Figures 6.1** and **6.2** in **Appendix F** for the project APE from the Historic PCR dated September 2019.

The No-Build Alternative would not result in impacts to historic resources.

5.9 Protected Lands

There are no Section 4(f), Section 6(f), or Chapter 26 properties present in the project area; therefore, coordination regarding Section 4(f), Section 6(f) or Chapter 26 resources is not required for this project.

The No-Build Alternative would not impact 4(f), 6(f), or Chapter 26 resources.

5.10 Water Resources

A *Surface Water Analysis Form*, *Section 404/10 Impacts Table*, and *Waters of the U.S. Delineation Report* were submitted to the TxDOT San Antonio District in January and September 2020. It was determined approximately 1.29 acres of jurisdictional waterbodies/wetland features would be permanently impacted by the proposed project. These waters of the U.S. are discussed in greater detail below. Anticipated jurisdiction of water features was determined using professional judgement based on the waters of the U.S. definition found in the Navigable Waters Protection Rule, which became effective on June 22, 2020 (US Army Corps of Engineers [USACE] and Environmental Protection Agency [EPA] 2020).

The No-Build Alternative would not impact water resources.

5.10.1 Clean Water Act Section 404

Water features mapped in the project area are shown on **Figures 7.1** through **7.15** in **Appendix F**. This project will involve regulated activity in jurisdictional waters and therefore will require authorization under Section 404. **Table 2** shows the waters that are anticipated to be jurisdictional waters in which regulated activities are anticipated to take place. It also indicates whether the impacts are anticipated to be authorized under Section 404 by a non-reporting nationwide permit (NWP) (i.e., no pre-construction notification [PCN] required), or if it is anticipated that a NWP with PCN, individual permit (IP), letter of permission, or regional general permit will be required.

Table 2: Waters of the US

Name of water body[1]	Type of water body	Location of water body	Covered by non-reporting nationwide permit under Section 404?	Nationwide permit with pre-construction notification, individual permit, letter of permission, or regional general permit required under Section 404?
Lucas Creek (Stream 4)	Intermittent stream	29.375339°N, 98.746804°W	Y	N
Potranca Creek (Stream 5)	Intermittent stream	29.376676°N, 98.724269°W	N	Y – NWP 14 with PCN
Wetland 3	Palustrine emergent wetland	29.377293°N, 98.724766°W	N	Y – NWP 14 with PCN
Wetland 4	Palustrine emergent wetland	29.376951°N, 98.721884°W	N	Y – NWP 14 with PCN or IP
Wetland 6	Palustrine emergent wetland	29.378389°N, 98.719130°W	N	Y – NWP 14 with PCN
Wetland 7	Palustrine emergent wetland	29.377918°N, 98.719270°W	N	Y – NWP 14 with PCN
Stream 6b	Intermittent stream/ephemeral stream	29.378201°N, 98.719259°W	N	Y – NWP 14 with PCN
Stream 9	Intermittent stream	29.385118°N, 98.688811°W	Y	N

[1] Additional water bodies were delineated in the project area but are not included here because no regulated activities would occur at those locations. Anticipated jurisdiction of water features was determined using professional judgement based on the waters of the U.S. definition found in the Navigable Waters Protection Rule.

Impacts at five water bodies (Potranca Creek [Stream 5], Wetland 3, Wetland 6, Wetland 7, and Stream 6b) would be authorized under NWP 14 with a PCN. Impacts at Wetland 4 may require authorization under an IP. A PCN or IP application has not been submitted to the USACE, and a pre-application meeting is planned prior to their submittal.

Due to the impacts at Wetland 4 and to comply with Section 404(b)(1) Guidelines, TxDOT reviewed alternatives to the proposed alignment at that crossing. Four alternatives to the proposed alignment were evaluated – (1) adjusting the proposed roadway alignment; (2) bridging the wetland; (3) placing the frontage road on a retaining wall; (4) and the No-Build alternative. An alternative is practicable if it is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." None of the four alternatives were found to be practicable. Adjusting the proposed alignment would require the relocation of a gas station. Either bridging the wetland and placing the frontage road on a retaining wall would result in substantial additional

construction cost, would create drainage issues along the roadway, and/or would not reduce impacts enough to avoid an IP. Although there would be no substantial adverse environmental impacts associated with the no-build alternative, it would not meet current design standards and would not reduce congestion or improve mobility; therefore, it would not address the need and purpose of the proposed project. As such, the proposed improvements to construct the eastbound frontage roads over Wetland 4 is the preferred alternative.

5.10.2 Clean Water Act Section 401

For a project that will use a NWP under Section 404 or Section 10, regardless of whether the NWP is non-reporting (i.e., assumed) or reporting (i.e., requires submittal of a PCN), TxDOT complies with Section 401 of the Clean Water Act by implementing the Texas Commission on Environmental Quality's (TCEQ) conditions for NWPs. For projects that require authorization under Section 404 or Section 10 beyond a NWP, TxDOT complies with Section 401 of the Clean Water Act by including a Tier I or Tier II checklist (depending upon the amount of disturbance/impact) in the individual permit, letter of permission, or regional general permit application that is submitted to the USACE, and then complying with the conditions of the Tier I or Tier II checklist.

5.10.3 Executive Order 11990 Wetlands

The proposed project would comply with EO 11990, which prohibits new construction in wetlands unless (1) there are no practicable alternatives to such construction, and (2) the project includes all practicable measures to minimize harm to wetlands. There are no practicable alternatives to the proposed project that completely avoid jurisdictional wetlands identified within the project limits. Avoidance of these impacts is not feasible because changes in the horizontal alignment would impact other wetland areas or potentially displace businesses or residences and cause community impacts. The alternative selected weighed various factors to avoid wetland impacts to the greatest extent practicable. The project ROW footprint has been minimized to that necessary to meet design and safety standards.

5.10.4 Rivers and Harbors Act

The project would not require a permit from the U.S. Coast Guard under Section 9 or Section 10 of the Rivers or Harbors Act.

5.10.5 Clean Water Act Section 303(d)

A search of the TCEQ Draft 2018 Texas Integrated Report for the Clean Water Act Section 303(d), adopted on September 27, 2019, determined that the project is located within five linear miles of, is within the watershed of, and drains to an impaired assessment unit. **Table 3** shows the 303(d) impaired waterbodies located within the project area.

Table 3: CWA Section 303(d) Impaired Water Segments

Watershed	Segment Name	Segment Number	Assessment Unit Number
Medina River (TCEQ Basin 19)	Medina River Below Medina Diversion Lake	1903	1903_02
Medina River (TCEQ Basin 19)	Lower Leon Creek	1906	1906_03, 1906_04
Upper San Antonio (TCEQ Basin 19)	Apache Creek*	1911B	1911B_01

* Apache Creek is within 5 miles of the project, but the project does not drain to Apache Creek.
Source: TCEQ 2019.

To date, TCEQ has not identified (through either a total maximum daily load [TMDL] or the review of projects under the TCEQ MOU) a need to implement control measures beyond those required by the construction general permit (CGP) on road construction projects. Therefore, compliance with the project's CGP, along with the coordination under the TCEQ MOU for certain transportation projects, collectively meets the need to address impaired waters during the environmental review process. As required by the CGP, the project and associated activities will be implemented, operated, and maintained using best management practices to control the discharge of pollutants from the project site.

5.10.6 Clean Water Act Section 402

Since the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit (CGP) authorization and compliance (and the associated documentation) occur outside of the environmental clearance process, compliance is ensured by the policies and procedures that govern the design and construction phases of the project. The Project Development Process Manual and the Plans, Specifications, and Estimates (PS&E) Preparation Manual require a Storm Water Pollution Prevention Plan (SW3P) be included in the plans of all projects that disturb 1 or more acres. The Construction Contract Administration Manual requires that the CGP authorization documents (notice of intent [NOI] or site notice) be completed, posted, and submitted, when required by the CGP, to TCEQ and the municipal separate storm sewer system (MS4) operator. It also requires that projects be inspected to ensure compliance with the CGP.

The PS&E Preparation Manual requires that all projects include Standard Specification Item 506 (Temporary Erosion, Sedimentation, and Environmental Controls), and the "Required Specifications Checklists" require Special Provision 506-003 on all projects that need authorization under the CGP. These documents require the project contractor to comply with the CGP and SW3P and to complete the appropriate authorization documents.

5.10.7 Floodplains

The project is located within a Federal Emergency Management Agency (FEMA)-designated 100-year floodplain. Coordination with the Bexar County Floodplain Administrator will be conducted.

This project is subject to and will comply with federal EO 11988 on Floodplain Management. TxDOT implements this EO on a programmatic basis through its Hydraulic Design Manual. Design of this project will be conducted in accordance with TxDOT's Hydraulic Design Manual. Adherence to the TxDOT Hydraulic Design Manual ensures that this project will not result in a "significant encroachment" as defined by FHWA's rules implementing EO 11988 at 23 CFR 650.105(q).

5.10.8 Wild and Scenic Rivers

No designated wild and scenic rivers occur in Bexar County; therefore, the Wild and Scenic Rivers Act does not apply.

5.10.9 Coastal Barrier Resources

There are no Coastal Barrier Resources System units mapped in Bexar County; therefore, the Coastal Barrier Resources Act does not apply to the project.

5.10.10 Coastal Zone Management

The project is not located within a Texas Coastal Management Plan (TCMP) boundary. Therefore, a consistency determination is not required.

5.10.11 Edwards Aquifer

The proposed project is not located in the Edwards Aquifer contributing, recharge, or transition zones of the Edwards Aquifer; therefore, the TCEQ Edwards Aquifer Rules do not apply to the project.

5.10.12 International Boundary and Water Commission

The project does not cross or encroach upon the floodway of the International Boundary Water Commission (IBWC) ROW or an IBWC flood control project; therefore, the project does not require an IBWC license.

5.10.13 Drinking Water Systems

In accordance with TxDOT's Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges (Item 103, Disposal of Wells), any drinking water wells would need to be properly removed and disposed of during construction of the project.

5.11 Biological Resources

The *Biological Evaluation Form* and *Tier 1 Site Assessment Form* and associated attachments, dated December 2019, describe the Texas Parks and Wildlife Department (TPWD) Ecological Mapping System of Texas (EMST) (**Figures 8.1** through **8.17** in **Appendix F**) and observed, or field-verified, vegetation (**Figures 9.1** through **9.17** in **Appendix F**). The forms also list the federal and state-listed threatened, endangered, and candidate species, as well as those considered species of greatest conservation need (SGCN) by the state and provides an assessment of their habitat requirements and the potential impacts of the proposed project. A summary of these findings is provided below.

5.11.1 Texas Parks and Wildlife Coordination

According to the Threshold Table PA for the MOU between TxDOT and TPWD, the proposed project would exceed the impact coordination threshold for Disturbed prairie; Riparian; and Tallgrass Prairie, Grassland MOU Vegetation Types (TxDOT 2017a). The proposed project also provides suitable habitat for 17 species of greatest conservation need (SGCN) that do not have specified Best Management Practices (BMPs) in the current BMP PA (revised 2017) (TxDOT 2017b). Therefore, coordination with TPWD was initiated on March 25, 2020. TPWD recommended implementing Water Quality BMPs as outlined in the 2019 BMP PA (TxDOT 2017b); spanning Potranca Creek to minimize impacts to wetlands adjacent to the creek; and surveys and relocating any state-listed mussels found in Potranca Creek, along with a Permit to Introduce Fish, Shellfish or Aquatic Plants into Public waters and an Aquatic Resource Relocation Plan (ARRP) if dewatering activities are required. Copies of this coordination are included in **Appendix G**.

5.11.2 Impacts to Vegetation

The project area is located within the Texas Blackland Prairies Ecoregion. The existing ROW within the project area, which includes the US 90 roadway, consists primarily of maintained urban vegetation, native invasive mesquite (*Prosopis glandulosa*) shrubland, and some natural vegetation. The proposed ROW consists primarily of disturbed grassland and mesquite shrubland.

Table 4 and **Figures 9.1** through **9.17** provide the field-verified EMST vegetation types identified in the proposed project area and the Ecological System Type according to TPWD's *Draft Descriptions of Systems, Mapping Subsystems, and Vegetation Types for Phase V*. Based on the Threshold Table PA for the MOU between TxDOT and TPWD (effective September 1, 2013 and revised in 2017 [TxDOT 2017a]), **Table 4** also provides the TxDOT TPWD MOU vegetation type that corresponds with each EMST vegetation type identified in the project area.

Table 4: Potential Impacts to Field-verified MOU Vegetation

EMST Vegetation Type	TxDOT/TPWD MOU Vegetation Type	Acreage of Impacts*	MOU Threshold Value (acres)	Threshold Exceeded?
Row Crops	Agricultural	7.3	10.0	No
Total Permanent Impacts to Agricultural MOU Vegetation		**7.3**		
Central Texas: Floodplain deciduous Shrubland	Riparian	1.0	0.1	**Yes**
Central Texas: Floodplain Hardwood Forest		3.1		
Total Permanent Impacts to Riparian MOU Vegetation		**4.1**		
Native Invasive: Baccharis Shrubland	Disturbed Prairie	25.8	3.0	**Yes**
Native Invasive: Deciduous Woodland		3.0		
Native Invasive: Mesquite Shrubland		119.1		
Total Permanent Impacts to Disturbed Prairie MOU Vegetation		**147.9**		

Table 4: Potential Impacts to Field-verified MOU Vegetation

EMST Vegetation Type	TxDOT/TPWD MOU Vegetation Type	Acreage of Impacts*	MOU Threshold Value (acres)	Threshold Exceeded?
Blackland Prairie: Disturbance or Tame Grassland	Tallgrass Prairie, Grassland	26.9	2.0	**Yes**
Total Permanent Impacts to Tallgrass Prairie, Grassland MOU Vegetation		**26.9**		
Urban Low Intensity	Urban	401.2	NA	**No**
Total Permanent Impacts to Urban MOU Vegetation		**401.2**		

*Based on ROW to ROW impacts

According to the Threshold PA between TxDOT and TPWD, there is no threshold for Urban vegetation. The coordination threshold for Riparian vegetation is 0.1 acre, and potential permanent acreage impacts to this vegetation type is 4.1 acres. The coordination threshold for Disturbed Prairie vegetation is 3.0 acres, and potential permanent acreage impacts to this vegetation type is 147.9 acres. The coordination threshold for Tallgrass Prairie, Grassland vegetation is 2.0 acres, and potential permanent acreage impacts to this vegetation type is 26.9 acres. Therefore, the project would exceed impact thresholds defined by TPWD/TxDOT, and coordination with TPWD was conducted. The proposed project is not anticipated to result in indirect encroachment impacts to vegetation.

Under the No-Build Alternative, the proposed project would have no effect on existing vegetation habitat in the project area.

5.11.3 Executive Order 13112 on Invasive Species

This project is subject to and will comply with federal EO 13112 on Invasive Species. TxDOT implements this EO on a programmatic basis through its Roadside Vegetation Management Manual and Landscape and Aesthetics Design Manual.

5.11.4 Executive Memorandum on Environmentally and Economically Beneficial Landscaping

This project is subject to and will comply with the federal Executive Memorandum on Environmentally and Economically Beneficial Landscaping, effective April 26, 1994. TxDOT implements this Executive Memorandum on a programmatic basis through its Roadside Vegetation Management Manual and Landscape and Aesthetics Design Manual.

5.11.5 Impacts to Wildlife

The project area is located in the far southwestern end of Texas Blackland Prairies ecoregion, at the convergence of the Texan Biotic Province to the north and east and the subtropical Tamaulipan Biotic Province to the south (Blair 1950). The wildlife of the area surrounding the project area is more closely aligned with the Texan Biotic Province. The region supports at least 49 species of mammals, 23 species of amphibians, over 70 species of reptiles, and over 400 species of birds (Blair 1950, Lockwood and Freeman 2014, Dixon 2000, Schmidly 2004).

Mammals that are characteristic of the region include bobcat (*Lynx rufus*), coyote (*Canis latrans*), nine-banded armadillo (*Dasypus novemcinctus*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), eastern mole (*Scalapus aquaticus*), fox squirrel (*Sciurus niger*), Baird's pocket gopher (*Geomys breviceps*), fulvous harvest mouse (*Reithrodontomys fulvescens*), northern pygmy mouse (*Baiomys taylori*), hispid cotton rat (*Sigmodon hispidus*), black-tailed jackrabbit (*Lepus californicus*), eastern cottontail (*Sylvilagus floridanus*), and striped skunk (*Mephitis mephitis*).

Reptiles in the region include several turtle species, 16 lizard species and 39 snake species. Turtle species characteristic of the region include common box turtle (*Terrapene carolina*), eastern mud turtle (*Kinosternon subrubrum*), eastern snapping turtle (*Chelydra serpentina*), red-eared slider (*Thrachemys scripta elegans*), spiny softshell turtle (*Apalone spinifera*), Texas cooter (*Pseudemys texana*), western box turtle (*Terrapene ornata*), and yellow mud turtle (*Kinosternon flavescens flavescens*). Common lizards in the area include green anole (*Anolis carolinensis*), Mediterranean gecko (*Hemidactylus turcicus*), skinks (*Eumeces* spp.), spiny lizards (*Sceloperus* spp.), and whiptails (*Aspidoscelis* spp.). Common snakes in the area include bullsnake (*Pituophis catenifer sayi*), common kingsnake (*Lampropeltis getula*), copperhead (*Agkistrodon contortrix*), cottonmouth (*Agkistrodon piscivorus*), eastern coachwhip (*Masticophis flagellum*), eastern diamondback rattlesnake (*Crotalus adamanteus*), eastern racer (*Coluber constrictor*), ribbon snake (*Thamnophis sauritus*), rat snakes (*Elaphe* spp.), Texas coral snake (*Micrurus fulvius tener*), timber (canebrake) rattlesnake (*Crotalus horridus*), and water snakes (*Nerodia* spp.). Amphibians that are characteristic of the region include American bullfrog (*Rana catesbeiana*), American green tree frog (*Hyla cinerea*), Couch's spadefoot toad (*Scaphiopus couchii*), eastern spadefoot toad (*Scaphiopus holbrookii*), gulf coast toad (*Incilius valliceps*), lesser siren (*Siren intermedia*), northern leopard frog (*Rana pipiens*), small-mouthed salamander (*Ambystoma texanum*), southern cricket frog (*Acris gryllus*), Strecker's chorus frog (*Pseudacris streckeri*), tiger salamander (*Ambystoma tigrinum*), western spadefoot toad (*Scaphiopus hammondii*), and Woodhouse's toad (*Anaxyrus woodhousii*).

Common year-round resident bird species in the study area include American coot (*Fulica americana*), black-bellied whistling duck (*Dendrocygna autumnalis*), eastern meadowlark (*Sturnella magna*), eastern phoebe (*Sayornis phoebe*), great-tailed grackle (*Quiscalus mexicanus*), inca dove (*Columbina inca*), killdeer (*Charadrius vociferus*), ladder-backed woodpecker (*Picoides scalaris*), northern cardinal (*Cardinalis cardinalis*), northern mockingbird (*Mimus polyglottos*), red-bellied woodpecker (*Melanerpes carolinus*), and white-winged dove (*Zenaida asiatica*). Common migrant/summer resident bird species in the study area include barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon pyrrhonota*), common nighthawk (*Chordeiles minor*), dickcissel (*Spiza americana*), eastern kingbird (*Tyrannus tyrannus*), great crested flycatcher (*Myiarchus crinitus*), indigo bunting (*Passerina cyanea*), orchard oriole (*Icterus spurius*), scissor-tailed flycatcher (*Tyrannus forficatus*), summer tanager (*Piranga rubra*), and yellow-billed cuckoo (*Coccyzus americanus*). Common migrant/winter resident bird species include American white pelican (*Pelecanus erythrorhynchos*), orange-crowned warbler (*Oreothlypis celata*), savannah sparrow (*Passerculus sandwichensis*), yellow-rumped warbler (*Setophaga coronata*), and many various species of ducks. Other common migrant species in the region include broad-winged hawk (*Buteo platypterus*), Mississippi kite (*Ictinia mississippiensis*), scarlet tanager (*Piranga olivacea*), Wilson's phalarope (*Phalaropus tricolor*), and

yellow-headed blackbird (*Xanthocephalus xanthocephalus*). These species may occur within undeveloped portions of the proposed ROW, and therefore may be impacted by the proposed project.

The following sections provide a summary of potential impacts to wildlife associated with the Build Alternative. Under the No-Build Alternative, the proposed project would have no effect on existing wildlife and habitat in the project area.

5.11.6 Migratory Bird Protections

This project will comply with applicable provisions of the Migratory Bird Treaty Act (MBTA) and Texas Parks and Wildlife Code Title 5, Subtitle B, Chapter 64, Birds. It is TxDOT's policy to avoid removal and destruction of active bird nests except through federal or state approved options. In addition, it is TxDOT's policy to, where appropriate and practicable:

- use measures to prevent or discourage birds from building nests on man-made structures within portions of the project area planned for construction, and
- schedule vegetation clearing activities outside of typical nesting season.

A site survey identified active cliff swallow and cave swallow (*Petrochelidon fulva*) nests under existing bridges within the project action area. While no impact to migratory birds is expected, TxDOT will take all appropriate actions to prevent the take of migratory birds, their active nests, eggs, or young should they be discovered on the project site. Direction to contractors is provided on the standard Environmental Permits, Issues, and Commitments (EPIC) sheet.

5.11.7 Fish and Wildlife Coordination Act

This project is anticipated to require an individual permit issued by the USACE. Compliance with the Fish and Wildlife Coordination Act (FWCA) will be accomplished through the individual permit application process.

5.11.8 Bald and Golden Eagle Protection Act of 2007

Within the U.S. or anywhere within its jurisdiction, bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are protected by the Bald and Golden Eagle Protection Act of 2007. No eagles or potential eagle nests were observed in or adjacent to the project area during field visits. Based on the information available and observations made in the project area, the project is not within 660 feet of an active or inactive Bald or Golden Eagle nest, and therefore, no coordination with USFWS is required.

5.11.9 Magnuson-Stevens Fishery Conservation Management Act

The proposed project is not located in a coastal county; therefore, the Essential Fish Habitat (EFH)/Magnuson-Stevens Fishery Conservation and Management Act does not apply.

5.11.10 Marine Mammal Protection Act

The project does not contain suitable habitat for marine mammals. Coordination with the National Marine Fisheries Service is not required.

5.11.11 Threatened, Endangered, and Candidate Species

A review of the threatened and endangered species lists for Bexar County, Texas, maintained by the USFWS and the TPWD, identified federal and state-listed threatened, endangered, as well as those considered SGCN by the state.

No suitable habitat for federally listed threatened, endangered, or proposed threatened or endangered species was identified in or adjacent to the project area. Therefore, the project does not have the potential to affect any federally listed species.

Suitable habitat was identified for five state-listed threatened species, Mexican treefrog (*Smilisca baudinii*), Texas fatmucket (*Lampsilis bracteata*), Texas pimpleback (*Cyclonaias* [=*Quadrula*] *petrina*), Texas horned lizard (*Phrynosoma cornutum*), and Texas tortoise (*Gopherus berlandieri*). There is also potential habitat for 23 SGCNs: Strecker's chorus frog, Woodhouse's Toad, western burrowing owl (*Athene cunicularia hypugaea*), American badger (*Taxidea taxus*), big brown bat (*Eptesicus fuscus*), eastern spotted skunk (*Spilogale putorius*), long-tailed weasel (*Mustela frenata*), mink (*Neovison vison*), tricolored bat (*Perimyotis subflavus*), western hog-nosed skunk (*Conepatus leuconotus*), western spotted skunk (*Spilogale gracilis*), eastern box turtle (*Terrapene carolina*), slender glass lizard (*Ophisaurus attenuatus*), Tamaulipan spot-tailed earless lizard (*Holbrookia subcaudalis*), Texas garter snake (*Thamnophis sirtalis annectans*), Texas indigo snake (*Drymarchon melanurus erebennus*), timber (canebrake) rattlesnake, western box turtle, bigflower cornsalad (*Valerianella stenocarpa*), Correll's false dragon-head (*Phystostegia correllii*), low spurge (*Euphorbia peplidion*), Siler's huaco (*Manfreda sileri*), and tree dodder (*Cuscuta exaltata*).

BMPs will be implemented to minimize potential impacts, where possible, including TPWD's Amphibian, Bird, Freshwater Mussel, Terrestrial Reptile, and Water Quality BMPs (TxDOT 2017b). Contractors will be advised of the potential occurrence of the eastern spotted skunk within the project area, to avoid harming the species if encountered, and to avoid unnecessary impacts to dens. Contractors will be advised of the potential occurrence of the Texas horned lizard within the project area and will avoid harvester ant mounds in the selection of Project Specific Locations (PSLs), where feasible. Contractors will be advised of the potential occurrence of the Texas tortoise within the project area and will avoid harming to species if encountered, and utility trenches should be covered overnight and visually inspected before filling to avoid trapping or burying the species.

The current TxDOT/TPWD BMP PA does not specify BMPs for the five plant species, and no BMPs or plant surveys were recommended for the five plant species by TPWD through agency coordination. BMPs and direction to contractors is provided on the standard EPIC sheet.

The No-Build Alternative would not result in impacts to existing vegetation and wildlife habitat in the project area.

5.12 Air Quality

An air quality analysis was conducted for the proposed project in accordance with TxDOT's Guidance for preparing Air Quality Statements (TxDOT 2019a).

5.12.1 Transportation Conformity

This project is located within an area that has been designated by the Environmental Protection Agency (EPA) as a marginal nonattainment area for the 2015 ozone national ambient air quality standards (NAAQS); therefore, transportation conformity rules apply.

Both the MTP and the TIP were initially found to conform to the TCEQ State Implementation Plan (SIP) by FHWA and FTA on September 24, 2019 (**Appendix E**); however, the proposed project is not consistent with this conformity determination, because the project is not listed completely in the STIP. TxDOT will not take final action on this environmental document until the proposed project is consistent with a currently conforming MTP and STIP. The TIP pages from the AAMPO included in **Appendix E** have not yet been approved by FHWA.

5.12.2 Carbon Monoxide Traffic Air Quality Analysis (TAQA)

Traffic data for the estimated time of completion (ETC) year (2022) and design year (2042) is 85,000 vehicles per day (vpd) and 115,900 vpd, respectively. See the traffic projections memo in **Appendix H**. A prior TxDOT modeling study and previous analyses of similar projects demonstrated that it is unlikely that the CO standard would ever be exceeded as a result of any project with an annual average daily traffic (AADT) below 140,000 vpd. The AADT projections for the proposed project do not exceed 140,000 vpd; therefore, a TAQA is not required.

5.12.3 Mobile Source Air Toxics (MSAT)

Background

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 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 [FR], 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) (http://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 or contributors and non-cancer hazard contributors from the 2011 National Air Toxics Assessment (NATA) (https://www.epa.gov/national-air-toxics-assessment). These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel PM, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these compounds the priority MSATs, the list is subject to change and may be adjusted in consideration of future EPA rules.

Motor Vehicle Emissions Simulator (MOVES)

According the to the 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.

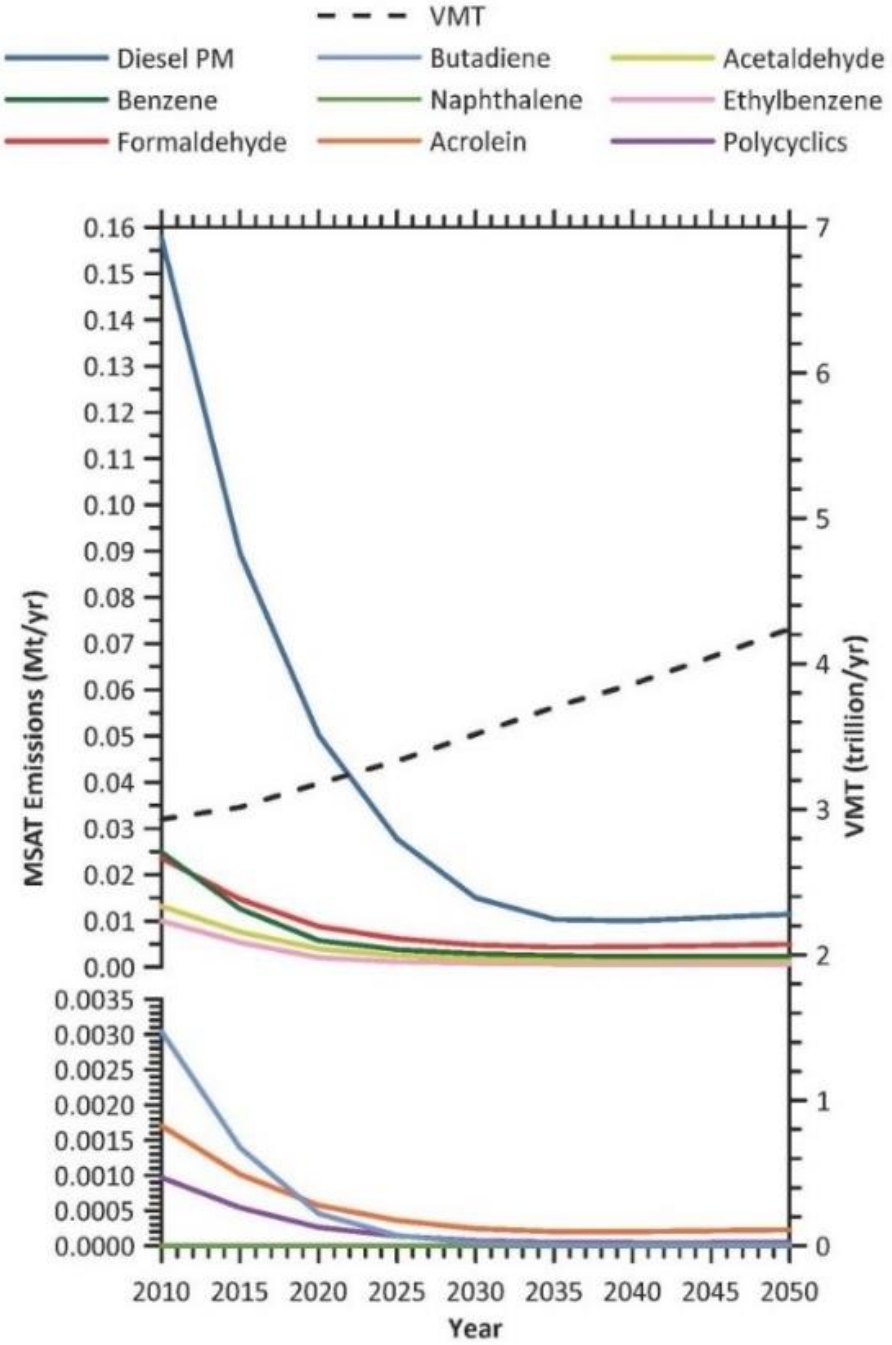
These new emissions data are for light- and heavy-duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES2014 also adds updated vehicle sales, population, age distribution, and vehicle miles travelled (VMT) data. MOVES2014 incorporates the effects of three new Federal emissions standard 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 model years 2017-2025 (79 FR 60344).

Since the release of MOVES2014, the EPA has released MOVES2014a. In the November 2015 MOVES2014a Questions and Answers Guide (http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100NNCY.txt), the 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 particulate matter emissions, while emissions for other criteria pollutants remain essentially the same as MOVES2014. Using EPA's MOVES2014a model, as shown in **Insert 2**, 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.

Insert 2.

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.

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 potential public health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA. The FHWA, the 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 field.

Project Specific MSAT Information

A qualitative MSAT 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 FHWA entitled, *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*, found at: https://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobile_source_air_toxics/msatemissions.cfm.

The VMT estimated for the Build Alternatives 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. 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 the Build 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 concentrations would likely be most pronounced along the expanded roadway sections that would be built at the US 90 and I-410 intersection. 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. 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 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 CAA 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 IRIS, which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, http://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 (http://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.htm#quainhal)."

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the CAA to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld the EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable (https://www.cadc.uscourts.gov/internet/opinions.nsf/284E23FFE079CD59852578000050C9DA/$file/07-1053-1120274.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.

5.12.4 Congestion Management Process

The congestion management process is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. The project was developed from the AAMPO's CMP, which meets all requirements of 23 CFR 450.320 and 500.109, as applicable. The CMP was adopted by AAMPO on August 26, 2019.

The region commits to operational improvements and travel demand reduction strategies at two levels of implementation: program level and project level. Program level commitments are inventoried in the regional CMP, which was adopted by AAMPO; they are included in the financially constrained MTP, and future resources are reserved for their implementation.

The CMP element of the plan carries an inventory of all project commitments (including those resulting from major investment studies) that details type of strategy, implementing responsibilities, schedules, and expected costs. At the project's programming stage, travel demand reduction strategies and commitments will be added to the regional TIP or included in the construction plans. The regional TIP provides for programming of these projects at the appropriate time with respect to the single occupancy vehicle (SOV) facility implementation and project-specific elements.

Committed congestion reduction strategies and operational improvements within the study boundary will consist of capacity improvements and addition of pedestrian and bike shared use facilities. Other congestion relief projects in the corridor are listed in **Table 5**.

Table 5: Congestion Management Process Strategies

Operational Improvements in Travel Corridor		
Location	Type	Implementation Date
Loop 1604 from West Military Drive [LP 13] to Macadona-Lacoste Road	Adding Capacity Widening	2022
Loop 1604 from US 90 to West Military Drive [LP 13]	Added Capacity Widening	2030
SH 151 from Loop 1604 to I-410	Added Capacity Widening	2021
I-410 from US 90 to IH 35 S	Added Capacity Widening	2028
Ingram Road from Potranco Road to Ingram Road Dead End	Added Capacity, Bicycle/Pedestrian Improvements	2019
West Military Drive [LP 13] & Ingram Road Connectors from West Military Drive [LP 13] Dead End to Potranco Road	Added Capacity, Bicycle/Pedestrian Improvements	2019

Source: Alamo Area MPO: http://www.alamoareampo.org/imap/

In an effort to reduce congestion and the need for SOV lanes in the region, TxDOT and AAMPO will continue to promote appropriate congestion reduction strategies through the Congestion Mitigation and Air Quality Improvement (CMAQ) program, the CMP, and the MTP. The congestion reduction strategies considered for this project would help alleviate congestion in the SOV study boundary, but would not eliminate it.

Therefore, the proposed project is justified. The CMP analysis for added SOV capacity projects in the Transportation Management Area (TMA) is on file and available for review at AAMPO.

5.12.5 Construction-related Emissions Reduction Strategies

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

5.13 Hazardous Materials

In the *Hazardous Materials ISA Form* dated April 2020, an ISA was conducted to identify potential hazardous materials within the proposed project study area. The components of the ISA included reviewing project design and ROW requirements, existing and previous land use, and federal and state regulatory databases and files. A database search for potential hazardous materials was conducted in January 2020 in general accordance with the American Society of Testing and Materials (ASTM) E1527 standards and TxDOT guidelines. An analysis of the ISA data indicates further research may be needed to determine if the proposed project would be impacted by hazardous materials. A copy of the GeoSearch Database Radius Report is included as an appendix to the April 2020 *Hazardous Materials ISA Form*.

During preliminary investigations, USGS topographic maps, current and past aerial imagery, and the project schematic were reviewed. No hazardous materials concerns were identified. The Railroad Commission of Texas (RRC) Public Geographic Information System (GIS) viewer identified numerous liquid petroleum gas (LPG) sites, one closed operator cleanup program site, and one permitted well near the project area, and two pipelines that cross the project (**Figures 10.1** and **10.2** in **Appendix F**). Coordination will be conducted with owners to relocate or deepen any pipelines, and no work is proposed at the LPG locations. No concerns are anticipated.

During the site survey, a small pumpjack or well equipment was observed on a residential property southwest of the US 90/SH 211 intersection. Historic topographic maps and well records do not show a well in this location and the equipment surrounding the pump does not indicate pumped materials are being stored. It is possible this pump serves as yard décor for the residential property. Additional ROW would be required from this property and would displace the pump, therefore, additional information is needed to determine if there would be any potential hazardous materials concerns.

The 2020 GeoSearch Database Radius Report identified 35 hazardous materials sites that required additional research to determine if there would be any potential hazardous materials concerns: nine petroleum storage tank (PST) sites, 13 leaking petroleum storage tank (LPST) sites, one Superfund Enterprise Management System (SEMS) site, one Resource Conservation & Recovery Act Corrective Action (RCRAC) site, one Resource Conservation & Recovery Act – Non-CORRACTS [RCRA Corrective Action] Treatment, Storage & Disposal Facilities (RCRAT) site, one industrial and hazardous waste corrective action (IHWCA) site, one TCEQ voluntary cleanup program (VCP) site, one innocent owner/operator database (IOP) site, one Resource Conservation & Recovery Act – Generator (RCRAGR06) site, three groundwater contamination case (GWCC) sites, and three closed & abandoned landfill inventory (CALF) sites.

Hazardous materials may be encountered on the site during preconstruction and construction activities. Any unanticipated hazardous material and/or petroleum contamination encountered during construction of the proposed project would be handled according to applicable federal and state regulations per TxDOT Standard Specifications.

The No-Build Alternative would not result in hazardous materials impacts.

5.14 Traffic Noise

A traffic noise analysis was conducted in accordance with TxDOT's (FHWA-approved) Guidelines for Analysis and Abatement of Roadway Traffic Noise (2011). Traffic Noise Model version 2.5 (TNM 2.5) was utilized in the assessment.

The *Traffic Noise Analysis Technical Report*, dated August 2020, identified 46 representative receivers along the project length (**Table 6** and **Figures 11.1** through **11.12** in **Appendix F**).

Table 6: Traffic Noise Levels dB(A) Leq

Representative Receiver	NAC Category	NAC Level	Existing 2022	Predicted 2042	Change (+/-)	Noise Impact
R1 Residence	B	67	67	69	+2	**Yes**
R2 Residence	B	67	66	68	+2	**Yes**
R3 Residence	B	67	63	65	+2	No
R4 Residence	B	67	66	68	+2	**Yes**
R5 Residence	B	67	61	65	+4	No
R6 Residence	B	67	63	64	+1	No
R7 Residence	B	67	60	64	+4	No
R8 Residence	B	67	58	59	+1	No
R9 Residence	B	67	59	61	+2	No
R10 Residence	B	67	58	64	+6	No
R11 Church (interior)	D	52	34	37	+3	No
R12 Residence	B	67	63	66	+3	**Yes**
R13 Residence	B	67	63	65	+2	No
R14 Residence	B	67	66	69	+3	**Yes**
R15 Residence	B	67	67	70	+3	**Yes**
R16 Residence	B	67	67	68	+1	**Yes**
R17 Residence	B	67	69	71	+2	**Yes**
R18 Residence	B	67	69	71	+2	**Yes**
R19 Residence	B	67	62	64	+2	No
R20 Residence	B	67	69	71	+2	**Yes**
R21 Residence	B	67	70	72	+2	**Yes**
R22 Mobile Home Park	B	67	68	71	+3	**Yes**
R23 Mobile Home Park	B	67	67	69	+2	**Yes**
R24 Mobile Home Park	B	67	68	68	0	**Yes**
R25 Residence	B	67	58	60	+2	No
R26 Residence	B	67	65	67	+2	**Yes**
R27 Church (exterior)	C	67	65	67	+2	**Yes**
R28 Residence	B	67	72	73	+1	**Yes**
R29 Basketball Court	C	67	68	69	+1	**Yes**
R30 Church (interior)	D	52	43	44	+1	No
R31 Mobile Home Park	B	67	65	66	+1	**Yes**

Table 6: Traffic Noise Levels dB(A) Leq

Representative Receiver	NAC Category	NAC Level	Existing 2022	Predicted 2042	Change (+/-)	Noise Impact
R32 Mobile Home Park	B	67	67	68	+1	**Yes**
R33 Church (interior)	D	52	40	41	+1	No
R34 Office (interior)	D	52	33	35	+2	No
R35 Sport Court	C	67	62	63	+1	No
R36 Office (interior)	D	52	35	38	+3	No
R37 Soccer Field	C	67	61	63	+2	No
R38 Office (interior)	D	52	39	41	+2	No
R39 Hotel	E	72	63	65	+2	No
R40 Church (interior)	D	52	32	33	+1	No
R41 Restaurant	E	72	68	70	+2	No
R42 Hotel	E	72	63	64	+1	No
R43 Hotel	E	72	66	66	0	No
R44 Hotel	E	72	68	66	-2	No
R45 Hospital (interior)	D	52	28	31	+3	No
R46 Church (interior)	D	52	41	42	+1	No

Data Source: Blanton & Associates, Inc., 2020

As indicated in **Table 6**, the proposed project would result in traffic noise impacts to receivers; therefore, noise walls were evaluated for each of the impacted receiver locations, the results of which are described in detail in the 2020 *Traffic Noise Analysis Technical Report*. Noise barriers were determined to be reasonable and feasible for 11 receivers and three noise walls were proposed for incorporation into the project (**Table 7**):

Table 7: Noise Barrier Proposal (preliminary)

Barrier	Representative Receiver	Total # Benefited	Length (Feet)	Height (feet)	Total Cost	$/Benefited Receiver
1	R13 through R18	65	2,676	20	$963,360	$14,821
2	R20 and R21	52	1,976	20	$711,360	$13,680
3	R22 through R24	122	3,316	20	$1,193,760	$9,785

Data Source: Blanton & Associates, Inc., 2020

Any subsequent project design changes may require a reevaluation of this preliminary noise barrier proposal. The final decision to construct the proposed noise barrier will not be made until completion of the project design, utility evaluation and polling of adjacent property owners.

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 predicted (2042) noise impact contours (**Table 8**). Predicted traffic noise levels were modeled at four undeveloped areas. The first area is located north of US 90 and west of SH 211; the second area is located north of US 90 and west of Montgomery Road; the third area is located south of US 90 and east of LP 1604; and the fourth area is located south of US 90 and east of I-410. The distances shown in **Table 8** indicate contours

calculated at the greatest distances from the ROW line in undeveloped or vacant areas within the project corridor.

Table 8: Predicted Noise Impact Contours

Undeveloped Area	Land Use	Impact Contour	Distance from ROW
North of US 90 West of SH 211	NAC category B & C	66 dB(A)	165 feet
	NAC category E	71 dB(A)	25 feet
North of US 90 West of Montgomery Road	NAC category B & C	66 dB(A)	65 feet
	NAC category E	71 dB(A)	Within ROW
South of US 90 East of LP 1604	NAC category B & C	66 dB(A)	195 feet
	NAC category E	71 dB(A)	55 feet
South of US 90 East of I-410	NAC category B & C	66 dB(A)	190 feet
	NAC category E	71 dB(A)	60 feet

Data Source: Blanton & Associates, Inc., 2020

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 the traffic noise analysis will be made 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.

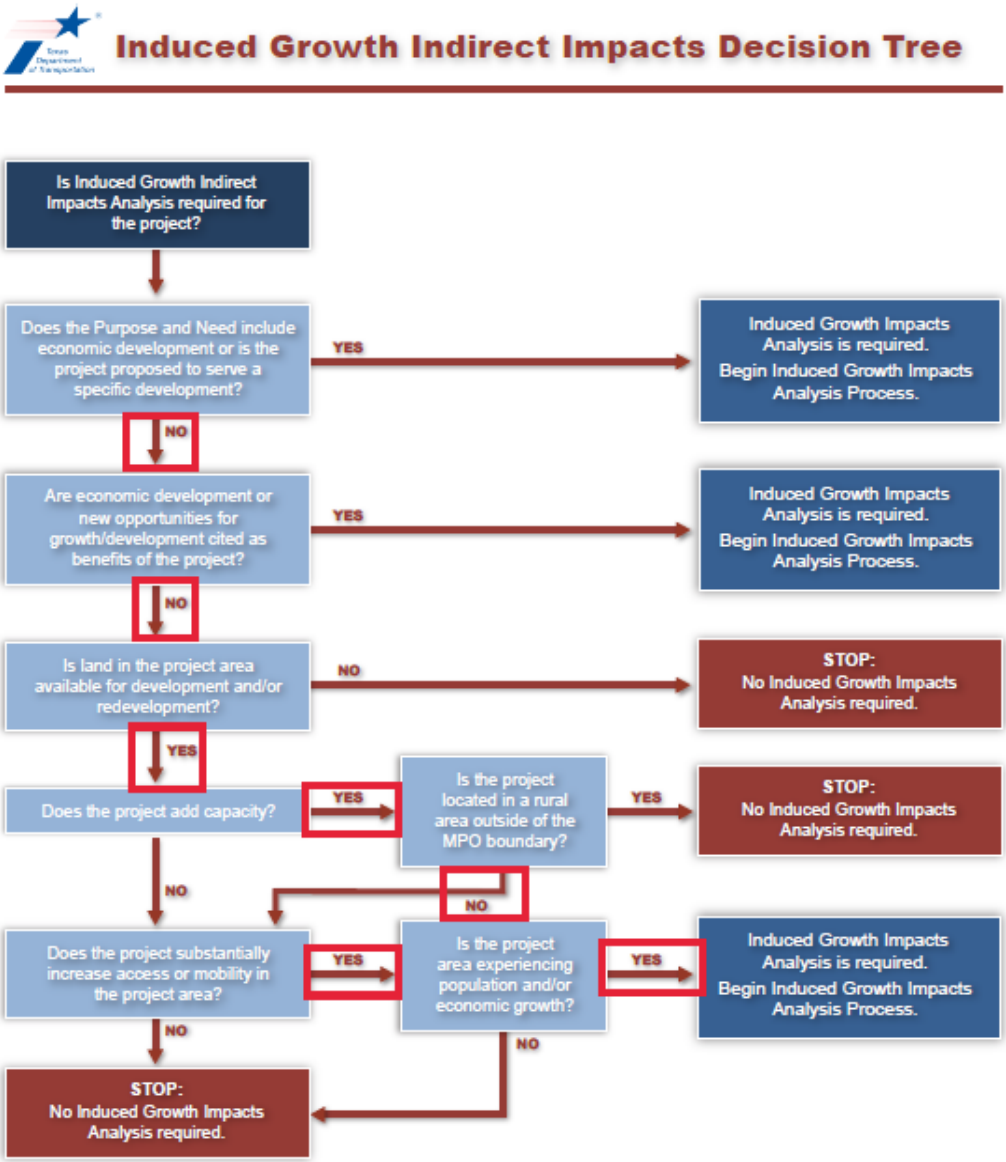
The No-Build Alternative may maintain existing traffic noise levels or noise levels may change as traffic volumes increase with time.

5.15 Induced Growth

Indirect impacts are defined as those caused by an action and are later in time or farther removed in distance, but still reasonably foreseeable. Indirect impacts are not directly associated with the construction or operation of the roadway and are often caused by related development and induced growth. This, in turn, can result in a variety of related impacts such as changes in land use, population density or growth rate, economic vitality, and impacts on air and water and other natural resources. Utilizing TxDOT's *Induced Growth Indirect Impacts Decision Tree* (TxDOT 2014b), it was determined an induced growth impacts analysis was required because there is land available in the project area for development or redevelopment, the project would add capacity, the project would substantially

increase access or mobility in the project area, and the project area is experiencing population and economic growth. See **Insert 3** for the induced growth indirect impacts decision tree.

Insert 3.



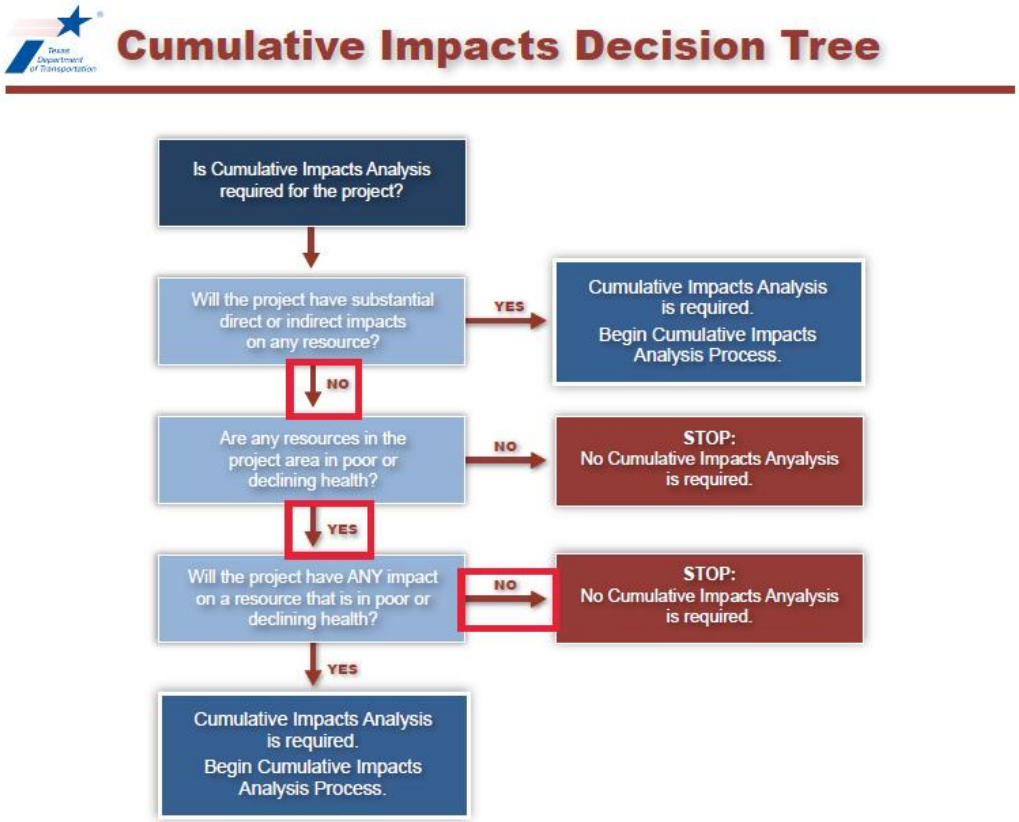
An *Indirect and Cumulative Impacts Technical Report*, dated April 2020, was prepared based on TxDOT's Indirect Impacts Analysis Guide (TxDOT 2019b) and is on file at the TxDOT San Antonio District Office. Based on reviews of historic aerial imagery, planning documents, and population data, development within the AOI has continually moved westward over time and growth trends are anticipated to continue westward, regardless of the proposed improvements to US 90. The proposed project would construct continuous, controlled-access frontage roads and widen the mainlanes, but

would not create new access to the US 90 facility. The controlled access to the US 90 facility would be throughout the project limits and would not directly encourage additional development of adjacent properties. The proposed project is expected to improve mobility and may therefore influence the type or density of development occurring in developable areas throughout the AOI, but is not anticipated to induce new rates of growth. Additionally, the purpose of the proposed project is to accommodate existing and future traffic volumes and improve mobility and connectivity along the project corridor in response to this existing trend of growth and development. Therefore, the proposed project is not anticipated to induce growth and development within the AOI, as much as accommodate the existing and projected demand.

5.16 Cumulative Impacts

Cumulative impacts result from individually minor, but collectively significant, actions taking place over a period of time (40 CFR §1508.7). They are defined as impacts on the environment that result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Utilizing TxDOT's Cumulative Impacts Decision Tree (TxDOT 2014a), it was determined that a cumulative impacts analysis was not required because: 1) the proposed project would not have substantial direct or indirect impacts on any resource; and 2) although some resources in the project area are in poor or declining health, the proposed project is not expected to result in impacts to these resources or contribute to their poor or declining health. See **Insert 4** for the cumulative impacts decision tree.

Insert 4.



Although the proposed project would result in direct impacts, the proposed project is not anticipated to induce growth or cause indirect impacts since growth is already occurring within the AOI and the project is intended to address existing demand. The proposed project could influence the type and density of development that is anticipated to occur regardless of the proposed improvements, but the project would not induce growth. Additionally, any future developments within the AOI would also be required to mitigate for potential impacts to sensitive and protected resources. These developments are not anticipated to occur as a result of the US 90 improvements and, as stated earlier, would be required to mitigate impacts to protected resources in compliance with state and federal regulations. Therefore, because no indirect impacts are anticipated, it was determined the project would not require a cumulative impacts analysis.

5.17 Construction Phase Impacts

Construction activities could result in temporary impacts to the human and natural environment. This includes light pollution; impacts associated with physical construction activity; temporary lane, road, or bridge closures (including detours); and other traffic disruptions. Construction for the proposed project is anticipated to last approximately 90 months. BMPs (as specified in **Section 8.2**) and other strategies will be implemented to mitigate such impacts.

Noise associated with 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 receptors is 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.

During the construction phase of this project, temporary increases in particulate matter (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 PM from diesel powered construction equipment and vehicles. The potential impacts of PM emissions will be minimized by using fugitive dust control measures contained in standard specifications, as appropriate. Considering the temporary and transient nature of construction-related emissions, as well as the mitigation actions to be utilized including compliance with applicable regulatory requirements, it is not anticipated that emissions from construction of this project will have a significant impact on air quality in the area.

Under the No-Build Alternative, no construction would occur, therefore, no construction impacts would be required.

6.0 AGENCY COORDINATION

Over the course of project development TxDOT has coordinated and will continue to coordinate with local, state, and federal agencies regarding the proposed project as necessary. Copies of agency coordination documents are available in **Appendix G.**

- Coordination with the Bexar County Floodplain Administrator will be conducted.

- The project would likely require a NWP 14 with a PCN or an IP, and would require mitigation in the form of Permittee Responsible Mitigation (PRM) for the impacts to the wetland. TxDOT has been in discussions with the fort Worth USACE regarding this project.
- TxDOT coordination with TPWD was initiated on March 25, 2020 and TPWD provided recommendations on May 11, 2020.
- Coordination with the NRCS for the FPPA was determined to not be required due to the score on the FPPA Form NRCS-CPA 106.
- TxDOT initiated coordination with the following tribes on October 25 and November 20, 2019: Kickapoo Traditional Tribe of Texas, Kickapoo Tribe of Oklahoma, Mescalero Apache Tribe, Wichita and Affiliated Tribes, Absentee Shawnee Tribe of Oklahoma, Alabama-Quassarte Tribal Town, Caddo Nation, Seminole Nation of Oklahoma, Tonkawa Tribe of Oklahoma, Alabama-Coushatta Tribe of Texas, Apache Tribe of Oklahoma, Comanche Nation of Oklahoma. No responses were received as of November 25, 2019.
- As part of Section 106 Consultation regarding historic resources, TxDOT will coordinate with the SHPO as needed.

7.0 PUBLIC INVOLVEMENT

On January 30 and February 1, 2018, seven Meetings with Affected Property Owners (MAPOs) were conducted. TxDOT personnel discussed that the project is in the early stages and wanted to meet with affected property owners about the preliminary design before having an open house meeting. They also gave an overview of the ROW and right of entry processes and gave Right of Entry Authorization forms to each property owner. They also addressed any issues or concerns the property owners had, which mostly consisted of project timing, access, requesting files and meetings, sold land or alternate land uses, the ROW acquisition process, safety, bike lanes, TxDOT communication, and design suggestions. Documentation of the MAPOs are available for review at the TxDOT San Antonio District.

On Tuesday, December 4, 2018, TxDOT held a Public Meeting in the Kriewald Elementary School Cafeteria, located at 10355 Kriewald Road, San Antonio, Texas 78245. Notices of the meeting were published in English in the *San Antonio Express News* on November 20, 2018, and in the *Median Valley Times* on November 29, 2018. Meeting handouts were available in both English and Spanish. A total of 146 people attended the meeting and 23 comments were received during the public comment period. Most of the comments were about safety, design suggestions, and road closure signs, while other comments were about lighting, traffic signals, TxDOT communication, congestion, ROW acquisition, support of the project, noise impacts, increased travel times, and other comments about areas outside the project area. The Public Meeting Summary is available for review at the TxDOT San Antonio District.

Between June 24 through August 10, 2020, TxDOT held 21 virtual MAPOs with 33 property owners. TxDOT personnel discussed the project overview, how the proposed project would impact adjacent properties, the ROW acquisition and compensation process, and the project timeline. Property owners had questions about the ROW acquisition and compensation process, access from their property, noise walls, design modifications, drainage improvements, obtaining copies of project documents presented to them, the project construction process, how TxDOT would use the acquired ROW, TxDOT's coordination with the city of San Antonio and Bexar County, project cost and funding, and relocation assistance. Documentation of the MAPOs are available for review at the TxDOT San Antonio District.

A public hearing is planned for the fall of 2020 to present the proposed project design as a result of comments received at the public meeting and to present the results of the environmental studies. A notice for the public hearing and a notice of availability for the Draft EA will be sent to adjacent property owners and the appropriate agencies. A notice of impending construction will also be provided to owners of adjoining property and affected local governments and public officials. The notice may be provided via a sign or signs posted within the TxDOT ROW, mailed notice, printed notice distributed by hand, notice via the TxDOT website when the recipient has previously been informed of the relevant website address, or other means. The notice will be provided after an environmental decision is made, but before earthmoving or other activities requiring use of heavy equipment begin.

Additional MAPOs are planned to follow up with affected property owners about project updates. These MAPOs may be conducted leading up to and after the public hearing. Documentation of these MAPOs will be included in the final EA and will be available for review at the TxDOT San Antonio District.

8.0 POST-ENVIRONMENTAL CLEARANCE ACTIVITIES AND DESIGN/CONSTRUCTION COMMITMENTS

8.1 Post-Environmental Clearance Activities

After issuance of a FONSI, there are unresolved environmental activities that will need to be performed and finalized. These activities are detailed below.

1. A PCN or IP application would be submitted to the USACE, and a pre-application meeting is planned prior to their submittal.

2. The Build Alternative would include 5 or more acres of earth disturbance. TxDOT would comply with TCEQ's TPDES CGP. An SW3P would be prepared and implemented, and a construction site notice would be posted on the construction site. An NOI would be required.

3. Construction of the proposed project may require temporary lane closures. However, these are expected to be of short duration with no major traffic flow disruptions on the existing roadways. TxDOT will work with community members to notify them of closures and limited access.

8.2 Design/Construction Commitments

Project-specific avoidance measures and special instructions, including BMPs are provided on the standard EPIC sheet, and detailed below.

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

2. In the event that migratory birds are encountered on-site during project construction, every effort would be made to avoid protected birds, active nests, eggs, and/or young. Contractors would not collect, capture, relocate, or transport birds, eggs, young, or active nests without a permit.

3. The proposed project contains potential habitat for Texas fatmucket and Texas pimpleback. Freshwater Mussel BMPs will be implemented. Also, per TPWD recommendation, mussel surveys will be conducted where suitable habitat may be present and any potentially impacted native aquatic resources will be relocated, in conjunction with a Permit to Introduce, Fish, Shellfish or Aquatic Plans into public Waters and an ARRP if dewatering activities are required. The ARRP will be completed for TPWD approval 30 days prior to activity within project waters and/or resource relocated, and will be submitted with an application for a no-cost Permit to Introduce Fish, Shellfish, or Aquatic Plants into Public Waters. (See TPWD coordination email in **Appendix G** for more details).

4. The proposed project contains potential habitat for the Texas horned lizard, Texas indigo snake, Texas tortoise, timber (canebrake) rattlesnake, Tamaulipan spot-tailed earless lizard, and Texas garter snake. Terrestrial Reptile BMPs will be implemented. Contractors will be advised of the potential occurrence of the Texas horned lizard within the project area and will avoid harvester ant mounds in the selection of Project Specific Locations (PSLs), where feasible. Contractors will be advised of the potential occurrence of the Texas tortoise within the project area and will avoid harming to species if encountered, and utility trenches should be covered overnight and visually inspected before filling to avoid trapping or burying the species

5. The proposed project contains potential habitat for the Mexican treefrog. Amphibian BMPs and Water Quality BMPs will be implemented.

6. The proposed project contains potential habitat for the western burrowing owl. Bird BMPs will be implemented.

7. The proposed project contains potential habitat for the eastern spotted skunk. Contractors will be advised of the potential occurrence of the species in the project area, to avoid harming them if encountered, and to avoid unnecessary impacts to dens.

8. TPWD MOU Water Quality BMPs will be implemented. These include: Minimize the use of equipment in streams and riparian areas during construction. When possible, equipment access should be from banks or bridge decks; and when temporary stream crossings are unavoidable, remove stream crossings once they are no longer needed and stabilize banks and soils around the crossing.

9. In accordance with the EO 13112 on Invasive Species and the Executive Memorandum on Beneficial Landscaping, 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. Therefore, seeding and replanting with TxDOT approved seeding specifications would be performed where possible.

10. Engineering erosion, sedimentation, and post-construction total suspended solids (TSS) BMPs would include the use of the following: blankets/matting, mulch filter berm socks, silt fence, rock berm, extended detention basin, construction wetlands, and vegetation lined ditches.

11. The potential impacts of particulate matter emissions will be minimized by using fugitive dust control measures contained in standard specifications, as appropriate. TxDOT encourages construction contractors to use TERP and other local and federal incentive programs to the fullest extent possible to minimize diesel emissions.

12. If additional research is conducted and it is confirmed hazardous materials would be encountered during construction of the proposed project, any concerns will be handled before or during construction according to applicable federal and state regulations per TxDOT Standard Specifications. Any unanticipated hazardous material and/or petroleum contamination encountered during construction of the proposed project would also be handled according to applicable federal and state regulations per TxDOT Standard Specification.

13. 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.

9.0 CONCLUSION

The analysis of alternatives for the proposed project determined that improvements proposed under the Build Alternative would meet the need and purpose of the project. Implementation of the proposed project would not result in a significant impact on the human or natural environment. Therefore, a FONSI is recommended.

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Appendix A

Project Location Maps

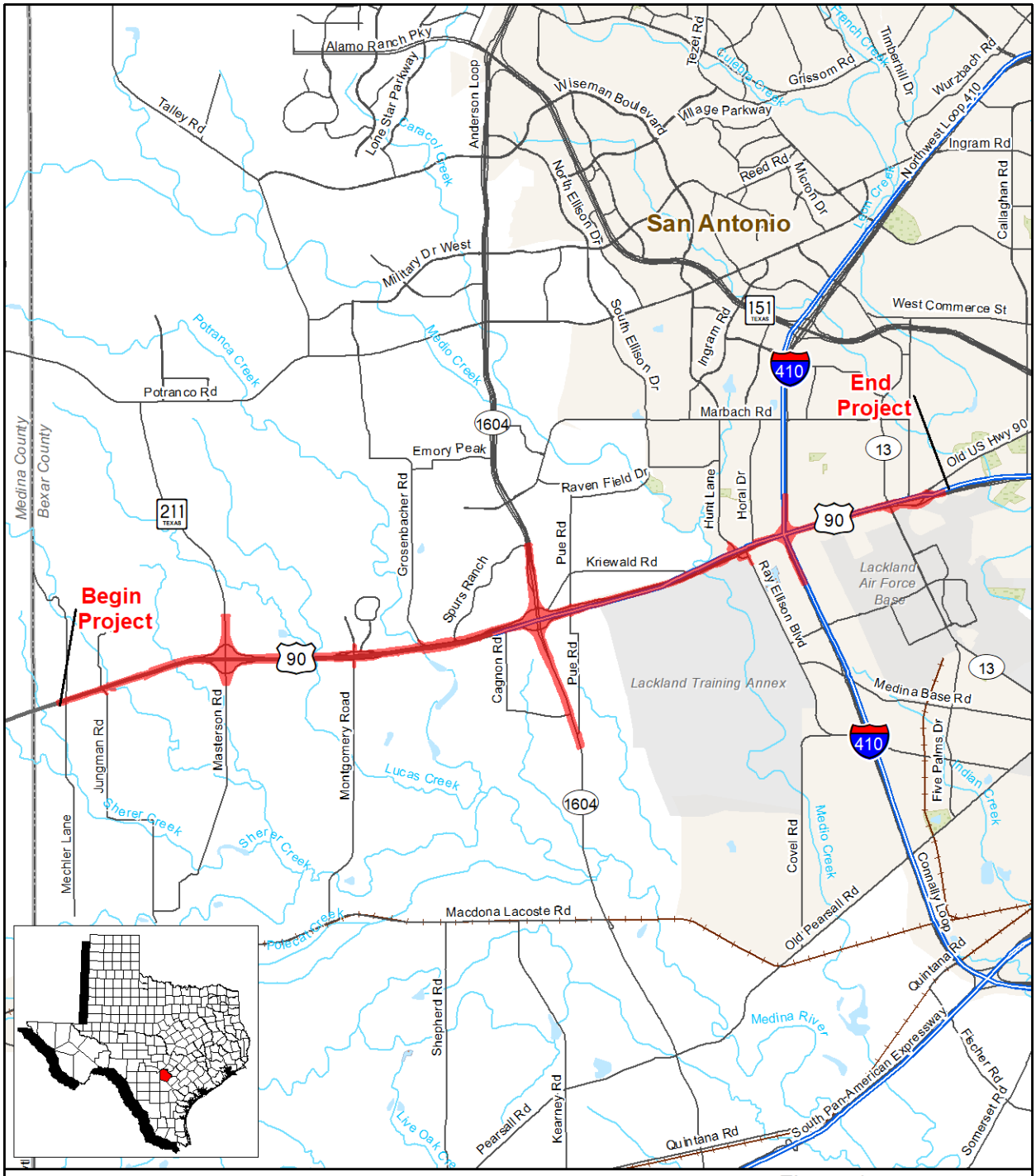
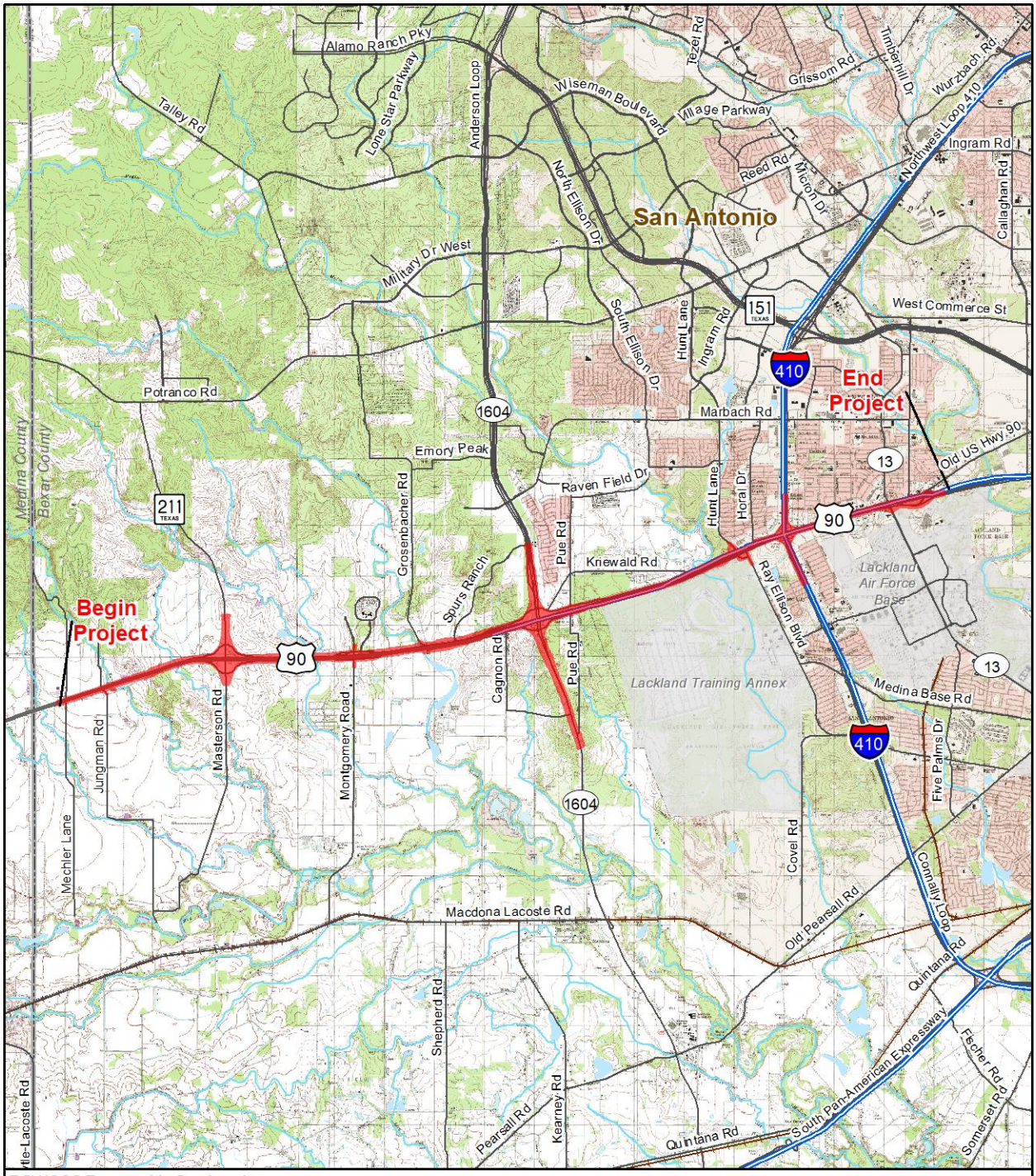


Figure 1
Project Location on County Map
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



7.5' USGS Topographic Quadrangles:
Culebra Hill, Texas (1979, Revised 1983, Map ID No. 29098-D6)
Lacoste, Texas (1979, Revised 1983, Map ID No. 29095-C7)
Lacoste NE, Texas (1979, Revised 1983, Map ID No. 29095-D8)
MavDona, Texas (1979, Revised 1983, Map ID No. 29098-C6)

Base Map: USGS Topographic Map, 24K

Project Location

1:125,000

Miles

0 0.5 1 2

Figure 2
Project Location on Topographic Map
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Appendix B

Project Photos

Photo 1. Eastern project limit, facing west.

Photo 2. Western project limit, facing east.

Photo 3. US 90 mainlanes and representative photo of development along the project area.

Photo 4. Representative photo of land use along US 90.

Photo 5. Representative photo of US 90 mainlanes and frontage road.

Photo 6. Representative photo of US 90 mainlanes.

Photo 7. Photo of potential residential structure and residential outbuilding displacements.

Photo 8. Photo of potential business outbuilding displacement (structure on the right).

Appendix C

Schematics

SUBMITTAL: DRAFT

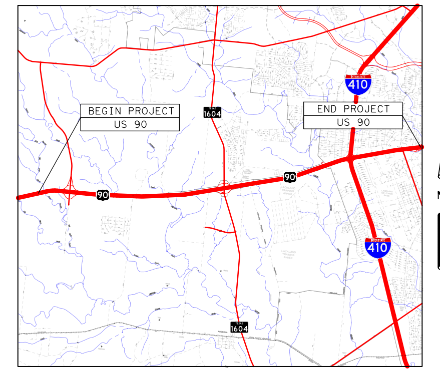
SHEET: 1 OF 5

TEXAS DEPARTMENT OF TRANSPORTATION

SCHEMATIC LAYOUT
US 90 IMPROVEMENTS
BEXAR COUNTY

LIMITS: FROM SH 211 TO MILITARY DRIVE
TxDOT C.S.J.: 0024-07-059 & 0024-08-138
LENGTH: 59720.00 FT = 11.311 MI

OFFICE OF THE DISTRICT ENGINEER
SAN ANTONIO DISTRICT



NOTE:

1. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT) EPOCH 2010.00, AS OBSERVED IN DECEMBER, 2015.

2. COORDINATES AND DISTANCES ARE US SURVEY FEET, DISPLAYED IN SURFACE VALUES DERIVED FROM THE FOLLOWING FORMULA: GRID X 1.00017 = SURFACE. SURFACE ADJUSTMENT FACTOR = 1.00017.

*GPS OBSERVATIONS ARE BASED ON THE FOLLOWING CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS): TXAN, TXPL.

3. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988. (GEOID 12A). DIGITAL LEVELS WERE APPLIED TO THE NETWORK HOLDING CONTROL POINT NO. 100'S ELEVATION OF 619.34'.

VICINITY MAP: NTS
EXCEPTIONS: NONE
EQUATIONS: US 90 AT IH-410; US 90A 85+51.10 = US 90B 172+28.98
RAILROAD CROSSINGS: NONE
SURVEY DATA: TEXAS CENTRAL ZONE #4204 (BEXAR COUNTY)

DESIGN SPEED:	MAINLANE	70 MPH (URBAN)(ROLLING)
	RAMP	45 MPH (URBAN)(ROLLING)
	FRONTAGE ROAD	50 MPH (URBAN)(ROLLING)
CURRENT ADT(2016):		44,700
PROJECTED ADT(2045):		113,800
FUNCTIONAL CLASSIFICATION:		URBAN PRINCIPAL ARTERIAL
PROPOSED DESIGN STANDARDS(STRUCTURES):		LRFD
PROPOSED DESIGN STANDARDS(ROADWAY):		TXDOT ROADWAY DESIGN MANUAL CHAPTER 3; 4R, SECTION 6; FREEWAYS
PROPOSED DESIGN STANDARDS(TRAFFIC):		TMUTCD & APPLICABLE TRAFFIC STANDARDS
PLOT SCALE:		1"=200' (HORIZ.) 1"=20' (VERT.)

SUBMITTED: ____________, 2020
PROJECT MANAGER

CORRECT: ____________, 2020
TRANSPORTATION PLANNING DIRECTOR

RECOMMENDED FOR APPROVAL: ____________, 2020
DIRECTOR OF TRANSPORTATION, PLANNING AND DEVELOPMENT

APPROVED: ____________, 2020
DISTRICT ENGINEER

APPROVED: DESIGN DIVISION LETTER DATED

APPROVED: F.H.W.A. LETTER DATED

TBPE REGISTRATION NO. F-16341

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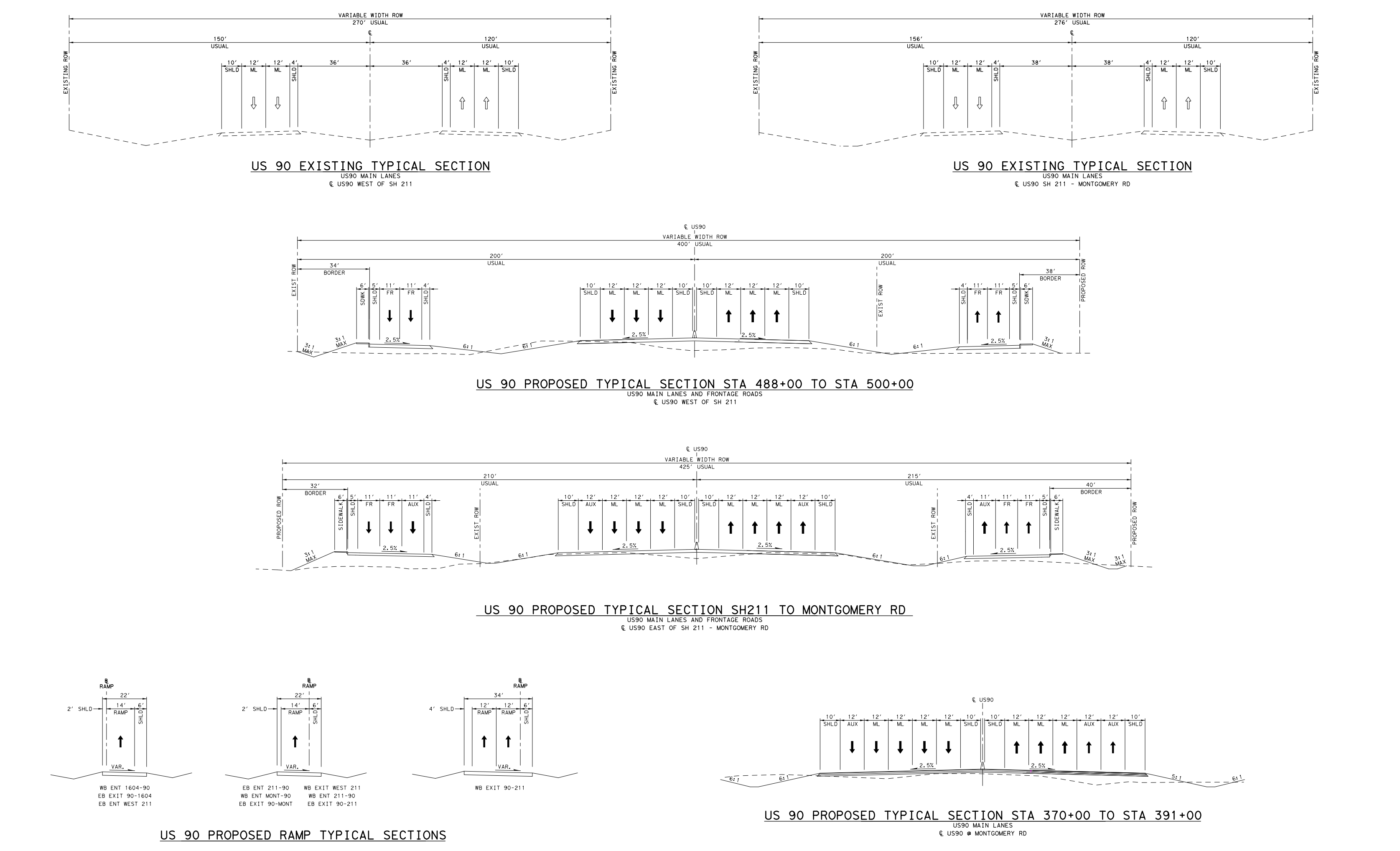
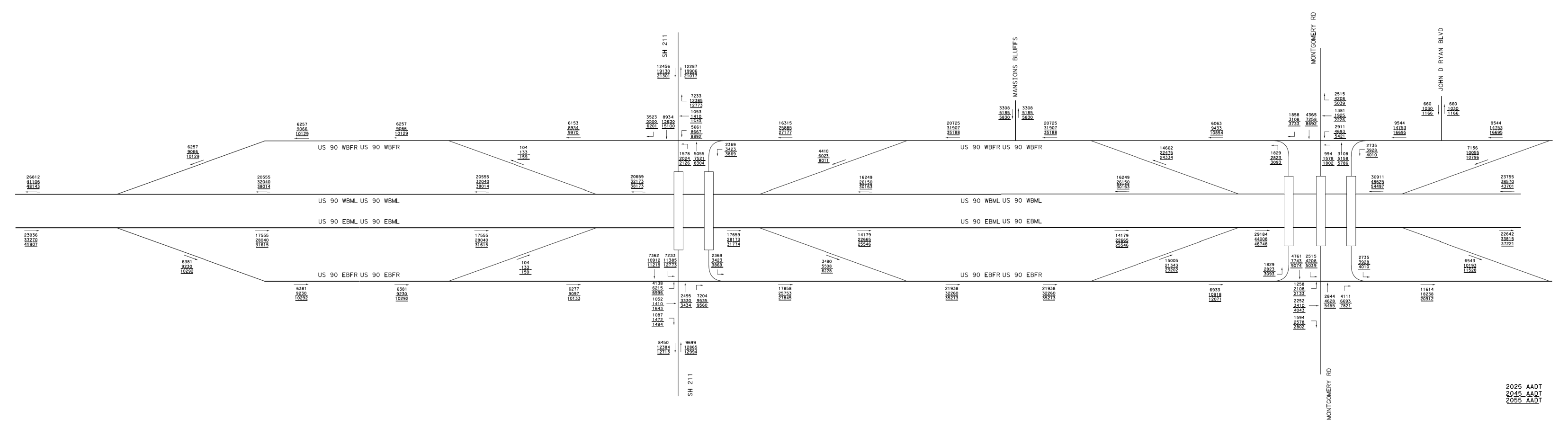
FILENAME: $FILE$
DRAWING DATE: $DATE$





CURVE DATA									
ALIGNMENT NO.	CURVE NO.	PC STATION	PI STATION	PT STATION	DELTA	D	L	T	R
US90A			172+28.98						
	US90A_R1	228+93.06	232+79.48	236+65.61	3° 51' 46.00" (RT)	0° 30' 0.00"	772.56'	386.42'	11459.16'
			315+85.94						
US90B			85+51.10						
	US90B_R1	92+32.02	97+03.44	101+73.18	8° 24' 14.00" (LT)	0° 53' 34.52"	941.17'	471.43'	6416.65'
	US90B_R2	160+77.09	165+51.65	170+24.06	9° 28' 11.09" (RT)	1° 0' 0.00"	946.97'	474.57'	5729.58'
	US90B_R3	288+91.20	290+43.63	291+95.98	3° 2' 52.10" (LT)	1° 0' 0.00"	304.78'	152.43'	5729.58'
	US90B_R4	299+94.12	309+53.33	319+08.08	9° 34' 11.15" (RT)	0° 30' 0.00"	1913.95'	959.21'	11459.16'
	US90B_R5	363+14.06	368+50.44	373+86.04	5° 21' 35.56" (RT)	0° 30' 0.00"	1071.98'	536.38'	11459.16'
	US90B_R6	389+99.06	394+20.56	398+41.80	3° 24' 1.36" (RT)	0° 24' 12.57"	842.74'	421.49'	14200.00'
	US90B_R7	398+41.80	402+63.30	406+84.54	3° 24' 1.36" (LT)	0° 24' 12.57"	842.74'	421.49'	14200.00'
	US90B_R8	417+47.51	421+09.26	424+70.85	2° 55' 7.07" (RT)	0° 24' 12.57"	723.34'	361.75'	14200.00'
	US90B_R9	436+37.24	439+52.59	442+67.84	2° 32' 40.00" (LT)	0° 24' 12.57"	630.61'	315.36'	14200.00'
	US90B_R10	442+67.84	445+83.20	448+98.45	2° 32' 40.00" (RT)	0° 24' 12.57"	630.61'	315.36'	14200.00'
	US90B_R11	484+75.34	490+75.16	496+65.27	17° 50' 51.12" (LT)	1° 29' 59.60"	1189.92'	599.82'	3820.00'
	US90B_R12	513+39.09	516+91.69	520+44.14	2° 50' 41.41" (LT)	0° 24' 12.57"	705.05'	352.60'	14200.00'
	US90B_R13	520+44.14	523+96.74	527+49.20	2° 50' 41.41" (RT)	0° 24' 12.57"	705.05'	352.60'	14200.00'
			631+26.19						

SUBMITTAL: DRAFT

SHEET: 2 OF 5

TEXAS DEPARTMENT OF TRANSPORTATION

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US 90 IMPROVEMENTS
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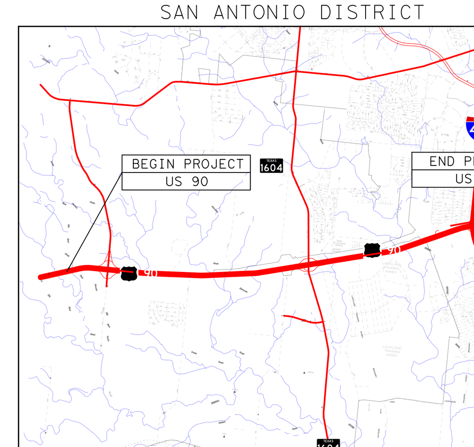

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APPROVED: ______________, 2020
DISTRICT ENGINEER

APPROVED: DESIGN DIVISION LETTER DATED

APPROVED: F.H.W.A. LETTER DATED

JMT TBPE REGISTRATION NO. F-16341

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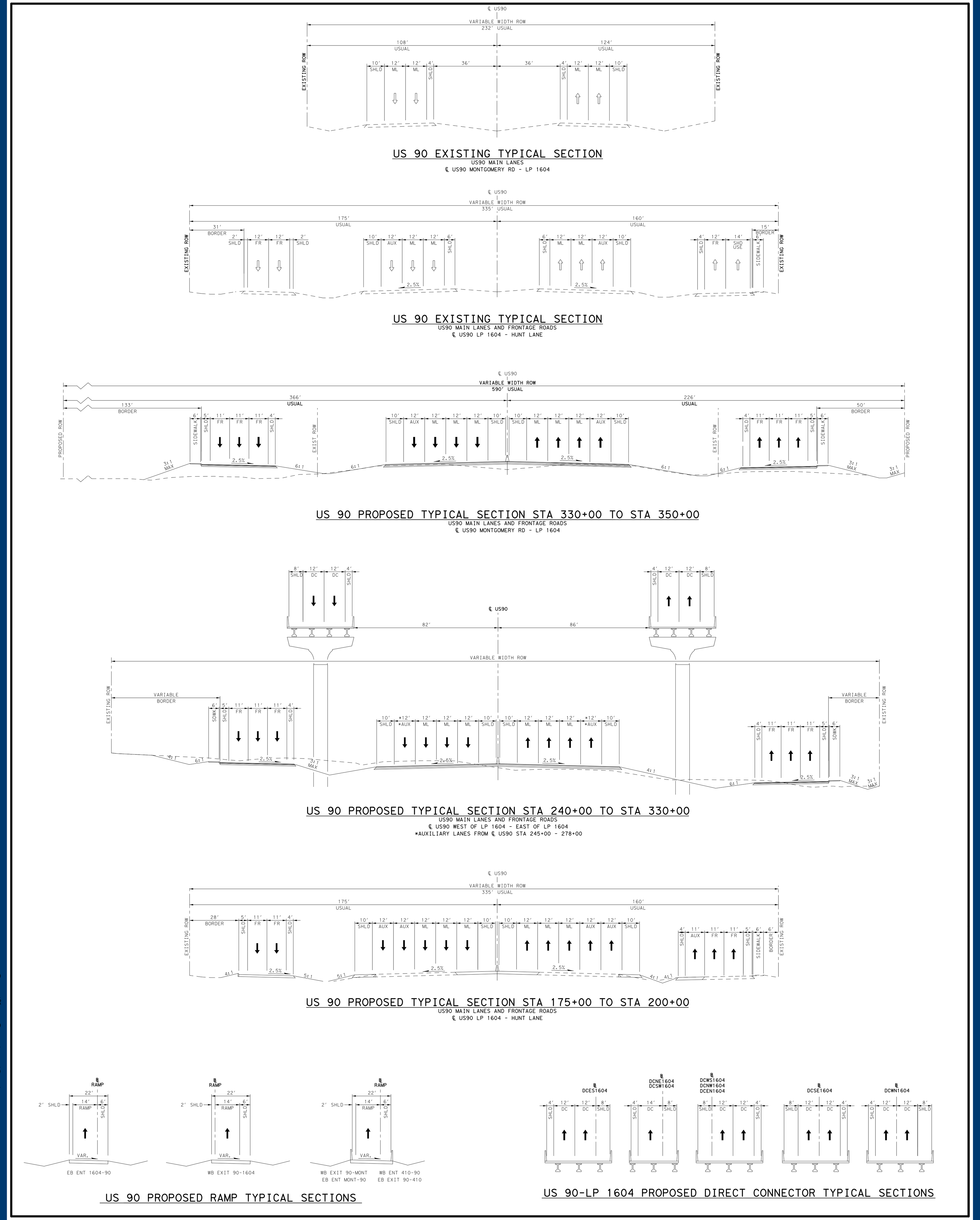
FILENAME:
DRAWING DATE: $DATE$



SUBMITTAL: DRAFT

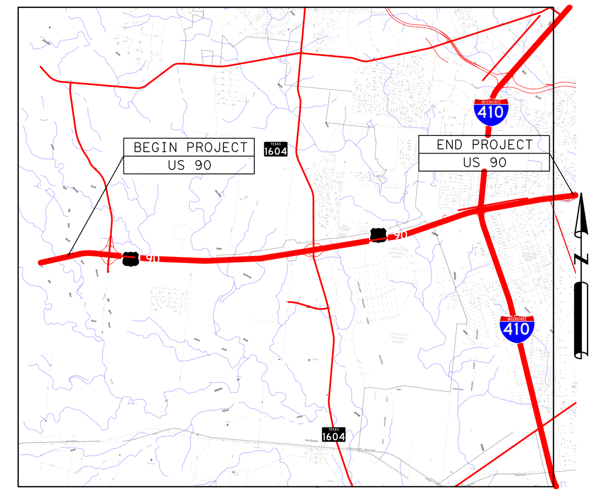
SHEET: 3 OF 5

TEXAS DEPARTMENT OF TRANSPORTATION

SCHEMATIC LAYOUT
US 90 IMPROVEMENTS
BEXAR COUNTY

LIMITS: FROM SH 211 TO MILITARY DRIVE
TxDOT C.S.J.: 0024-07-059 & 0024-08-138
LENGTH: 59720.00 FT = 11.311 MI

OFFICE OF THE DISTRICT ENGINEER
SAN ANTONIO DISTRICT



NOTE:

1. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT) EPOCH 2010.00, AS OBSERVED IN DECEMBER, 2015.

2. COORDINATES AND DISTANCES ARE US SURVEY FEET, DISPLAYED IN SURFACE VALUES DERIVED FROM THE FOLLOWING FORMULA: GRID X 1.00017 = SURFACE. SURFACE ADJUSTMENT FACTOR = 1.00017.

*GPS OBSERVATIONS ARE BASED ON THE FOLLOWING CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS): TXAN, TXPL.

3. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988. (GEOID 12A). DIGITAL LEVELS WERE APPLIED TO THE NETWORK HOLDING CONTROL POINT NO. 100'S ELEVATION OF 619.34'.

VICINITY MAP: NTS
EXCEPTIONS: NONE
EQUATIONS: US 90 AT IH-410; US 90A 85+51.10 = US 90B 172+28.98
RAILROAD CROSSINGS: NONE
SURVEY DATA: TEXAS CENTRAL ZONE #4204 (BEXAR COUNTY)

DESIGN SPEED:	MAINLANE	70 MPH (URBAN)(ROLLING)
	RAMP	45 MPH (URBAN)(ROLLING)
	FRONTAGE ROAD	50 MPH (URBAN)(ROLLING)
CURRENT ADT(2016):		44,700
PROJECTED ADT(2045):		113,800
FUNCTIONAL CLASSIFICATION:		URBAN PRINCIPAL ARTERIAL
PROPOSED DESIGN STANDARDS(STRUCTURES):		LRFD
PROPOSED DESIGN STANDARDS(ROADWAY):		TXDOT ROADWAY DESIGN MANUAL CHAPTER 3; 4R, SECTION 6; FREEWAYS
PROPOSED DESIGN STANDARDS(TRAFFIC):		TMUTCD & APPLICABLE TRAFFIC STANDARDS
PLOT SCALE:		1"=200' (HORIZ.) 1"=20' (VERT.)

SUBMITTED: ____________, 2020
PROJECT MANAGER

CORRECT: ____________, 2020
TRANSPORTATION PLANNING DIRECTOR

RECOMMENDED FOR APPROVAL: ____________, 2020
DIRECTOR OF TRANSPORTATION, PLANNING AND DEVELOPMENT

APPROVED: ____________, 2020
DISTRICT ENGINEER

APPROVED: DESIGN DIVISION LETTER DATED

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FILENAME:
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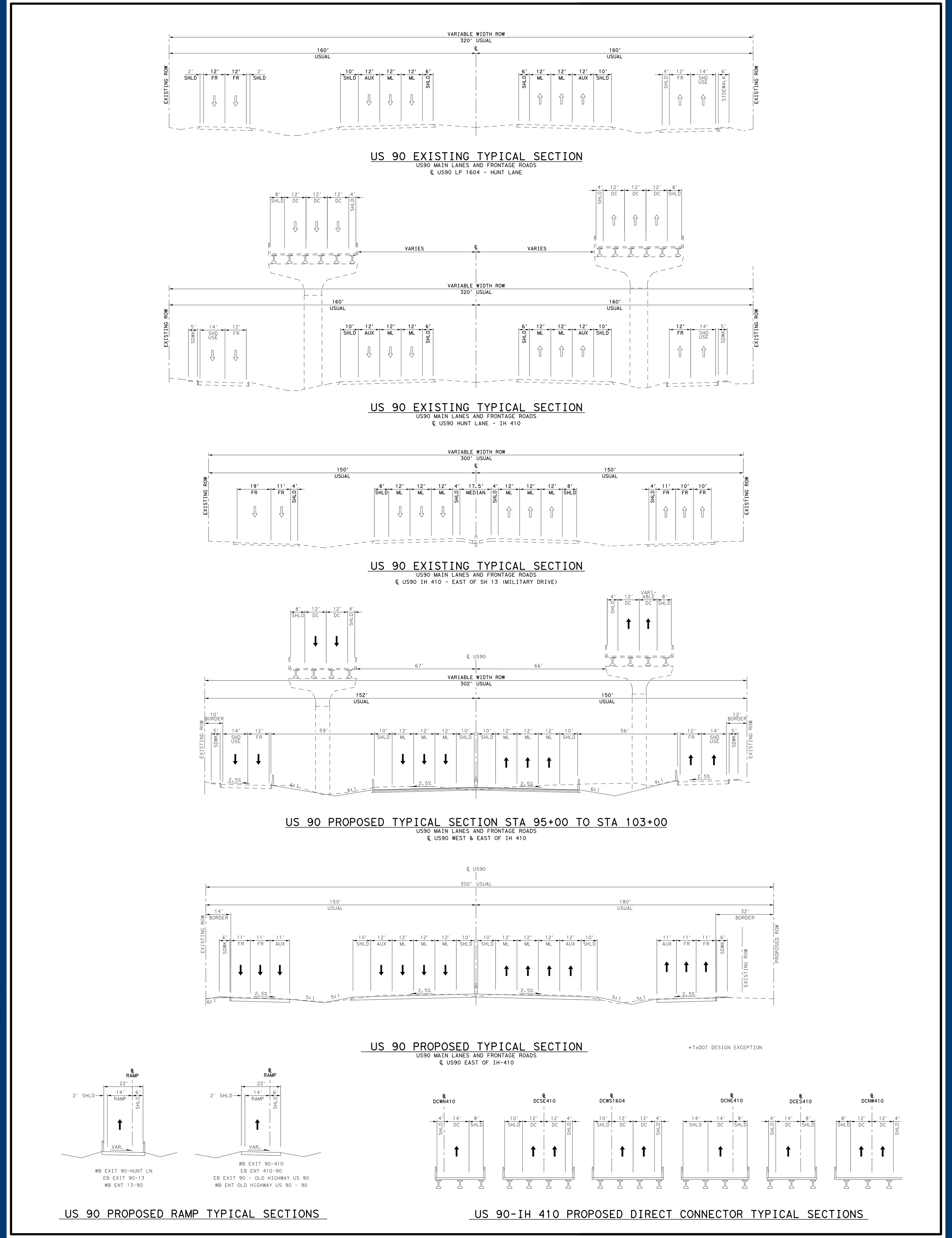


SUBMITTAL: DRAFT

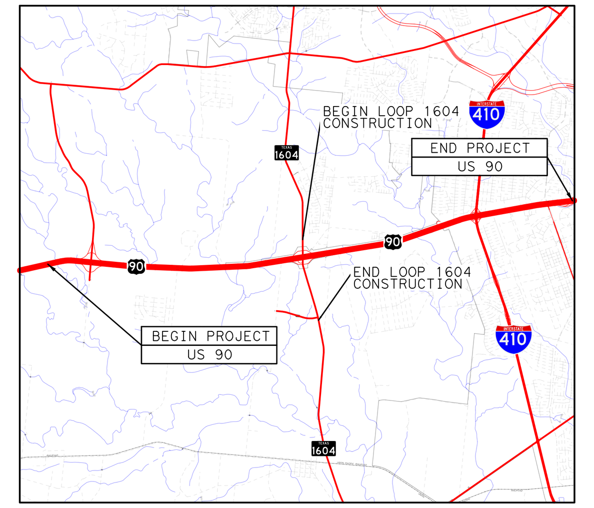
SHEET: 4 OF 5

TEXAS DEPARTMENT OF TRANSPORTATION

SCHEMATIC LAYOUT
US 90 IMPROVEMENTS
BEXAR COUNTY

LIMITS: FROM SH 211 TO LP 1604
TxDOT C.S.J.: 0024-07-059
LENGTH: 23900 FT = 4.53 MI

OFFICE OF THE DISTRICT ENGINEER
SAN ANTONIO DISTRICT



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VICINITY MAP: NTS
EXCEPTIONS: NONE
EQUATIONS: US 90 AT IH-410; US 90A 85+51.10 = US 90B 172+28.98
RAILROAD CROSSINGS: NONE
SURVEY DATA: TEXAS CENTRAL ZONE #4204 (BEXAR COUNTY)

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PLOT SCALE:		1"=200' (HORIZ.) 1"=20' (VERT.)

SUBMITTED: ______________, 2020

PROJECT MANAGER

RECOMMENDED FOR APPROVAL: ______________, 2020

DIRECTOR OF TRANSPORTATION, PLANNING AND DEVELOPMENT

CORRECT: ______________, 2020

TRANSPORTATION PLANNING DIRECTOR

APPROVED: ______________, 2020

DISTRICT ENGINEER

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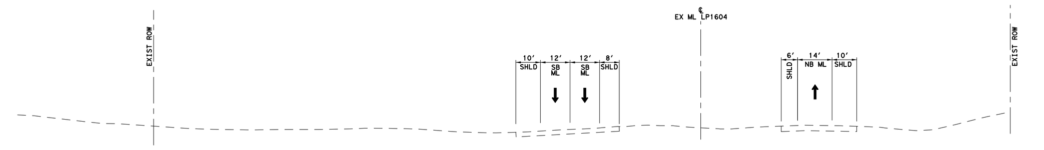
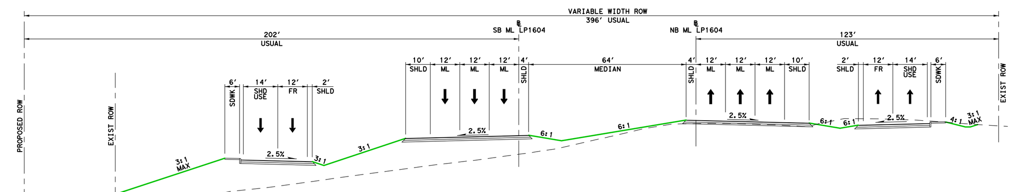
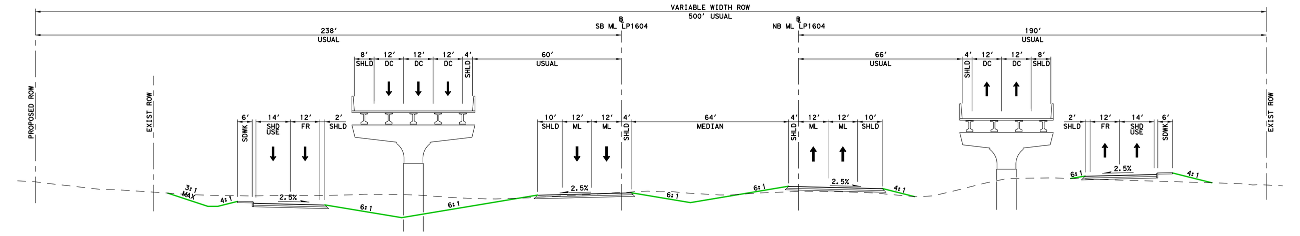


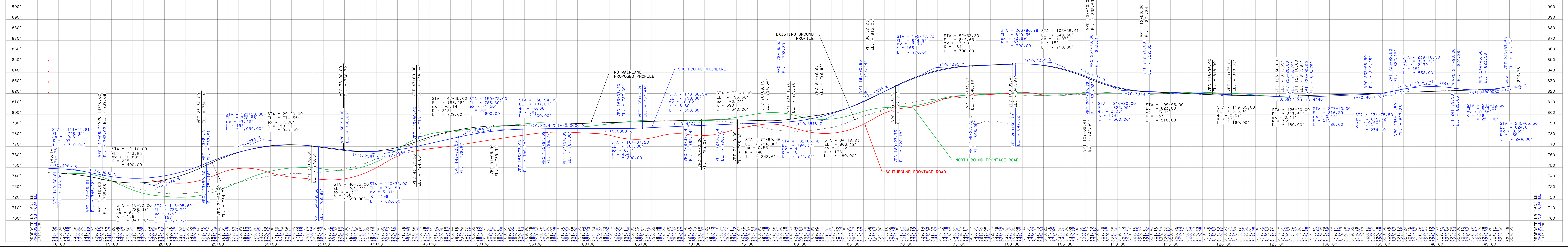
LP 1604 EXISTING TYPICAL SECTION



LP 1604 PROPOSED TYPICAL SECTION STA 142+00 TO STA 160+00



LP 1604 PROPOSED TYPICAL SECTION STA 171+00 TO STA 183+00



SUBMITTAL: DRAFT

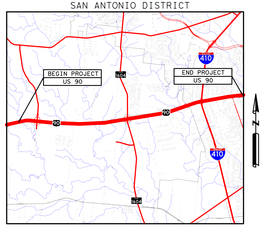
SHEET: 5 OF 5

TEXAS DEPARTMENT OF TRANSPORTATION

SCHEMATIC LAYOUT
US 90 IMPROVEMENTS
BEXAR COUNTY

LIMITS: FROM SH 211 TO I-410
TxDOT C.S.J.: 0024-07-059 & 0024-08-138
LENGTH: 59720.00 FT = 11.311 MI

OFFICE OF THE DISTRICT ENGINEER
SAN ANTONIO DISTRICT



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PLOT SCALE:		1"=200' (HORIZ.)

SUBMITTED:
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PROJECT MANAGER

CORRECT:
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TRANSPORTATION PLANNING DIRECTOR

RECOMMENDED FOR APPROVAL:
_____, 2020
DIRECTOR OF TRANSPORTATION, PLANNING AND DEVELOPMENT

APPROVED:
_____, 2020
DISTRICT ENGINEER

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APPROVED: F.H.W.A. LETTER DATED

JMT TBPE REGISTRATION NO. F-16341

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FILENAME = sheet1.dgn

COMPUTER DATE: 8/4/2020

100' 0' 200' 400'

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

LEGEND

- PROPOSED MAINLANE
- PROPOSED FRONTAGE ROAD
- PROPOSED BRIDGE
- EXISTING ROAD TO REMAIN
- PROPOSED RAMP
- TEMPORARY PAVEMENT
- MILL & OVERLAY
- SCHEMATIC (BY OTHERS)
- PROPOSED ISC
- MASTER DEVELOPMENT/PLAT
- PAVEMENT REMOVAL
- FLOODPLAIN
- WETLAND
- PROPOSED LANE ASSIGNMENT/DIRECTION
- EXISTING LANE ASSIGNMENT/DIRECTION
- EXISTING CHANNEL
- PROPOSED CHANNEL
- EXISTING ROW
- PROPOSED ROW
- RETAINING WALL
- SOUND WALL
- PROPOSED SIGN STRUCTURE
- EXISTING SIGN STRUCTURE
- SIGNALIZED INTERSECTION
- SHEET FLOW DIRECTION
- PROPOSED ARROWS
- EXISTING ARROWS

LEGEND OF UTILITY TYPES

ABANDONED UTILITY
PROPOSED UTILITY
UNKNOWN

COMMUNICATIONS
AT&T (FIBER OPTIC)
AT&T (FIBER OPTIC)
CENTURYLINK (FIBER OPTIC)
CONTERRA (FIBER OPTIC)
LEVEL3 (FIBER OPTIC)
TWC (TELEVISION)
AT&T (TELEPHONE)
AT&T (FIBER OPTIC)
CONTERRA (FIBER OPTIC)
CONTERRA (FIBER OPTIC)
LEVEL3 (FIBER OPTIC)
TWC (TELEVISION)

WATER
SAWS
SAWS (RECLAIMED)
SAWS
SAWS (RECLAIMED)

GAS / PETROLEUM
CPS
GREY FOREST
WEST TEXAS GAS
ENTERPRISE
CPS
GREY FOREST
WEST TEXAS GAS
ENTERPRISE

SEWERS / DRAINS
SAWS
SAWS

ELECTRIC / POWER
CPS
CPS

OVERHEAD UTILITIES
CPS ELECTRIC
AT&T (TELEPHONE)
AT&T (TELEPHONE)
AT&T (FIBER)
TWC (FIBER)
TWC (FIBER)
LEVEL3 (FIBER)
TXDOT (TRAFFIC SIGNAL)
TXDOT (TRAFFIC SIGNAL)
GUY WIRE
CPS ELECTRIC TRANSMISSION
CPS (TEST)

LEGEND OF UTILITY SYMBOLS

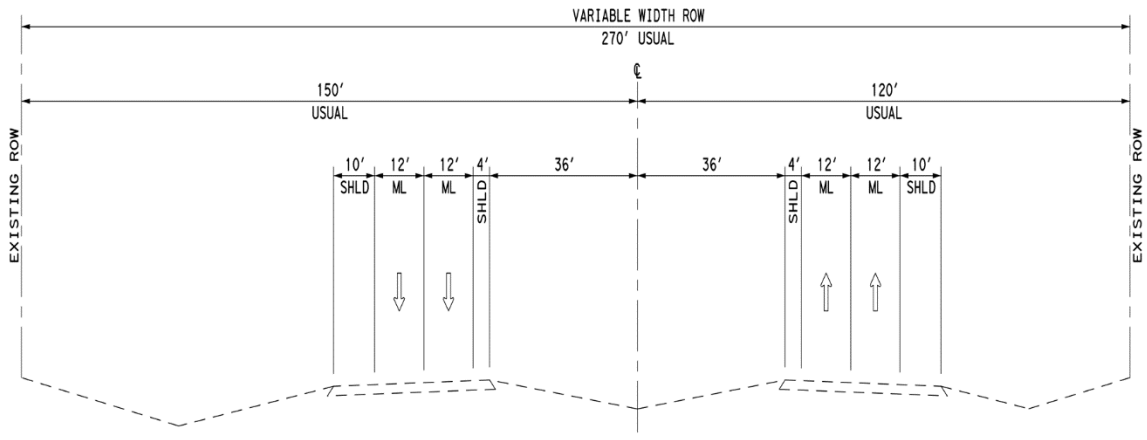
END CAP
TEST HOLE
AT&T COMMUNICATION
CATV CABINET
CATV HANDHOLE
CATV PEDESTAL
FIBER HANDHOLE
TELEPHONE CABINET
TELEPHONE CONCRETE (VAULT)
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE W/RISER
ELECTRIC WINDHOLE
ELECTRIC PEDESTAL/BOX (CABINET)
ELECTRIC MANHOLE
ELECTRIC POLE (WOOD)
ELECTRIC POLE W/RISER
SIGNAL POLE
SIGNAL POLE
SIGNAL HANDHOLE/BOX
SIGNAL MANHOLE
GAS METER
GAS TEST STATION
GAS VALVE
GAS VENT PIPE (GAS RISER)
WASTE WATER CLEANOUT
WASTE WATER MANHOLES
FIRE HYDRANT
WATER MANHOLE
WATER METER
WATER VALVE
WATER VAULT

THE RIOS GROUP
CLEARWATER CREEK ENGINEERING
CREAT CORPORATION
7500 Bonhomme Avenue
Suite 1000
St. Louis, Missouri

REV.	DATE	DESCRIPTION

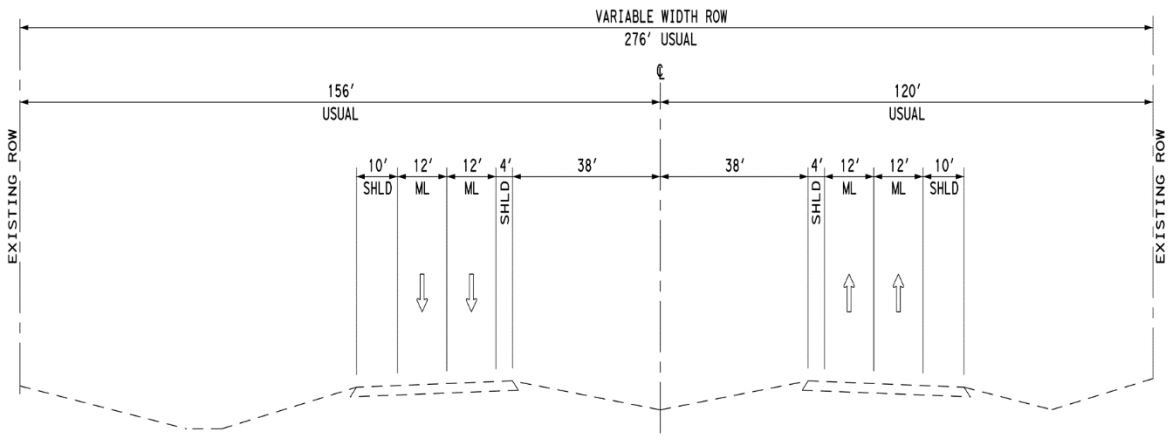
Appendix D

Typical Sections



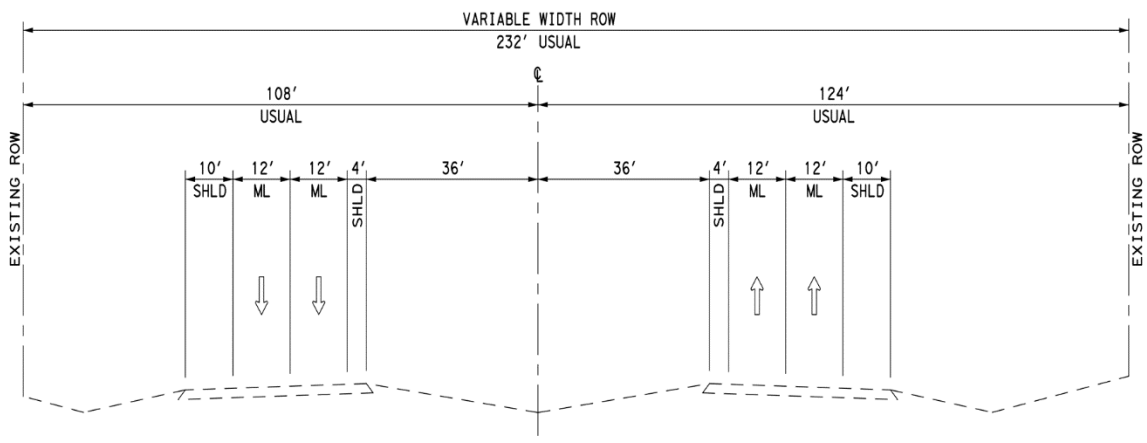
US 90 EXISTING TYPICAL SECTION

US90 MAIN LANES
℄ US90 WEST OF SH 211



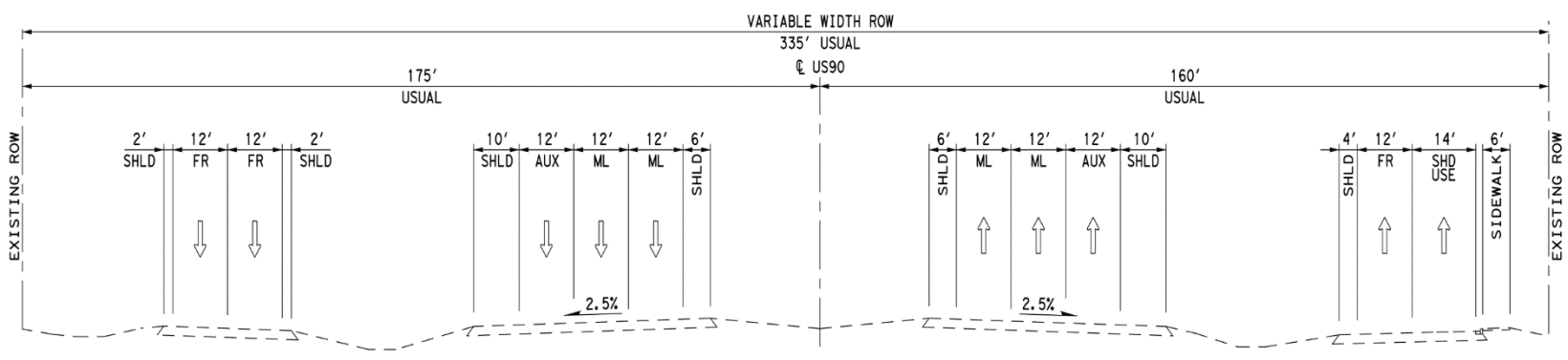
US 90 EXISTING TYPICAL SECTION

US90 MAIN LANES
℄ US90 SH 211 - MONTGOMERY RD



US 90 EXISTING TYPICAL SECTION

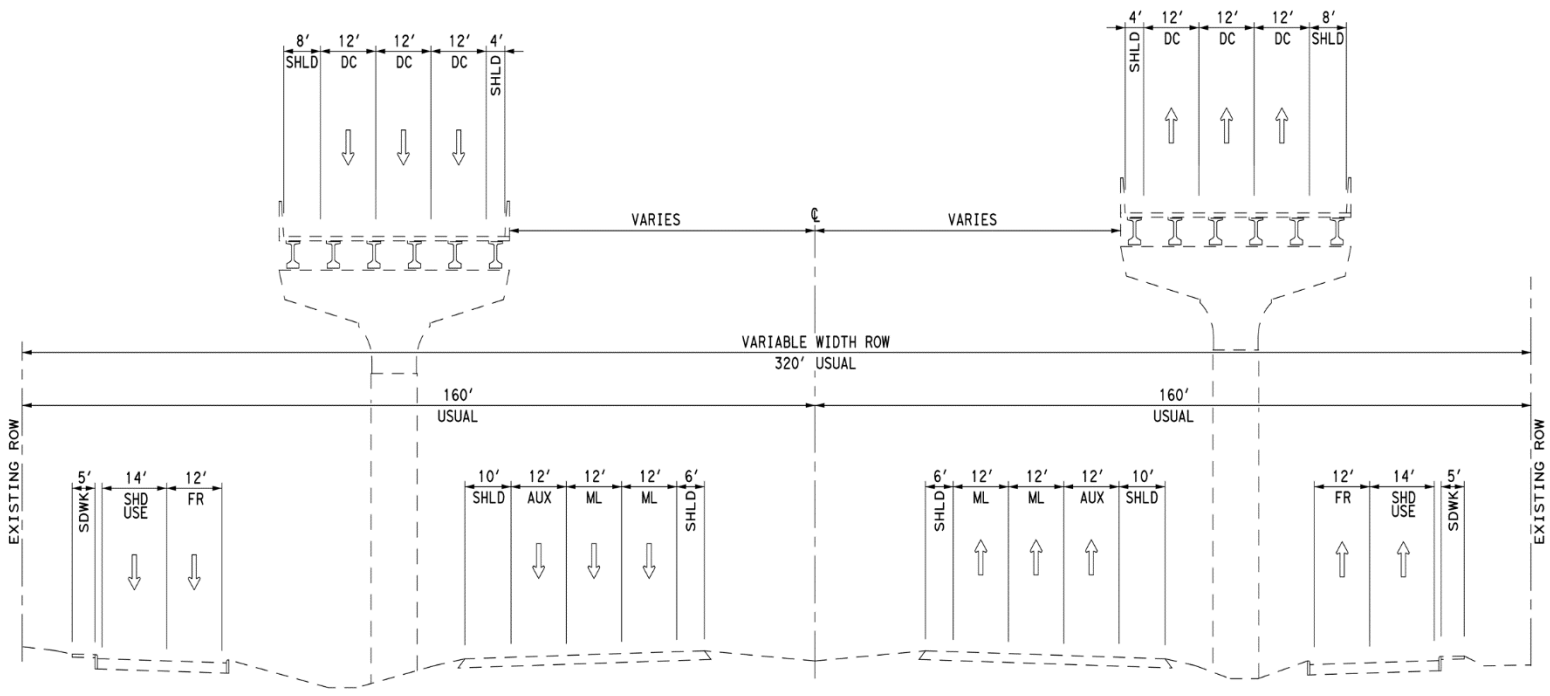
US90 MAIN LANES
℄ US90 MONTGOMERY RD - LP 1604



US 90 EXISTING TYPICAL SECTION

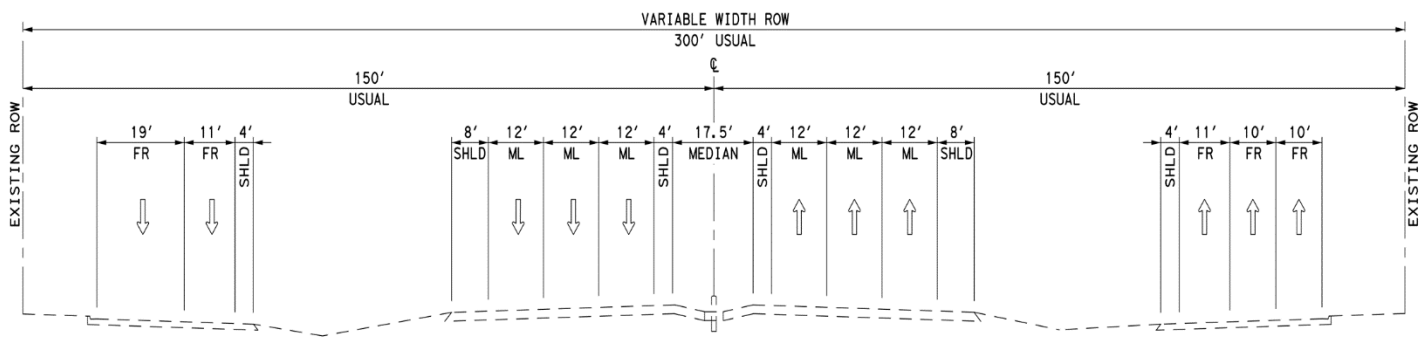
US90 MAIN LANES AND FRONTAGE ROADS
℄ US90 LP 1604 - HUNT LANE

Figure 3.1
Existing Typical Sections
US 90 Reconstruction and Widening
From SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060, and 0024-08-140



US 90 EXISTING TYPICAL SECTION

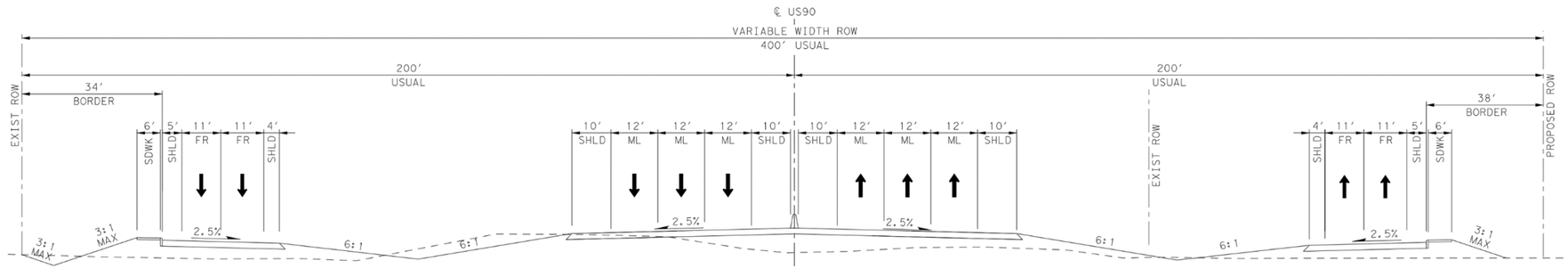
US90 MAIN LANES AND FRONTAGE ROADS
℄ US90 HUNT LANE - IH 410



US 90 EXISTING TYPICAL SECTION

US90 MAIN LANES AND FRONTAGE ROADS
℄ US90 IH 410 - EAST OF SH 13 (MILITARY DRIVE)

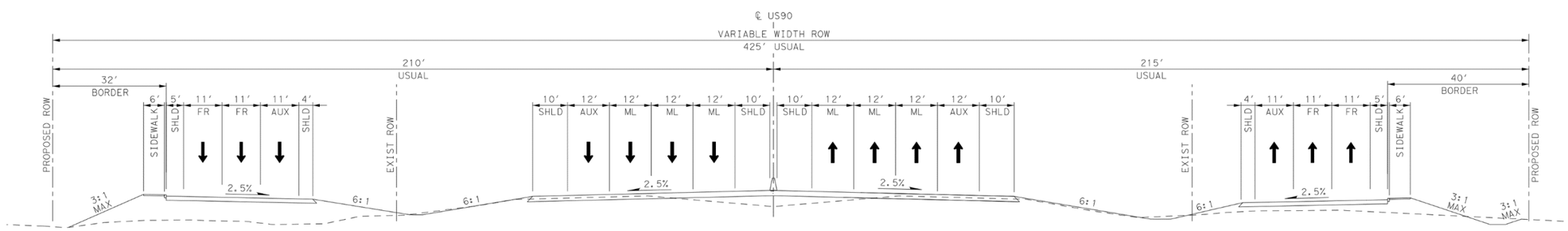
Figure 3.2
Existing Typical Sections
US 90 Reconstruction and Widening
From SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060, and 0024-08-140



US 90 PROPOSED TYPICAL SECTION

US90 MAIN LANES AND FRONTAGE ROADS

US 90 WEST OF SH 211

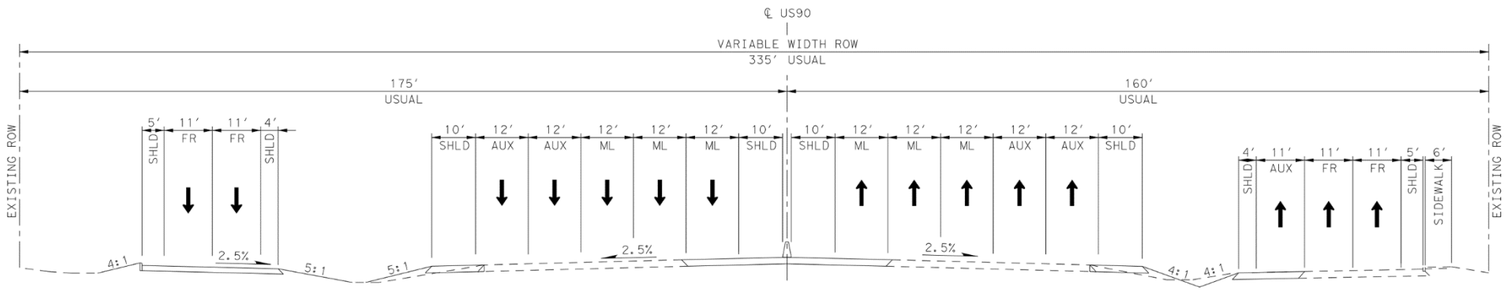


US 90 PROPOSED TYPICAL SECTION

US90 MAIN LANES AND FRONTAGE ROADS

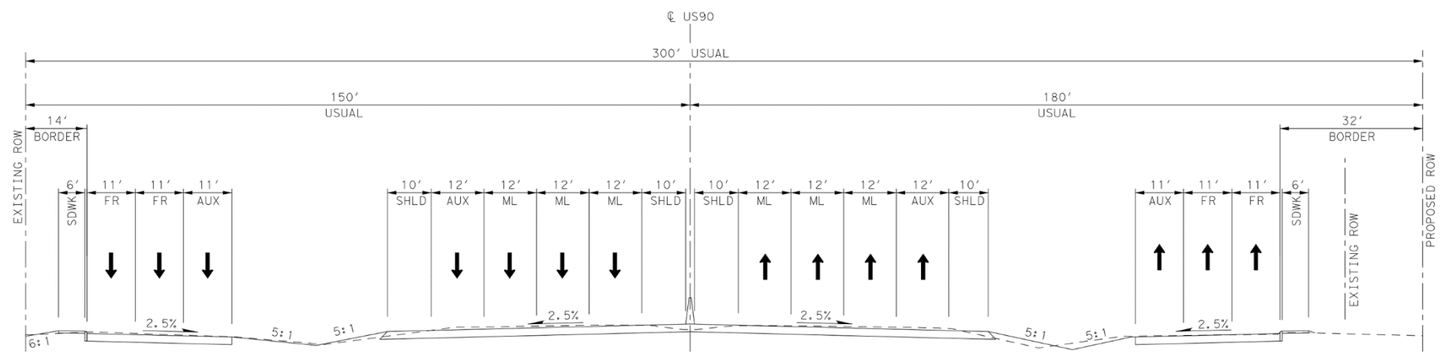
US 90 SH211 TO LP 1604

Figure 3.3
Proposed Typical Sections
US 90 Reconstruction and Widening
From SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060, and 0024-08-140



US 90 PROPOSED TYPICAL SECTION

US90 MAIN LANES AND FRONTAGE ROADS
℄ US90 LP 1604 TO 410



US 90 PROPOSED TYPICAL SECTION

US90 MAIN LANES AND FRONTAGE ROADS
℄ US90 EAST OF 410

Figure 3.4
Proposed Typical Sections
US 90 Reconstruction and Widening
From SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060, and 0024-08-140

Appendix E

Plan and Program Excerpts

METROPOLITAN TRANSPORTATION PLAN "Mobility 2045"

ALAMO AREA METROPOLITAN PLANNING ORGANIZATION

FY 2022

TxDOT District	County	CSJ	Hwy	Phase	City	Project Sponsor	MPO Proj ID No.	Year of Expenditure Cost
15 - San Antonio	Bexar	0465-02-027	FM 1518	R	Other	TxDOT	5309.2	$8,194,000

Limits From: FM 78
Limits To: IH 10
Description: Expand from 2 to 4 lanes with raised median or center turn lane, bike lanes and sidewalks
Remarks: None

Last Revision Date: 7/2020 TDM Network Years: N/A

Proj Hist: 5/20 - add R phase to TIP: 4/18 - move from FY 2021 to FY 2023 and combine with STP-MM selected project; 4/16 - funded through STP-MM project selection process

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$2,194,000
ROW Purchase:	$8,194,000
Construction Cost:	$44,780,000
Construction Engineering:	$2,687,000
Contingencies:	$3,135,000
Indirect Costs:	$2,239,000
Other Field:	$1,791,000
Total Project Cost:	$65,020,000

Cost of Approved Phases: $8,194,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: Added Capacity: Non Toll | Status: Non-RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
SWROW	$6,555,200	$1,638,800	$0	$0	$8,194,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$6,555,200	$1,638,800	$0	$0	$8,194,000

15 - San Antonio	Bexar	2230-01-021	FM 1560	R	Other	TxDOT	5391.2	$11,800,000

Limits From: Galm/Shaenfield
Limits To: SH 16
Description: Expand from 2 lanes to 4 lanes with turn lanes, bike accommodation and sidewalks
Remarks: None

Last Revision Date: 7/2020 TDM Network Years: N/A

Proj Hist: 5/20 - add R phase to TIP; 4/18 - funded through the 19-22 STP-MM Call for Projects; 4/17 - add project to MTP with Prop 1/Prop 7; portion of project may have already been in the MTP

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$1,900,000
ROW Purchase:	$11,800,000
Construction Cost:	$19,750,000
Construction Engineering:	$900,000
Contingencies:	$1,500,000
Indirect Costs:	$400,000
Other Field:	$900,000
Total Project Cost:	$37,150,000

Cost of Approved Phases: $11,800,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: Added Capacity: Non Toll | Status: Non-RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
SWROW	$9,440,000	$2,360,000	$0	$0	$11,800,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$9,440,000	$2,360,000	$0	$0	$11,800,000

15 - San Antonio	Bexar	0024-07-059	US 90	E	Other	TxDOT	5380.2	$12,408,000

Limits From: SH 211
Limits To: 0.8 Miles W of IH 410
Description: Expand from 4 lane divided to 6 lane expressway and 4 FR lanes (LP 1604 to SH 211)
Remarks: None

Last Revision Date: 7/2020 TDM Network Years: N/A

Proj Hist: 5/20 - add E phase to TIP; 9/19 - ADM clarify description; 1/19 - rev descr to incl FR lanes and update cost; 4/18 - correct funding distribution; 4/17 - add project

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$5,390,000
ROW Purchase:	$7,500,000
Construction Cost:	$110,000,000
Construction Engineering:	$7,018,000
Contingencies:	$5,500,000
Indirect Costs:	$6,314,000
Other Field:	$6,358,000
Total Project Cost:	$148,080,000

Cost of Approved Phases: $12,408,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: Added Capacity: Non-Toll | Status: RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
SWPE	$0	$12,408,000	$0	$0	$12,408,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$0	$12,408,000	$0	$0	$12,408,000

METROPOLITAN TRANSPORTATION PLAN "Mobility 2045"

ALAMO AREA METROPOLITAN PLANNING ORGANIZATION

FY 2022

TxDOT District	County	CSJ	Hwy	Phase	City	Project Sponsor	MPO Proj ID No.	Year of Expenditure Cost
15 - San Antonio	Bexar	0024-08-138	US 90	E	San Antonio	TxDOT	5381.2	$890,000

Limits From: 0.8 Miles W of IH 410
Limits To: IH 410
Description: Expand from 4 lane divided to 6 lane expressway and from 4 to 4 FR lanes
Remarks: None

Last Revision Date: 7/2020 TDM Network Years: N/A

Proj Hist: 5/20 - add E phase to TIP; 1/19 - rev descr to incl FR lanes; 4/18 - correct funding distribution; 4/17 - add project

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$490,000
ROW Purchase:	$1,000,000
Construction Cost:	$10,000,000
Construction Engineering:	$400,000
Contingencies:	$700,000
Indirect Costs:	$200,000
Other Field:	$400,000
Total Project Cost:	$13,190,000

Cost of Approved Phases: $890,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: Added Capacity: Non-Toll | Status: RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
SWPE	$0	$890,000	$0	$0	$890,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$0	$890,000	$0	$0	$890,000

15 - San Antonio	Bexar	0017-10-168	IH 35 North	C,E	San Antonio	TxDOT	61.2	$638,700,000

Limits From: IH 410 S
Limits To: IH 410 N
Description: Expand from 8 ln to 14 ln expy - add 6 new express lanes incl 2 HOV-special use lns, & from 4/6 to 4/6 FR lanes & DCs at IH 410 S & IH 410 N
Remarks: 1 lane DC: NB 35 to WB 410N; 2 lane DC: NB 410S to NB 35; SB 35 to SB 410S; EB 410N to SB 35

Last Revision Date: 7/2020 TDM Network Years: 2035,2045

Proj Hist: 5/20 - move from 21 to 22; 10/19 - move 25 to 21 & rev cost; 9/19 - ADM clarify descr; 1/19 - rev descr to incl FR lanes; 10/18 - rev descr & cost; 4/18 - move from 20 to 25 (out of TIP); 10/13 - revise description; 4/13 -

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$50,000,000
ROW Purchase:	$0
Construction Cost:	$538,700,000
Construction Engineering:	$50,000,000
Contingencies:	$0
Indirect Costs:	$32,000,000
Other Field:	$0
Total Project Cost:	$670,700,000

Cost of Approved Phases: $638,700,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score 58

Type of Work: Added Capacity: Non Toll | Status: RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
12 - Strat Priority	$295,200,000	$73,800,000	$0	$0	$369,000,000
12 - CL	$106,400,000	$26,600,000	$0	$0	$133,000,000
6 - Structures	$33,030,000	$3,670,000	$0	$0	$36,700,000
3 - DB	$80,000,000	$20,000,000	$0	$0	$100,000,000
Totals	$514,630,000	$124,070,000	$0	$0	$638,700,000

15 - San Antonio	Guadalupe	0025-03-097	IH 10	C	Other	TxDOT	5395.0	$150,000,000

Limits From: Bexar/Guadalupe County Line
Limits To: FM 465
Description: Expand from 4 lane to 6 lane expressway and from 4 to 4 FR lanes
Remarks: Move from MTP to TIP; no impact to conformity; see companion project #4008

Last Revision Date: 7/2020 TDM Network Years: 2025,2035,2045

Proj Hist: 5/20 - move 21 to 22; 10/19 - move 28 to 21, rev funding & limits; 1/19 - rev descr to incl FR lanes & update cost; 10/18 - move 29 to 28; 6/18 - correct fund distrib; 4/17 - add proj to MTP with P1/P7; portion of project may

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$15,000,000
ROW Purchase:	$0
Construction Cost:	$150,000,000
Construction Engineering:	$6,700,000
Contingencies:	$11,600,000
Indirect Costs:	$3,300,000
Other Field:	$6,700,000
Total Project Cost:	$193,300,000

Cost of Approved Phases: $150,000,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score 23

Type of Work: Added Capacity: Non Toll | Status: RSR | Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
12 - Strat Priority	$120,000,000	$30,000,000	$0	$0	$150,000,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$120,000,000	$30,000,000	$0	$0	$150,000,000

METROPOLITAN TRANSPORTATION PLAN "Mobility 2045"

ALAMO AREA METROPOLITAN PLANNING ORGANIZATION

FY 2031

TxDOT District	County	CSJ	Hwy	Phase	City	Project Sponsor	MPO Proj ID No.	Year of Expenditure Cost
15 - San Antonio	Bexar	0024-07-064	US 90	C	San Antonio	TxDOT	5561.0	$310,000,000

Limits From: at Lp 1604 W
Limits To: -
Description: Construct direct connectors: 1 lane DC - SB 1604 to WB 90; NB 1604 to EB 90; NB 1604 to WB 90; EB 90 to NB 1604 & EB 90 to SB 1604; 2 lane DC: WB 90 to NB 1604 & WB 90 to SB 1604
Remarks: None

Last Revision Date: 7/2020 TDM Network Years: 2035,2045
Proj Hist: 5/20 - add project - spin off of 0024-07-059

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$31,000,000
ROW Purchase:	$0
Construction Cost:	$310,000,000
Construction Engineering:	$13,800,000
Contingencies:	$24,000,000
Indirect Costs:	$6,900,000
Other Field:	$13,800,000
Total Project Cost:	$399,500,000

Cost of Approved Phases: $310,000,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: TSMO: Interchange
Status: RSR Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
Prop 1/Prop 7	$248,000,000	$62,000,000	$0	$0	$310,000,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$248,000,000	$62,000,000	$0	$0	$310,000,000

TxDOT District	County	CSJ	Hwy	Phase	City	Project Sponsor	MPO Proj ID No.	Year of Expenditure Cost
15 - San Antonio	Bexar	0024-08-143	US 90	C	San Antonio	TxDOT	5562.0	$40,000,000

Limits From: IH 410
Limits To: Lp 13
Description: Ramp revisions and rehabilitate mainlanes
Remarks: None

Last Revision Date: 7/2020 TDM Network Years: N/A
Proj Hist: 5/20 - add project

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$4,000,000
ROW Purchase:	$0
Construction Cost:	$40,000,000
Construction Engineering:	$1,800,000
Contingencies:	$3,000,000
Indirect Costs:	$1,000,000
Other Field:	$1,800,000
Total Project Cost:	$51,600,000

Cost of Approved Phases: $40,000,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: TSMO: Operational
Status: RSR Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
Prop 1/Prop 7	$32,000,000	$8,000,000	$0	$0	$40,000,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$32,000,000	$8,000,000	$0	$0	$40,000,000

TxDOT District	County	CSJ	Hwy	Phase	City	Project Sponsor	MPO Proj ID No.	Year of Expenditure Cost
15 - San Antonio	Comal	0000-00-000	Transit Station	C	New Braunfels	VIA	9129.0	$5,000,000

Limits From: -
Limits To: -
Description: Construct transit station in New Braunfels, Texas
Remarks: None

Last Revision Date: 7/2020 TDM Network Years: N/A
Proj Hist: added w/ 12/8/14 adoption of the MTP

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$245,000
ROW Purchase:	$0
Construction Cost:	$5,000,000
Construction Engineering:	$200,000
Contingencies:	$350,000
Indirect Costs:	$100,000
Other Field:	$200,000
Total Project Cost:	$6,095,000

Cost of Approved Phases: $5,000,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

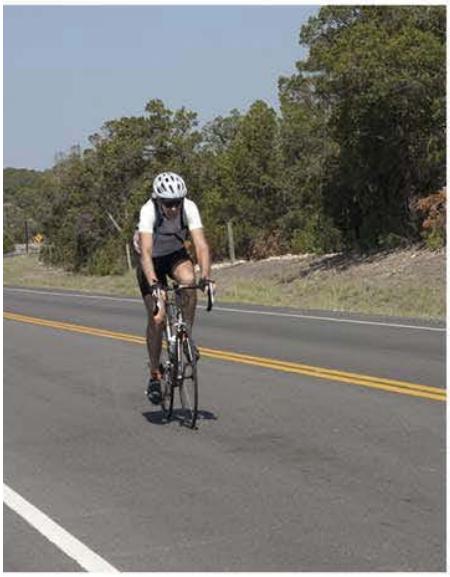
Type of Work: Transit
Status: Exempt Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
7 - STBG	$4,000,000	$0	$1,000,000	$0	$5,000,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$4,000,000	$0	$1,000,000	$0	$5,000,000

FY 2019 – 2022
Transportation Improvement Program

Alamo Area
Metropolitan Planning Organization
"We Plan to Keep You Moving!"



Transportation Improvement Program
Appendix D: Environmental Clearance Project Listing

Hwy	CSJ	MPO Proj ID No.	Project Sponsor	Year
SL 1604	2255-02-028	5388.0	TxDOT	2026
Limits From:	US 181			
Limits To:	0.38 Mi North of FM 1303			
Description:	Expand from 2 lanes to 4 lanes divided			
Remarks:	None			
Travel Demand Model Network Years:		2035,2045		
SL 1604	2452-01-070	5557.0	TxDOT	2031
Limits From:	0.7 Mi North of FM 2536			
Limits To:	Macdona-Lacoste Rd			
Description:	Expand from 2 lanes to 4 lanes divided			
Remarks:	None			
Travel Demand Model Network Years:		2035,2045		
SL 1604	2452-03-087	3530.0	TxDOT	2025
Limits From:	Redland Road			
Limits To:	IH 35 North			
Description:	Expand from 4 to 10 lane expressway - including 2 HOV - special use lanes & from 4 to 4 FR lanes			
Remarks:	None			
Travel Demand Model Network Years:		2035,2045		
SL 1604	2452-03-111	9107.0	TxDOT	2025
Limits From:	FM 78			
Limits To:	IH 10 East			
Description:	Expand from 4 lane divided to 4 lane expressway and from 0 to 4 FR lanes			
Remarks:	None			
Travel Demand Model Network Years:		2035,2045		
SL 1604	2452-04-015	5389.0	TxDOT	2026
Limits From:	FM 1346 - Houston Street			
Limits To:	US 87			
Description:	Expand from 2 lanes to 4 lanes divided			
Remarks:	None			
Travel Demand Model Network Years:		2035,2045		
SL 1604	2452-04-017	5554.0	TxDOT	2025
Limits From:	Martinez Creek			
Limits To:	FM 1346 - Houston Street			
Description:	Expand from 2 lanes to 4 lanes divided			
Remarks:	None			
Travel Demand Model Network Years:		2025,2035,2045 **		
US 90	0024-07-064	5561.0	TxDOT	2030
Limits From:	at Lp 1604 W			
Limits To:	-			
Description:	Construct direct connectors: 1 lane DC - SB 1604 to WB 90; NB 1604 to EB 90; NB 1604 to WB 90; EB 90 to NB 1604 & EB 90 to SB 1604; 2 l			
Remarks:	None			
Travel Demand Model Network Years:		2035,2045		
US 90	0024-08-143	5562.0	TxDOT	2030
Limits From:	IH 410			
Limits To:	Lp 13			
Description:	Ramp revisions and rehabilitate mainlanes			
Remarks:	None			
Travel Demand Model Network Years:		N/A		

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM
TIP PROJECTS FY 2019-2022
ALAMO AREA METROPOLITAN PLANNING ORGANIZATION
FY 2022

TxDOT District	County	CSJ	Hwy	Phase	City	Project Sponsor	MPO Proj ID No.	Year of Expenditure Cost
15 - San Antonio	Bexar	0024-08-138	US 90	E	San Antonio	TxDOT	5381.2	$890,000

Limits From: 0.8 Miles W of IH 410
Limits To: IH 410
Description: Expand from 4 lane divided to 6 lane expressway and from 4 to 4 FR lanes
Remarks: None
Last Revision Date: 7/2020
Proj Hist: 5/20 - add E phase to TIP; 1/19 - rev descr to incl FR lanes; 4/18 - correct funding distribution; 4/17 - add project

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$490,000
ROW Purchase:	$1,000,000
Construction Cost:	$10,000,000
Construction Engineering	$400,000
Contingencies:	$700,000
Indirect Costs:	$200,000
Other Field	$400,000
Total Project Cost:	$13,190,000

Cost of Approved Phases: $890,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: Added Capacity: Non-Toll | Status: RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
SWPE	$0	$890,000	$0	$0	$890,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$0	$890,000	$0	$0	$890,000

15 - San Antonio	Bexar	0465-02-027	FM 1518	R	Other	TxDOT	5309.2	$8,194,000

Limits From: FM 78
Limits To: IH 10
Description: Expand from 2 to 4 lanes with raised median or center turn lane, bike lanes and sidewalks
Remarks: None
Last Revision Date: 7/2020
Proj Hist: 5/20 - add R phase to TIP: 4/18 - move from FY 2021 to FY 2023 and combine with STP-MM selected project; 4/16 - funded through STP-MM project selection process

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$2,194,000
ROW Purchase:	$8,194,000
Construction Cost:	$44,780,000
Construction Engineering	$2,687,000
Contingencies:	$3,135,000
Indirect Costs:	$2,239,000
Other Field	$1,791,000
Total Project Cost:	$65,020,000

Cost of Approved Phases: $8,194,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: Added Capacity: Non Toll | Status: Non-RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
SWROW	$6,555,200	$1,638,800	$0	$0	$8,194,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$6,555,200	$1,638,800	$0	$0	$8,194,000

15 - San Antonio	Bexar	2230-01-021	FM 1560	R	Other	TxDOT	5391.2	$11,800,000

Limits From: Galm/Shaenfield
Limits To: SH 16
Description: Expand from 2 lanes to 4 lanes with turn lanes, bike accommodation and sidewalks
Remarks: None
Last Revision Date: 7/2020
Proj Hist: 5/20 - add R phase to TIP; 4/18 - funded through the 19-22 STP-MM Call for Projects; 4/17 - add project to MTP with Prop 1/Prop 7; portion of project may have already been in the MTP

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$1,900,000
ROW Purchase:	$11,800,000
Construction Cost:	$19,750,000
Construction Engineering	$900,000
Contingencies:	$1,500,000
Indirect Costs:	$400,000
Other Field	$900,000
Total Project Cost:	$37,150,000

Cost of Approved Phases: $11,800,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: Added Capacity: Non Toll | Status: Non-RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
SWROW	$9,440,000	$2,360,000	$0	$0	$11,800,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$9,440,000	$2,360,000	$0	$0	$11,800,000

STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM
TIP PROJECTS FY 2019-2022
ALAMO AREA METROPOLITAN PLANNING ORGANIZATION
FY 2022

TxDOT District	County	CSJ	Hwy	Phase	City	Project Sponsor	MPO Proj ID No.	Year of Expenditure Cost
15 - San Antonio	Bexar	0024-07-059	US 90	E	Other	TxDOT	5380.2	$12,408,000

Limits From: SH 211
Limits To: 0.8 Miles W of IH 410
Description: Expand from 4 lane divided to 6 lane expressway and 4 FR lanes (LP 1604 to SH 211)
Remarks: None
Last Revision Date: 7/2020
Proj Hist: 5/20 - add E phase to TIP; 9/19 - ADM clarify description; 1/19 - rev descr to incl FR lanes and update cost; 4/18 - correct funding distribution; 4/17 - add project

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$5,390,000
ROW Purchase:	$7,500,000
Construction Cost:	$110,000,000
Construction Engineering	$7,018,000
Contingencies:	$5,500,000
Indirect Costs:	$6,314,000
Other Field	$6,358,000
Total Project Cost:	$148,080,000

Cost of Approved Phases: $12,408,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score N/A

Type of Work: Added Capacity: Non-Toll | Status: RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
SWPE	$0	$12,408,000	$0	$0	$12,408,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$0	$12,408,000	$0	$0	$12,408,000

15 - San Antonio	Bexar	0017-10-168	IH 35 North	C,E	San Antonio	TxDOT	61.2	$638,700,000

Limits From: IH 410 S
Limits To: IH 410 N
Description: Expand from 8 ln to 14 ln expy - add 6 new express lanes incl 2 HOV-special use lns, & from 4/6 to 4/6 FR lanes & DCs at IH 410 S & IH 410 N
Remarks: 1 lane DC: NB 35 to WB 410N; 2 lane DC: NB 410S to NB 35; SB 35 to SB 410S; EB 410N to SB 35
Last Revision Date: 7/2020
Proj Hist: 5/20 - move from 21 to 22; 10/19 - move 25 to 21 & rev cost; 9/19 - ADM clarify descr; 1/19 - rev descr to incl FR lanes; 10/18 - rev descr & cost; 4/18 - move from 20 to 25 (out of TIP); 10/13 - revise description; 4/13 -

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$50,000,000
ROW Purchase:	$0
Construction Cost:	$538,700,000
Construction Engineering	$50,000,000
Contingencies:	$0
Indirect Costs:	$32,000,000
Other Field	$0
Total Project Cost:	$670,700,000

Cost of Approved Phases: $638,700,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score 58

Type of Work: Added Capacity: Non Toll | Status: RSR | Non-Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
12 - Strat Priority	$295,200,000	$73,800,000	$0	$0	$369,000,000
12 - CL	$106,400,000	$26,600,000	$0	$0	$133,000,000
6 - Structures	$33,030,000	$3,670,000	$0	$0	$36,700,000
3 - DB	$80,000,000	$20,000,000	$0	$0	$100,000,000
Totals	$514,630,000	$124,070,000	$0	$0	$638,700,000

15 - San Antonio	Guadalupe	0025-03-097	IH 10	C	Other	TxDOT	5395.0	$150,000,000

Limits From: Bexar/Guadalupe County Line
Limits To: FM 465
Description: Expand from 4 lane to 6 lane expressway and from 4 to 4 FR lanes
Remarks: Move from MTP to TIP; no impact to conformity; see companion project #4008
Last Revision Date: 7/2020
Proj Hist: 5/20 - move 21 to 22; 10/19 - move 28 to 21, rev funding & limits; 1/19 - rev descr to incl FR lanes & update cost; 10/18 - move 29 to 28; 6/18 - correct fund distrib; 4/17 - add proj to MTP with P1/P7; portion of project

Total Project Cost Information (TxDOT %):

Preliminary Engineering:	$15,000,000
ROW Purchase:	$0
Construction Cost:	$150,000,000
Construction Engineering	$6,700,000
Contingencies:	$11,600,000
Indirect Costs:	$3,300,000
Other Field	$6,700,000
Total Project Cost:	$193,300,000

Cost of Approved Phases: $150,000,000
NOX lbs/day N/A
VOC lbs/day N/A
CMP Score 23

Type of Work: Added Capacity: Non Toll | Status: RSR | Exempt

Authorized Funding by Category/Share

Funding Categories	Federal	State	Local	Local Contrib	Total
12 - Strat Priority	$120,000,000	$30,000,000	$0	$0	$150,000,000
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Other	$0	$0	$0	$0	$0
Totals	$120,000,000	$30,000,000	$0	$0	$150,000,000

Appendix F

Resource-specific Maps

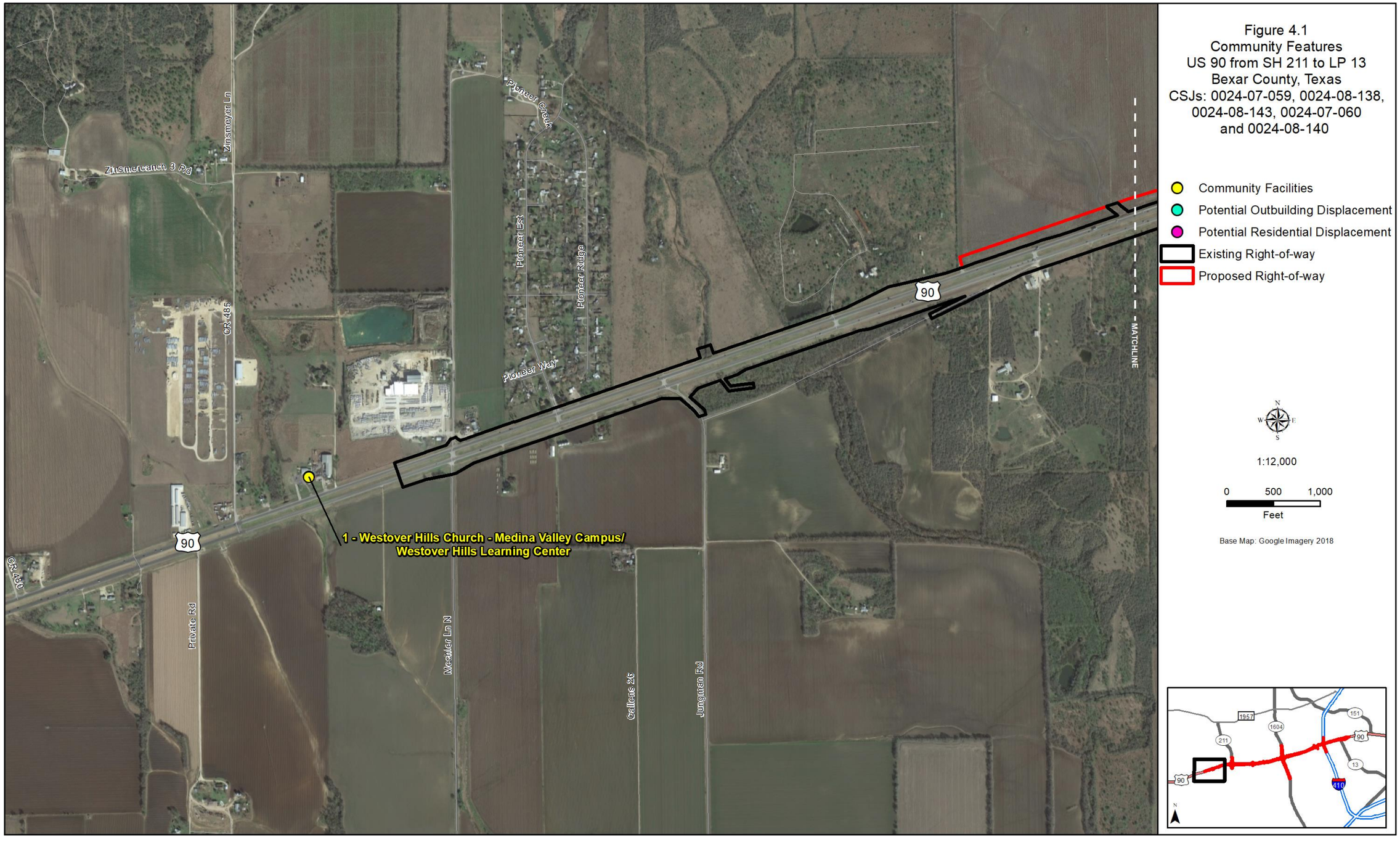


Figure 4.1
Community Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

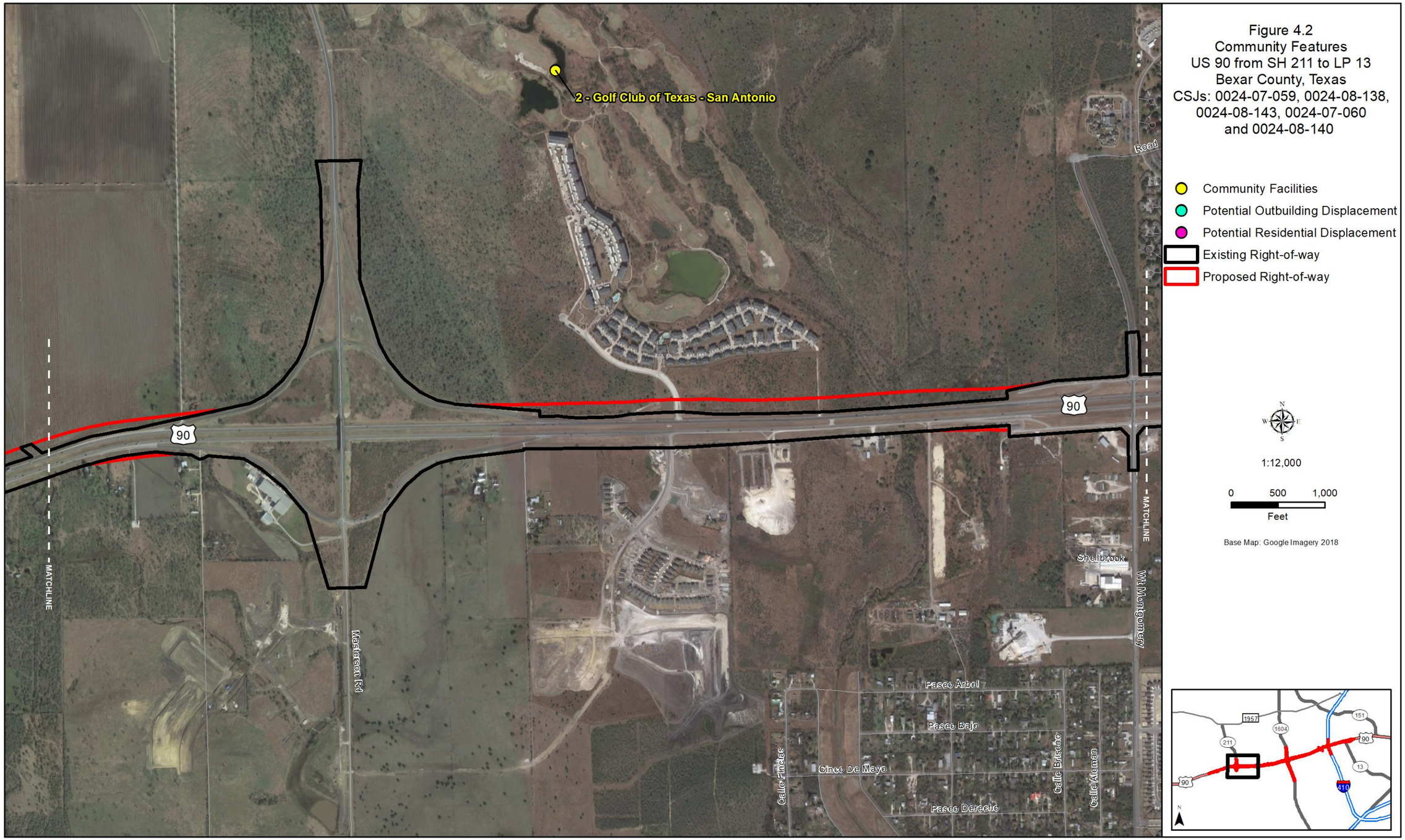


Figure 4.2
Community Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

7 - Crownhill Ministry
4 - Air Force Villages Charitable Foundation
3 - Blue Skies of Texas
5 - Life Center Christian Fellowship
6 - Fabian Dale Dominguez State Jail
MATCHLINE
MATCHLINE
MATCHLINE
1604
90
Crosenbacher Rd
Cegnon
Cegnon Rd
Wt Montgomery
John D Ryan Blvd
RD H
RD W
Road E
RD B
Figure 4.3
Community Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060
and 0024-08-140
Community Facilities
Potential Outbuilding Displacement
Potential Residential Displacement
Existing Right-of-way
Proposed Right-of-way
N
W
E
S
1:12,000
0
500
1,000
Feet
Base Map: Google Imagery 2018
1957
1604
211
151
90
13
410
90

Figure 4.4
Community Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

- Community Facilities
- Potential Outbuilding Displacement
- Potential Residential Displacement
- Existing Right-of-way
- Proposed Right-of-way

N W E S

1:12,000

0 500 1,000
Feet

Base Map: Google Imagery 2018

12 - Faith Worship Center Church
13 - Kriewald Road Elementary
14 - Wildflower Cemetery
15 - JBSA-Lackland and Medina Training Annex
Aurora Field
Big Elk Dr
Buffalo Horn
Bear Springs Dr
Buffalo Pass Dr
Bear Paw Path
Canton Field
Pue Rd
Del Lago Ct
Bernuda Tree
Ancient Archer
Indian Wells
Long Trl
Kiwe Trl
Shorebird Ln
Salty Marsh
Arcadian Dr
Kriewald Rd
Westrail Dr
Westrail Dr
Westex Trl
Kelly West Ct
MATCHLINE
1604
90
Lackland AF Reserve Base Annex Rd
Figure 4.5
Community Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060
and 0024-08-140
Community Facilities
Potential Outbuilding Displacement
Potential Residential Displacement
Existing Right-of-way
Proposed Right-of-way
1:12,000
0 500 1,000
Feet
Base Map: Google Imagery 2018
1957
1604
211
151
90
13
410

Figure 4.6
Community Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Figure 4.7
Community Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140
Community Facilities
Potential Outbuilding Displacement
Potential Residential Displacement
Existing Right-of-way
Proposed Right-of-way
1:12,000
0 500 1,000
Feet
Base Map: Google Imagery 2018
16 - SAWS Westside Operations
17 - Christ Temple Church
18 - Legend Oaks Healthcare and Rehabilitation
19 - Iglesia Evangelica Cristiana Espiritual
20 - Iglesia Fuente De Amor
21 - House of Prayer
22 - American Legion Post 579
23 - Stablewood Farms Park
24 - Atonement Lutheran Church
25 - Good Shepherd Presbyterian Church
26 - Life Church Southwest Campus
27 - Mighty Fortress Christian Church
28 - St. Vincent De Paul Catholic Church
29 - Chapel Hill United Methodist
30 - U.S. Renal Care
MATCHLINE
Rasa Dr
Zabra St
Merritt St
Maddux St
Scotty Dr
Pilar St
Berlotti Dr
Mahota Dr
Tarasco St
Glider Ave
Chaps Dr
Landing Ave
Skolout St
Spiral Ave
Lake Vis
Stable Vis
Bridle Ridge
Whitecliff Dr
Harrow Dr
Dumont Dr
Fairtel Dr
Ray Ellison Dr
Lackland Air Force Base Annex Rd
Kriewald Rd
Westrail Dr
Westex Trl
Green Plain Dr
Shorebird Ln
Salty Marsh
Acadian Dr
90
410

Figure 4.8
Community Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140
Community Facilities
Potential Outbuilding Displacement
Potential Residential Displacement
Existing Right-of-way
Proposed Right-of-way
1:12,000
0 500 1,000
Feet
Base Map: Google Imagery 2018
35 - One Voice Praise and Worship Center
36 - Lackland Baptist Church / Iglesia Cristiana Tierra Prometida
37 - VIA Kel-Lac Transit Center
38 - Circus Bingo Military
39 - Gathering of His Grace Church
40 - Kel-Lac Uniforms and Tactical
41 - Veterans of Foreign Wars Post 9174
42 - New Life Christian Center / New Life Christian Academy Hybrid
43 - Lackland AFB Amphitheater
44 - Gateway Hills Golf Course
45 - VIA Kel-Lac Park & Ride Bus Station
34 - ChildSafe
33 - BCFS Health and Human Services - San Antonio
32 - San Antonio Council on Alcohol & Drug Awareness
31 - Southwest Texas Regional Advisory Council (STRAC)
MATCHLINE
Old Us Highway 90
Rodriguez Ave
Military Dr
Pinn Rd
Westlawn Dr
Westville Dr
Westshire Dr
Westlyn Dr
Gallop Dr
Westbriar
Westwood Rd
Westward Dr
Marimba Pl
Keltha Blvd
Paro St
Elmer Blvd
Tahoka St
Meguin Dr
Orr Dr
Avil Ave
Jerome Rd
Bronco Ln
Rawhide Ln
Westvale Dr
Cartwheel Ln
Hackamore Ln
Buckboard St
Westrock Dr
Frontier Dr
Tallahassee Dr
W Plz
Westfield Dr
Biscayne Dr
Renwick Dr
Ajmeth Cir
Wilford Hall Loop
Bergquist Dr
Pepperrell St
Ladd St
Foster Ave
Hughes Ave
Arnold Cir
Easy St
Scott Dr
Spence St
Harmon St
Bong Ave
Luke Blvd
Goodfellow St
Kelly Ave
Elit Cir
Metroher Dr
Kingsley
Fenoyer St
Gary Ave
Green Ash
90
13
1957
1604
211
151
110

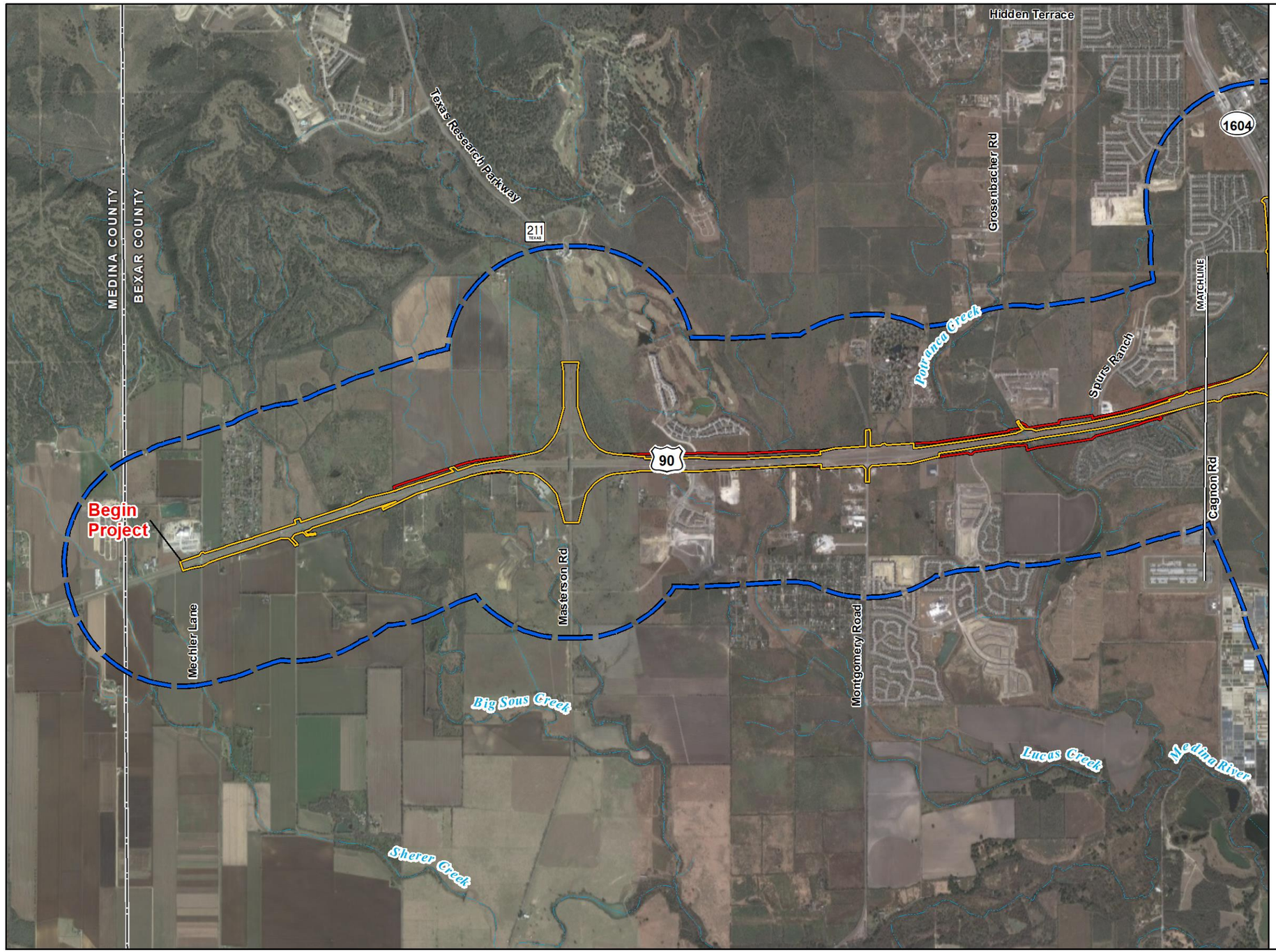


Figure 5.1
Cultural Resources
US 90 from SH 211 to LP 13
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060
and 0024-08-140

Area of Potential Effects (APE)

Existing Right-of-way

Proposed Right-of-way

1-kilometer Search Radius

1:36,000

0 1,500 3,000 6,000
Feet

0 250 500 1,000
Meters

Base Map: Texas Imagery Service 2018

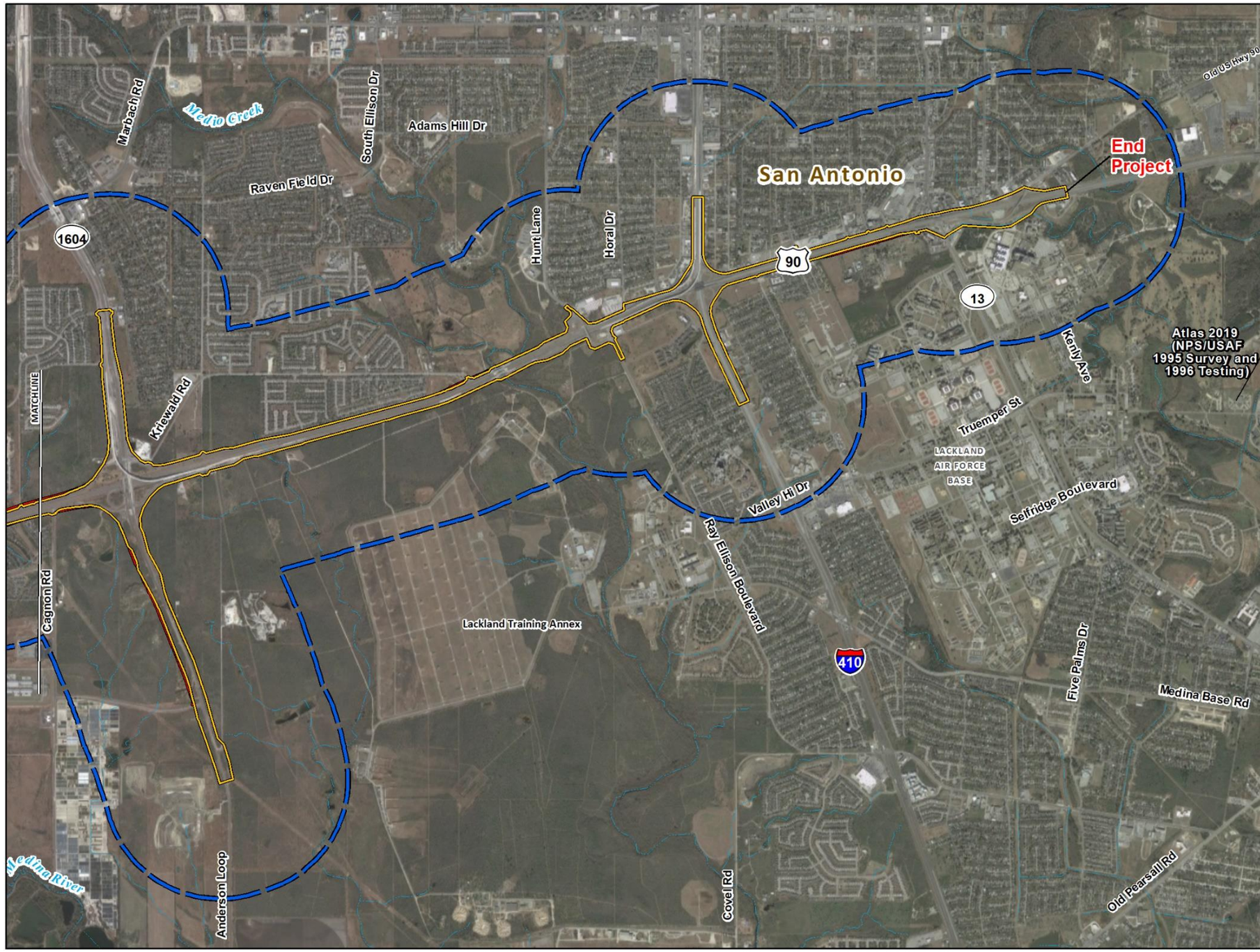


Figure 5.2
Cultural Resources
US 90 from SH 211 to LP 13
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Area of Potential Effects (APE)

Existing Right-of-way

Proposed Right-of-way

1-kilometer Search Radius

1:36,000

0 1,500 3,000 6,000
Feet

0 250 500 1,000
Meters

Base Map: Texas Imagery Service 2018

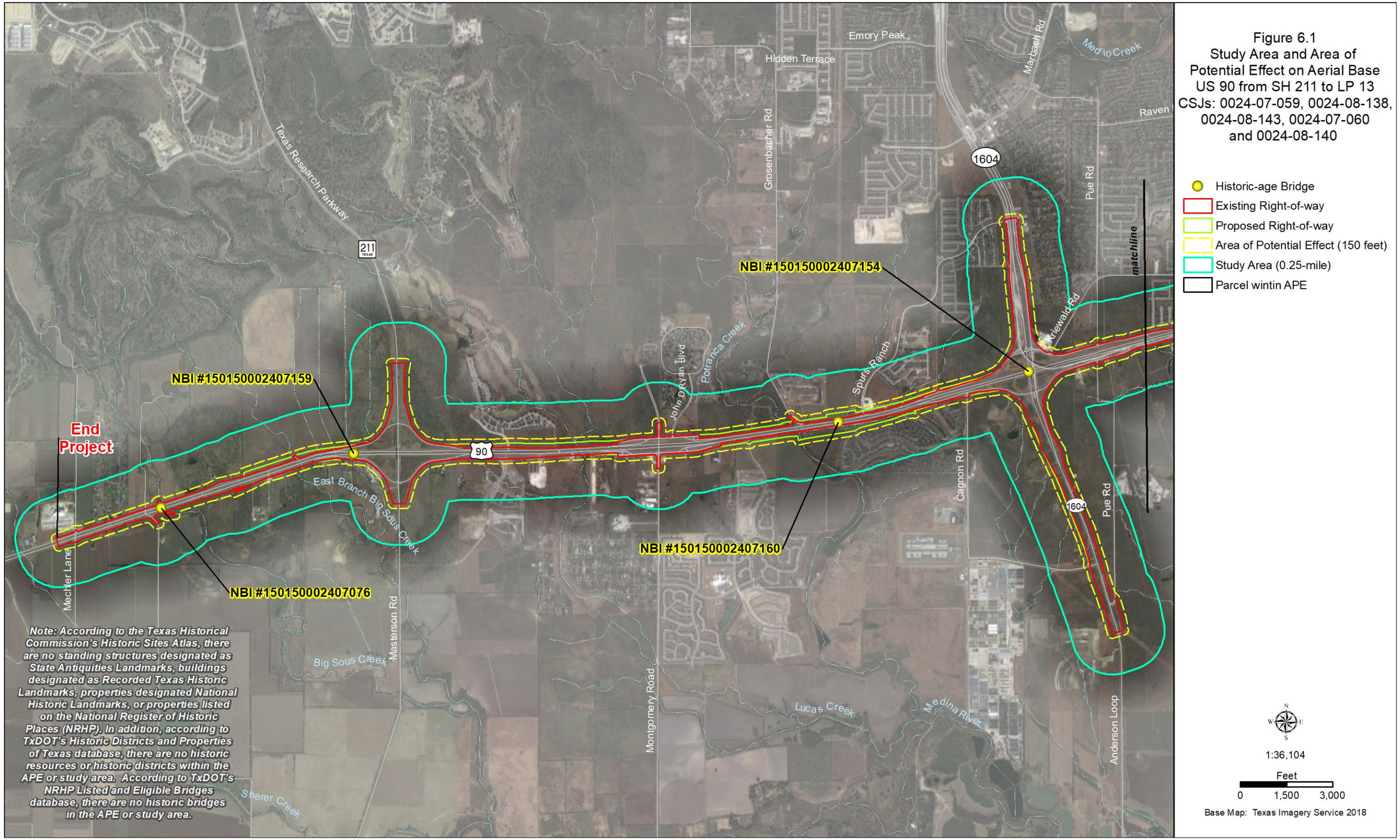


Figure 6.1
Study Area and Area of Potential Effect on Aerial Base
US 90 from SH 211 to LP 13
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

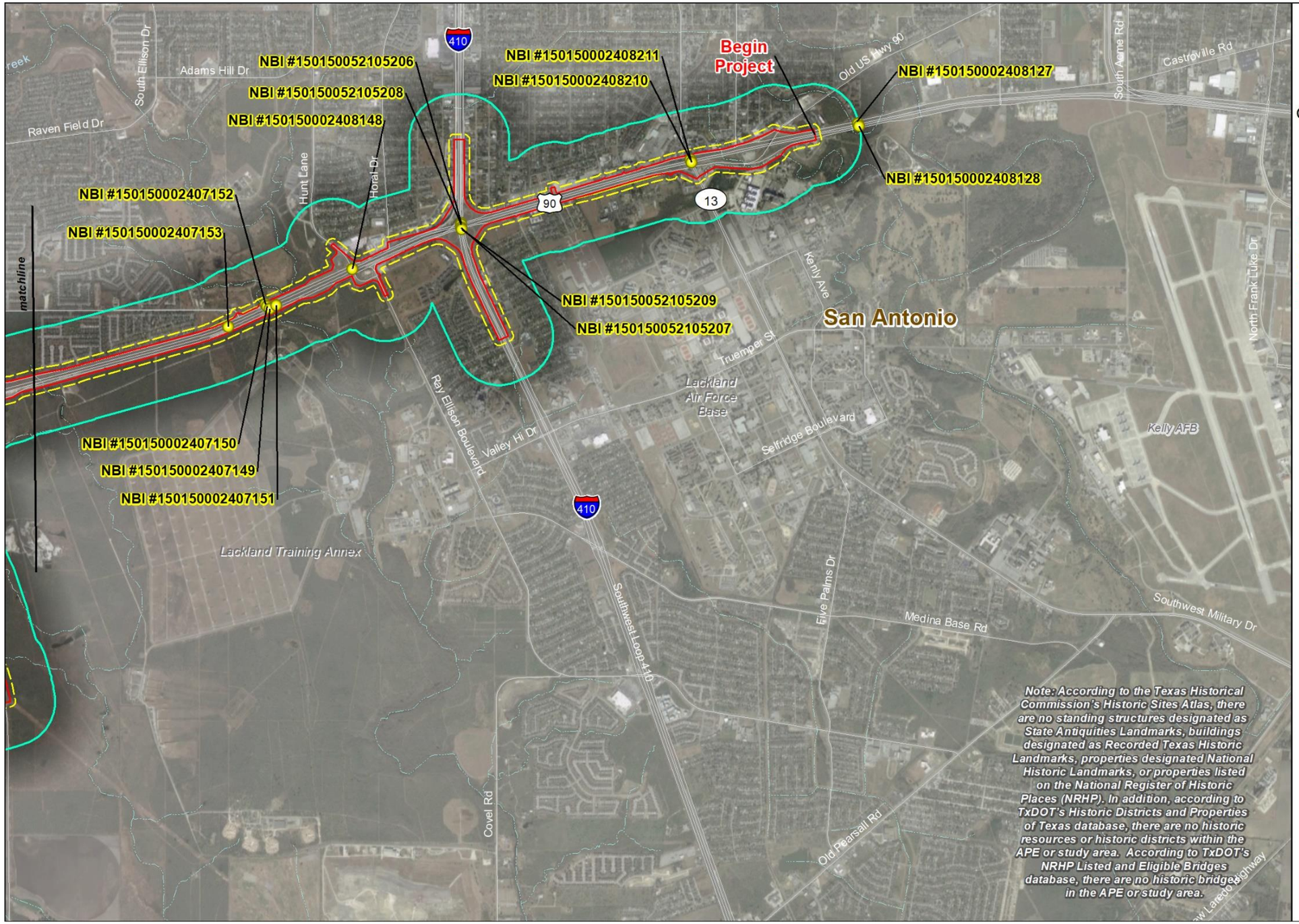


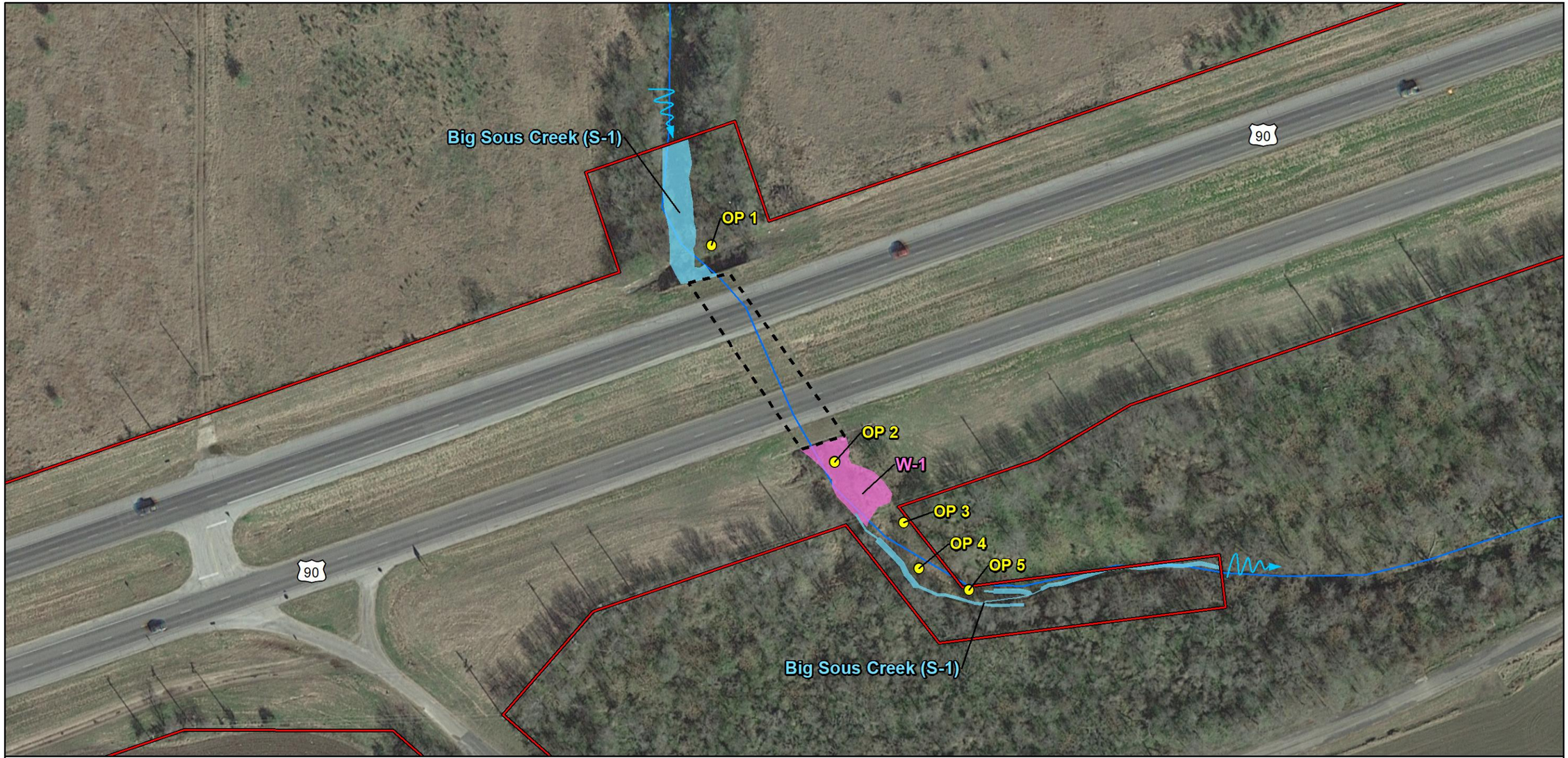
Figure 6.2
Study Area and Area of Potential Effect on Aerial Base
US 90 from SH 211 to LP 13
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

- Historic-age Bridge
- Existing Right-of-way
- Proposed Right-of-way
- Area of Potential Effect (150 feet)
- Study Area (0.25-mile)
- Parcel wintin APE

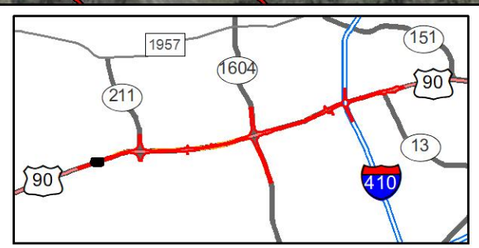
1:36,104

Feet
0 1,500 3,000

Base Map: Texas Imagery Service 2018



Existing Right-of-way
Culvert
Stream/River (NHD)
Stream
Wetland
Observation Point



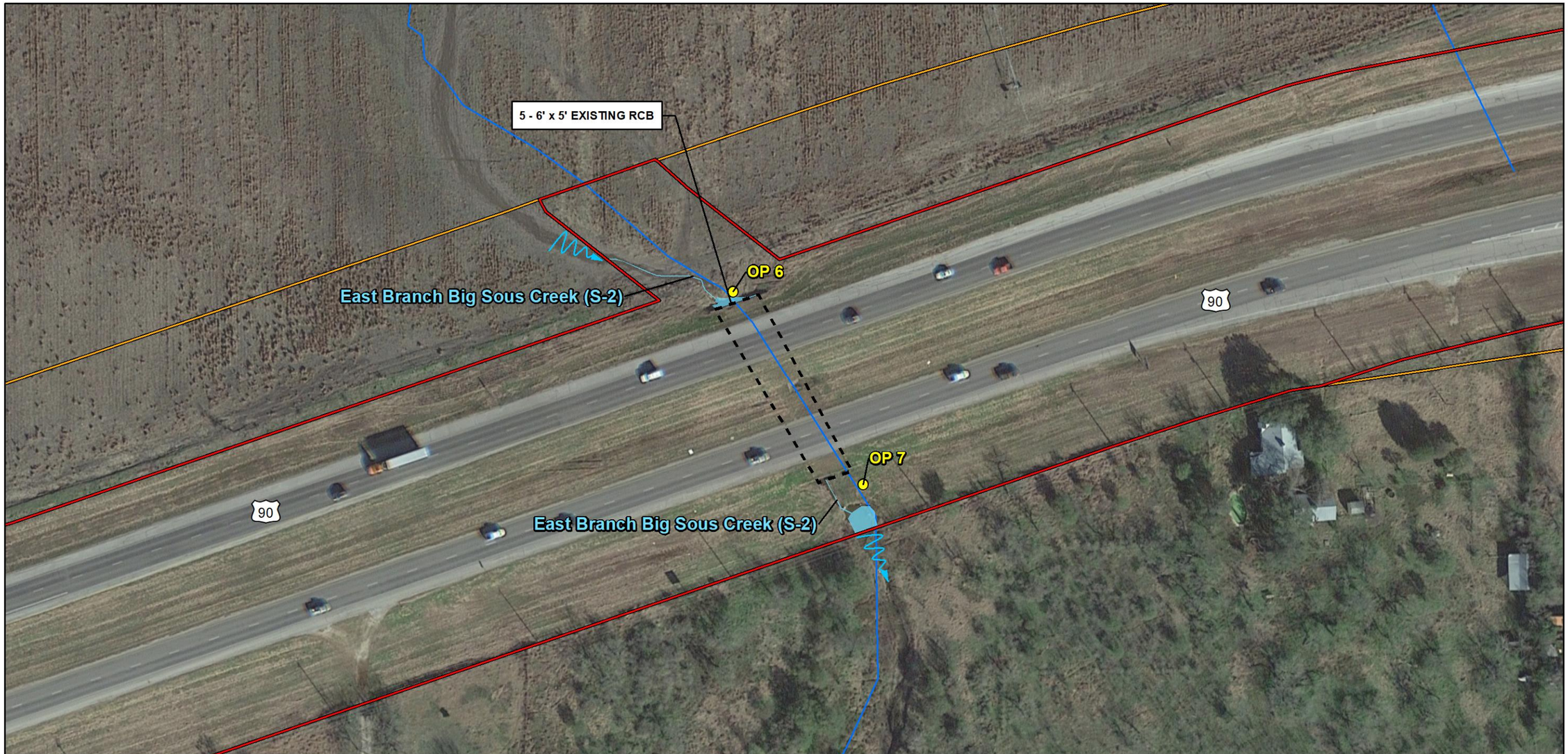
N
W E
S

1:1,200

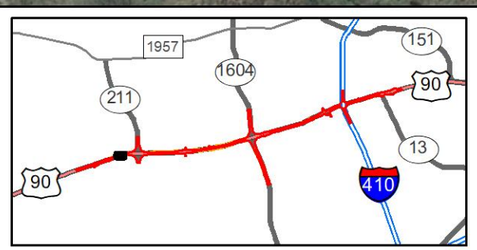
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.1
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way
Culvert
Stream/River (NHD)
Stream
Observation Point

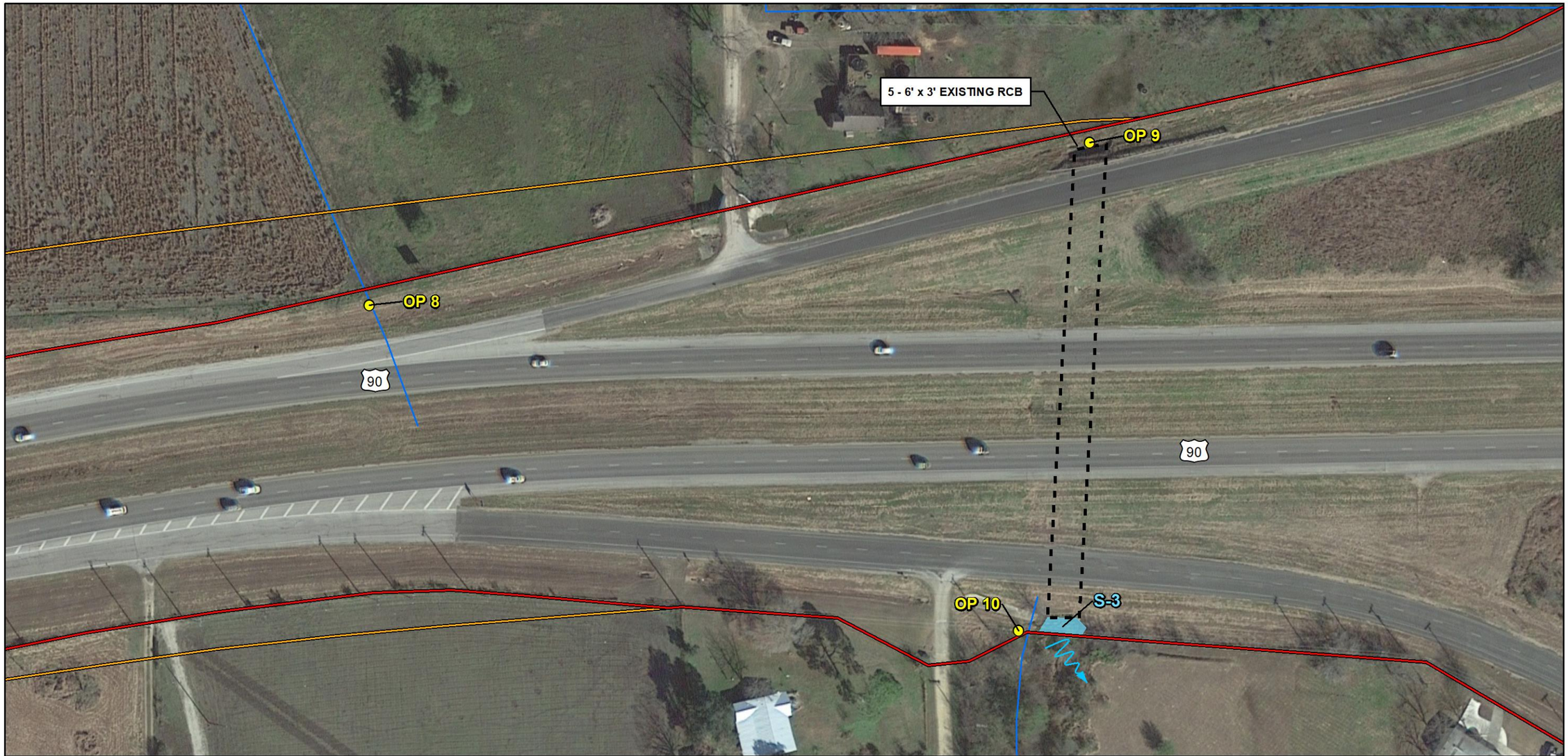


1:1,200

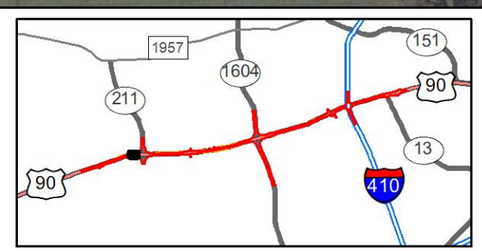
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.2
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way
Culvert
Stream/River (NHD)
Stream
Observation Point



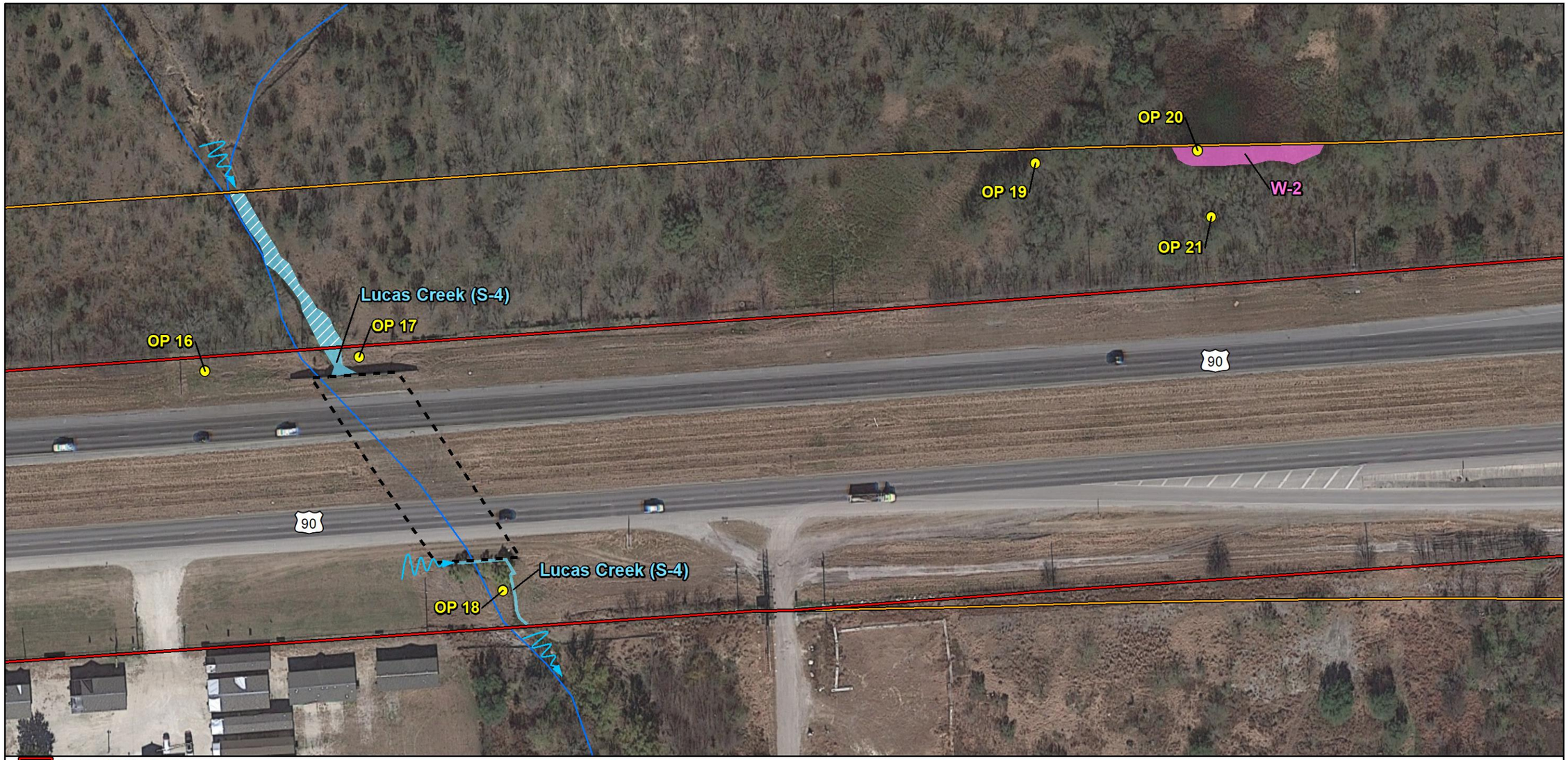
N
W E
S

1:1,200

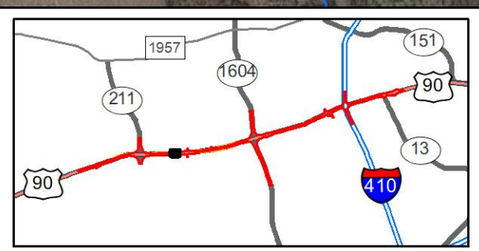
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.3
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way
Culvert
Stream/River (NHD)
Stream
Estimated Stream
Wetland
Observation Point

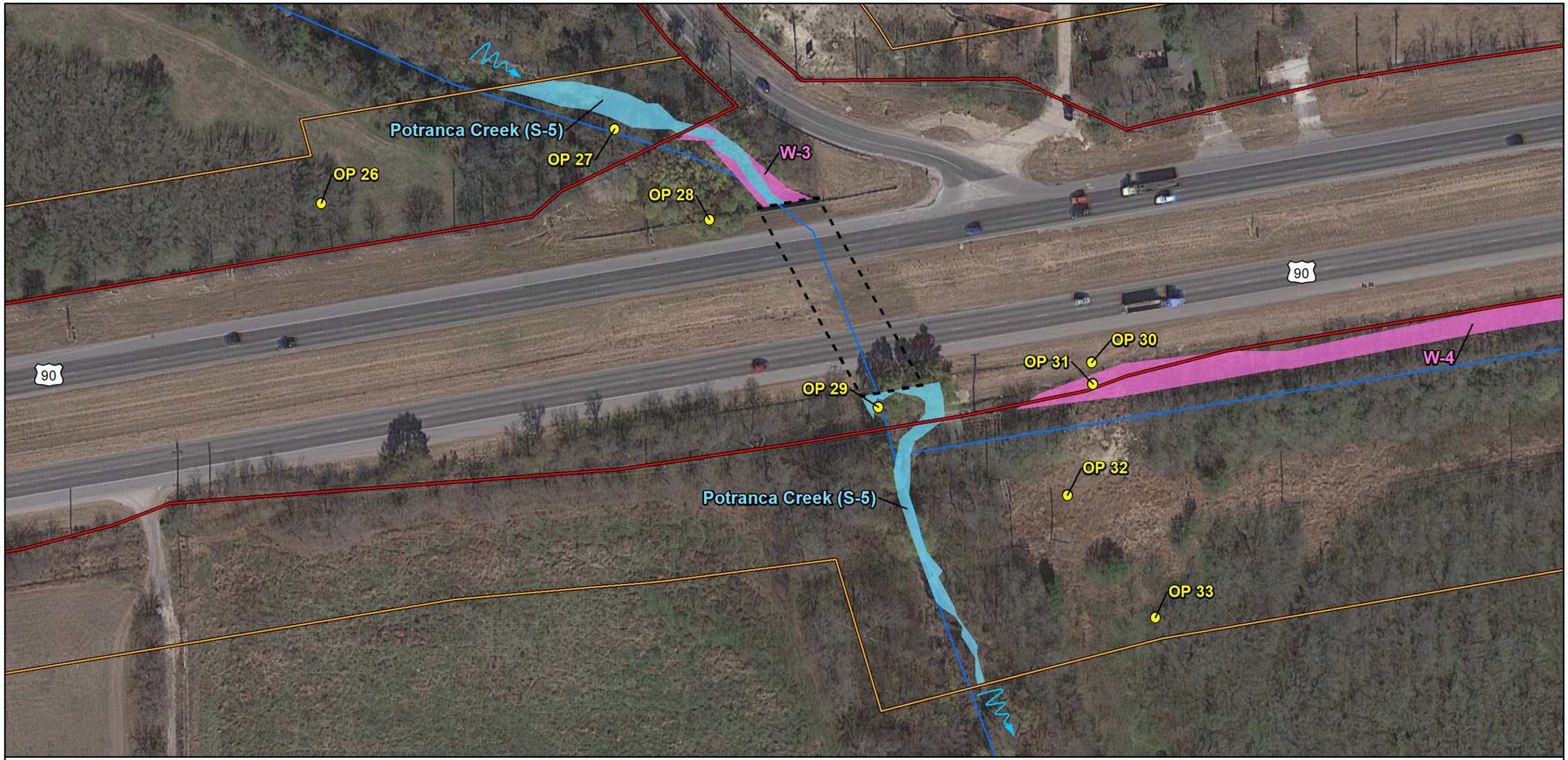


1:1,200

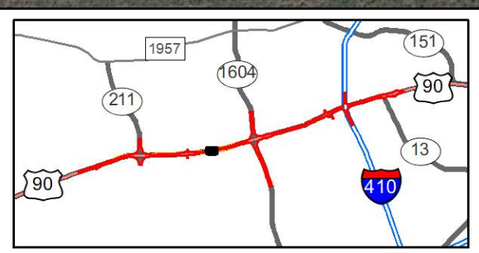
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.4
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way
Culvert
Stream/River (NHD)
Stream
Wetland
Observation Point

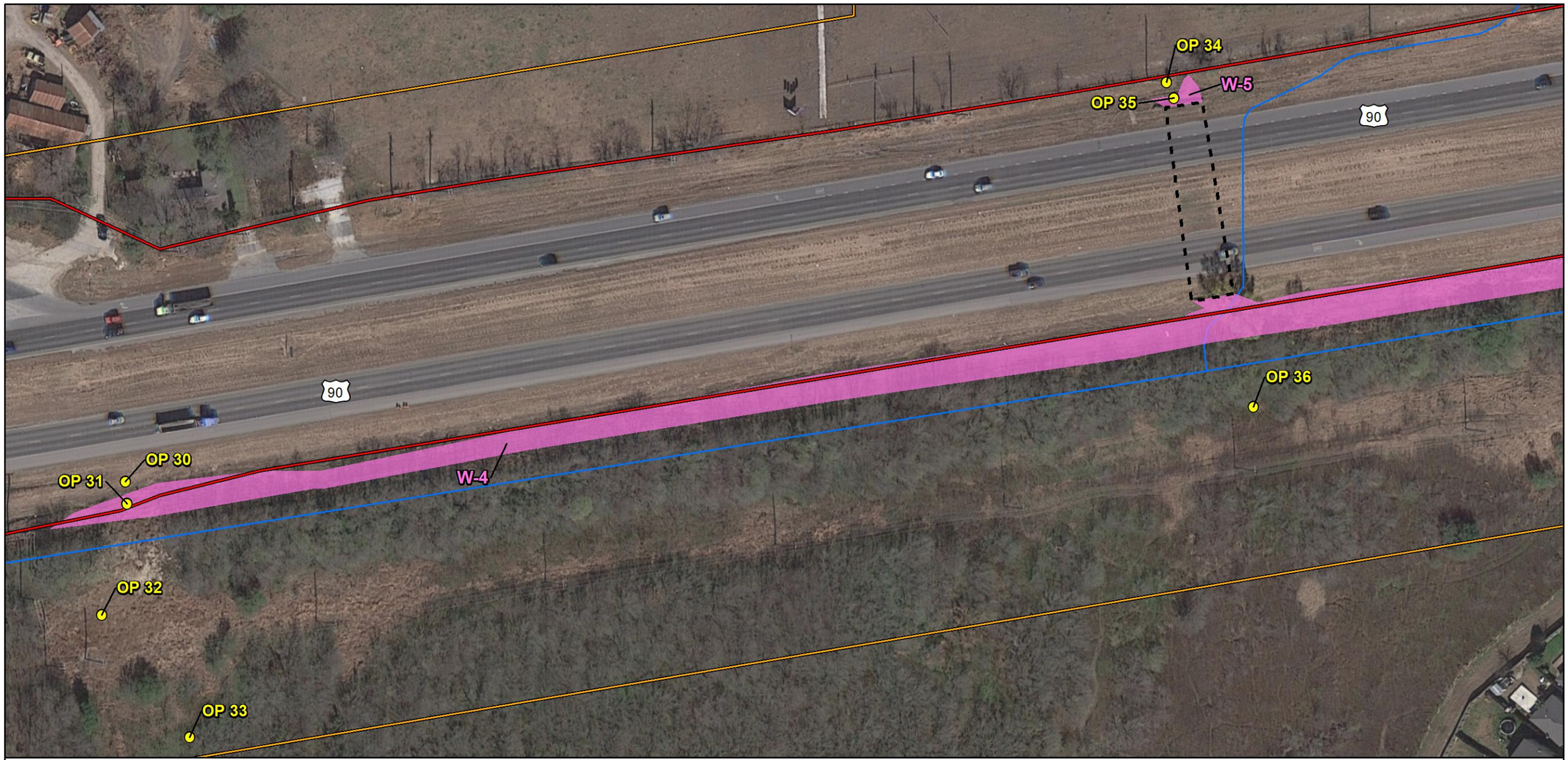


1:1,200

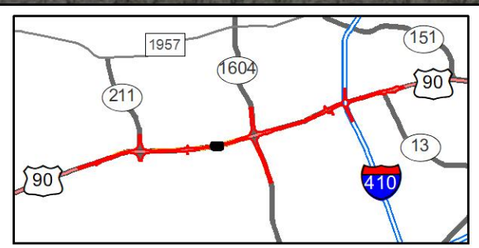
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.5
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way
Culvert
Stream/River (NHD)
Stream
Wetland
Observation Point

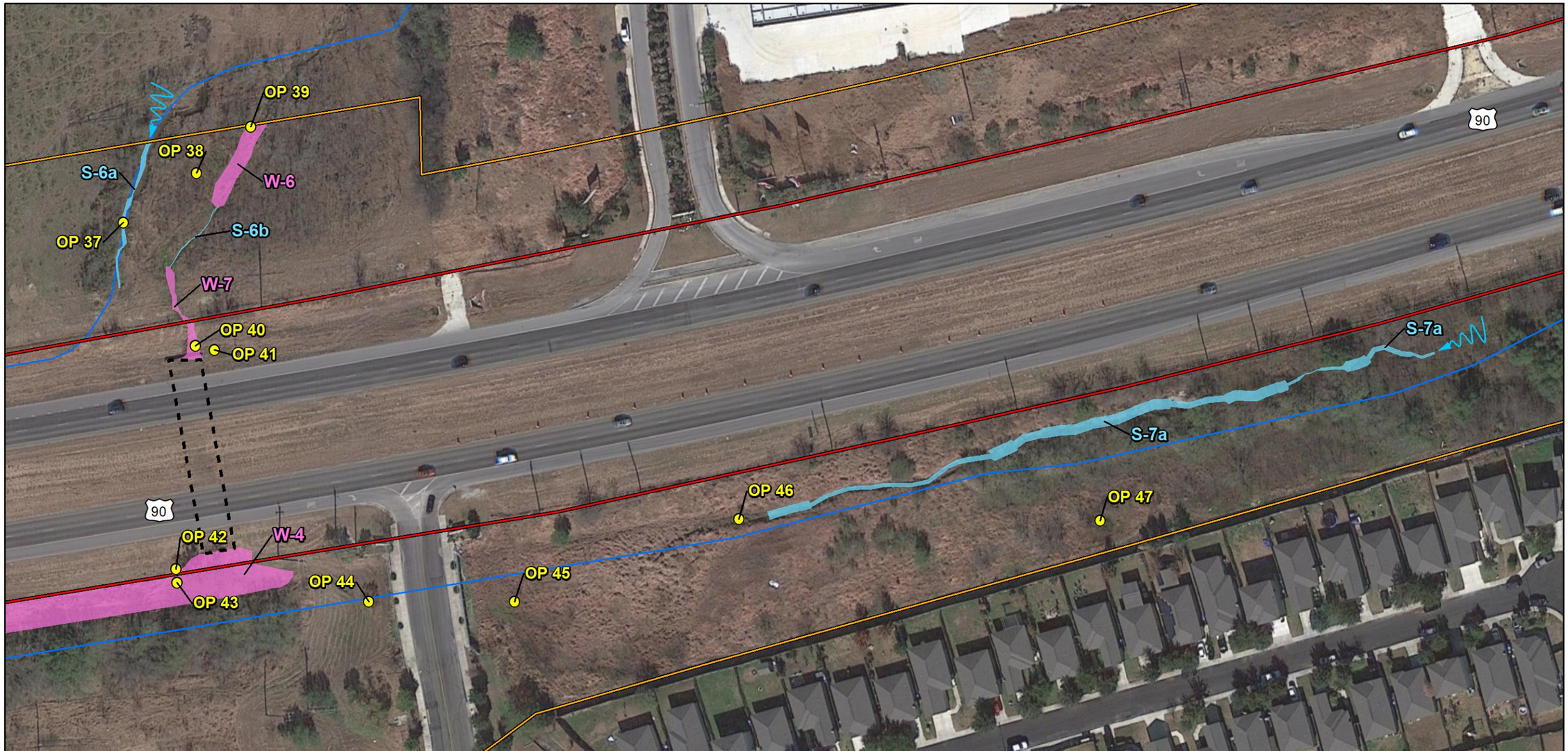


1:1,200

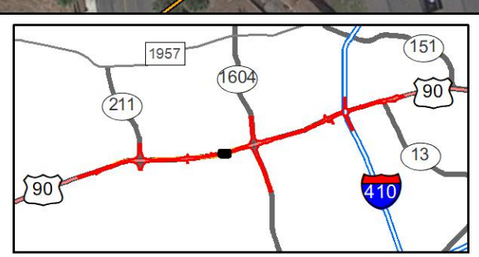
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.6
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way
Culvert
Stream/River (NHD)
Stream
Wetland
Observation Point



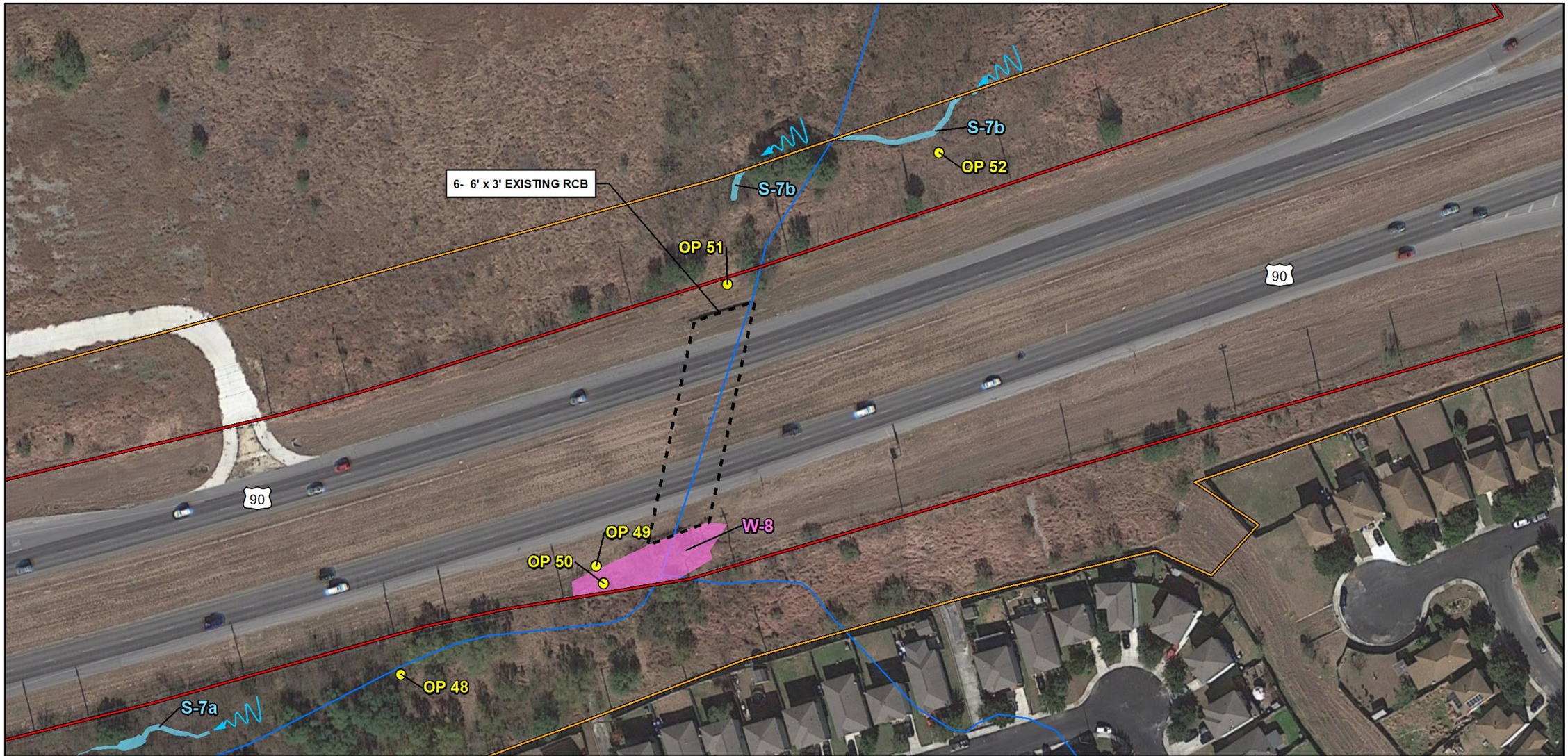
N
W E
S

1:1,200

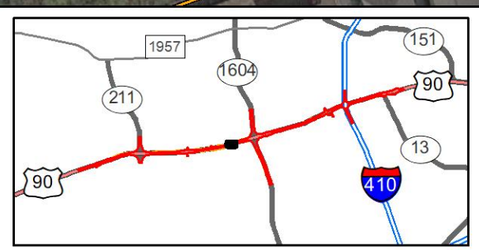
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.7
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way
Culvert
Stream/River (NHD)
Stream
Wetland
Observation Point

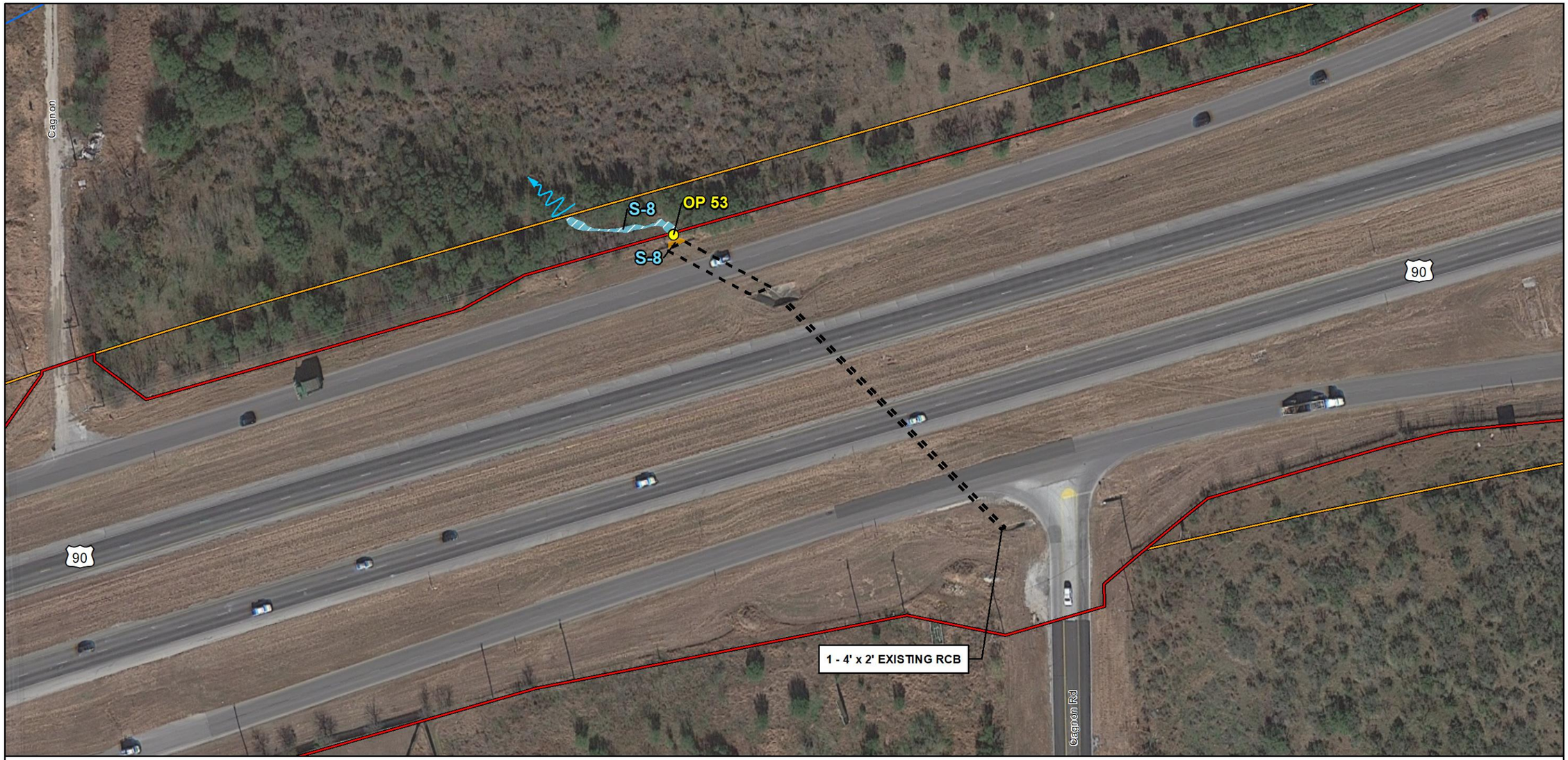


1:1,200

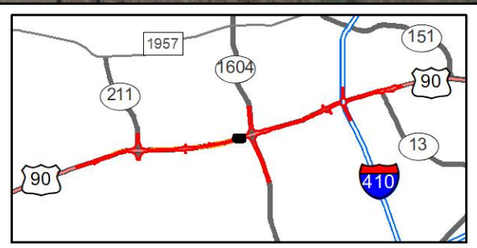
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.8
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way
Culvert
Stream/River (NHD)
Estimated Stream
Concrete-Lined Stream
Observation Point

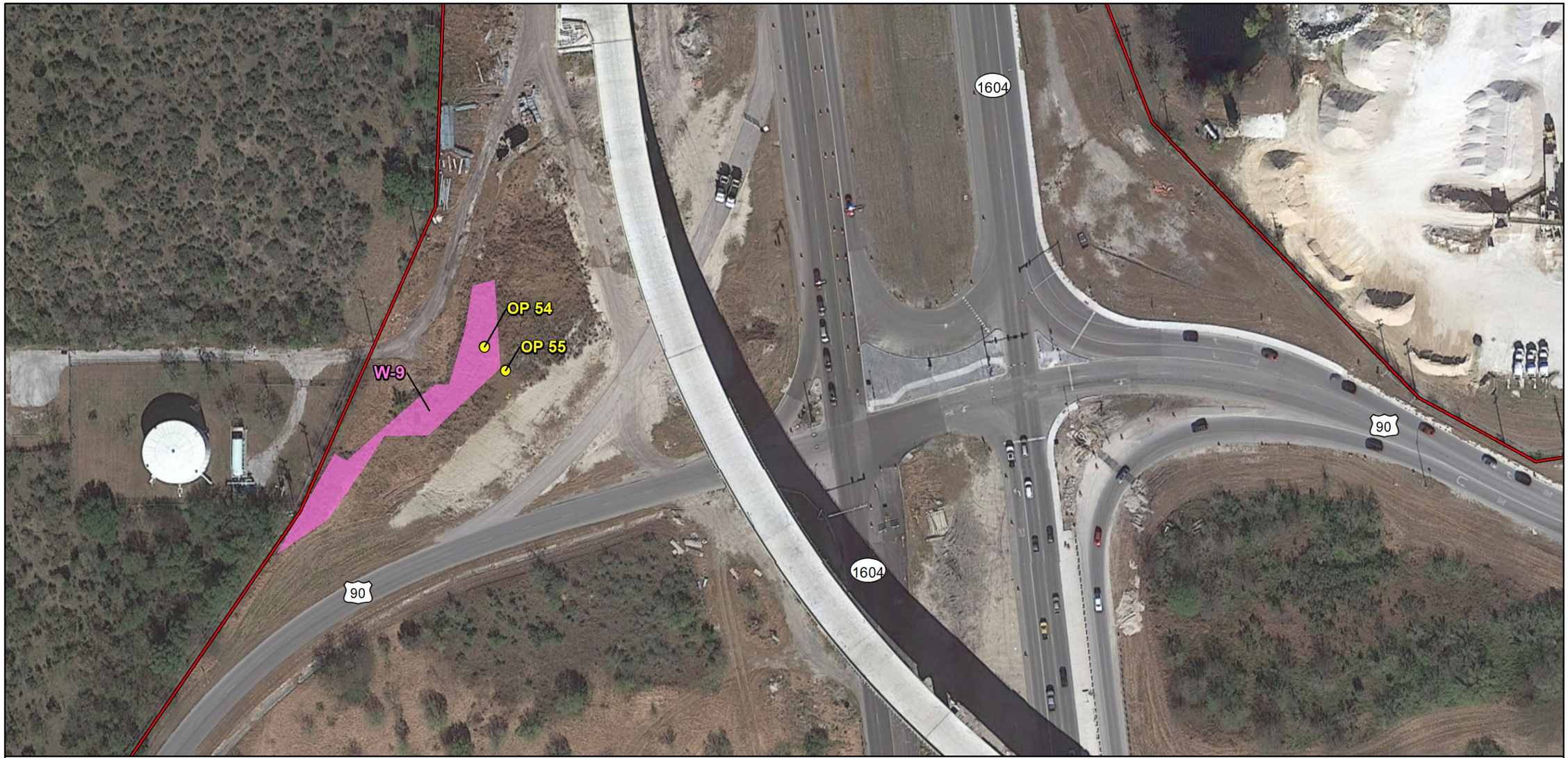


1:1,200

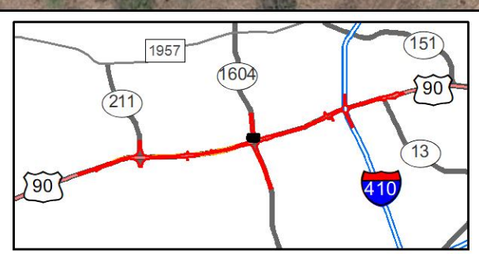
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.9
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Wetland
Observation Point

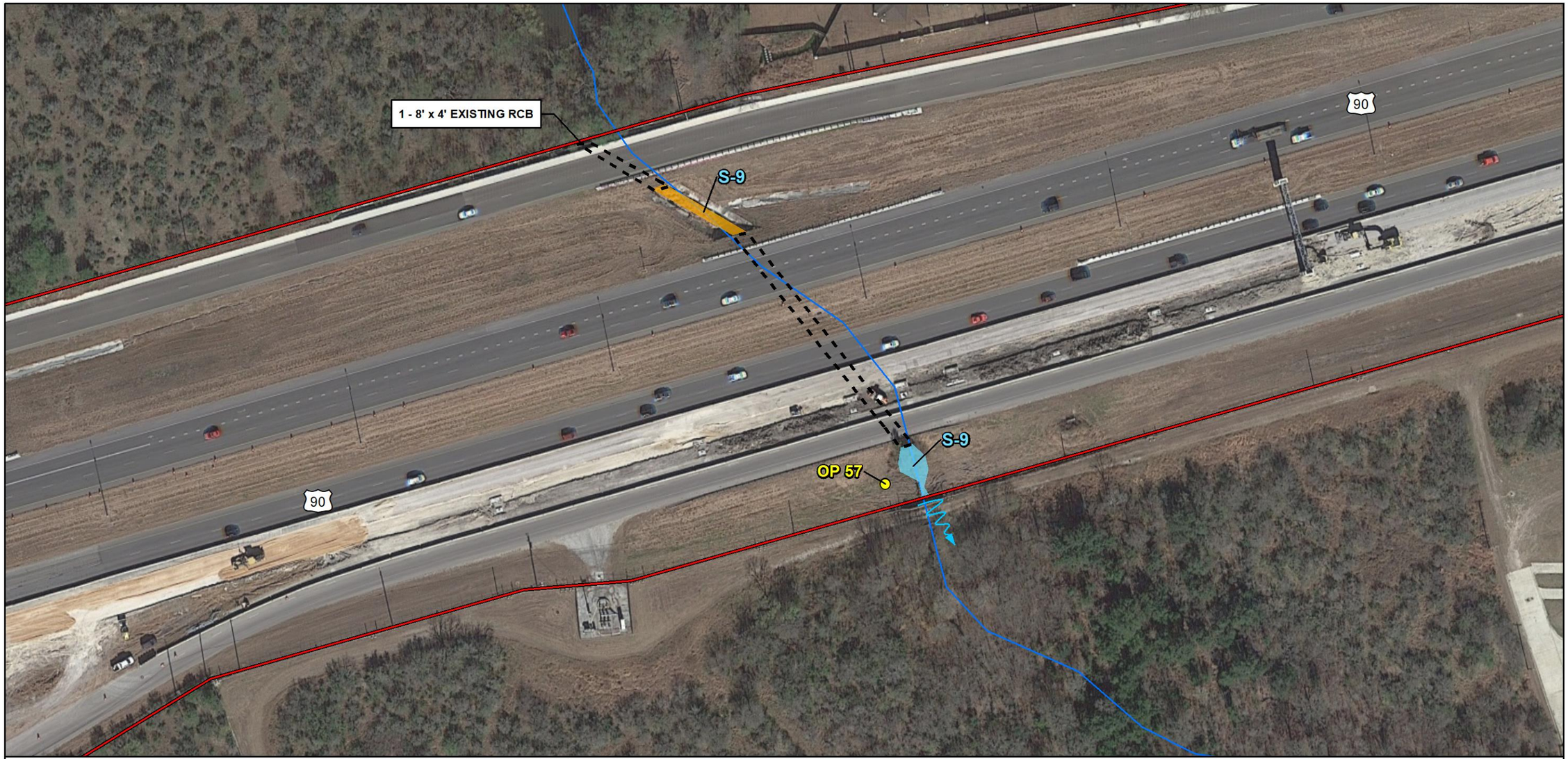


1:1,200

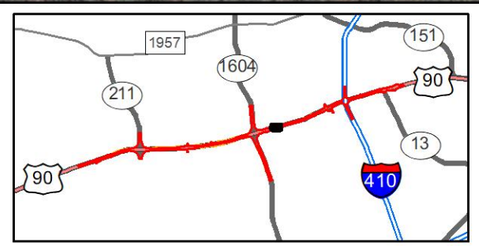
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.10
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Culvert
Stream/River (NHD)
Stream
Concrete-Lined Stream
Observation Point

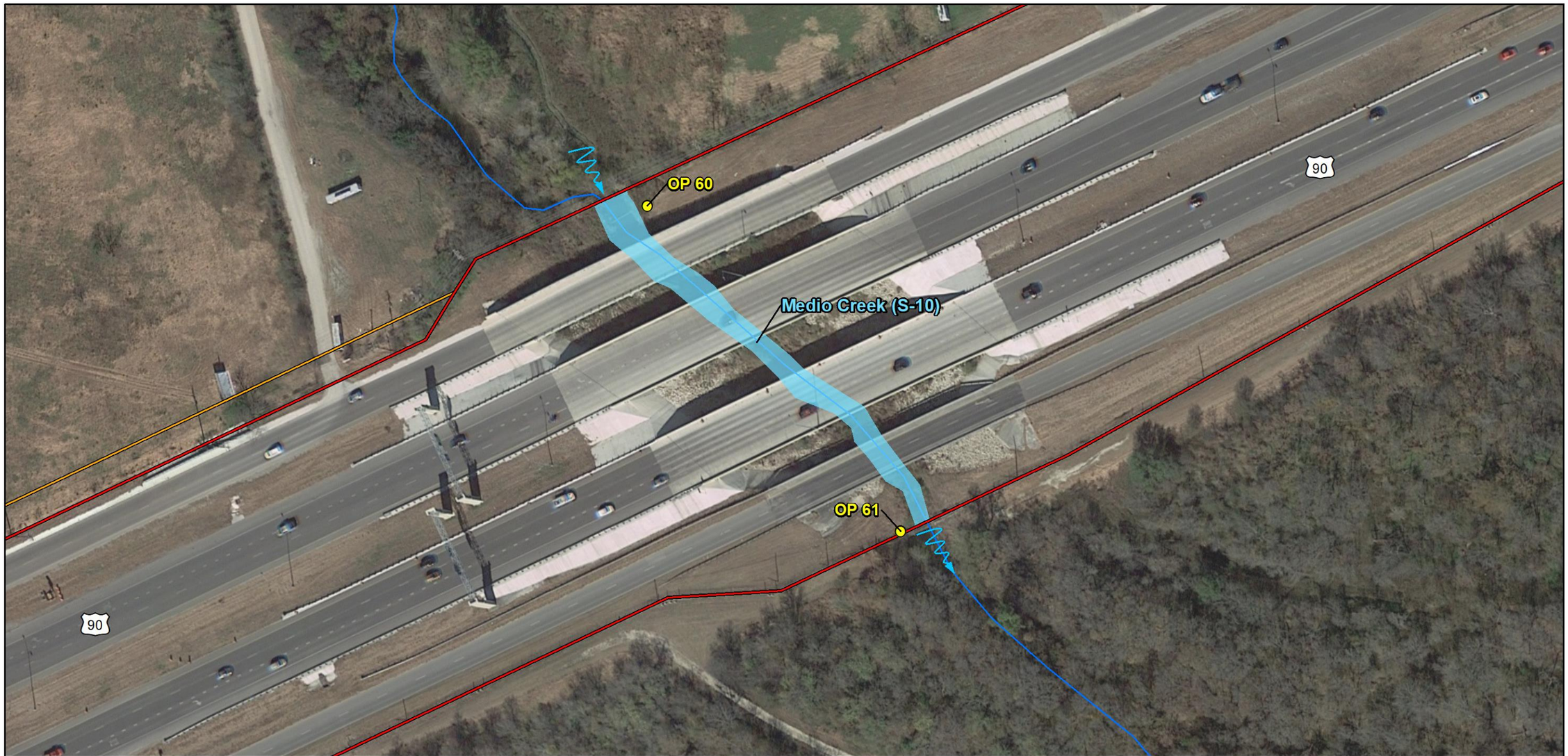


1:1,200

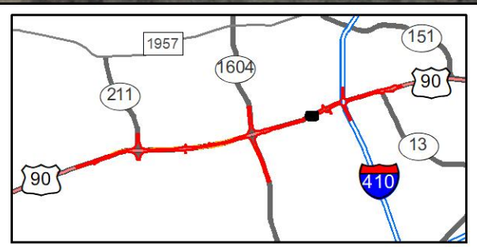
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.11
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way
Stream/River (NHD)
Stream
Observation Point



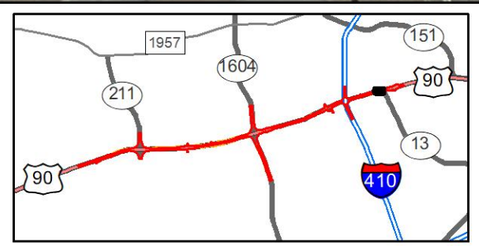
1:1,200

0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.12
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way
Culvert
Concrete-Lined Stream

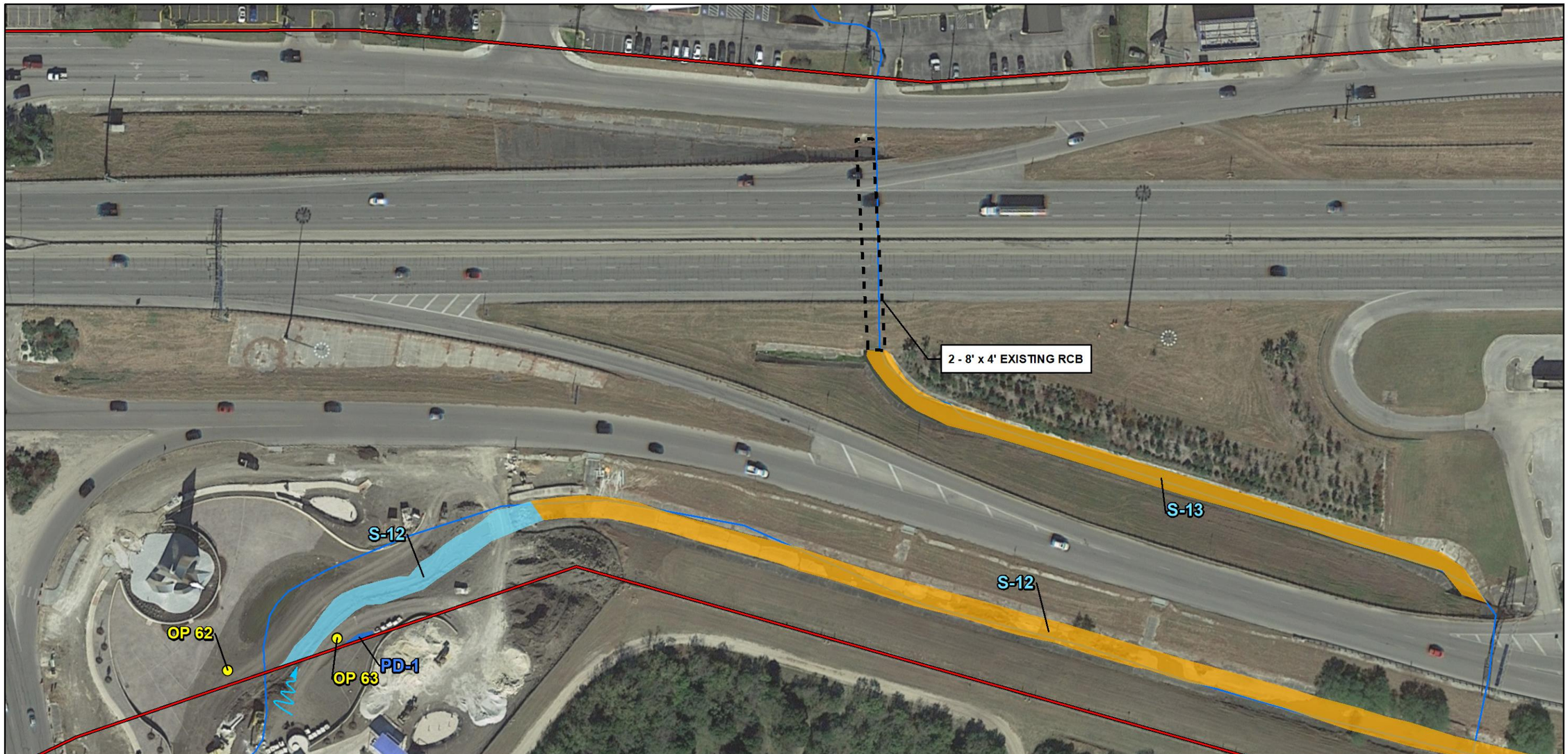


1:1,200

0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.13
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



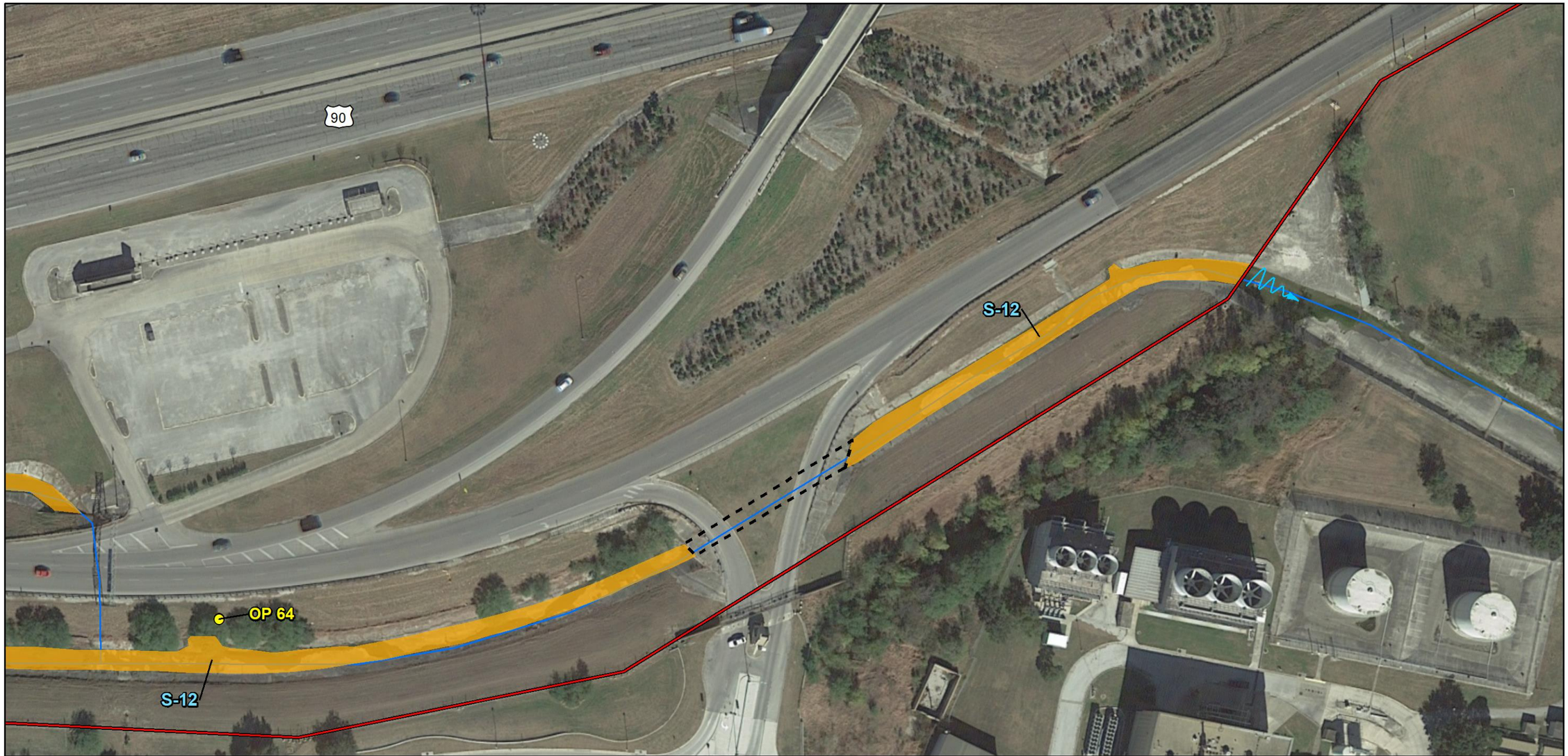
Existing Right-of-way
Culvert
Stream/River (NHD)
Stream
Concrete-Lined Stream
Pond
Observation Point

1:1,200

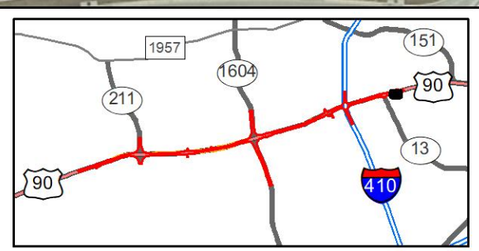
0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.14
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Culvert
Stream/River (NHD)
Concrete-Lined Stream
Observation Point



1:1,200

0 25 50 100
Feet

Base Map: Google Imagery 2018

Figure 7.15
Delineated Water Features
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.1
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.2
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.3
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

N W E S

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.4
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

N W E S

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.5
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.6
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

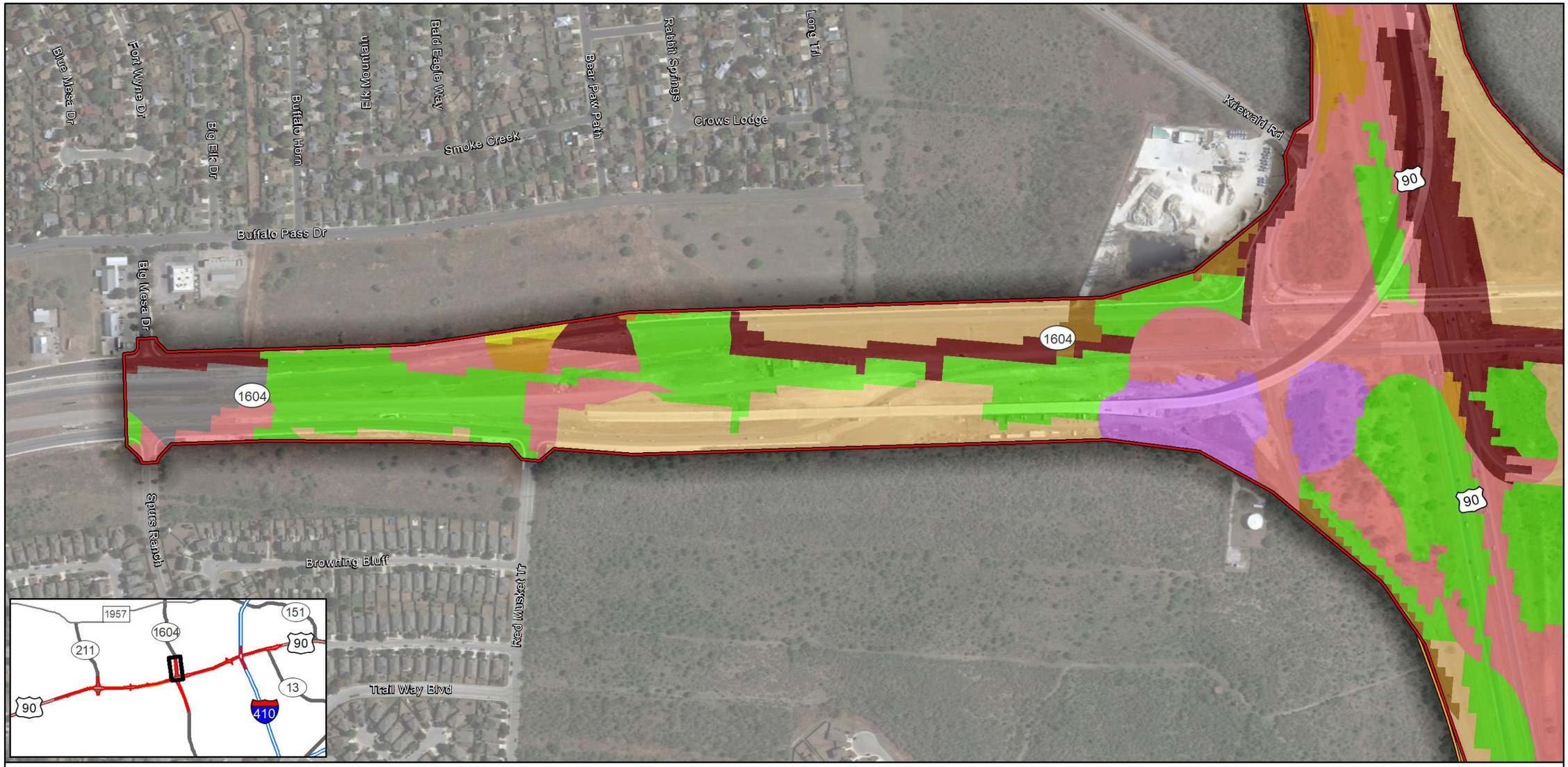
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.7
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

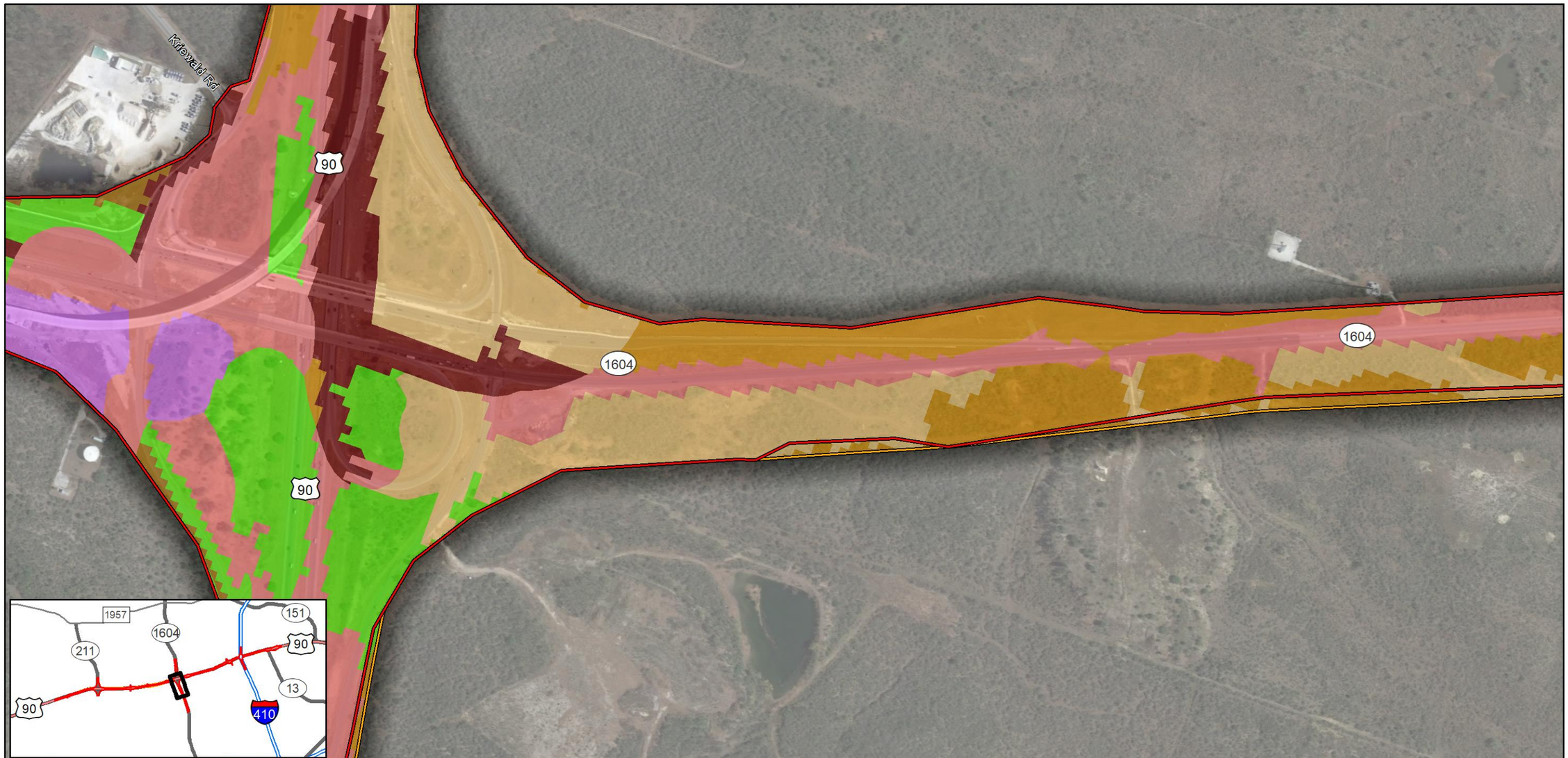
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.8
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.9
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

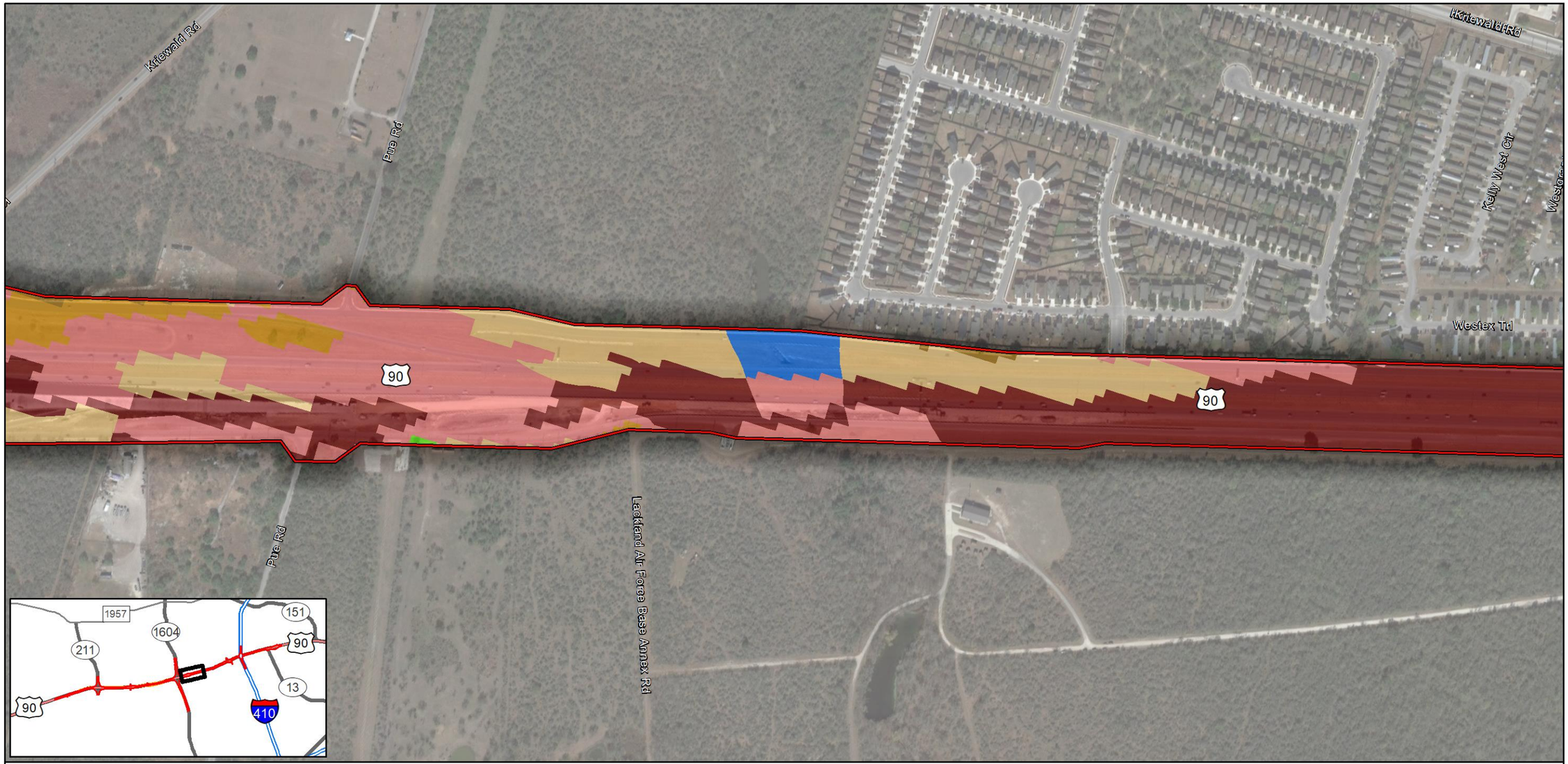
- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800
Feet

Base Map: Google Imagery 2018

Figure 8.10
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way

Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.11
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way

Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.12
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way

Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

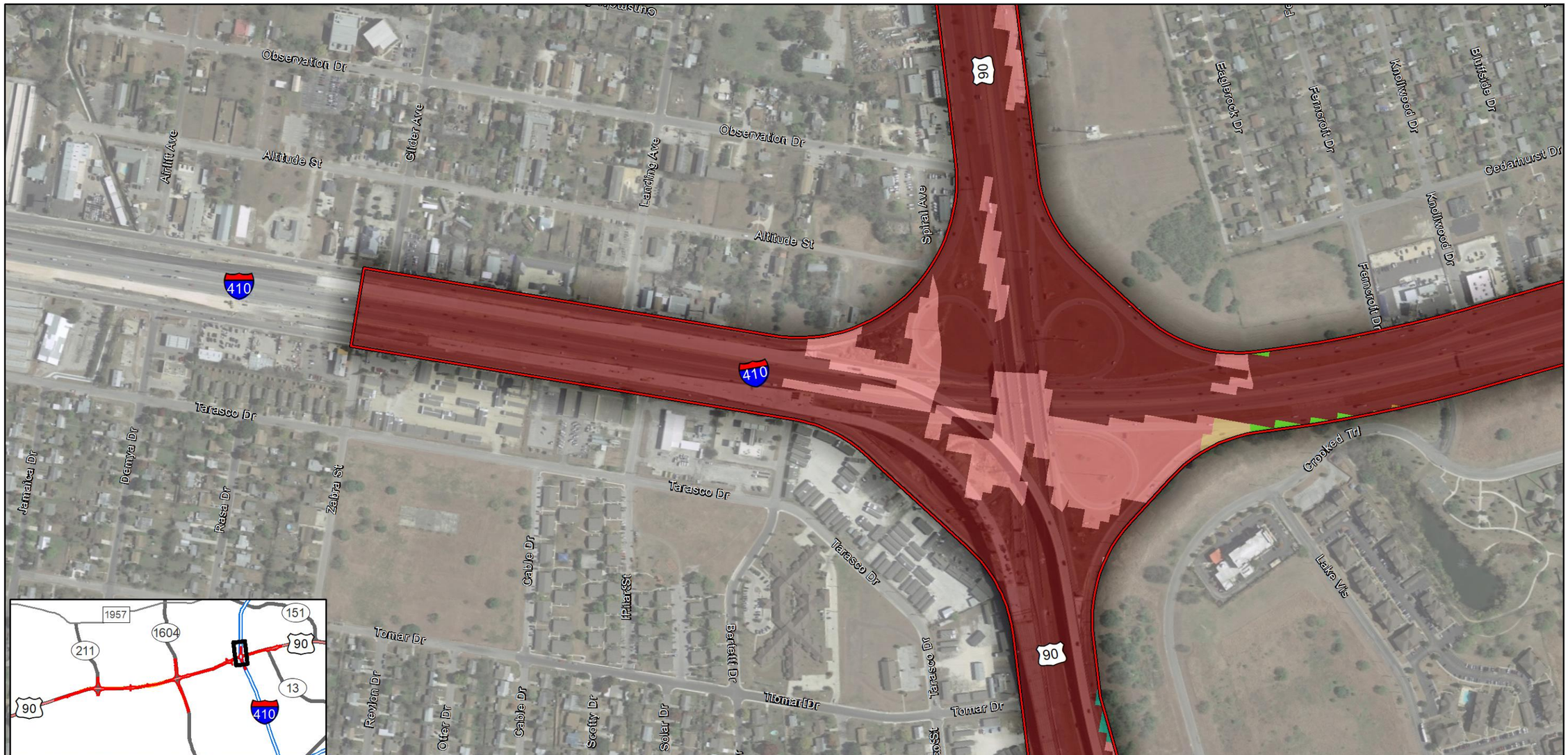
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.13
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way

Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.14
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

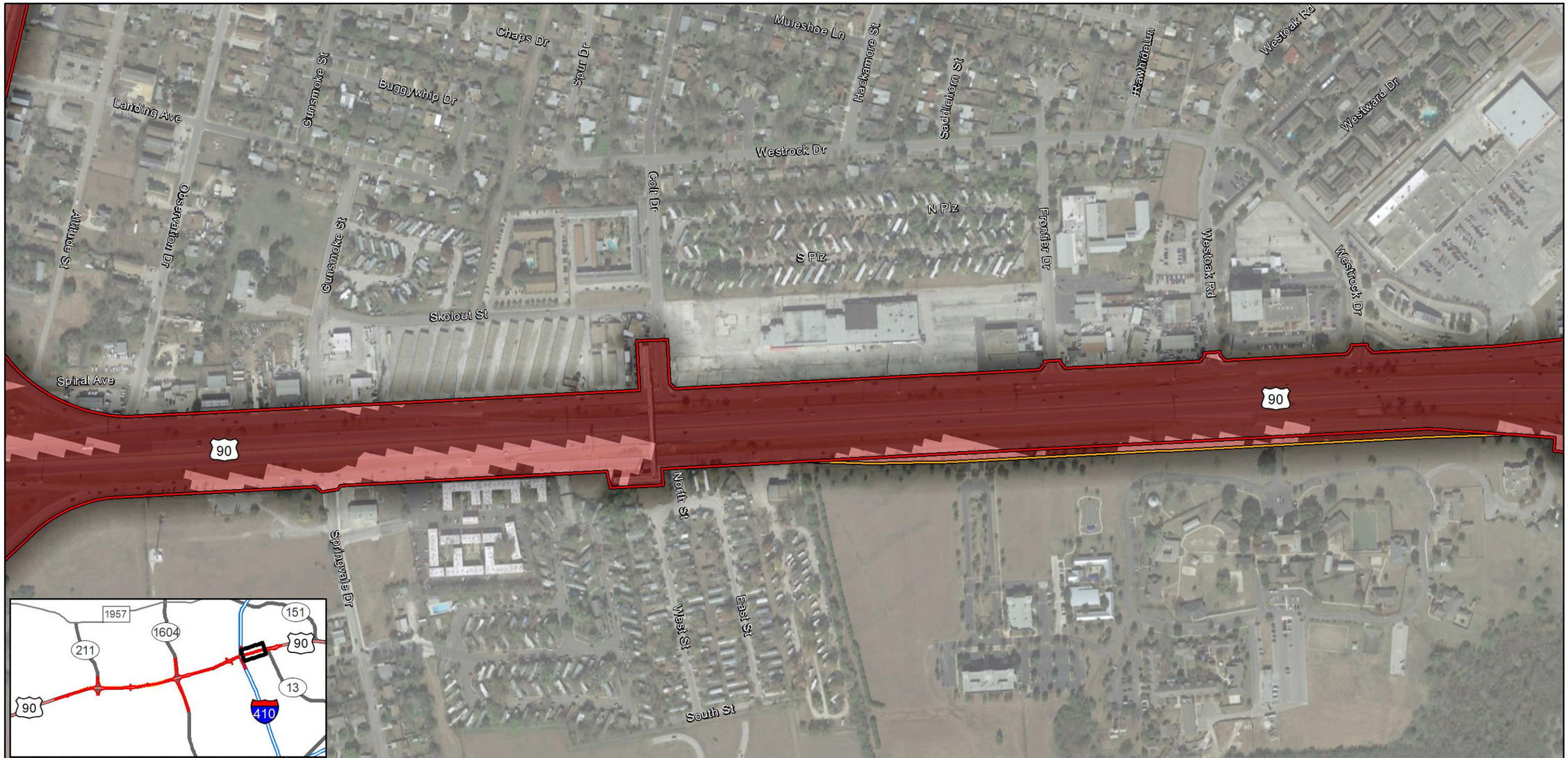
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.15
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way

Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.16
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

EMST

- Barren
- Blackland Prairie: Disturbance or Tame Grassland
- Edwards Plateau: Ashe Juniper-Live Oak Shrubland
- Edwards Plateau: Floodplain Deciduous Shrubland
- Edwards Plateau: Floodplain Hardwood Forest
- Edwards Plateau: Floodplain Herbaceous Vegetation
- Edwards Plateau: Riparian Hardwood Forest
- Edwards Plateau: Riparian Herbaceous Vegetation
- Edwards Plateau: Savanna Grassland
- Native Invasive: Deciduous Woodland
- Native Invasive: Huisache Woodland or Shrubland
- Native Invasive: Mesquite Shrubland
- Post Oak Savanna: Post Oak - Live Oak Motte and Woodland
- Row Crops
- South Texas: Shallow Shrubland
- Urban High Intensity
- Urban Low Intensity

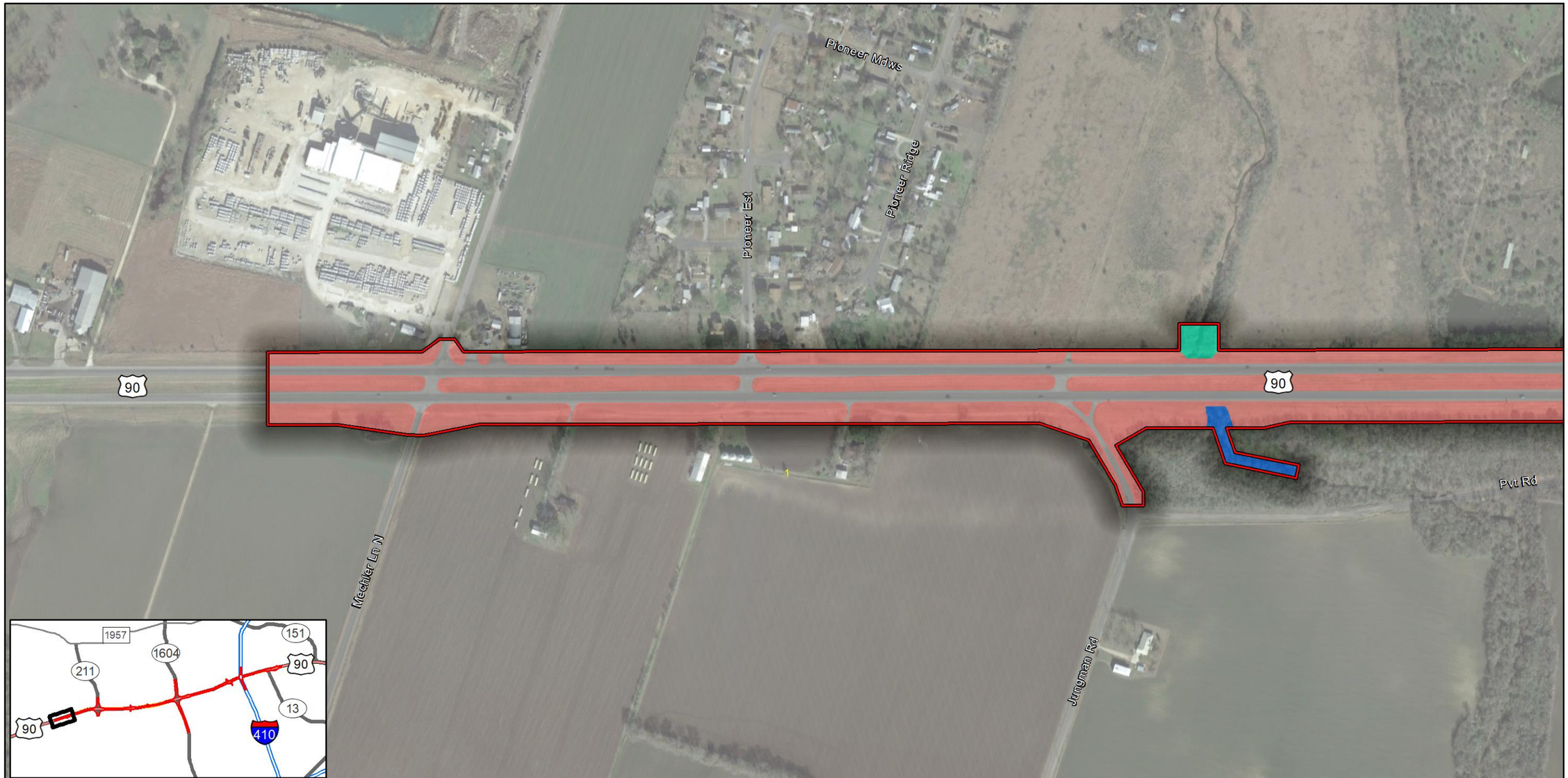
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 8.17
Ecological Mapping System of Texas (EMST) Mapped Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

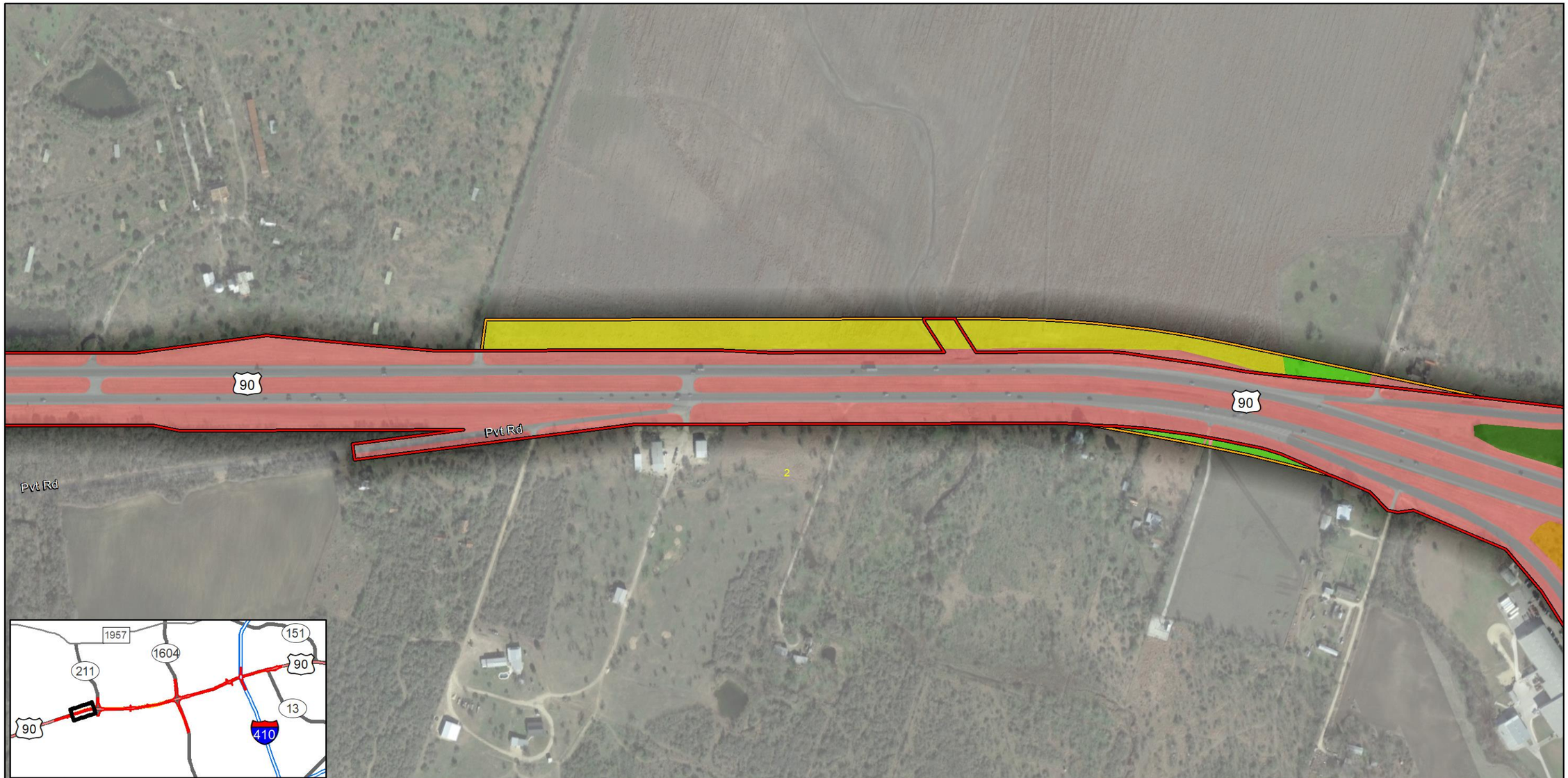
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.1
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

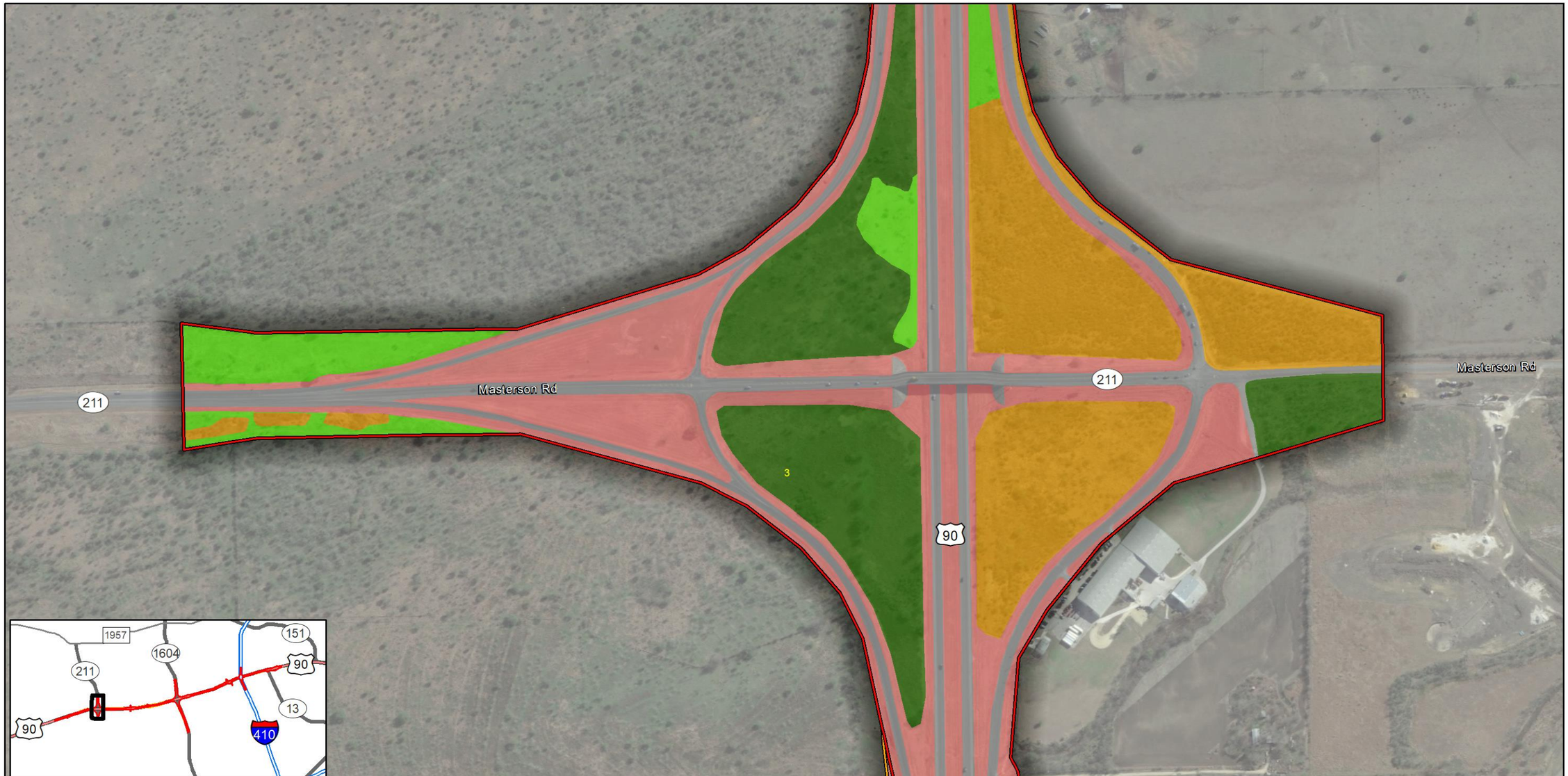
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.2
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.3
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.4
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.5
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

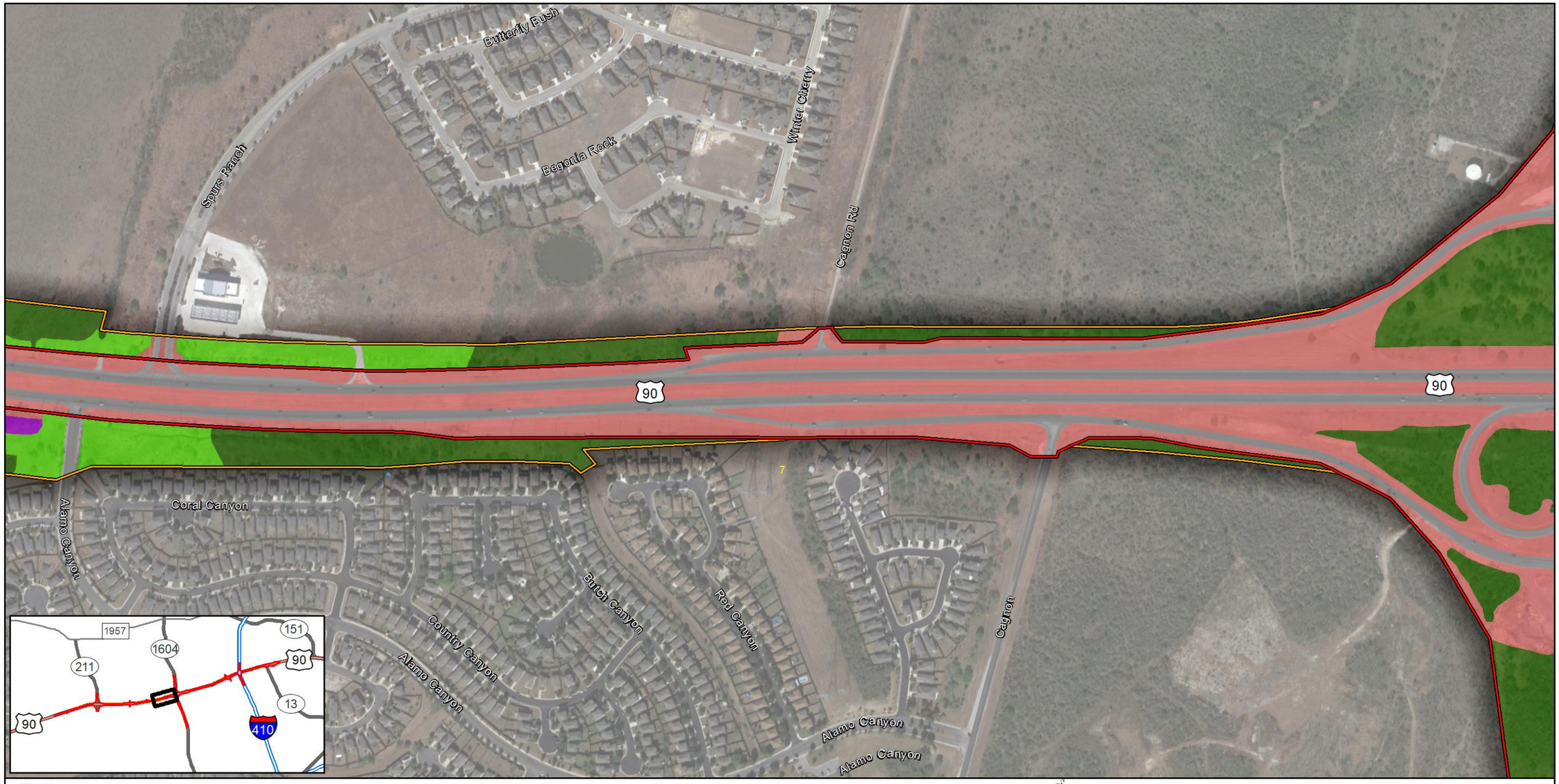
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.6
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.7
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way

Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.8
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.9
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.10
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.11
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way

Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

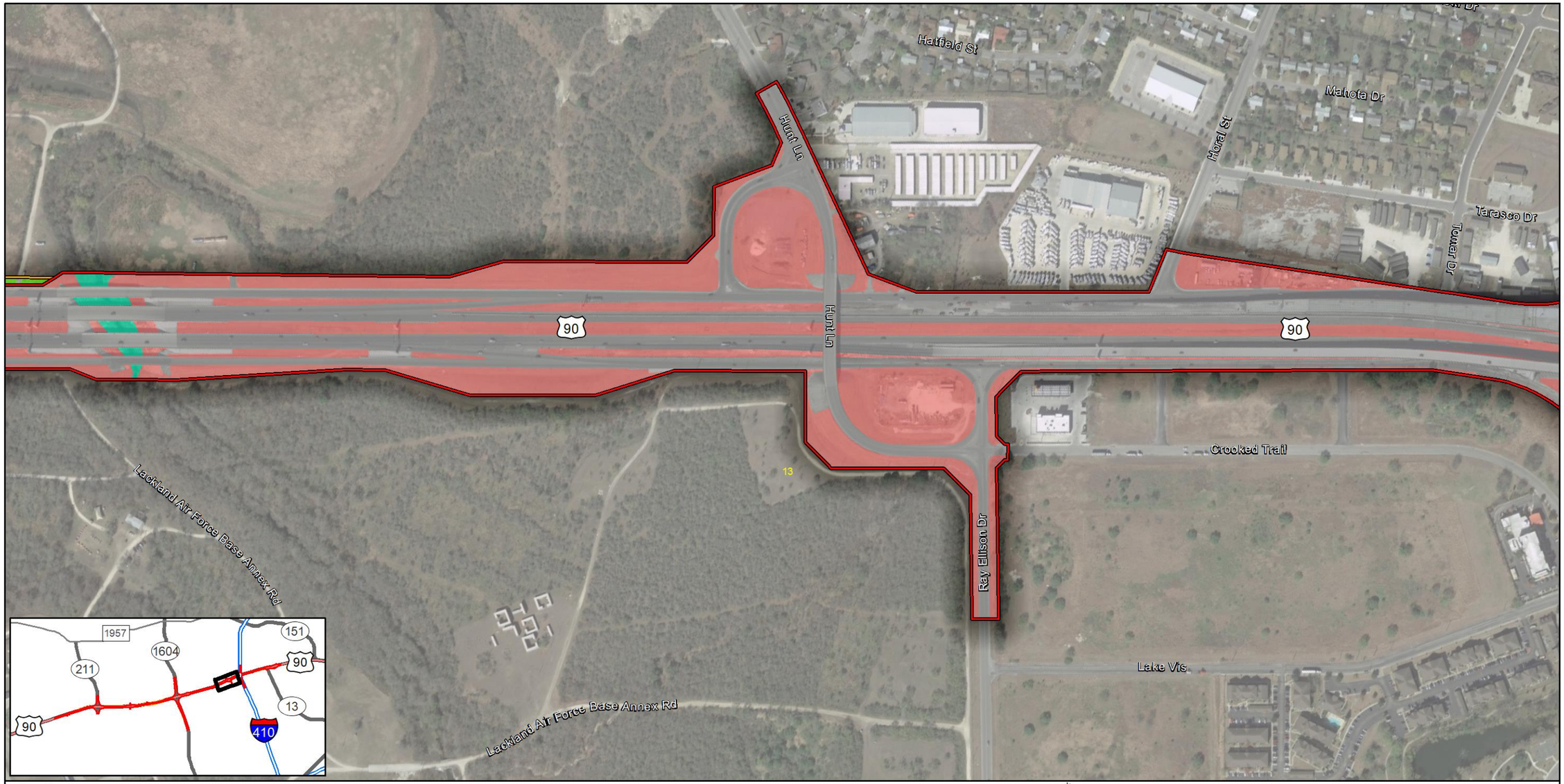
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.12
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.13
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way

Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.14
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.15
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

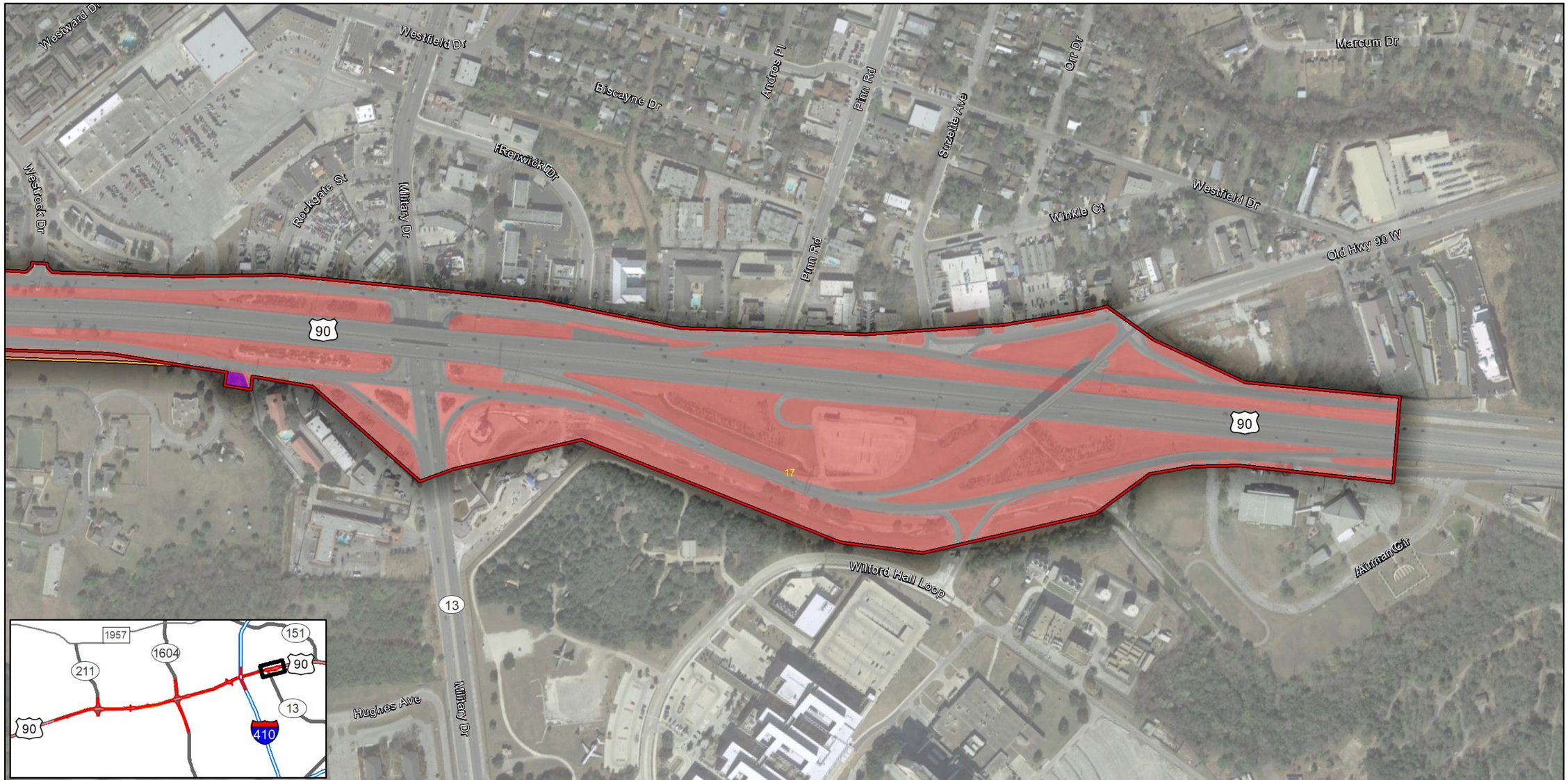
1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.16
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140



Existing Right-of-way
Proposed Right-of-way

Field Verified Vegetation

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Deciduous Shrubland
- Central Texas: Floodplain Hardwood Forest
- Existing Transportation
- Native Invasive: Baccharis Shrubland
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Row Crops
- Urban Low Intensity

1:4,800

0 200 400 600 800

Feet

Base Map: Google Imagery 2018

Figure 9.17
Field Verified Vegetation
US 90 from SH 211 to LP 13
Bexar County County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060 and 0024-08-140

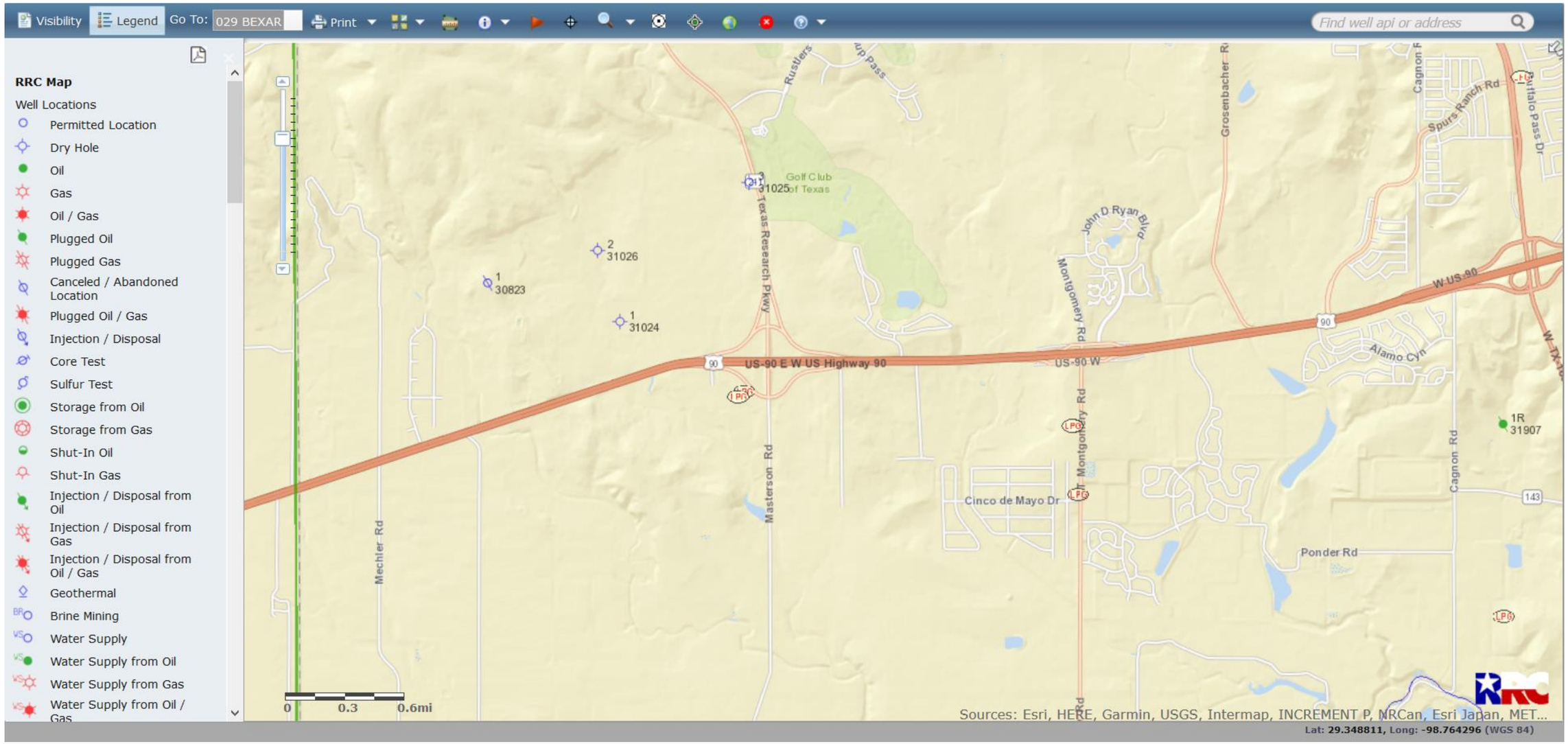


Figure 10.1. Railroad Commission of Texas Public GIS Viewer, 2020.

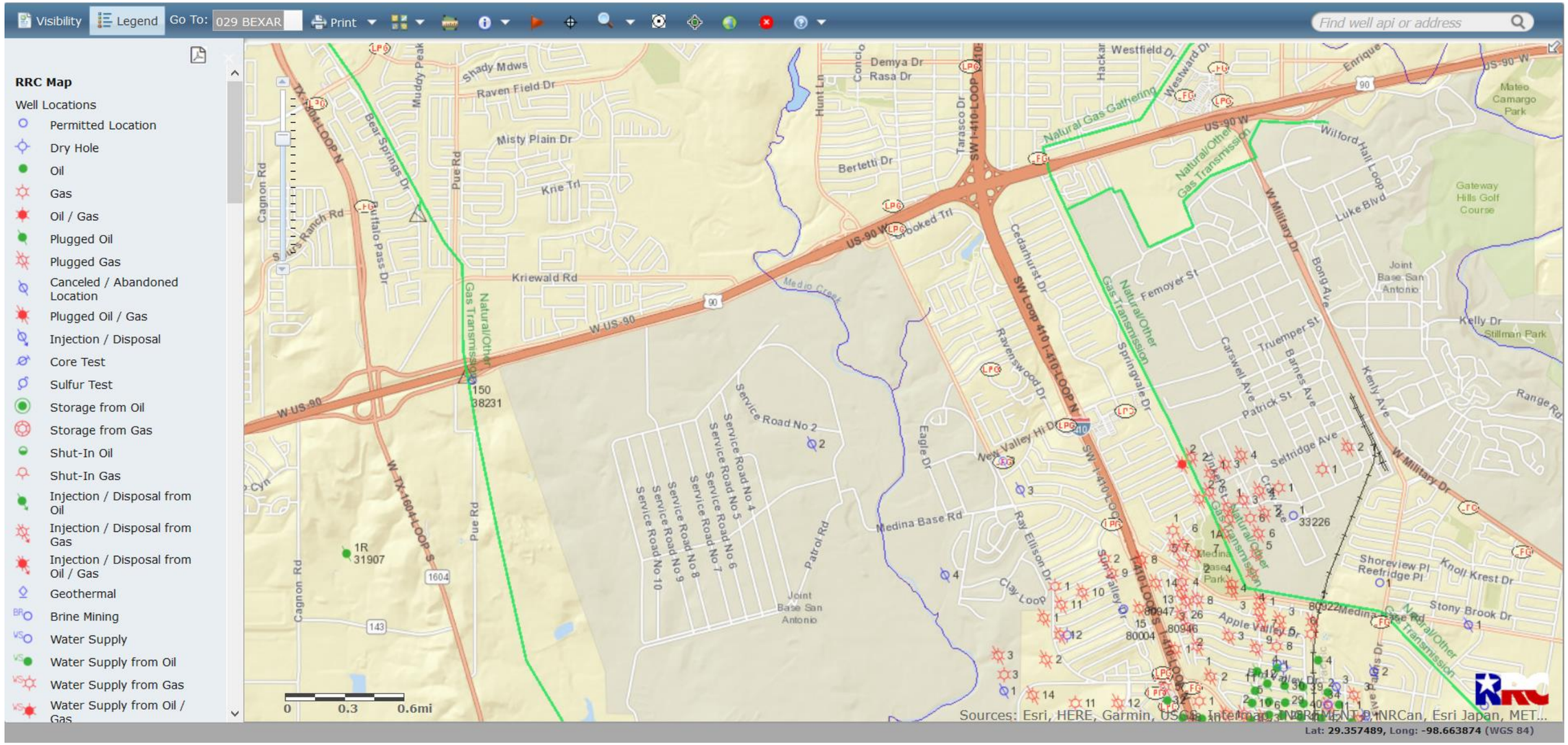
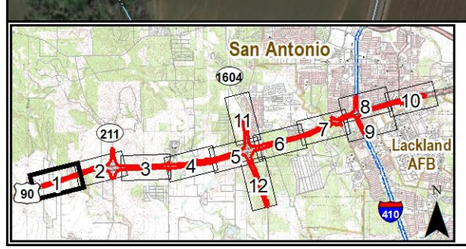


Figure 10.2. Railroad Commission of Texas Public GIS Viewer, 2020.



Base Map: Google Map Service; ESRI-USA Base Map

Existing Right-of-way
Proposed Right-of-way
Project Plan
Non-impacted Receiver (R#)
Impacted Receiver (R#)

1:6,000

0 500 1,000
Feet

Figure 11.1
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060,
and 0024-08-140

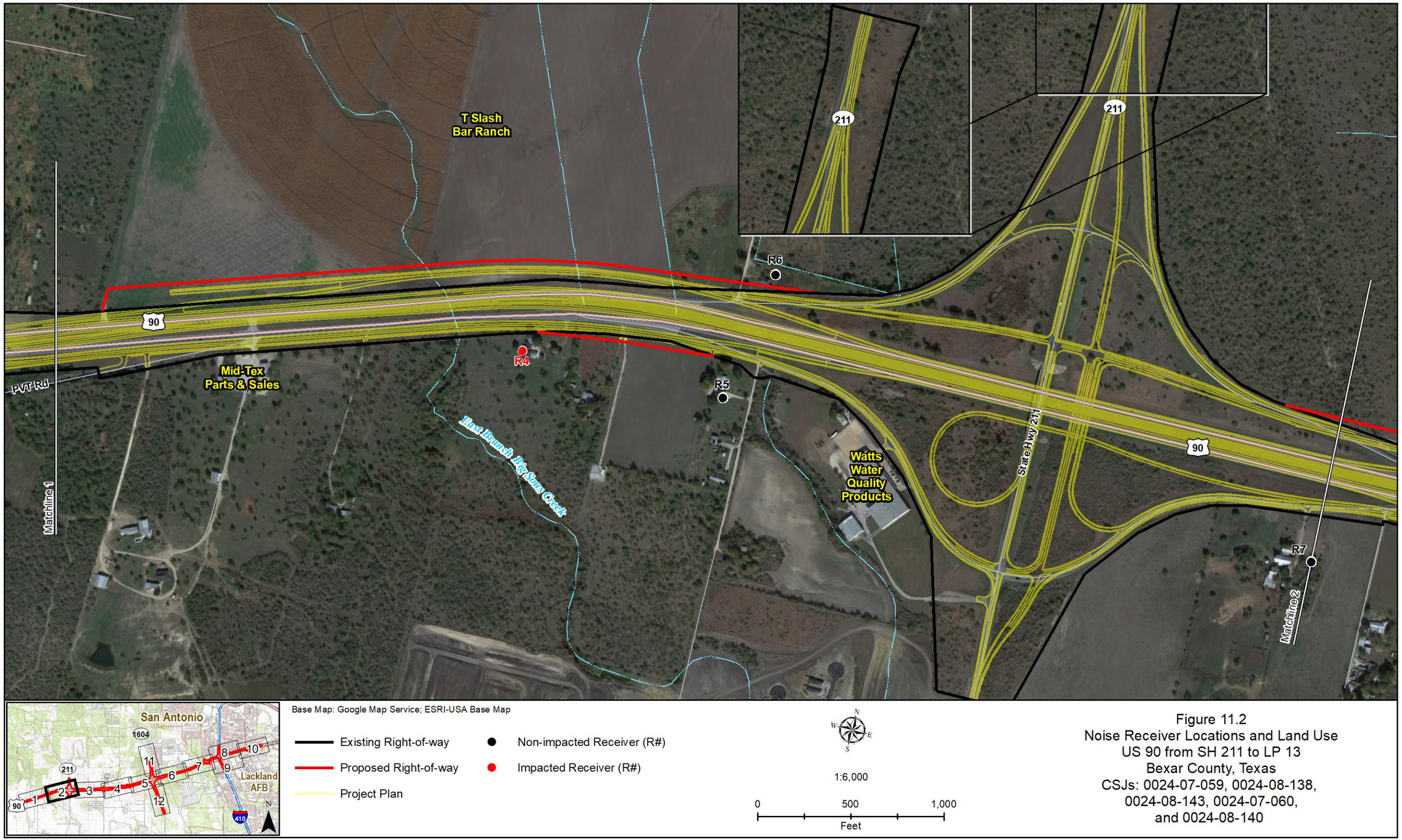
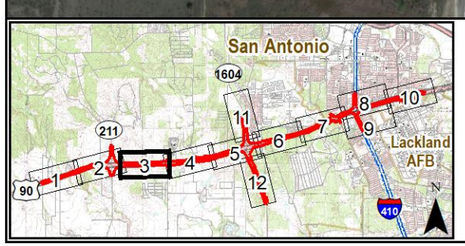


Figure 11.2
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060,
and 0024-08-140



Base Map: Google Map Service; ESRI-USA Base Map

Existing Right-of-way

Proposed Right-of-way

Project Plan

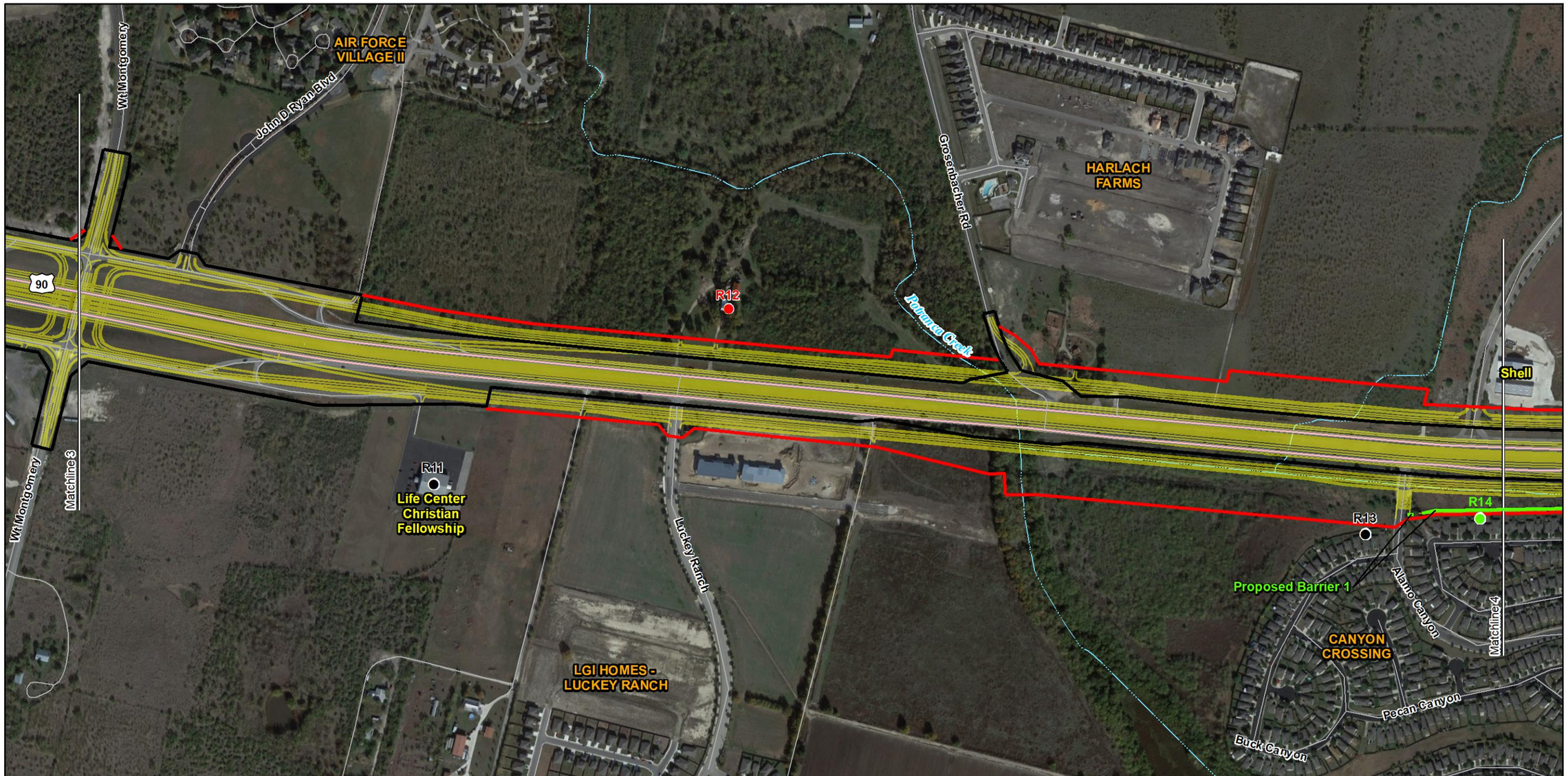
Non-impacted Receiver (R#)

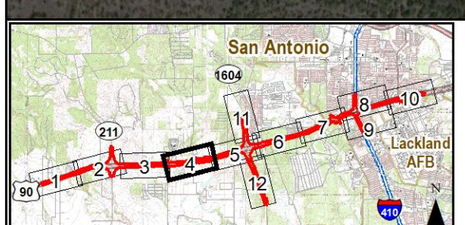
N
W E
S

1:6,000

0 500 1,000
Feet

Figure 11.3
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060,
and 0024-08-140





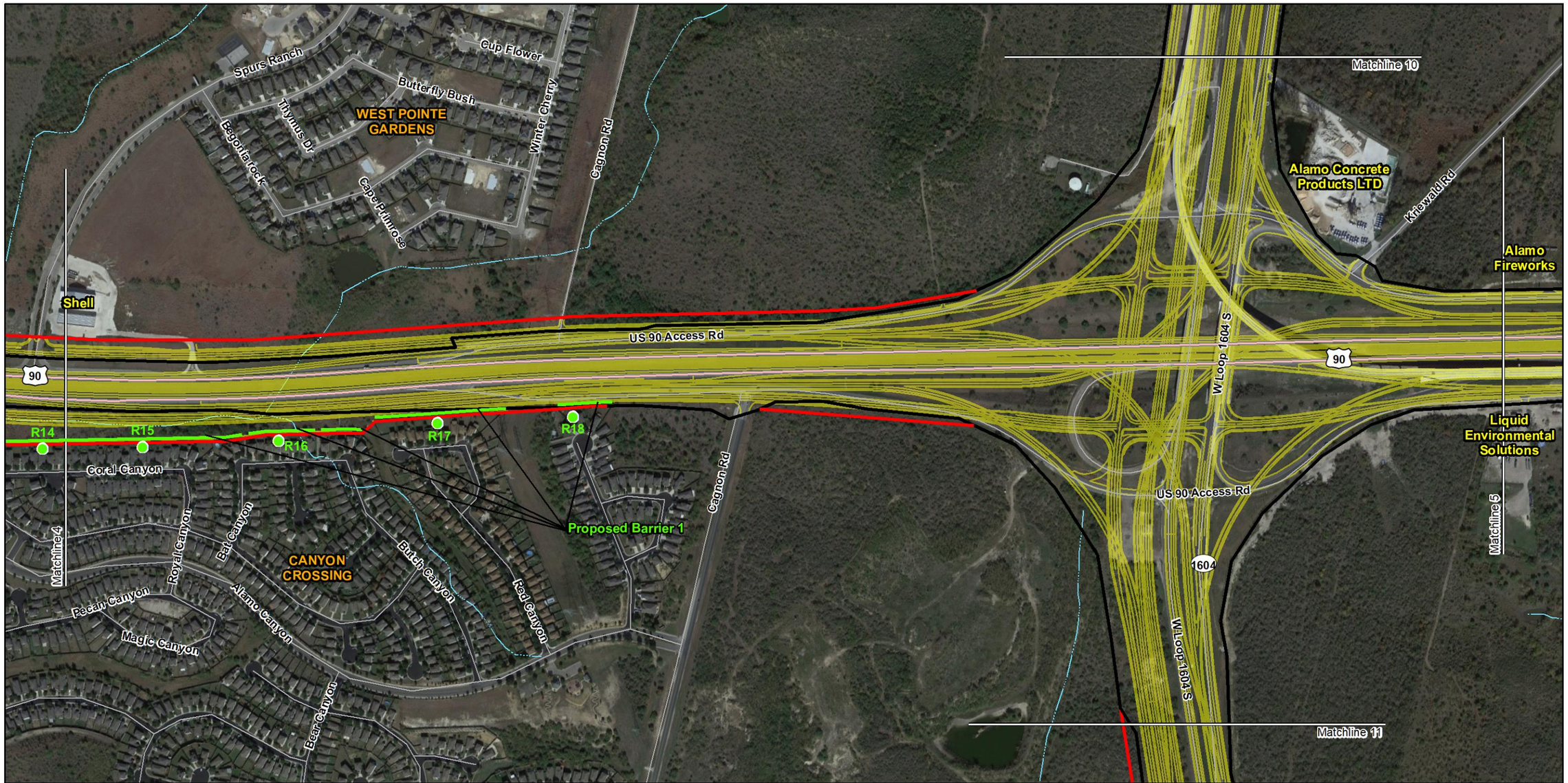
Base Map: Google Map Service; ESRI-USA Base Map

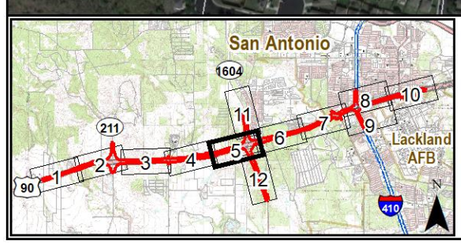
Existing Right-of-way
Proposed Right-of-way
Project Plan
Non-impacted Receiver (R#)
Impacted Receiver (R#)
Benefited Receiver (R#)

1:6,000

0 500 1,000
Feet

Figure 11.4
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060,
and 0024-08-140





Base Map: Google Map Service; ESRI-USA Base Map

Existing Right-of-way

Proposed Right-of-way

Project Plan

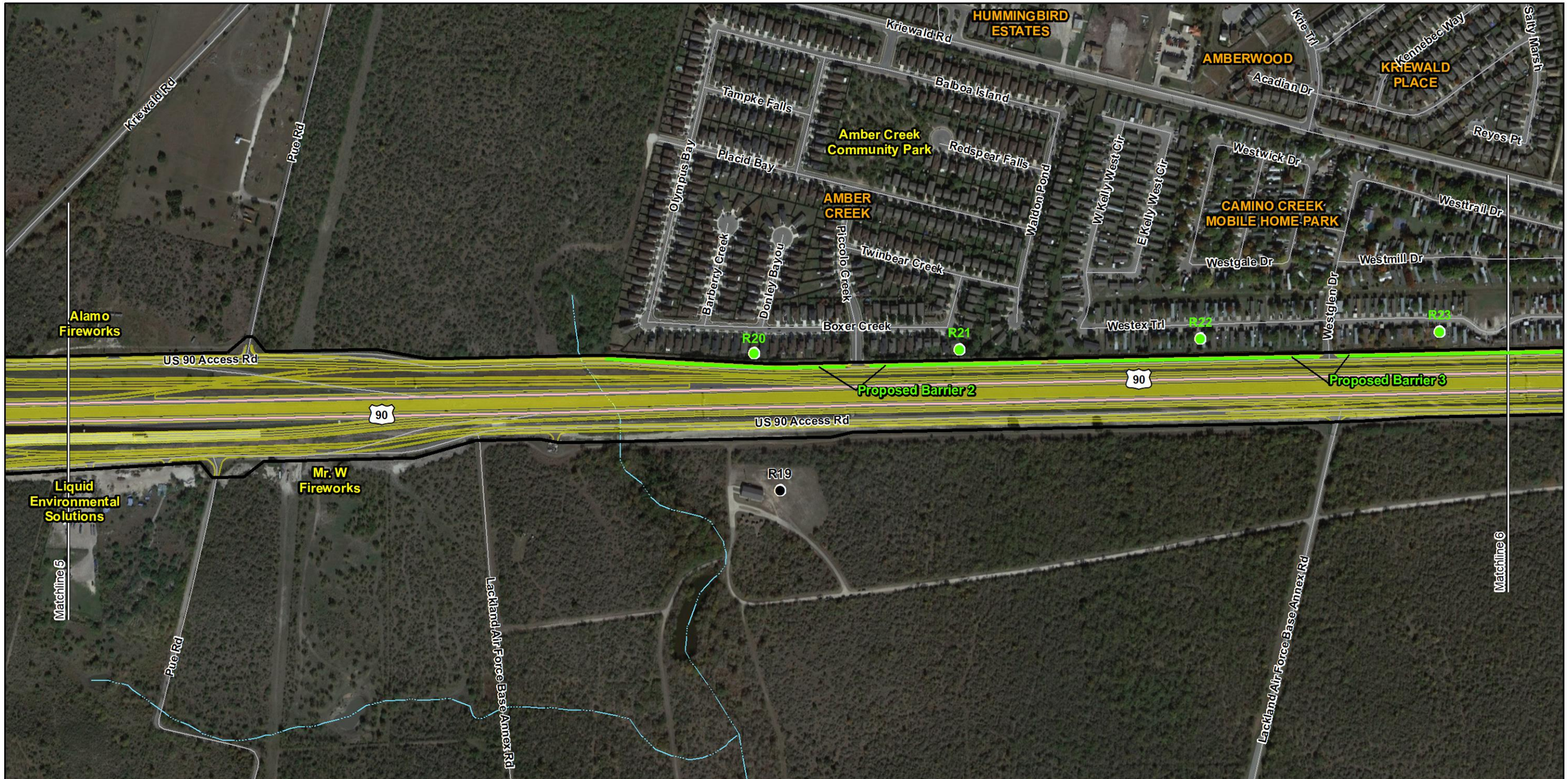
Benefited Receiver (R#)

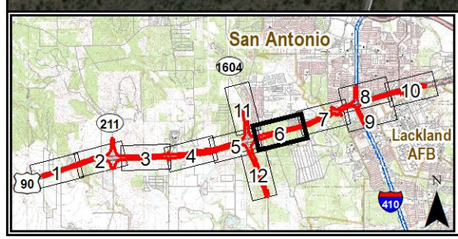
1:6,000

0 500 1,000

Feet

Figure 11.5
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060,
and 0024-08-140





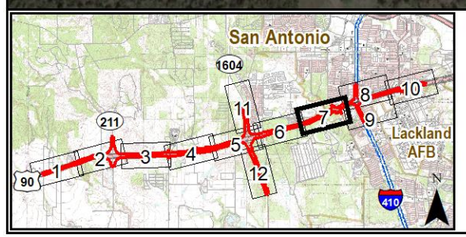
Base Map: Google Map Service; ESRI-USA Base Map

Existing Right-of-way
Project Plan
Non-impacted Receiver (R#)
Benefited Receiver (R#)

1:6,000

0 500 1,000
Feet

Figure 11.6
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060,
and 0024-08-140



Base Map: Google Map Service; ESRI-USA Base Map

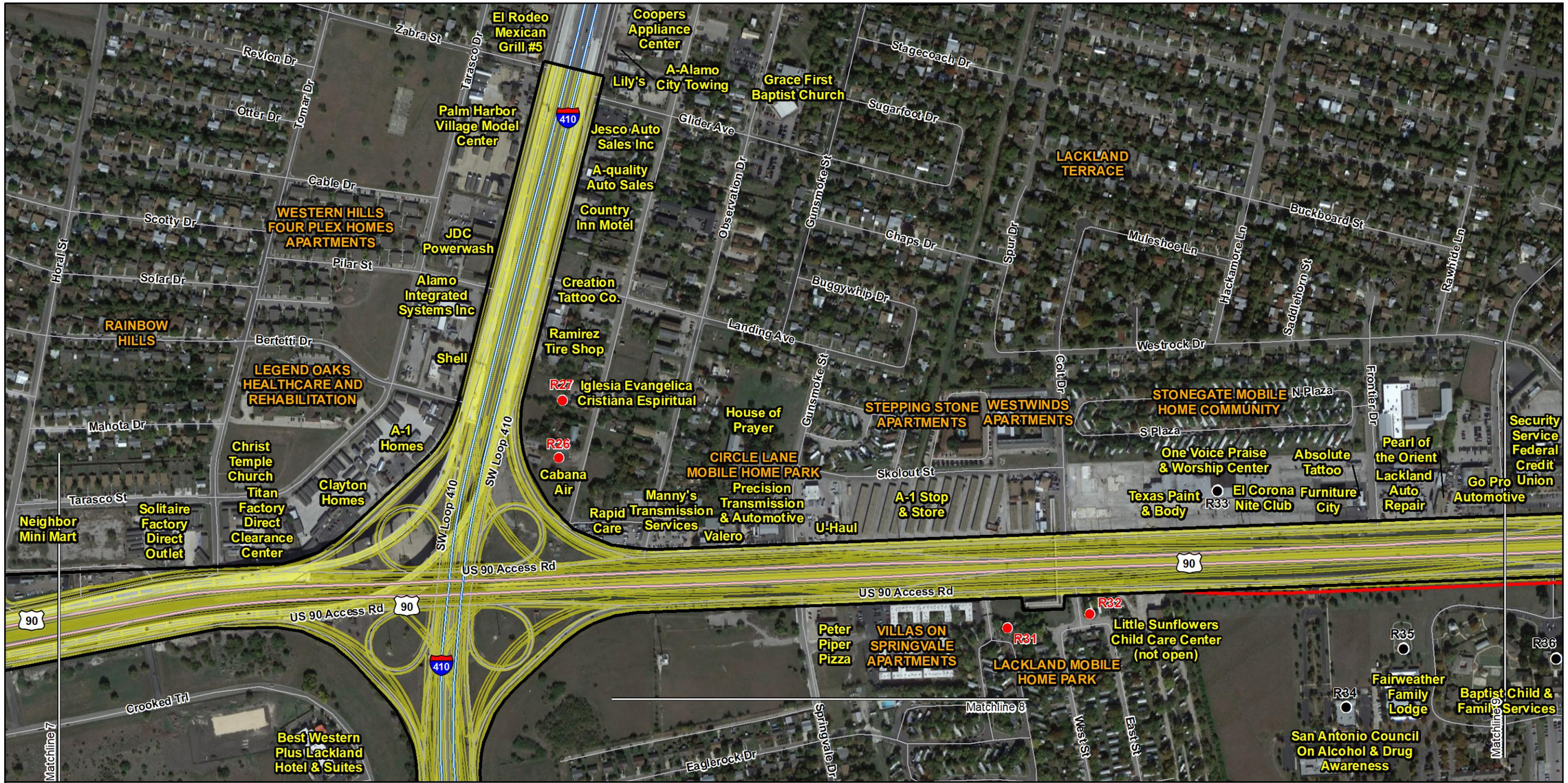
Existing Right-of-way
Proposed Right-of-way
Project Plan
Non-impacted Receiver (R#)
Benefited Receiver (R#)

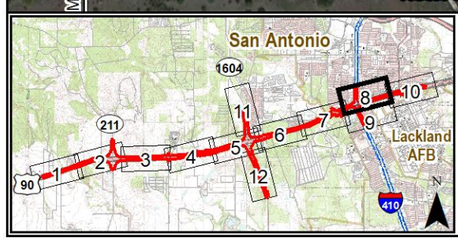
N W E S

1:6,000

0 500 1,000
Feet

Figure 11.7
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060,
and 0024-08-140





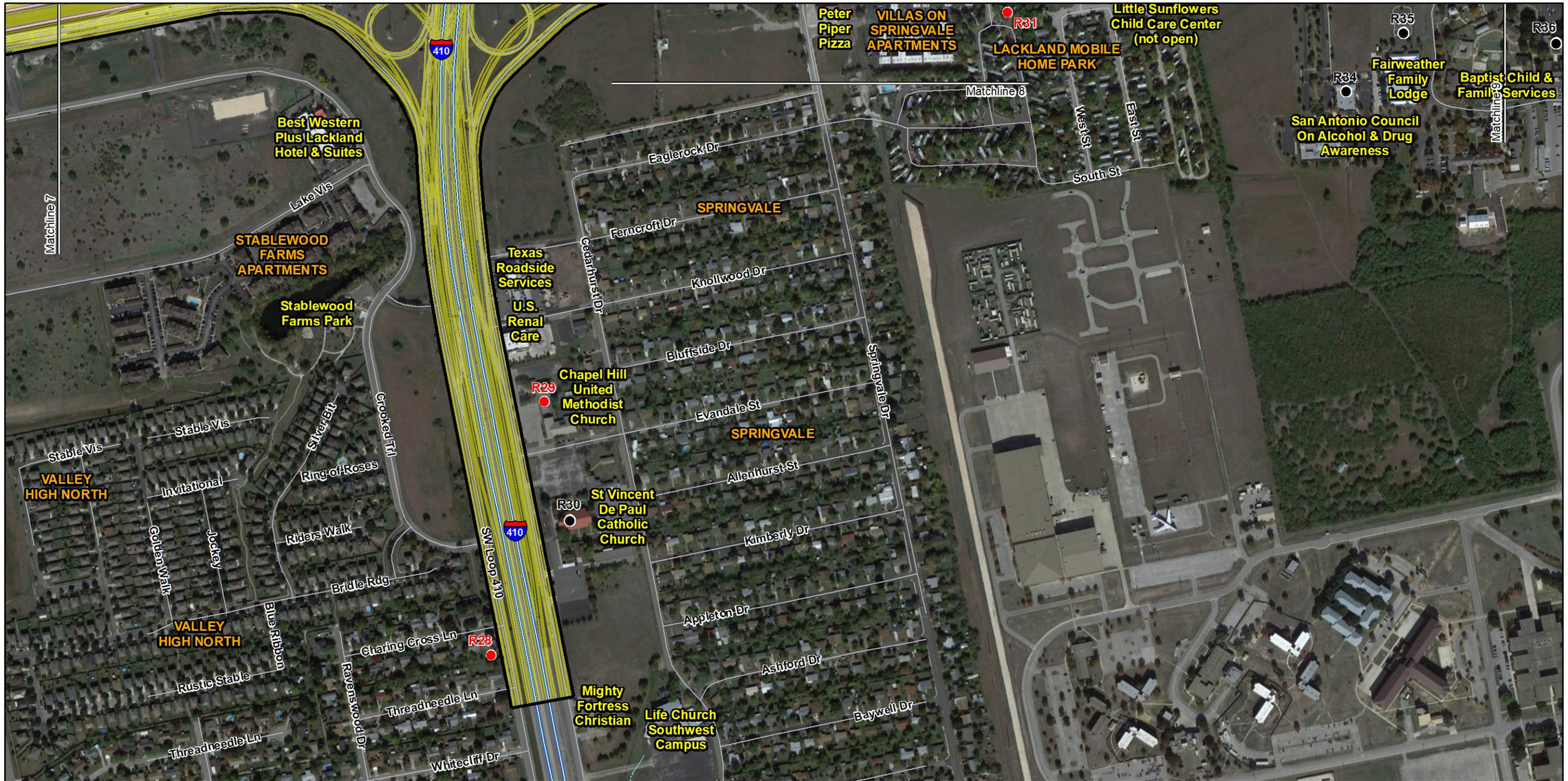
Base Map: Google Map Service; ESRI-USA Base Map

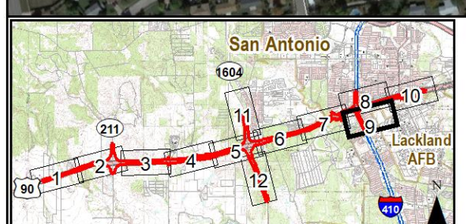
Existing Right-of-way
Proposed Right-of-way
Project Plan
Non-impacted Receiver (R#)
Impacted Receiver (R#)

1:6,000

0 500 1,000
Feet

Figure 11.8
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060, and 0024-08-140





Base Map: Google Map Service; ESRI-USA Base Map

Existing Right-of-way
Project Plan
Non-impacted Receiver (R#)
Impacted Receiver (R#)

1:6,000

0 500 1,000
Feet

Figure 11.9
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060, and 0024-08-140

Base Map: Google Map Service; ESRI-USA Base Map

Existing Right-of-way

Proposed Right-of-way

Project Plan

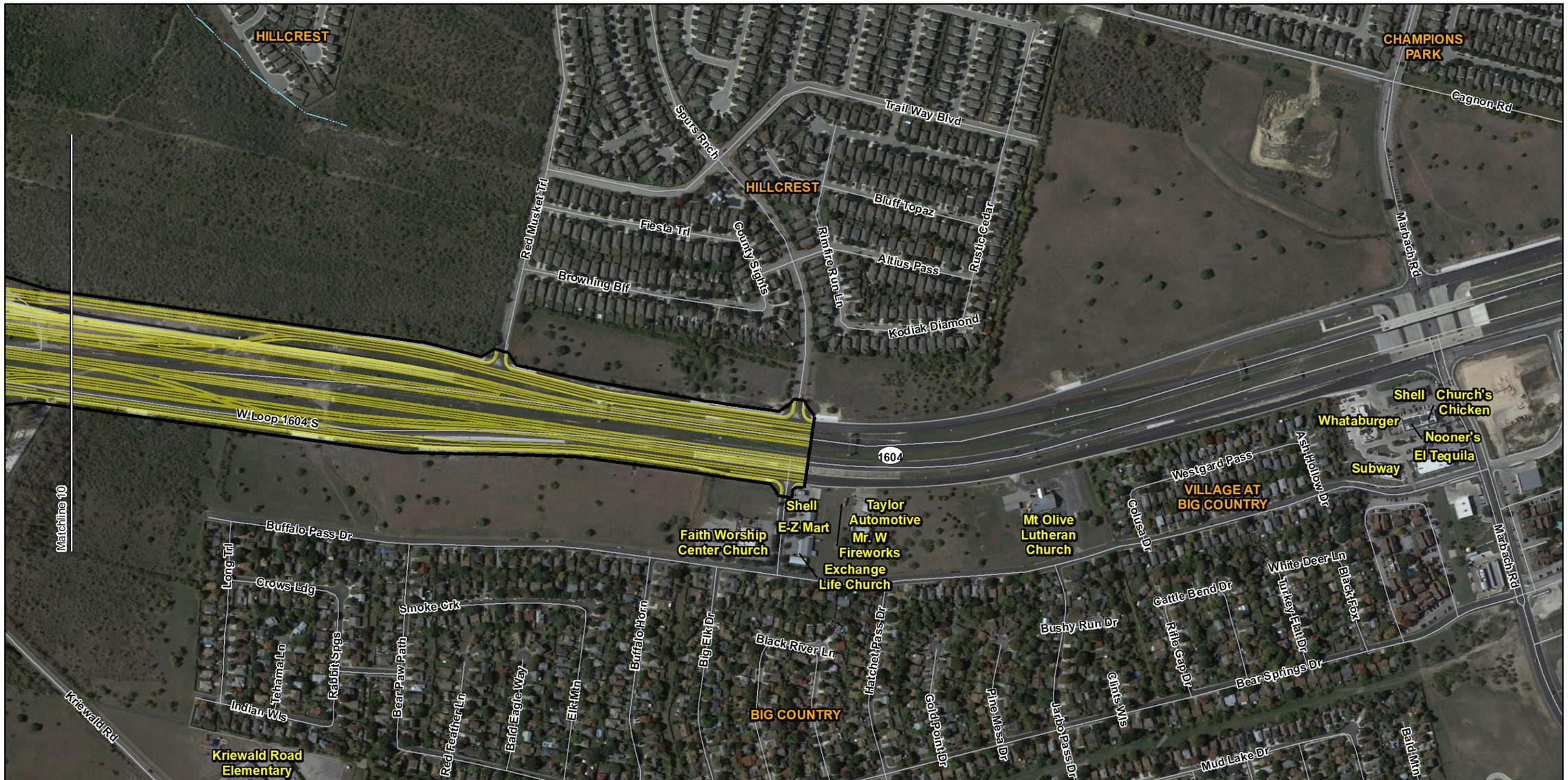
Non-impacted Receiver (R#)

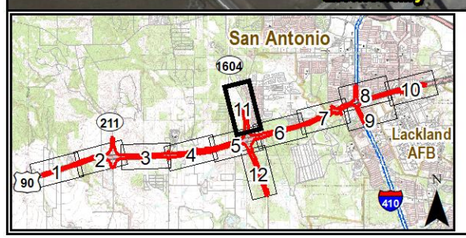
1:6,000

0 500 1,000

Feet

Figure 11.10
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138, 0024-08-143, 0024-07-060, and 0024-08-140





Base Map: Google Map Service; ESRI-USA Base Map

Existing Right-of-way

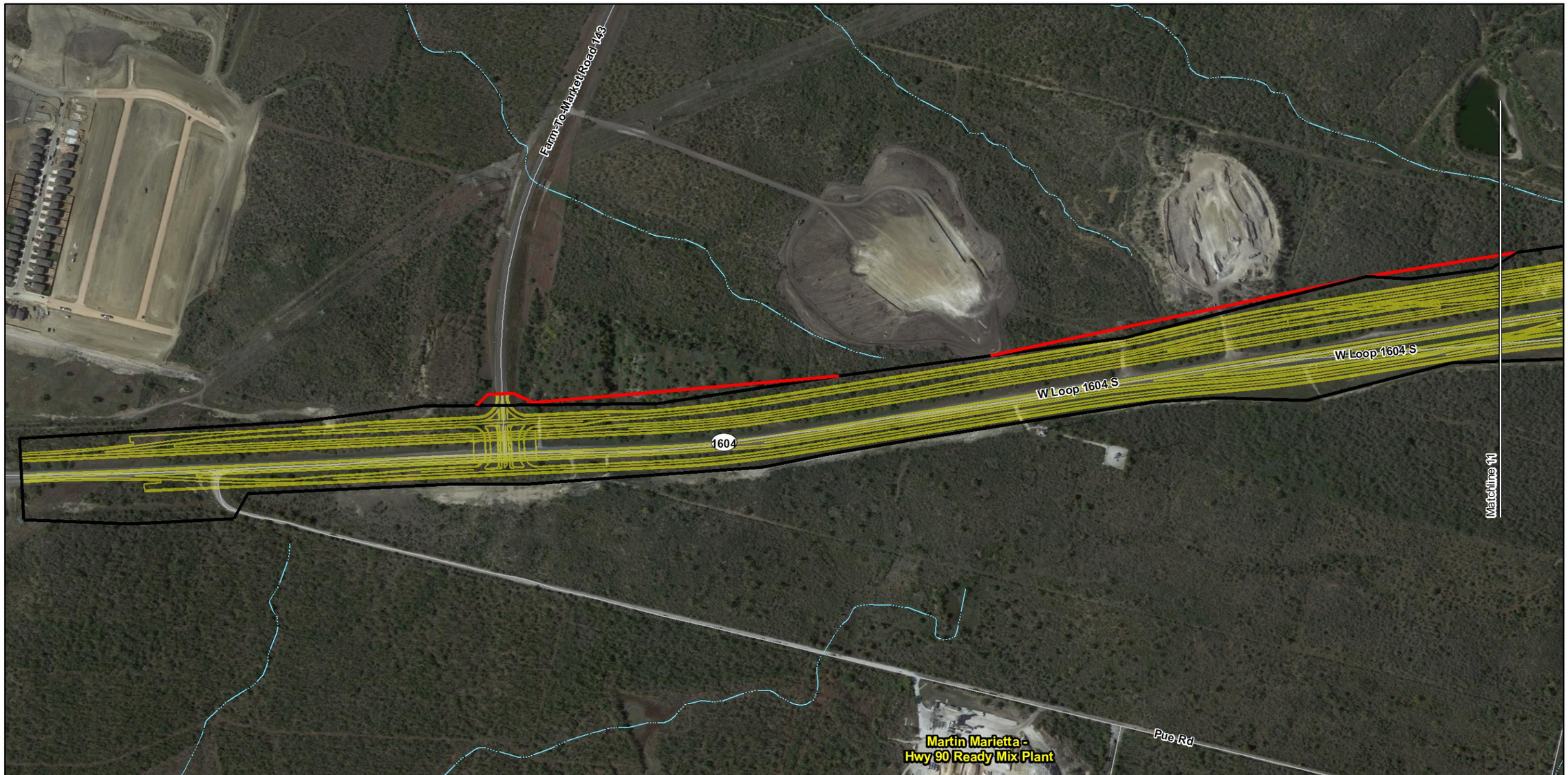
Project Plan

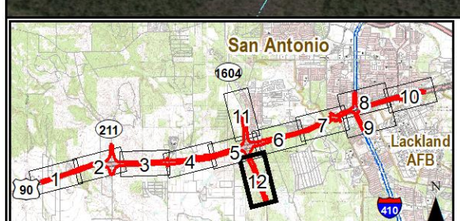
1:6,000

0 500 1,000

Feet

Figure 11.11
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060,
and 0024-08-140





Base Map: Google Map Service; ESRI-USA Base Map

Existing Right-of-way

Proposed Right-of-way

Project Plan

1:6,000

0 500 1,000

Feet

Figure 11.12
Noise Receiver Locations and Land Use
US 90 from SH 211 to LP 13
Bexar County, Texas
CSJs: 0024-07-059, 0024-08-138,
0024-08-143, 0024-07-060,
and 0024-08-140

Appendix G

Resource Agency Coordination

USDA-NRCS Coordination for Prime Farmland

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request 10/10/19 | 4. Sheet 1 of 1
1. Name of Project US 90 from SH 211 to I-410	5. Federal Agency Involved TxDOT
2. Type of Project Road Improvement	6. County and State Bexar, Texas

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☐ NO ☐		4. Acres Irrigated | Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*		Alternative Corridor For Segment _____			
		Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly		587			
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0			
C. Total Acres In Corridor		903			
PART IV *(To be completed by NRCS) Land Evaluation Information*					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide And Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*					
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points				
1. Area in Nonurban Use	15	9			
2. Perimeter in Nonurban Use	10	5			
3. Percent Of Corridor Being Farmed	20	1			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	10			
6. Creation Of Nonfarmable Farmland	25	5			
7. Availablility Of Farm Support Services	5	5			
8. On-Farm Investments	20	0			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	0			
TOTAL CORRIDOR ASSESSMENT POINTS	160	35	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	0	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	35	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	35	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing this Part: Nick Wallisch | DATE 10/10/19

NOTE: Complete a form for each segment with more than one Alternate Corridor

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?
More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
Site is protected - 20 points
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?
(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

Farmland Classification—Bexar County, Texas

Map Scale: 1:61,900 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 500 1000 2000 3000

Feet: 0 3000 6000 12000 18000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Soil Rating Points

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas
Survey Area Data: Version 22, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 22, 2018—Jan 4, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HgD	Rock outcrop-Olmos complex, 5 to 25 percent slopes	Not prime farmland	21.3	3.4%
HsB	Houston Black clay, 1 to 3 percent slopes	All areas are prime farmland	36.0	5.7%
HtA	Branyon clay, 0 to 1 percent slopes	All areas are prime farmland	83.1	13.1%
HtB	Branyon clay, 1 to 3 percent slopes	All areas are prime farmland	56.4	8.9%
HuB	Houston Black gravelly clay, 1 to 3 percent slopes	All areas are prime farmland	194.9	30.7%
HuC	Houston Black gravelly clay, 3 to 5 percent slopes	All areas are prime farmland	58.3	9.2%
HuD	Houston Black gravelly clay, 5 to 8 percent slopes	Not prime farmland	49.6	7.8%
LvA	Lewisville silty clay, 0 to 1 percent slopes	All areas are prime farmland	26.1	4.1%
LvB	Lewisville silty clay, 1 to 3 percent slopes	All areas are prime farmland	5.8	0.9%
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	Not prime farmland	44.0	6.9%
PaC	Patrick soils, 3 to 5 percent slopes, rarely flooded	Not prime farmland	20.2	3.2%
Tf	Tinn and Frio soils, 0 to 1 percent slopes, frequently flooded	Not prime farmland	31.9	5.0%
VcB	Sunev clay loam, 1 to 3 percent slopes	Farmland of statewide importance	7.8	1.2%
Totals for Area of Interest			**635.5**	**100.0%**

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Archeological Coordination

Back To List

Assignment Details ★ Activity

Print this Page

Coordinate Archeology Survey

Associated Activity: Perform Archeology Survey

Agency Name: Texas Historical Commission-Archeology(THC-A)

Coordination Status: Completed

Are Correspondence Details Included: Yes

Add Correspondence

Correspondence Status:

Correspondence Method:

Correspondence Date :

Correspondence From:

Correspondence To:

Comments:

Correspondence For	Correspondence Type	Date	Correspondence From	Correspondence To	Comments	Actions
Sent Information	Letter	02/21/2008	TxDOT	THC-A	This coordination letter is for eligibility testing at 41BX1749. This site is in the APE. The letter disagrees with CAR-UTSA assessment. TxDOT and THC agree that 41BX1749 is not eligible within the existing ROW.	
Response received - no futher action	Letter	02/21/2008	THC-A	TxDOT	THC concurrence that 41BX1749 is not eligible in ROW. No survey was necessary for 0024-07-059. Coordinated as a Background Study through ENV weekly list.	

Comments: Spell

Based on additional documentation, no field survey is needed. Rather then delete the activity from the record, the coordination letter is provided to explain why the Survey Activity produced no survey report and that the status of 41BX1749 has been determined Ineligible by the THC, despite the Texas Site Atlas listing the site eligible. The project requires no additional archeological investigation and will be cleared on the ENV Arch weekly list as a Background Study.

Last Updated By: Eric Oksanen **Last Updated Date:** 12/18/2019 02:29:08

002407-059

Scanned
3.24.08
JDL

Texas Department of Transportation

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

January 29, 2008

RECEIVED
FEB 07 2008
TEXAS HISTORICAL COMMISSION

Reconstruction of Loop IH 410 SW, From SH 16 to Culebra Road
San Antonio District, Bexar County, CSJ:, 0521-04-204, 0521-05-118, 0521-05-1
0521-05-093, 0521-04-254. 0017-02-060
THC Antiquities Permit No. 3003

Section 106 Consulation and Transmittal of UTSA Draft Archeological Survey Reports:

1. Archeological Survey of Loop 410 SW
2. Investigations at 41BX1749

James E. Bruseth, Ph.D.
Division of Archeology, Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711

Dear Dr. Bruseth:

The above-referenced project will be conducted with state and federal funds. As required by the Antiquities Code of Texas, our Memorandum of Understanding and the First Amended Programmatic Agreement (PA, 2005) with your agency, we are continuing consultation on this project.

The proposed project is located in the urban southwest section of the city of San Antonio, Bexar County, Texas, and encompasses a portion of an inner loop around the metropolitan area. IH 410 is a major interior 6-lane loop within the urban setting of the city of San Antonio. Since its construction in 1967 it has become increasing congested and unable to accommodate the increased traffic capacity. Proposed improvements include additional main lanes, reconfiguring entrance and exit ramps, and the addition of direct connectors at major interchanges. The area of potential effects (APE) consists of existing and new rights-of-way along an ca.13-mile length of roadway from the vicinity of SH 16 to the approaches of the Culebra Road intersection. Right-of-way width varies from about 300 to 455 feet and both horizontal and vertical alignments will change. Construction plans have not be finalized but current depths of impact will usually be within previous construction levels although may extend to more than 24 feet if new bridge or overpass columns are required. The archeological APE will include an additional 50' width beyond the current and new ROW to accommodate small design changes and utility adjustments. See enclosed project description for maps and photographs.

This letter is to inform your office that archeological investigations in the form of intensive survey have been completed in all currently accessible areas of the area of potential effects. As a result, in addition to a project description that is attached, we are also forwarding to you the reports of two archeological investigations conducted by the University of Texas at San Antonio (UTSA) for this project. The archeological reports enclosed document the results of the over-all project survey and the results of investigations conducted at the prehistoric lithic scatter of site 41BX1749. These reports and our comments provide a summation of findings and final recommendations of eligibility for archeological properties identified in all accessible the areas of the APE.

TXDOT-ENV
FEB 25 2008
CRM

January 29, 2008

Reconstruction of Loop IH 410 SW, From SH 16 to Culebra Road
San Antonio District, Bexar County, CSJ:, 0521-04-204, 0521-05-118, 0521-05-119,
0521-05-093, 0521-04-254. 0017-02-060
THC Antiquities Permit No. 3003

In summary, no archeological sites were identified within accessible rights-of-way (ROW) that TxDOT recommends as eligibile for listing on the National Register of Historic Places. Four previously recorded prehistoric archeological sites were found to be within the APE; sites 41BX555, -BX556, -BX683, and 41BX704 and following investigations, no further work was recommended. One newly recorded site, 41BX1749, containing prehistoric and historical materials is discussed below. We will continue consultation with your office for those areas where rights-of-entry are presently unavailable.

Archeological investigations have been completed at that portion of the prehistoric site of 41BX1749 lying within the APE. The enclosed report describes the result of investigations at 41BX1749 within the US 90 ROW associated with interchange improvements along the approaches to Loop 410 SW. The site contains evidence of both historical and prehistoric activities in the form of light subsurface deposits of historical and prehistoric debris. Field investigations included auger testing, three 1 x 1 meter controlled hand units, and one backhoe trench. One previously excavated trench was also reopened.

Site 41BX1749 is located along the relatively narrow north ROW of the US 90 westbound access road approaching a bridge crossing of the Medio Creek. According to the maps provided, the site is extends ca. 60 meters parallel to the backslope and is less than 20 meters wide. One backhoe trench and three 1 x 1 meter controlled units sampled the deposits. The investigation found that: (1) the upper 30 cm consisted of disturbed mixed deposits; (2) test unit 1 identified a light scatter of buried late 19th debris including glass, metal and ceramic fragments ca. 50 cm below the surface and encountered prehistoric lithic debris mostly between levels 9-13 (ca. 90-130 cm) within an elastic clayey Houston Black stony soil association.

In general, the report's documentation is sufficient to evaluate the portion of the archeological property within TxDOT ROW for its eligibility for listing on the National Register and for designation as an SAL. No further work is recommended for the historical component due to the lack of intact features and disturbed nature of scattered deposits. We have also requested that for the final report, UTSA include or explain the lack of background historical archival data.

Based on the description of recovered prehistoric archeological materials that consisted of a modest collection of chronologically undiagnostic lithic debris, debitage, and a small collection of expedient stone tools, TxDOT cannot agree with UTSA's recommendation that the site is eligible for listing on the National Register under eligibility criterion D, e.g., for any new and important information the site's data may contribute. This is based on the report's description of archeological deposits and collected material, both of which reflect the absence of features, the lack of charcoal for dating, no evidence of depositional integrity, lack of separable living surfaces, and an unknown and non-definable number of occupational episodes. In addition, the small and undiagnostic nature of artifacts within the disturbed ROW does not provide a valid sample of archeological deposits for the over-all site area, most of which is assumed to lie beyond the area of potential effects. While TxDOT does not recommend any further work or eligibility for that portion of the site within the APE, we also recommend that if new ROW is required in the future, further evaluation is warranted to investigate the portion of the site presently lying beyond the current APE.

January 29, 2008

Reconstruction of Loop IH 410 SW, From SH 16 to Culebra Road
San Antonio District, Bexar County, CSJ:, 0521-04-204, 0521-05-118, 0521-05-119,
0521-05-093, 0521-04-254. 0017-02-060
THC Antiquities Permit No. 3003

In all other accessible areas of the APE, no further work is recommended at any other identified archeological site. As a result, TxDOT recommends that no archeological historic properties will be affected and that the project may proceed toward development and construction. As noted previously, we will continue consultation with your tribe as rights-of-entry become available for currently inaccessible locales.

In addition, to address the requirements of THC Antiquities Permit No. 3003, we request that pending any final comments from your office, UTSA may proceed to finalizing these reports and report production. TxDOT-ENV has previously reviewed and commented on the draft reports and our comments have been incorporated into the copies enclosed.

Thank you for your consideration in this matter. If you have any questions or have need of further information please contact me at (512) 416-2633.

Sincerely,

Al McGraw, Archeologist
Archeological Studies Program
Environmental Affairs Division

DRAFT REPORT
ACCEPTABLE
Please submit 30 final report copies
by
for F. Lawerence Oaks
State Historic Preservation Officer
Date 3-14-08
Track#

Enclosure
cc: San Antonio District Office, Attn: B. Salazar, ENV-VC, EL-scan, JG, AJMc

Concurrence By:

For:

F. Lawerence Oaks, Executive Director and SHPO — Date 2-21-08

MEMO

December 31, 2019

To: ECOS, Various Road Projects, Various CSJs, Various Districts

From: Scott Pletka, Ph.D.

Subject: Internal review under the Programmatic Agreement Among the Federal Highway Administration, the Texas Department of Transportation, the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Implementation of Transportation Undertakings (PA-TU), and internal review under the Memorandum of Understanding (MOU) Between the Texas Historical Commission and the Texas Department of Transportation

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Listed below are projects reviewed internally by qualified TxDOT archeologists. The projects will have no effect on archeological historic properties. As provided under the PA-TU, consultation with the Texas State Historic Preservation Officer is not necessary for these undertakings. As provided under the MOU, the proposed projects do not require individual coordination with the Texas Historical Commission.

CSJ	District	County	Roadway	Description	Work Performed	Consultation	Initial Consult Date
0924-06-562	ELP	El Paso	Central Business District	Road reconstruction	Background Study	ETCT	8/27/2018
1584-01-029	BMT	Tyler	FM 1745	Bridge replacement	Background Study	ETCT	3/8/2019
0024-07-059	SAT	Bexar	US 90	Minor road widening	Background Study	Formal	10/25/2019
1828-01-024	BMT	Tyler	FM 1943	Bridge replacement	Background Study	ETCT	3/10/2017
0513-01-017	WAC	Coryell	SH 236	Bridge replacement	Background Study	ETCT	3/10/2017
2208-01-071	FTW	Johnson	IH35	Erosion Control	Background Study	ETCT	3/8/2019
0014-04-084	FTW	Johnson	IH35	Erosion Control	Background Study	ETCT	3/8/2019
0168-09-175	AMA	Randall	IH27	Bridge replacement	Background Study	ETCT	9/22/2017

Signature _____ Date: 12/31/2019
For TxDOT
cc: THC

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 9, 2019, and executed by FHWA and TxDOT.

Back To List

Assignment Details ★ Activity

Print this Page

Coordinate Archeology Background Study

Associated Activity: Perform Archeology Background Study

Agency Name: PA Tribe(PA)

Coordination Status: Completed

Are Correspondence Details Included: Yes

Add Correspondence

Correspondence Status:

Correspondence Method:

Correspondence Date :

Correspondence From:

Correspondence To:

Comments: Spell

Correspondence For	Correspondence Type	Date	Correspondence From	Correspondence To	Comments	Actions
Sent Information	Email	10/25/2019	TxDOT	Tribes	sent consultation request.-LC	
Sent Information	Email	11/20/2019	TxDOT	Tribes	sent agenda with list of projects for monthly call.-LC	
Sent Information	Email	11/20/2019	TxDOT	Tribes	sent notes with list of projects from monthly call.-LC	
No Response received - review time expired	Other	11/25/2019	n/a	n/a	n/a	

Comments: Spell

all correspondence will be uploaded as one PDF at the end of the period. Sent to following Tribes: Kickapoo Traditional Tribe of Texas, Kickapoo Tribe of Oklahoma, Mescalero Apache Tribe, Wichita and Affiliated Tribes, Absentee Shawnee Tribe of Oklahoma, Alabama-Quassarte Tribal Town, Caddo Nation, Seminole Nation of Oklahoma, Tonkawa Tribe of Oklahoma, Alabama-Coushatta Tribe of Texas, Apache Tribe of Oklahoma, Comanche Nation of Oklahoma.

Last Updated By: Laura Cruzada **Last Updated Date:** 11/25/2019 01:40:45

From: Laura Cruzada
To: Hector H. Gonzalez; kentcollier2000@yahoo.com; dpacheco@okkt.net; holly@mathpo.org; gary.mcadams@wichitatribe.com; Terri.Parton@wichitatribe.com; 106NAGPRA@astribe.com; jlowe@alabama-quassarte.org; dhill@caddo.xyz; caddochair.cn@gmail.com; Chief@sno-nsn.gov; lbrown@tonkawatribe.com; mallen@tonkawatribe.com; Celestine.bryant@actribe.org; alec.tobine@actribe.org; epa4apachetribeok@gmail.com; martinac@comanchenation.com; theodorev@comanchenation.com; Andrea Ellis-Harrison
Cc: Eric Oksanen
Subject: TxDOT Sec. 106 Consultation Request - CSJ: 0024-07-059, US 90, from SH 211 to I-410, Convert Non-Freeway to Freeway, Bexar County, San Antonio District
Date: Friday, October 25, 2019 11:51:00 AM

Good morning,
We completed a desktop review of the above referenced project and recommend survey. If you would like to participate in the survey of this project, please let me know. Thank you!

Sec. 106 Consultation

OCTOBER 25, 2019

Contacts:

Laura Cruzada
512-416-2638

We kindly request your comments on historic properties of cultural or religious significance to your Tribe that may be affected by the proposed project. Please see the following summary for project details and information. To access the associated reports, which include a detailed project description, APE definition and identification efforts, use the attached link. After 21 days, the link will expire. We will provide an updated link upon request. This project will also be included during our monthly Sec. 106 conference call every third Wednesday of the month at 2 p.m.

Summary:

Project ID (CSJ), County and TxDOT District	*CSJ: 0024-07-059, Bexar County, San Antonio District*
Project Sponsor:	*TxDOT*
Short Description:	*US 90, from SH 211 to I-410, Convert Non-Freeway to Freeway*
Lat/Longs:	*Begin: 29.37481353/-98.76439715* *End: 29.393118/-98.661195*
New Right of Way:	*79 acres*
Depth of Impacts:	*2 feet typical, 8-10 feet, typical deep, 60 feet maximum*
Known Archeological Sites or Properties in project area:	*41BX1749* *41BX1150*
Identification Efforts:	*Background Study*
Recommendations:	*Survey, Re-assessment of 41BX1749*
Link to detailed report:	https://ftp.dot.state.tx.us/dropbox/pickup.php?claimID=ATvQjmupKopjtRMn&claimPasscode=mY9FTF1QE0ds1pM7&emailAddr=eric.oksanen%40txdot.gov

Please provide any comments that you may have on the TxDOT findings and recommendations. Please provide your comments within 30 days of receipt of this letter. Any comments provided after that time will be addressed to the fullest extent possible.

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.

Laura Cruzada
Public Involvement Specialist & Tribal Liaison
Environmental Affairs Division
125 E. 11th Street, Austin TX 78701
512-416-2638
laura.cruzada@txdot.gov

From:	Laura Cruzada
To:	celestine.bryant@actribe.org; ithompson@choctawnation.com; lhuffman@choctawnation.com; theodorev@comanchenation.com; janthpo@gmail.com; david.cook@kialegeetribe.net; kentcollier2000@yahoo.com; thpo@tttown.org; Holly Houghten; section106@mcn-nsn.gov; raebutler@mcn-nsn.gov; clowe@mcn-nsn.gov; earlii@tunica.org; Theodore Isham; lbrown@tonkawatribe.com; mallen@tonkawatribe.com; jwaffle@tonkawatribe.com; jwmunkres@osagenation-nsn.gov; Gary.McAdams@wichitatribe.com; Terri.Parton@wichitatribe.com; rquezada@ydsp-nsn.gov; Elizabeth Toombs; Alina Shively; emspain@mcn-nsn.gov; dpacheco@okkt.net; ahunter@osagenation-nsn.gov; khenry@coushattatribela.org; hahteed@comanchenation.com; martinac@comanchenation.com; dbatton@choctawnation.com; kyrau@astribe.com; margaretm@comanchenation.com; kpritchett@ukb-nsn.gov; cwhite@pci-nsn.gov; alec.tobine@actribe.org; chascoleman75@yahoo.com; 106NAGPRA@astribe.com; sodonnell@osagenation-nsn.gov; THPO@pci-nsn.gov; "jonasj@coushattatribela.org"; mooseanico@gmail.com; llangley@coushatta.org; lhaikey@pci-nsn.gov; lbilyeu@choctawnation.com; dkelly@delawarenation.com; nalligood@delawarenation.com; jdaukei@mathpo.org; dhill@caddo.xyz; caddochair.cn@gmail.com; jlowe@alabama-quassarte.org; Turner Hunt; dfrazier@astribe.com; epa4apachetribeok@gmail.com; ethompson@delawarenation-nsn.gov; dbatton@choctawnation.com; rdfontenot@coushatta.org; mcurrie@choctawnation.com; kellie@tribaladminservices.org; jrodgers@osagenation-nsn.gov; dhill@caddo.xyz; hector.gonzalez@ktttribe.org; kickapoolegal@ktttribe.org; jason.nelson@ktttribe.org
Cc:	Scott Pletka; "AICP Barbara C. Maley (Barbara.Maley@dot.gov)"
Subject:	Agenda and list of projects for Sec. 106 monthly call with TxDOT
Date:	Wednesday, November 20, 2019 1:20:00 PM
Attachments:	Archlist 10.24.19.pdf Archlist 10.31.19.pdf Archlist 11.07.19.pdf Archlist 11.14.19.pdf TMM Supplemental Mitigation Proposal_RD updates.docx

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Good afternoon,

Please find below the proposed agenda and list of projects for the monthly Sec. 106 call with TxDOT **at 2 p.m. TODAY.** If you have any items you'd like to add, please let me know.

Join Webex meeting

Meeting number (access code): 730 325 732

Join by phone **+1-415-655-0003** United States TOLL

Also attached are:

- Overview of mitigation: Paleoindian exhibit at Texas Memorial Museum/Traveling Exhibit ("Out of the shed and into the head")
- Projects that were reviewed by TxDOT per the Programmatic Agreement with FHWA, TxDOT, ACHP and SHPO (Texas Historical Commission - THC), and the Memorandum of Understanding with THC.

Agenda and List of Projects

1. **Program Updates**
   a. NAGPRA Update

      i. Working on the full list of collections to incorporate any info that was missing from the February 2018 meeting. Will reach out to all tribes with full list of collections, notes from February and which tribes are taking the lead.

      ii. First collection that is ready is from Bell County: Tonkawa and Mescalero Apache.

   b. Tribal Histories update

i. Traveling exhibit for Tribal Histories project

c. Concho County Safety Rest Area art/design– Tribal artist needed

d. GIS Early Tribal Coordination Tool demonstration

2. **Mitigation**
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      i. School Planners (Mason Co.)

      ii. Paleoindian Museum Exhibit project needs tribal reps (Starr Co.)

      iii. NAGPRA/NEPA Training

         1. What time of year is good?

         2. Who can serve on planning committee?

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      i. Crane Co. – Tribal monitors worked with TxDOT on the removal of burials from Oct. 23-28. The project is completed and we are waiting on the interim report.

      ii. Anderson County - CSJ 0198-03-026, US 176 Widen road to four lane divided highway;– 3 sites, 2 of which have Caddo components.
         1. Testing recommended for 41AN162 (right of entry granted) and 41AN173 (currently no right of entry).
         2. Staged Data Recovery for 41AN19 (right of entry granted).

      iii. Borderland Expressway (Formerly Northeast Parkway) in El Paso County – site testing in progress: site surface mapping and remote sensing has been done to identify potential excavation areas, excavations to begin first week of December.

3. **Field Work Updates**
   a. CSJ: 2222-20-018, Escondido Draw Recreational Trail improvements, San Angelo District, Crockett County – 42 sites including 41 prehistoric lithic scatters and 1 historic scatter; survey to be scheduled. (11-19-19)

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   e. CSJ: 0492-04-034, FM 756 widening, Smith County, Tyler District – no sites in APE, however landowner says prehistoric cemetery is in APE; survey to be scheduled. (10-25-19).

a. CSJ: 0221-05-065, US 271 widening and reconstruction, Atlanta District, Titus County – sites in ROW, testing for eligibility on Nov. 4-8. Testing identified a post mold feature in one of the trenches. Due to weather delays, we will need to return to further excavate the post mold and surrounding area. Revisit scheduled for December 2-5, 2019. (10-25-19)

b. CSJ: 0339-04-036, SH 105 Widening, Beaumont District, Hardin County – no sites in APE, survey to be scheduled. (10-25-19)

c. CSJ: 0024-07-059, US 90, from SH 211 to I-410, Convert Non-Freeway to Freeway, Bexar County, San Antonio District – 2 sites in APE; reassessing one site, survey to be scheduled. In planning stages with the District. (10-25-19)

d. Denton Co, FM 455 – testing on 3 historic age sites.

e. CSJ: 0424-01-054; SH 31, Roadway Widening; Gregg and Smith Counties, Tyler District - 3 previously recorded sites in the existing ROW. TxDOT recommends no further work required for evaluated areas; TxDOT shall complete review for unevaluated areas once access is obtained. (10-9-19)

f. CSJ 0165-02-061; US 271 Highway Widening; Smith and Gregg Counties, Tyler District - No additional work warranted on identified sites; no further work required for evaluated areas; TxDOT shall complete review for unevaluated areas once access is obtained. (10-4-19)

g. CSJ: 2222-20-006, Construct Hike and Bike Trail in Austin, Travis County, Austin District – 2 sites with lithic scatters; awaiting results of survey. (10-4-19)

h. CSJ: 2222-20-009, Construct Hike and Bike Trail in Kyle, TX. Austin District, Hays County – no sites; awaiting results of survey. (10-4-19)

i. CSJ: 1051-01-038, FM 664, Roadway Widening, Ellis County, Dallas District – 1 ineligible historic site; survey began week of 11-17-19. (10-4-19)

j. CSJ: 2222-20-002, Rec Trails construction, Avery, Red River County, Paris District – no sites; survey to be scheduled (9-9-19)

k. CSJ: 2222-20-016, Construct Trail from Annona to Avery, Red River County, Paris District – no sites; survey to be scheduled (9-6-19)

l. CSJ: 2222-20-013, Clarksville – to Highway 82, Construct Trail, Red River County, Paris District – no sites; survey to be scheduled (9-6-19)

m. CSJ: 2222-20-004, Construct Trail in Clarksville for Northeast Texas Trail, Red River County, Paris District – no sites; survey to be scheduled (9-6-19)

n. CSJ: 2222-20-003, Northeast Texas Trail, Wolfe City, Hunt County, Paris District – no sites; survey to be scheduled (9-6-19)

o. CSJ: 2222-20-001, Construct Northeast Texas Trail, Red River County, Paris District – no sites; survey to be scheduled (9-6-19)

p. CSJ: 1951-01-011, FM 1515, Roadway Widening; Denton County, Dallas District; no sites; survey pending, pursuing right of entry. (8-30-19)

q. CSJ: 0015-09-187, IH-35 Intersection Improvements, South Bound Auxiliary Lanes, and Reverse South Bound Ramps, Williamson County, Austin District (8-26-19)

r. El Paso County – Northeast Parkway, testing at 3 sites scheduled for September

s. CSJ: 2222-19-003, White Lake Loop Trail - construct trail, boardwalk - Fort Bend County, Houston District – sites in APE previously surveyed; will be resurveyed.

t. CSJ: 2222-20-007, Winters Bayou Bird Sanctuary trail, boardwalk and trail bridge construction - San Jacinto County, Lufkin District – no sites identified in background study; survey to be scheduled.

u. CSJ: 0214-03-035, SH 63 - Construct new bridge over Sabine River into Vernon Parish, Louisiana on new alignment., Newton County, Beaumont District - no sites identified in background study; survey to be scheduled.

v. CSJ 1051-01-051, etc., FM 664 Highway Widening; Ellis County, Dallas District – no historic properties in current survey, but further survey to be scheduled. (8-13-19)

w. CSJ: 0905-06-095, Upland Avenue Road Widening - Lubbock County, Lubbock District – survey to take place in November with shovel testing and trenching along the margins of 2 large playas in the APE. (8-9-19)

x. CSJ 2158-01-019 and 2158-01-020, FM 2275 Road Widening; Gregg County, Tyler District; further evaluation on 41GG55 prehistoric site.

a. CSJ 1502-03-006, Loop 88 Project: New Roadway; Lubbock County, LBB District – no sites but survey to be scheduled.

b. CSJ 1502-02-002, Loop 88 Project: New Roadway; Lubbock County, LBB District – no sites but survey to be scheduled.

c. CSJ 0255-05-044, US 281 Highway Widening; Brooks and Hidalgo, PHR District – survey to be scheduled; two sites in APE.

4. **Survey/No Properties/Proceed to Construction**
   a. CSJ: 2635-04-034, State Loop 335 widening; Potter County, Amarillo District – survey complete; no sites in APE; proceed to construction. (10-28-19)

5. **Desktop Reviews/No Properties/Proceed to Construction**
   a. CSJ: 0379-01-046, SH 136, Passing Lanes, Bridge Replacement, Roadway Rehabilitation; Hutchinson, Potter, Moore Counties, Amarillo District. (11-19-19)

   b. CSJ: 2222-20-015, Port Lavaca trail construction, Yoakum District, Calhoun County. (11-19-19)

   c. CSJ: 0086-14-084 I-69W Mainlane Widening; Webb County, Laredo District – sites in APE not eligible due to previous disturbance. (11-8-19)

   d. CSJ: 0076-08-027, US 67 Road Widening; Reagan County, San Angelo District – sites in APE are not eligible; no further work warranted. (11-8-19)

e. CSJ 1392-01-044, FM 1378 Intersection Improvement, Collin County, Dallas District (11-8-19)

f. CSJ: 0024-07-063; US 90 at Montgomery Road, Intersection Improvements, Bexar County, San Antonio District (10-25-19)

Laura Cruzada
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Environmental Affairs Division
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Cc:	Scott Pletka; "AICP Barbara C. Maley (Barbara.Maley@dot.gov)"
Subject:	NOTES for Sec. 106 monthly call with TxDOT
Date:	Wednesday, November 20, 2019 2:50:00 PM
Attachments:	TxDOT and Tribal GOVERNMENT NAGPRA Meeting 5-16-19.docx

Thanks to those who could join us. Please find the notes below from the call as well as the notes from the NAGPRA consultation from Feb. 2019.

November Sec. 106 Monthly Call Notes

Participants:

- Laura Cruzada – TxDOT
- Scott Pletka – TxDOT
- Margie Murrow – Comanche Nation
- Hector Gonzalez and Carlos Patino – Kickapoo Traditional Tribe of Texas
- Holly Houghten – Mescalero Apache Tribe

1. **Program Updates**
   a. NAGPRA Update

      i. Working on the full list of collections to incorporate any info that was missing from the February 2018 meeting. Will reach out to all tribes with full list of collections, notes from February and which tribes are taking the lead.

      ii. First collection that is ready is from Bell County: Tonkawa and Mescalero Apache.

      iii. → Laura send Feb. 2018 NAGPRA consultation notes

   b. Tribal Histories update

      i. Traveling exhibit for Tribal Histories project - would be interested in getting cultural items that can travel with the exhibit. Anticipated complete date by annual summer consultation then loan out starting fall.

→ Send copy to Margie Murrow

→ Send copy of email to legal department as well

→ Holly to respond by Friday Nov. 22

c. Concho County Safety Rest Area art/design– Tribal artist needed

d. GIS Early Tribal Coordination Tool demonstration

→ Holly interested in participating in one of the Rec Trails projects. Laura to follow up.

2. **Mitigation**
   a. Supplemental

      i. School Planners (Mason Co.)

      ii. Paleoindian Museum Exhibit project needs tribal reps (Starr Co.)

      iii. NAGPRA/NEPA Training

         1. What time of year is good?

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From: Laura Cruzada
Sent: Wednesday, November 20, 2019 1:21 PM
To: celestine.bryant@actribe.org; ithompson@choctawnation.com; lhuffman@choctawnation.com; theodorev@comanchenation.com; janthpo@gmail.com; david.cook@kialegeetribe.net; kentcollier2000@yahoo.com; thpo@tttown.org; Holly Houghten <holly@mathpo.org>; section106@mcn-nsn.gov; raebutler@mcn-nsn.gov; clowe@mcn-nsn.gov; earlii@tunica.org; Theodore Isham <isham.t@sno-nsn.gov>; lbrown@tonkawatribe.com; mallen@tonkawatribe.com; jwaffle@tonkawatribe.com; jwmunkres@osagenation-nsn.gov; Gary.McAdams@wichitatribe.com; Terri.Parton@wichitatribe.com; rquezada@ydsp-nsn.gov; Elizabeth Toombs <elizabeth-toombs@cherokee.org>; Alina Shively <ashively@jenachoctaw.org>; emspain@mcn-nsn.gov; dpacheco@okkt.net; ahunter@osagenation-nsn.gov; khenry@coushattatribela.org; hahteed@comanchenation.com; martinac@comanchenation.com; dbatton@choctawnation.com; kyrau@astribe.com; margaretm@comanchenation.com; kpritchett@ukb-nsn.gov; cwhite@pci-nsn.gov; alec.tobine@actribe.org; chascoleman75@yahoo.com; 106NAGPRA@astribe.com; sodonnell@osagenation-nsn.gov; THPO@pci-nsn.gov; 'jonasj@coushattatribela.org'; mooseanico@gmail.com; llangley@coushatta.org; lhaikey@pci-nsn.gov; lbilyeu@choctawnation.com; dkelly@delawarenation.com; nalligood@delawarenation.com; jdaukei@mathpo.org; dhill@caddo.xyz; caddochair.cn@gmail.com; jlowe@alabama-quassarte.org; Turner Hunt <thunt@mcn-nsn.gov>; dfrazier@astribe.com; epa4apachetribeok@gmail.com; ethompson@delawarenation-nsn.gov; dbatton@choctawnation.com; rdfontenot@coushatta.org; mcurrie@choctawnation.com; kellie@tribaladminservices.org; jrodgers@osagenation-nsn.gov; dhill@caddo.xyz; hector.gonzalez@ktttribe.org; kickapoolegal@ktttribe.org;

jason.nelson@ktttribe.org
Cc: Scott Pletka <Scott.Pletka@txdot.gov>; 'AICP Barbara C. Maley (Barbara.Maley@dot.gov)' <Barbara.Maley@dot.gov>
Subject: Agenda and list of projects for Sec. 106 monthly call with TxDOT

Good afternoon,
Please find below the proposed agenda and list of projects for the monthly Sec. 106 call with TxDOT **at 2 p.m. TODAY.** If you have any items you'd like to add, please let me know.

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Meeting number (access code): 730 325 732
Join by phone **+1-415-655-0003** United States TOLL

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ii. Anderson County - CSJ 0198-03-026, US 176 Widen road to four lane divided highway;– 3 sites, 2 of which have Caddo components.

1. Testing recommended for 41AN162 (right of entry granted) and 41AN173 (currently no right of entry).
2. Staged Data Recovery for 41AN19 (right of entry granted).

iii. Borderland Expressway (Formerly Northeast Parkway) in El Paso County – site testing in progress: site surface mapping and remote sensing has been done to identify potential excavation areas, excavations to begin first week of December.

3. **Field Work Updates**

a. CSJ: 2222-20-018, Escondido Draw Recreational Trail improvements, San Angelo District, Crockett County – 42 sites including 41 prehistoric lithic scatters and 1 historic scatter; survey to be scheduled. (11-19-19)

b. CSJ: 2222-20-017, Rio Bravo Adventure Park trail improvements; Harris County, Houston District – no sites; survey to be scheduled. (11-19-19)

c. CSJ: 2222-20-008, Twin Lakes Moto Recreation Trail construction; Fort Worth District, Jack County – no sites; survey to be scheduled. (10-25-19)

d. CSJ: 0495-07-074, improvements to IH 20 and SH 31; Tyler District, Gregg County – no sites in APE; survey to take place before end of December. (10-25-19)

e. CSJ: 0492-04-034, FM 756 widening, Smith County, Tyler District – no sites in APE, however landowner says prehistoric cemetery is in APE; survey to be scheduled. (10-25-19).

a. CSJ: 0221-05-065, US 271 widening and reconstruction, Atlanta District, Titus County – sites in ROW, testing for eligibility on Nov. 4-8. Testing identified a post mold feature in one of the trenches. Due to weather delays, we will need to return to further excavate the post mold and surrounding area. Revisit scheduled for December 2-5, 2019. (10-25-19)

f. CSJ: 0339-04-036, SH 105 Widening, Beaumont District, Hardin County – no sites in APE, survey to be scheduled. (10-25-19)

g. CSJ: 0024-07-059, US 90, from SH 211 to I-410, Convert Non-Freeway to Freeway, Bexar County, San Antonio District – 2 sites in APE; reassessing one site, survey to be scheduled. In planning stages with the District. (10-25-19)

h. Denton Co, FM 455 – testing on 3 historic age sites.

i. CSJ: 0424-01-054; SH 31, Roadway Widening; Gregg and Smith Counties, Tyler District - 3 previously recorded sites in the existing ROW. TxDOT recommends no further work required for evaluated areas; TxDOT shall complete review for unevaluated areas once access is obtained. (10-9-19)

j. CSJ 0165-02-061; US 271 Highway Widening; Smith and Gregg Counties, Tyler District - No additional work warranted on identified sites; no further work required for evaluated areas; TxDOT shall complete review for unevaluated areas once access is obtained. (10-4-19)

k. CSJ: 2222-20-006, Construct Hike and Bike Trail in Austin, Travis County, Austin District – 2 sites with lithic scatters; awaiting results of survey. (10-4-19)

l. CSJ: 2222-20-009, Construct Hike and Bike Trail in Kyle, TX. Austin District, Hays County – no sites; awaiting results of survey. (10-4-19)

m. CSJ: 1051-01-038, FM 664, Roadway Widening, Ellis County, Dallas District – 1 ineligible historic site; survey began week of 11-17-19. (10-4-19)

n. CSJ: 2222-20-002, Rec Trails construction, Avery, Red River County, Paris District – no sites; survey to be scheduled (9-9-19)

o. CSJ: 2222-20-016, Construct Trail from Annona to Avery, Red River County, Paris District – no sites; survey to be scheduled (9-6-19)

p. CSJ: 2222-20-013, Clarksville – to Highway 82, Construct Trail, Red River County, Paris District – no sites; survey to be scheduled (9-6-19)

q. CSJ: 2222-20-004, Construct Trail in Clarksville for Northeast Texas Trail, Red River County, Paris District – no sites; survey to be scheduled (9-6-19)

r. CSJ: 2222-20-003, Northeast Texas Trail, Wolfe City, Hunt County, Paris District – no sites; survey to be scheduled (9-6-19)

s. CSJ: 2222-20-001, Construct Northeast Texas Trail, Red River County, Paris District – no sites; survey to be scheduled (9-6-19)

t. CSJ: 1951-01-011, FM 1515, Roadway Widening; Denton County, Dallas District; no sites; survey pending, pursuing right of entry. (8-30-19)

u. CSJ: 0015-09-187, IH-35 Intersection Improvements, South Bound Auxiliary Lanes, and Reverse South Bound Ramps, Williamson County, Austin District (8-26-19)

v. El Paso County – Northeast Parkway, testing at 3 sites scheduled for September

w. CSJ: 2222-19-003, White Lake Loop Trail - construct trail, boardwalk - Fort Bend County, Houston District – sites in APE previously surveyed; will be resurveyed.

x. CSJ: 2222-20-007, Winters Bayou Bird Sanctuary trail, boardwalk and trail bridge construction - San Jacinto County, Lufkin District – no sites identified in background study; survey to be scheduled.

y. CSJ: 0214-03-035, SH 63 - Construct new bridge over Sabine River into Vernon Parish, Louisiana on new alignment., Newton County, Beaumont District - no sites identified in background study; survey to be scheduled.

z. CSJ 1051-01-051, etc., FM 664 Highway Widening; Ellis County, Dallas District – no historic properties in current survey, but further survey to be scheduled. (8-13-19)

aa. CSJ: 0905-06-095, Upland Avenue Road Widening - Lubbock County, Lubbock District – survey to take place in November with shovel testing and trenching along the margins of 2 large playas in the APE. (8-9-19)

ab. CSJ 2158-01-019 and 2158-01-020, FM 2275 Road Widening; Gregg County, Tyler District; further evaluation on 41GG55 prehistoric site.

a. CSJ 1502-03-006, Loop 88 Project: New Roadway; Lubbock County, LBB District – no sites but survey to be scheduled.

b. CSJ 1502-02-002, Loop 88 Project: New Roadway; Lubbock County, LBB District – no sites but survey to be scheduled.

c. CSJ 0255-05-044, US 281 Highway Widening; Brooks and Hidalgo, PHR District – survey to be scheduled; two sites in APE.

4. **Survey/No Properties/Proceed to Construction**
   a. CSJ: 2635-04-034, State Loop 335 widening; Potter County, Amarillo District – survey complete; no sites in APE; proceed to construction. (10-28-19)

5. **Desktop Reviews/No Properties/Proceed to Construction**
   a. CSJ: 0379-01-046, SH 136, Passing Lanes, Bridge Replacement, Roadway Rehabilitation; Hutchinson, Potter, Moore Counties, Amarillo District. (11-19-19)

   b. CSJ: 2222-20-015, Port Lavaca trail construction, Yoakum District, Calhoun County. (11-19-19)

   c. CSJ: 0086-14-084 I-69W Mainlane Widening; Webb County, Laredo District – sites in APE not eligible due to previous disturbance. (11-8-19)

   d. CSJ: 0076-08-027, US 67 Road Widening; Reagan County, San Angelo District – sites in APE are not eligible; no further work warranted. (11-8-19)

   e. CSJ 1392-01-044, FM 1378 Intersection Improvement, Collin County, Dallas District (11-8-19)

   f. CSJ: 0024-07-063; US 90 at Montgomery Road, Intersection Improvements, Bexar County, San Antonio District (10-25-19)

Laura Cruzada
Public Involvement Specialist & Tribal Liaison
Environmental Affairs Division
125 E. 11th Street, Austin TX 78701
512-416-2638
laura.cruzada@txdot.gov

TPWD Coordination

Rachel Sprunger

From: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>
Sent: Friday, May 8, 2020 4:49 PM
To: Juan Alcazar
Cc: Clover Clamons; John Maresh
Subject: RE: Early project coordination for US 90 (0024-07-059)

Hi Juan,

Please see recommendations below and let me know if you have any questions.

Thanks,
Suzanne

- The Tier I indicates that the project is within range, contains suitable habitat, and may impact the blackspotted newt. TPWD recommends implementing the following Water Quality BMPs as outlined in the 2017 BMP PA:
    - Minimize the use of equipment in streams and riparian areas during construction. When possible, equipment access should be from banks, bridge decks, or barges.
    - When temporary stream crossings are unavoidable, remove stream crossings once they are no longer needed and stabilize banks and soils around the crossing.

- The Potranca Creek watershed to the north of US 90 appears to be developing quickly. Increased impervious cover will increase peak flows in this creek. Increased flows through culverts can cause erosion downstream of culverts, causing culverts to become perched and impeding the movement of aquatic organisms. TPWD recommends spanning Potranca Creek in order to accommodate the increased flows and minimize impacts to the wetlands adjacent to the creek.

- State-listed mussels have the potential to occur within perennial streams or intermittent streams with perennial pools in Bexar County. TPWD recommends further evaluating species where suitable habitat may be present and relocating potentially impacted native aquatic resources in conjunction with a Permit to Introduce Fish, Shellfish or Aquatic Plants into Public Waters and an Aquatic Resource Relocation Plan (ARRP) if dewatering activities are required. ARRPs assist in the permitting process to ensure that aquatic organisms are being handled properly and protected from danger during dewatering and/or relocation activities. The ARRP should be completed and approved by TPWD 30 days prior to activity within project waters and/or resource relocation and submitted with an application for a no-cost Permit to Introduce Fish, Shellfish, or Aquatic Plants into Public Waters. ARRPs can be submitted to Travis Tidwell, TPWD Region 1 Kills and Spills Team (KAST) Biologist at (512) 389-8612 cell or travis.tidwell@tpwd.texas.gov.

From: Juan Alcazar
Sent: Friday, May 8, 2020 10:12 AM
To: Suzanne Walsh
Cc: Clover Clamons ; John Maresh
Subject: RE: Early project coordination for US 90 (0024-07-059)

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Thank you Suzanne.

Juan Alcázar
Environmental Specialist
Texas Department of Transportation
4615 N.W. Loop 410 | San Antonio, Texas 78229-0928
O: 210.615.6144 | E: Juan.Alcazar@txdot.gov

From: Suzanne Walsh [mailto:Suzanne.Walsh@tpwd.texas.gov]
Sent: Friday, May 08, 2020 10:08 AM
To: Juan Alcazar <Juan.Alcazar@txdot.gov>
Cc: Clover Clamons <Clover.Clamons@txdot.gov>; John Maresh <John.Maresh@txdot.gov>
Subject: RE: Early project coordination for US 90 (0024-07-059)

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Hi Juan,

Thanks for the email. I am waiting to hear back from our Inland Fisheries folks. I coordinated this project internally with them as this project is anticipated to require an IP. I checked in with her this morning and hope to have comments to you later today.

Thanks,
Suzanne

From: Juan Alcazar <Juan.Alcazar@txdot.gov>
Sent: Friday, May 8, 2020 9:26 AM
To: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>
Cc: Clover Clamons <Clover.Clamons@txdot.gov>; John Maresh <John.Maresh@txdot.gov>
Subject: RE: Early project coordination for US 90 (0024-07-059)

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Good Moring Suzanne,

I'm following up on the US 90 (0024-07-059) project to see if your review is complete or if you had additional comments/questions. Although environments clearance is not expected until early fall 2020, the draft EA is scheduled to

be submitted to TxDOT May 15th. We would like the EA to show that all TPWD comments/recommendation have been addressed and considered. Since early coordination began 3/25/2020, can you please let me know if TPWD considers coordination to be complete, or if additional questions/comments can be expected. If TPWD has additional comments, please provide ASAP so we can address in the EA as well. Thanks.

Juan Alcázar
Environmental Specialist
Texas Department of Transportation
4615 N.W. Loop 410 | San Antonio, Texas 78229-0928
O: 210.615.6144 | E: Juan.Alcazar@txdot.gov

From: Juan Alcazar
Sent: Friday, May 01, 2020 1:39 PM
To: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>
Subject: RE: Early project coordination for US 90 (0024-07-059)

Dear Suzanne,

I think it would be safe to assume that some crossings, but not all may require a temporary crossing and or dewatering.

Juan Alcázar
Environmental Specialist
Texas Department of Transportation
4615 N.W. Loop 410 | San Antonio, Texas 78229-0928
O: 210.615.6144 | E: Juan.Alcazar@txdot.gov

From: Suzanne Walsh [mailto:Suzanne.Walsh@tpwd.texas.gov]
Sent: Friday, May 01, 2020 1:30 PM
To: Juan Alcazar <Juan.Alcazar@txdot.gov>
Subject: RE: Early project coordination for US 90 (0024-07-059)

Juan,

Thank you for the additional information. Do you anticipate needing temporary crossings or dewatering?

Thanks,
Suzanne

From: Juan Alcazar <Juan.Alcazar@txdot.gov>
Sent: Wednesday, April 22, 2020 11:09 AM
To: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>
Subject: RE: Early project coordination for US 90 (0024-07-059)

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Good morning Suzanne,

Below are responses to your questions on the proposed US 90 project (0024-07-059). I have also attached a Surface Water Analysis Report and a table summarizing total potential impacts to waters of the US, including wetlands.

Could you provide more information on stream/wetland impacts? Will TxDOT provide mitigation for impacts? Also, do you have a water resources technical report that I could review?

The proposed project is anticipated to impact waters of the U.S., including wetlands within project limits. Attached is an impact table summarizing total potential impacts to waters of the US and wetlands. I have also attached a Surface water Analysis report.
Within project limits there are several crossings that would requires a NWP 14 w/ PCN, mitigation, and a crossing that would require an Individual Permit (IP). Therefore, we believe the project would be authorized under an IP that includes stream mitigation and permittee responsible mitigation (PRM) for wetland impacts. Mitigation for loss of water of the U.S., including wetlands would be determined during the permitting process.

Did the district survey for SGCN plants

No we did not conduct a presence/absence survey for SGCN plants or federal and state listed species. However, we did conduct a habitat assessment for federal and state listed species identified in USFWS IPaC and TPWD RTEST for Bexar County. The survey helped us determine potential impacts and potential for these species to occurred within the project area based on each species habitat requirements.

Could you send a project schematic?

I will upload the schematic to the TxDOT Dropbox and you should receive an email with link to TxDOT Dropbox and to file.

Thanks Suzanne, Please let me know if you need additional project information.

Juan Alcázar

Environmental Specialist

Texas Department of Transportation

4615 N.W. Loop 410 | San Antonio, Texas 78229-0928

O: 210.615.6144 | E: Juan.Alcazar@txdot.gov

From: Suzanne Walsh [mailto:Suzanne.Walsh@tpwd.texas.gov]
Sent: Friday, April 17, 2020 4:57 PM
To: Juan Alcazar <Juan.Alcazar@txdot.gov>
Subject: RE: Early project coordination for US 90 (0024-07-059)

Hi Juan,

I had a couple of questions about the project.

Could you provide more information on stream/wetland impacts? Will TxDOT provide mitigation for impacts? Also, do you have a water resources technical report that I could review?

Did the district survey for SGCN plants

Could you send a project schematic?

Thanks,

Suzanne

Suzanne Walsh

Transportation Conservation Coordinator

(512) 389-4579

From: WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>
Sent: Thursday, March 26, 2020 11:21 AM
To: Juan Alcazar <Juan.Alcazar@txdot.gov>; WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>
Cc: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>
Subject: RE: Early project coordination for US 90 (0024-07-059)

The TPWD Wildlife Habitat Assessment Program has received your request and has assigned it project ID # 43519. The Habitat Assessment Biologist who will complete your project review is copied on this email.

Thank you,

John Ney

Administrative Assistant

Texas Parks & Wildlife Department

Wildlife Diversity Program – Habitat Assessment Program

4200 Smith School Road

Austin, TX 78744

Office: (512) 389-4571

From: Juan Alcazar <Juan.Alcazar@txdot.gov>
Sent: Wednesday, March 25, 2020 4:35 PM
To: WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>
Subject: Early project coordination for US 90 (0024-07-059)

ALERT: This email came from an external source. Do not open attachments or click on links in unknown or unexpected emails.

A Tier 1 Site Assessment Form and Supporting documents for the proposed US 90 from SH 211 to I-410 project (0024-07-059) in Bexar County, Texas, have been unloaded to ECOS and is ready for TPWD's review. Expected environmental clearance date for the project is 09/1/2020.

The TxDOT San Antonio District is proposing to reconstruct and widen approximately 11.5 miles of existing US Highway (US) 90 from State Highway (SH) 211 to Interstate Highway 410 (I-410). The proposed project would widen the existing roadway from a four-lane divided roadway with intermittent frontage roads to a six-lane expressway with one-way continuous frontage roads in each direction. The proposed project includes the addition of direct connectors (DCs) at Loop (LP) 1604 as well as intersection improvements at SH 211, Montgomery Road, Hunt Lane, and Military Drive (LP 13) intersections. The proposed US 90 project would require approximately 79 acres of additional ROW and the proposed ROW width would vary from 300 feet minimum to 590 feet maximum.

Thank you in advance for your assistance on this important transportation project. If you have questions or comments regarding this project please contact me by email or by phone at (210) 615-6144.

Juan Alcázar

Environmental Specialist

Texas Department of Transportation

4615 N.W. Loop 410 | San Antonio, Texas 78229-0928

O: 210.615.6144 | E: Juan.Alcazar@txdot.gov

Appendix H

Traffic Projections Memo

PAPE-DAWSON ENGINEERS

Memo

TO:	Laura Norton, Planner-TPP	**DATE:**	September 18, 2017
FROM:	Derek Mueller, P.E.	**PROJECT NO.:**	11201-01
RE:	US 90, CSJ: 0024-07-059 Traffic Projections		

Methodology Memo

The following is a summary of the data used for this project and how it was applied to assume the growth rates and the projected turning counts for the corridor.

- **Study Area:** This corridor, located West of San Antonio, TX in Bexar County, is along US 90 from Old Hwy 90 to 1 mile west of SH 211, along IH-410 from Marbach to US 90, and along Loop 1604 from Potranco to FM 143.

- **Historic Counts:** These relevant counts obtained from the Traffic Count Database System (TCDS).
    - Five annual ACR counts were available within the corridor (15E19, 15H138, 15H140, 15H143, and 15H145).
    - Three annual ACR counts were available within the corridor outside the limits of the project (S504 located 4.5 miles West of SH 211, S184 located 0.4 miles East of IH-35, S303 located 0.2 miles South of Old Pearsall Rd).

- **Classification Data:** Two classification counts were available outside the study area. One count was located near the intersection of IH-410 and Old Pearshall Rd (M1622) and one was located near the intersection of US 90 and US 173 (M957A). M957A should be an accurate representation of sections 1-2 as it is in a more rural area. M1622 should be an accurate representation of sections 3-5 as it is located in an urban area near San Antonio. The location M957A was the classification data used for sections 1-2 and M1622 was the classification data used for sections 3-5.

- **Growth Rate & Factors:** Based on historic growth and review of projected travel demand model assignments, several growth rates have been assigned to these corridors. Growth rates were calculated using historic data along the corridor. Based on the data available, a growth rate of 2 and 3 percent was calculated. The corridor is largely undeveloped which results in little growth shown in the traffic counts. We also reviewed the AAMPO Travel Demand model to identify future population, employment, and traffic patterns. We compared the model output projected growth rates and 2040 volumes along the corridor to our projected volumes using historic growth rates. The model output showed substantially more growth along Loop 1604

and US 90 due to a large increase in development in neighboring TAZs. Based on the model output, we revised our 20-year growth rate from 2 to 5% percent along US 90, west of Loop 1604 and Loop 1604, south of US 90 to account for the future development. A growth rate of 3% was selected for traffic growth through 2047 along Loop 1604 from Potranco to US 90 and along US 90 from Loop 1604 to IH-410, while a growth rate of 2% was selected for traffic growth through 2047 along US 90 from IH-410 to Old Hwy 90 and along IH-410 from Marbach to US 90. A rate of 2 percent was assumed for growth beyond 20 years. Available traffic impact analyses along the corridor were also reviewed to compare to model output and check side street volumes.

K and D factors were obtained from the nearest permanent station on US 90 near US 471 (S504). Taken from TCDS High Hourly Volumes report for 2015, the 30th highest hour data gave a K factor of 9.4 and a directional distribution (D) of 60% WB direction which is consistent with the data within the corridor. This will apply to sections 1-2 because they are farther removed from San Antonio.

US 90 from Jungman Rd to Loop 1604

Assumed Values		
20 Year Growth		5%
>20 Year Growth		2%
Assumed Truck Percentage	ADT	10.5%
	DHV	5.9%
Assumed K Factor		9.4%
Assumed D Factor		60%

K and D factors were obtained from the nearest permanent station on US 90 near IH-35 (S184). Taken from TCDS High Hourly Volumes report for 2015, the 30th highest hour data gave a K factor of 9.4 and a directional distribution (D) of 52% WB direction which is consistent with the data within the corridor. This will apply to sections 3-4 because they are closer to San Antonio.

US 90 from Loop 1604 to IH-410

Assumed Values		
20 Year Growth		3%
>20 Year Growth		2%
Assumed Truck Percentage	ADT	4.4%
	DHV	2.3%
Assumed K Factor		9.4%
Assumed D Factor		52%

US 90 from IH-410 to Old Hwy 90

Assumed Values		
20 Year Growth		2%
>20 Year Growth		2%
Assumed Truck Percentage	ADT	4.4%
	DHV	2.3%
Assumed K Factor		9.4%
Assumed D Factor		52%

K and D factors were obtained from the nearest permanent station on IH-410 near Old Pearsall Rd (S303). Taken from TCDS High Hourly Volumes report for 2015, the 30th highest hour data gave a K factor of 10.6 and a directional distribution (D) of 60% SB direction which is consistent with the data within the corridor. This data was used for counts along Loop 1604 and IH-410 as there is no count on Loop 1604 close enough to the corridor and IH-410 traffic is similar to that of Loop 1604. This will apply to section 5 (Loop 1604) as it is a north-south movement.

Loop 1604 from Potranco Rd to US 90

Assumed Values		
20 Year Growth		3%
>20 Year Growth		2%
Assumed Truck Percentage	ADT	4.4%
	DHV	2.3%
Assumed K Factor		10.6%
Assumed D Factor		60%

Loop 1604 from US 90 to FM 143

Assumed Values		
20 Year Growth		5%
>20 Year Growth		2%
Assumed Truck Percentage	ADT	4.4%
	DHV	2.3%
Assumed K Factor		10.6%
Assumed D Factor		60%

- **Method:** Line diagrams showing projected turning movement counts were developed using the calculated growth rate and traffic counts along the corridor and side streets.

END OF MEMO

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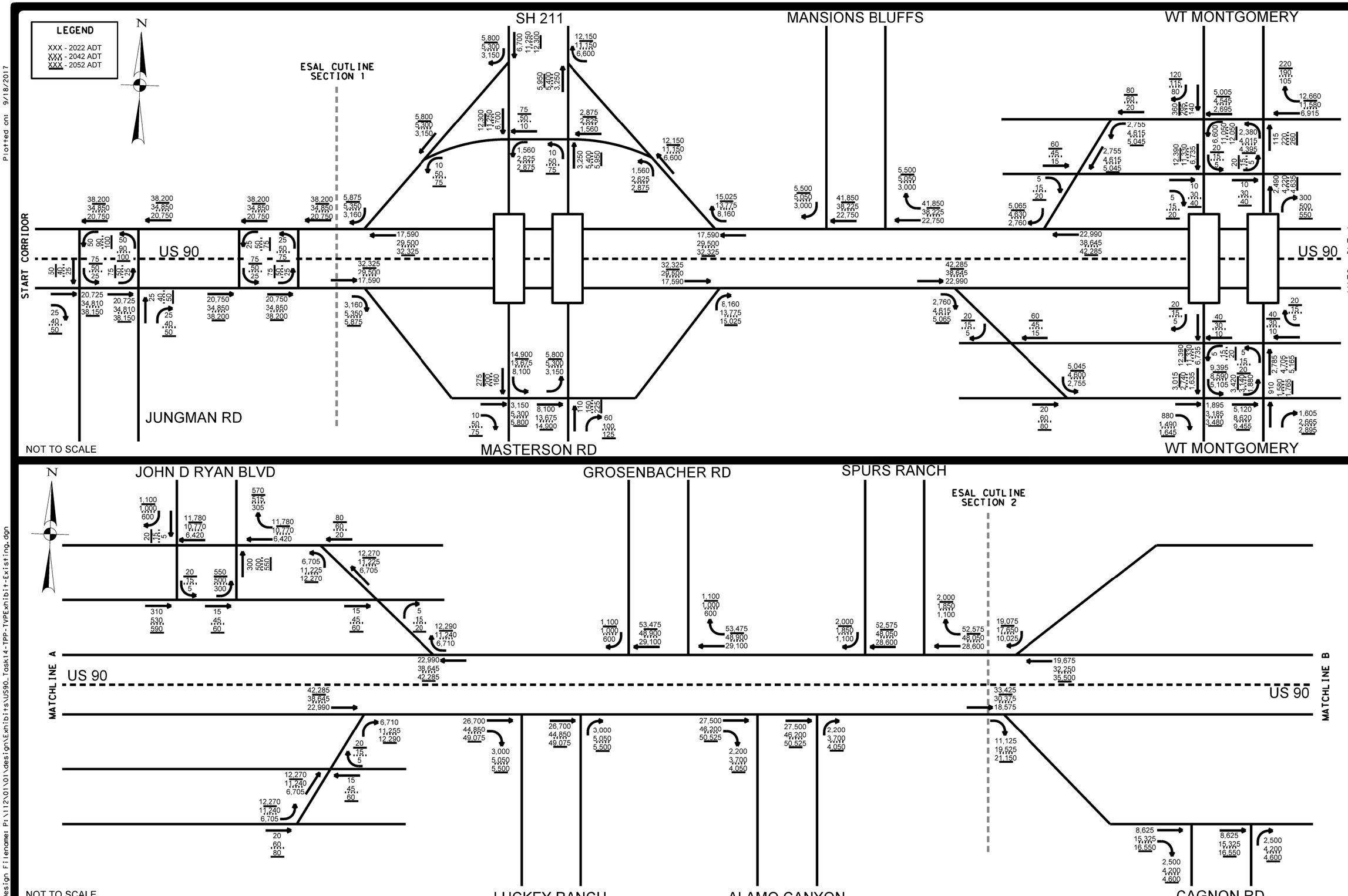

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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

US 90 FROM OLD HWY 90 TO JUNGMAN RD,
IH-410 FROM MARBACH TO US 90,
LOOP 1604 FROM POTRANCO TO FM 143
CSJ: 0024-07-0059
ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES
BEXAR COUNTY, TX
NO-BUILD CONDITIONS

JOB NO. 11201-01
DATE 9/18/2017
DESIGNER
CHECKED DNM DRAWN AMW
SHEET 1 OF 5

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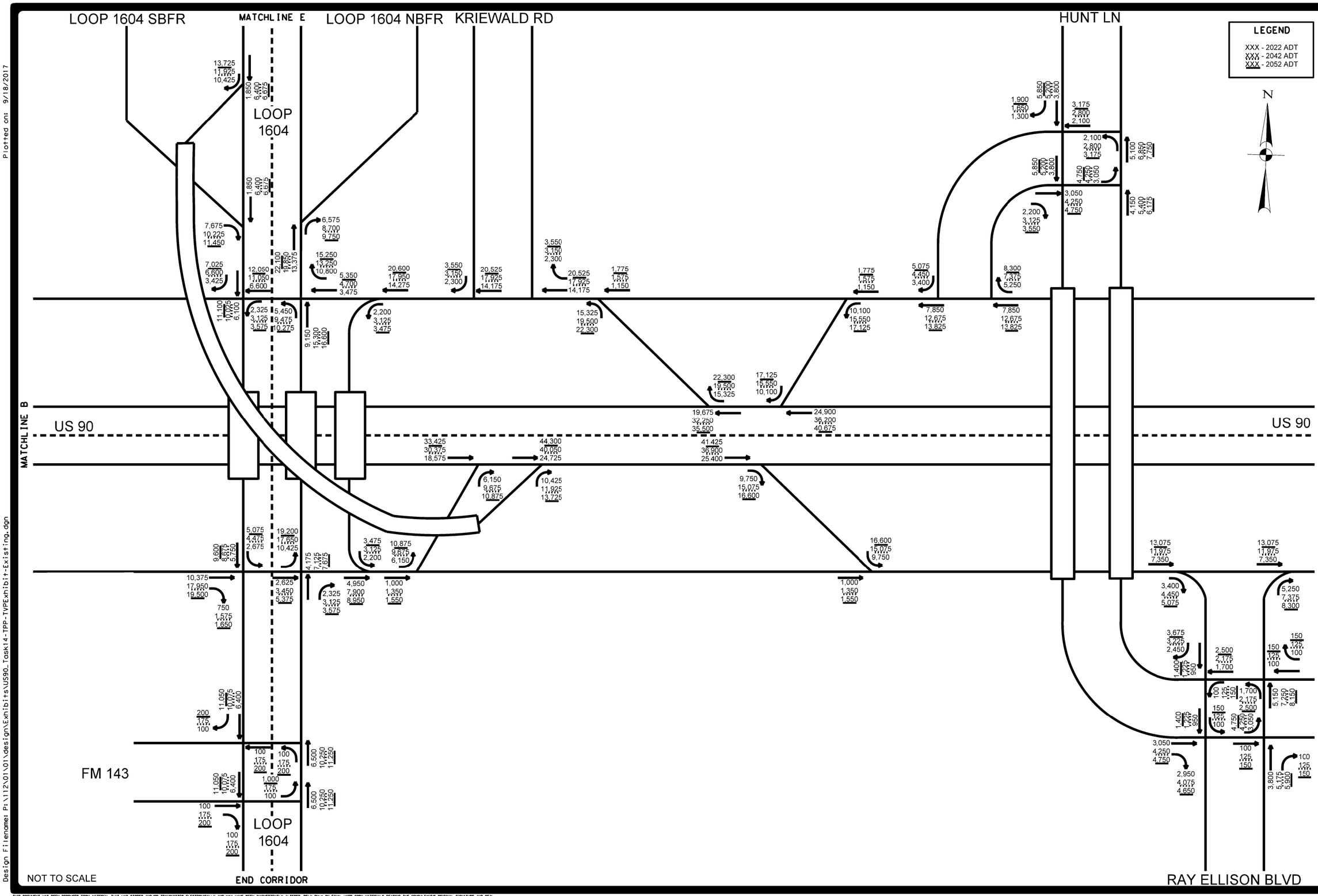

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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

US 90 FROM OLD HWY 90 TO JUNGMAN RD,
IH-410 FROM MARBACH TO US 90,
LOOP 1604 FROM POTRANCO TO FM 143
CSJ: 0024-07-0059
ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES
BEXAR COUNTY, TX
NO-BUILD CONDITIONS

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DATE 9/18/2017
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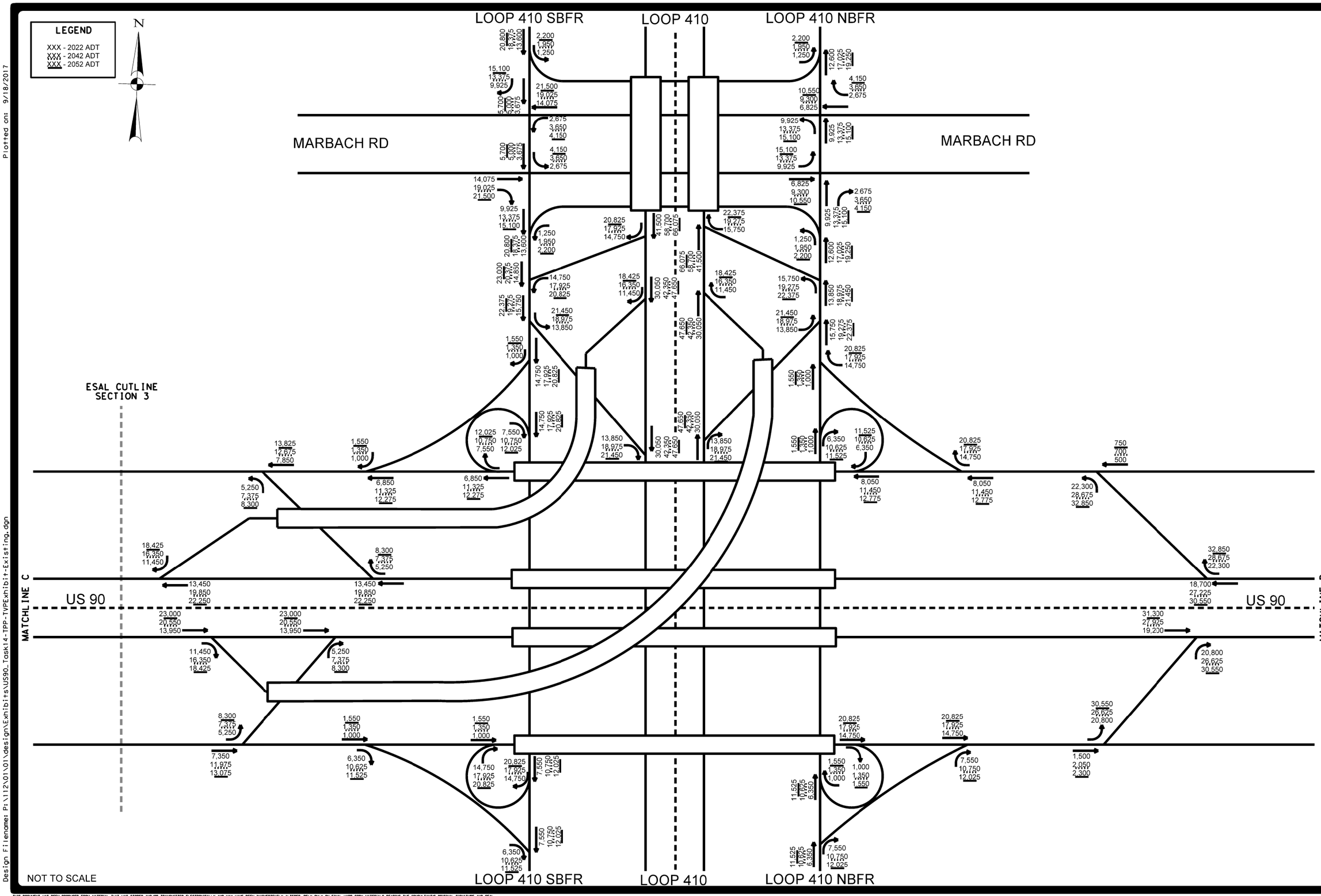

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REVISIONS:

PAPE-DAWSON ENGINEERS

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2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028800

US 90 FROM OLD HWY 90 TO JUNGMAN RD,
IH-410 FROM MARBACH TO US 90,
LOOP 1604 FROM POTRANCO TO FM 143
CSJ: 0024-07-0059
ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES
BEXAR COUNTY, TX
NO-BUILD CONDITIONS

JOB NO. 11201-01

DATE 9/18/2017

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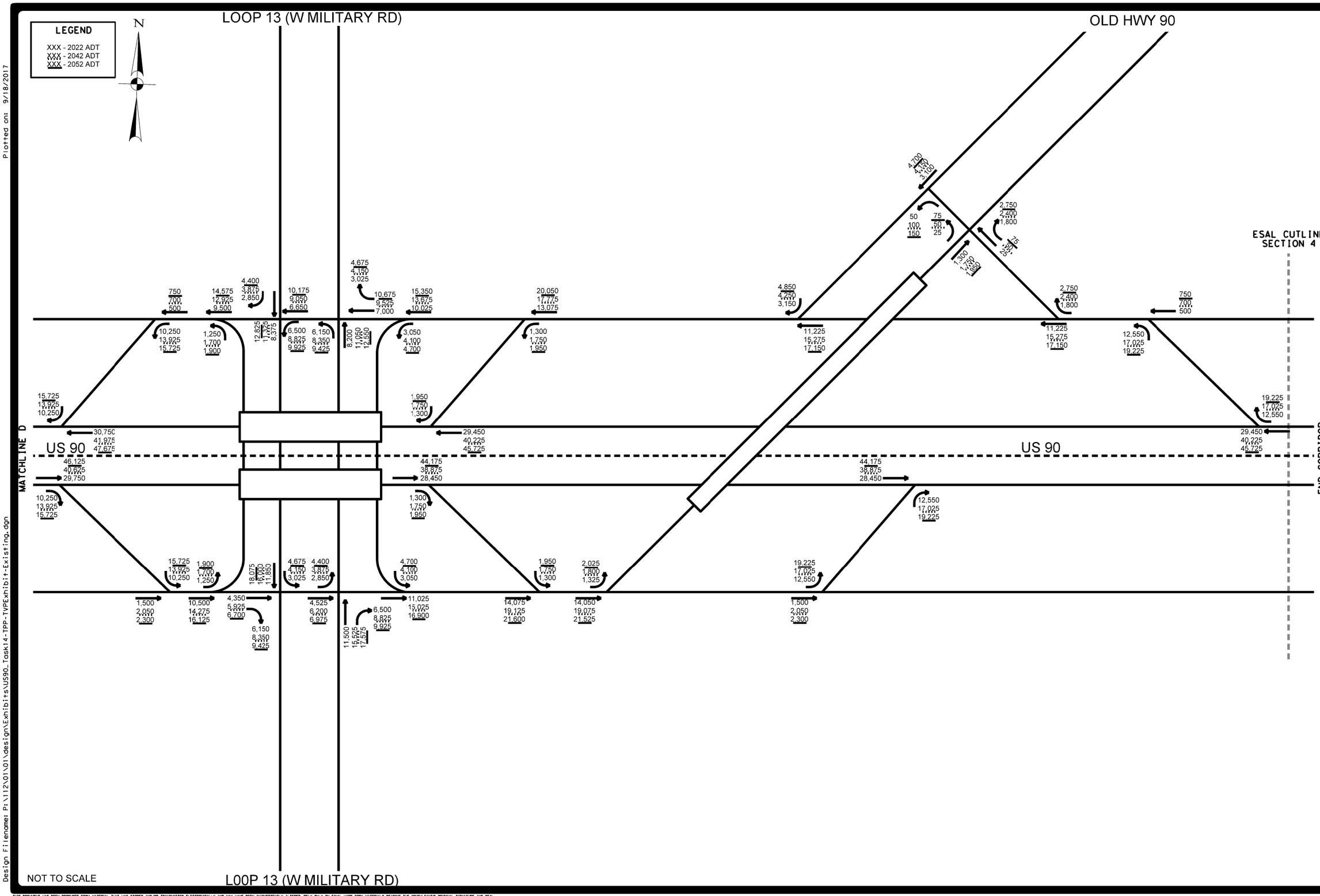

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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

US 90 FROM OLD HWY 90 TO JUNGMAN RD,
IH-410 FROM MARBACH TO US 90,
LOOP 1604 FROM POTRANCO TO FM 143
CSJ: 0024-07-0059
ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES
BEXAR COUNTY, TX
NO-BUILD CONDITIONS

JOB NO. 11201-01
DATE 9/18/2017
DESIGNER
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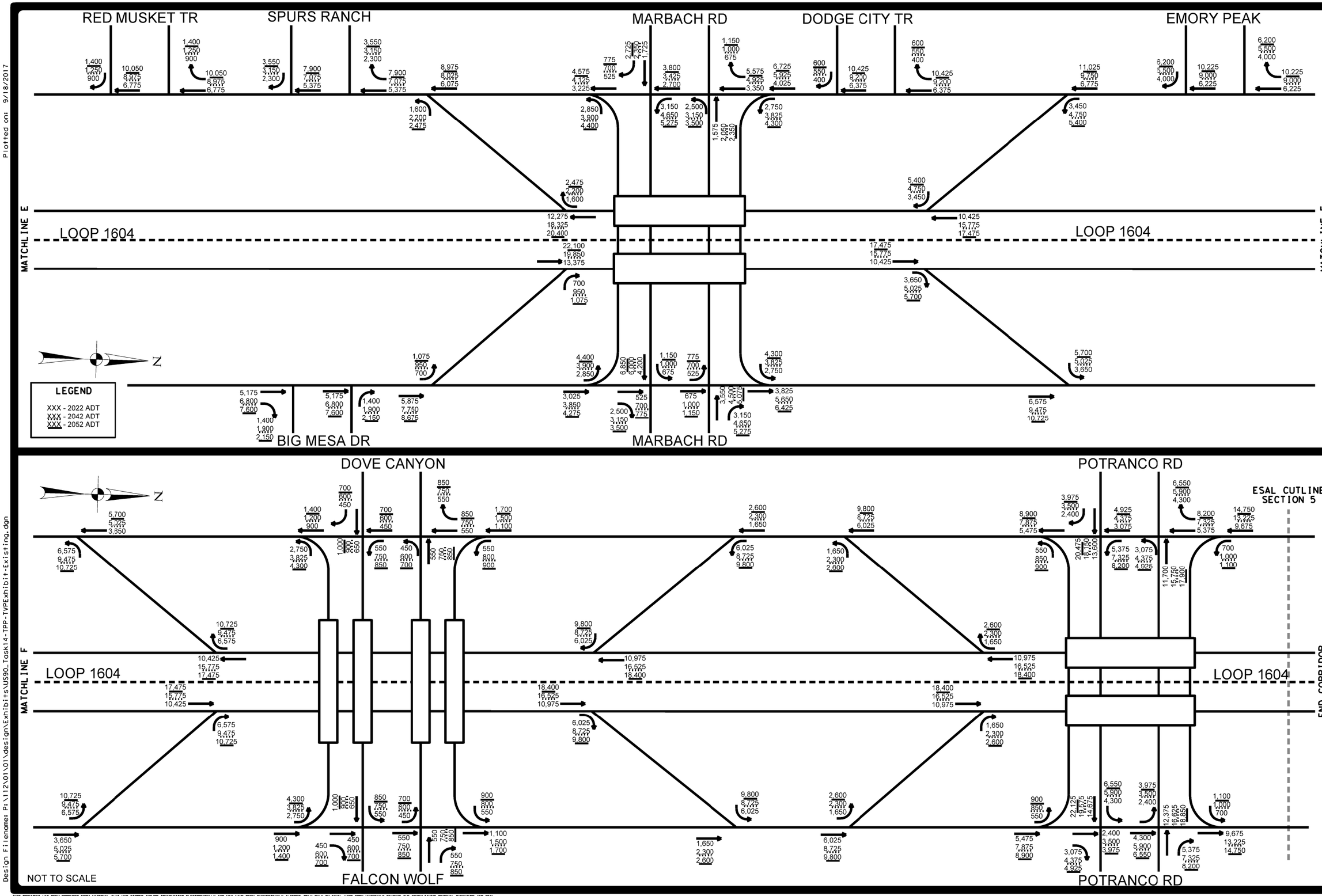

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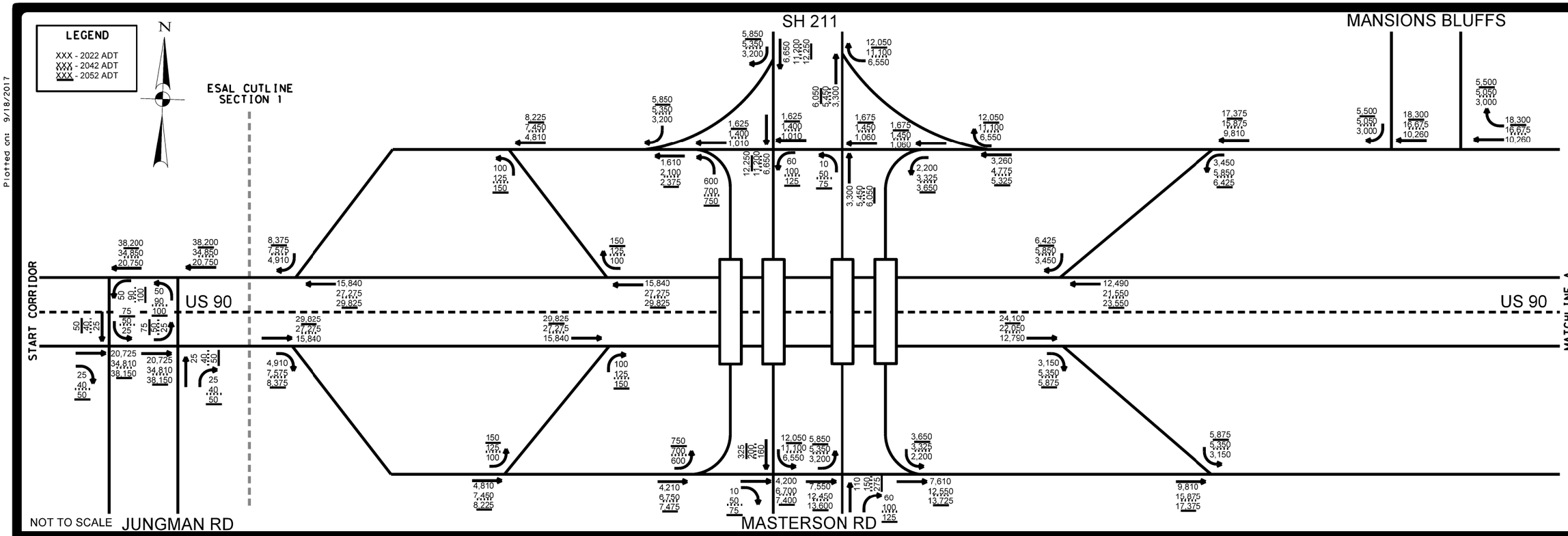

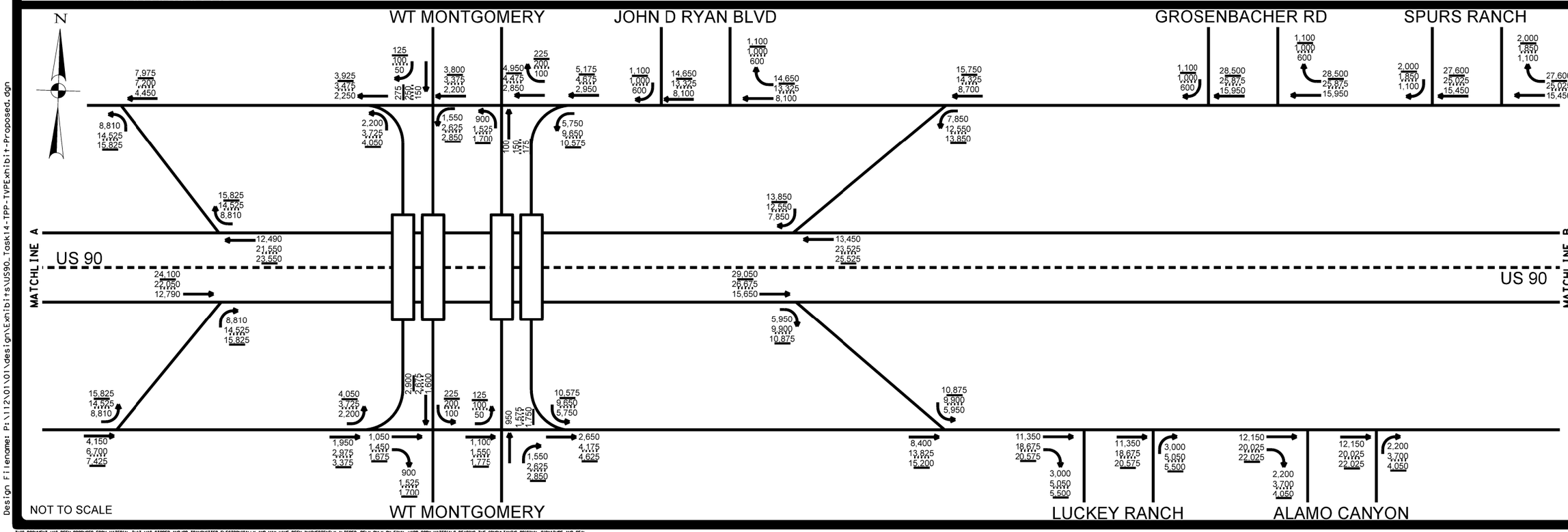

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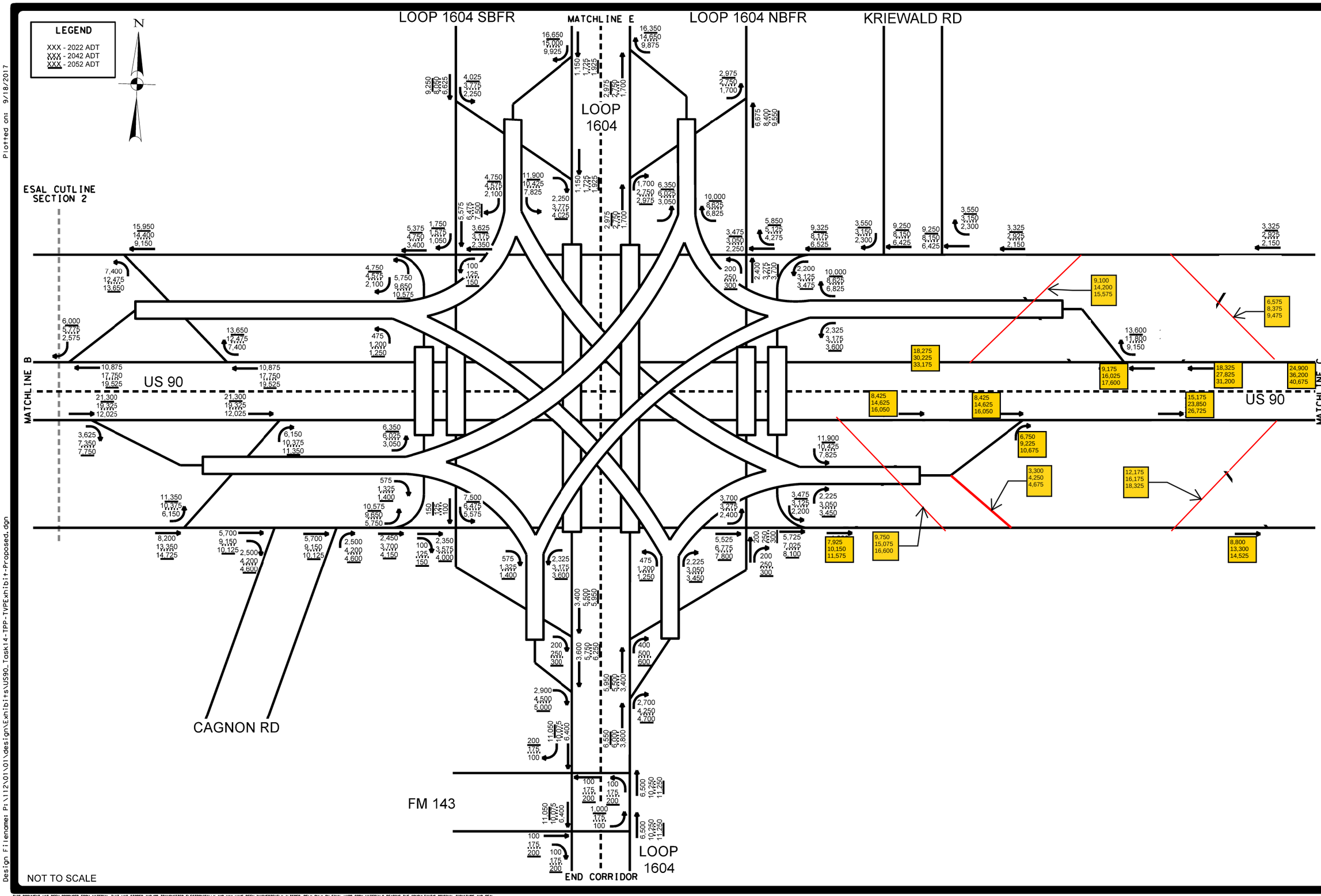

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IH-410 FROM MARBACH TO US 90,
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CSJ: 0024-07-0059
ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES
BEXAR COUNTY, TX
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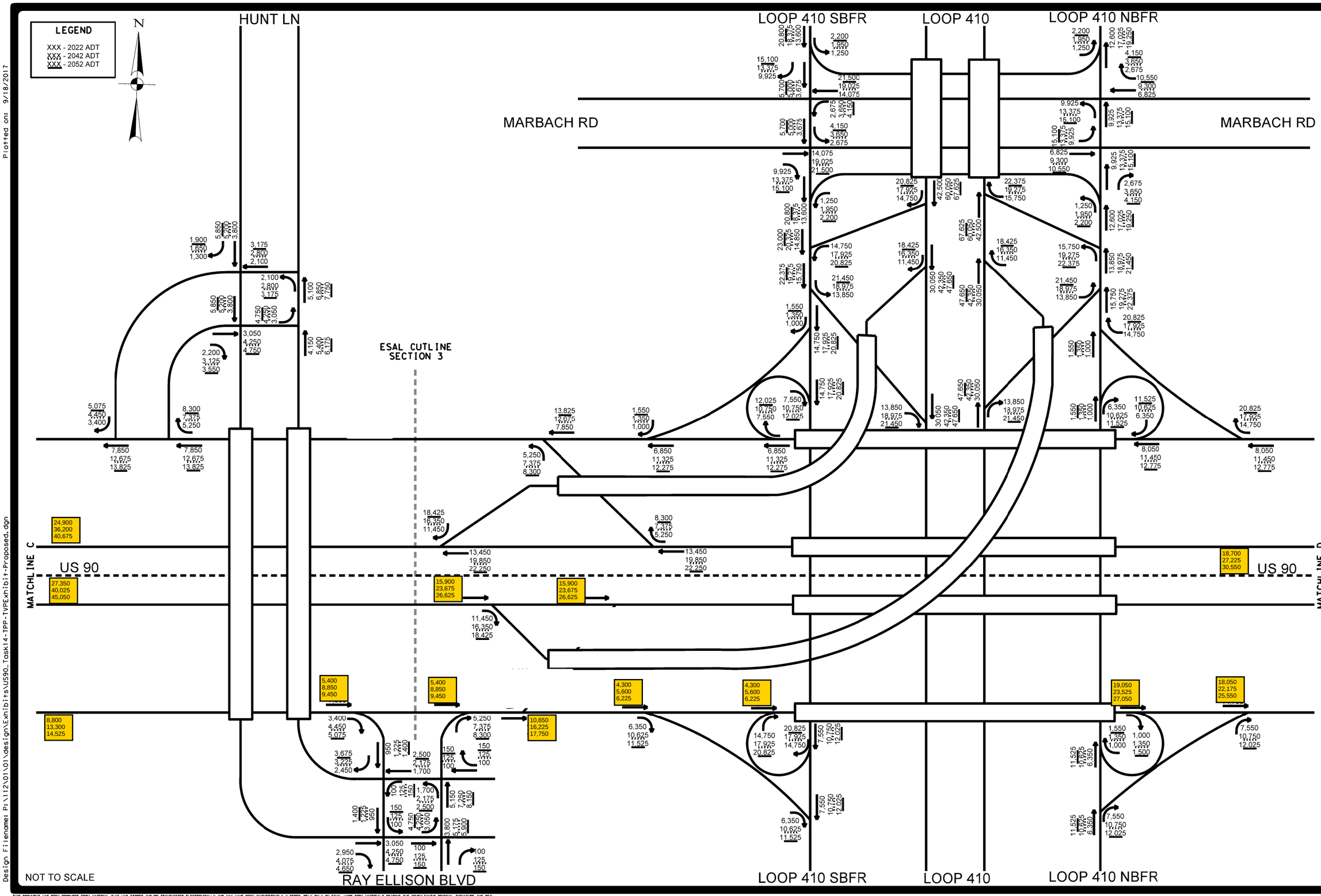

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2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000

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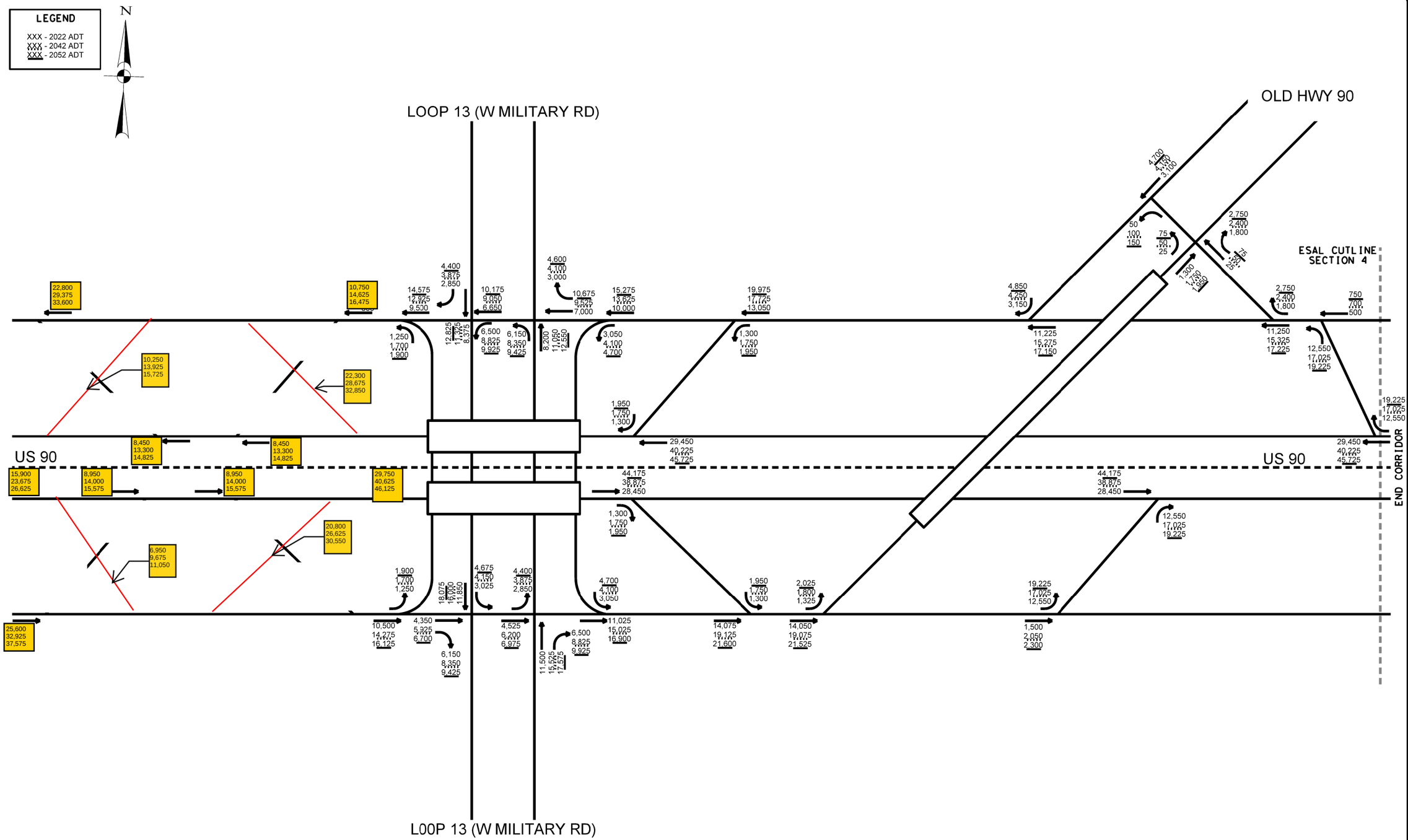

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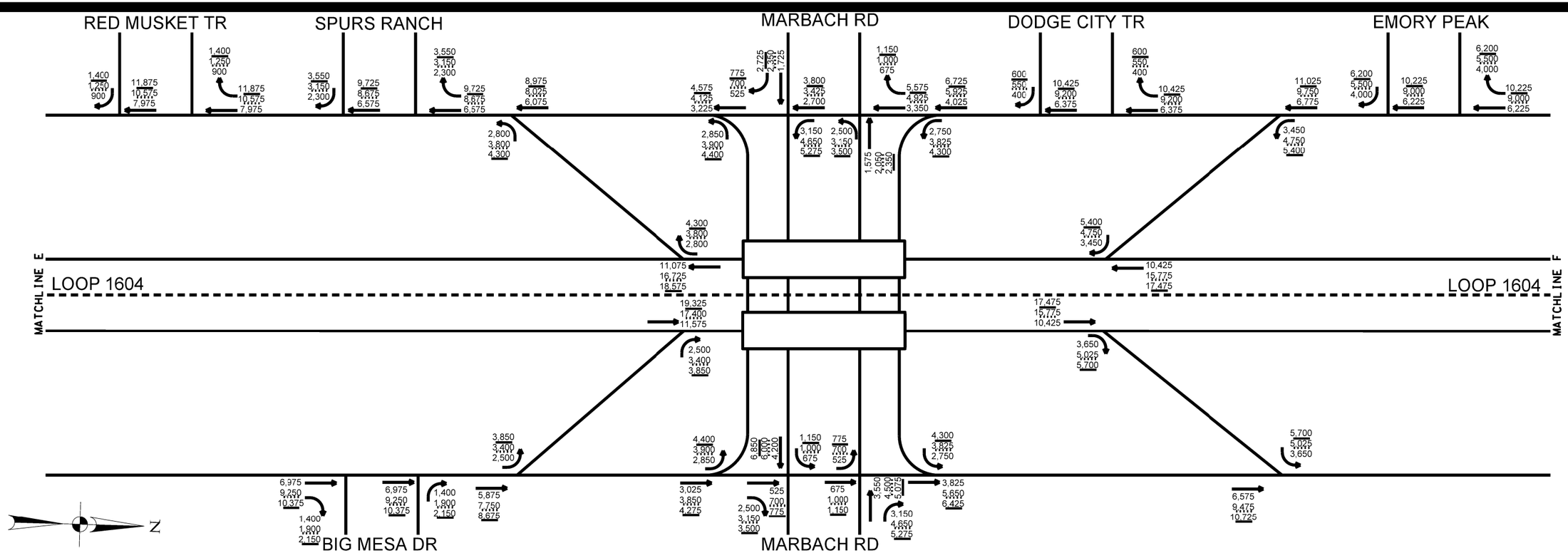

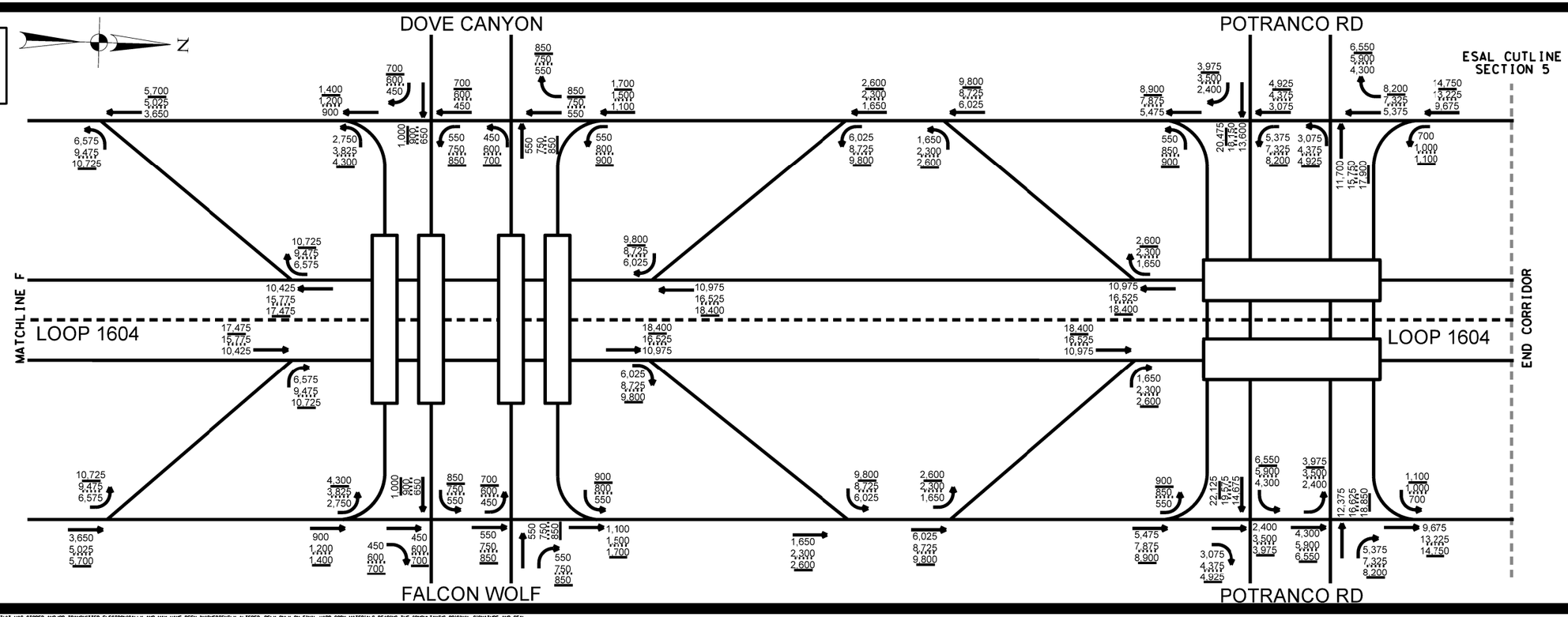

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TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District **September 18, 2017**

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2042	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2022 to 2042) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (No-Build Condition) Section 1 From Jungman Road To SH 211 Bexar County	41,500	69,700	60	9.4	10.5	5.9						

Data for Use in Air & Noise Analysis		
	Base Year	
Vehicle Class	% of ADT	% of DHV
Light Duty	89.5	94.1
Medium Duty	2.6	2.1
Heavy Duty	7.9	3.8

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (No-Build Condition) Section 1 From Jungman Road To SH 211 Bexar County	41,500	76,400	60	9.4	10.5	5.9						

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District **September 18, 2017**

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2042	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2022 to 2042) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (Proposed Condition) Section 1 From Jungman Road To SH 211 Bexar County	41,500	69,700	60	9.4	10.5	5.9						

Data for Use in Air & Noise Analysis		
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U.S. 90 Main Lanes (Proposed Condition) Section 1 From Jungman Road To SH 211 Bexar County	41,500	76,400	60	9.4	10.5	5.9						

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District **September 18, 2017**

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U.S. 90 Main Lanes (No-Build Condition) Section 2 From SH 211 To Loop 1604 Bexar County	59,400	99,800	60	9.4	10.5	5.9						

Data for Use in Air & Noise Analysis		
	Base Year	
Vehicle Class	% of ADT	% of DHV
Light Duty	89.5	94.1
Medium Duty	2.6	2.1
Heavy Duty	7.9	3.8

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (No-Build Condition) Section 2 From SH 211 To Loop 1604 Bexar County	59,400	109,150	60	9.4	10.5	5.9						

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District **September 18, 2017**

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2042	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2022 to 2042) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (Proposed Condition) Section 2 From SH 211 To Loop 1604 Bexar County	60,000	100,800	60	9.4	10.5	5.9						

Data for Use in Air & Noise Analysis		
	Base Year	
Vehicle Class	% of ADT	% of DHV
Light Duty	89.5	94.1
Medium Duty	2.6	2.1
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Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (Proposed Condition) Section 2 From SH 211 To Loop 1604 Bexar County	60,000	110,250	60	9.4	10.5	5.9						

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U.S. 90 Main Lanes (No-Build Condition) Section 3 From Loop 1604 To IH-410 Bexar County	76,000	112,500	52	9.4	4.4	2.3						

Data for Use in Air & Noise Analysis		
	Base Year	
Vehicle Class	% of ADT	% of DHV
Light Duty	95.6	95.7
Medium Duty	1.4	0.6
Heavy Duty	3.0	1.7

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (No-Build Condition) Section 3 From Loop 1604 To IH-410 Bexar County	76,000	125,600	52	9.4	4.4	2.3						

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District **September 18, 2017**

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2042	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2022 to 2042) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (Proposed Condition) Section 3 From Loop 1604 To IH-410 Bexar County	76,000	112,500	52	9.4	4.4	2.3						

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U.S. 90 Main Lanes (Proposed Condition) Section 3 From Loop 1604 To IH-410 Bexar County	76,000	125,600	52	9.4	4.4	2.3						

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U.S. 90 Main Lanes (No-Build Condition) Section 4 From IH-410 To Old Hwy 90 Bexar County	85,000	115,900	52	9.4	4.4	2.3						

Data for Use in Air & Noise Analysis		
	Base Year	
Vehicle Class	% of ADT	% of DHV
Light Duty	95.6	95.7
Medium Duty	1.4	0.6
Heavy Duty	3.0	1.7

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (No-Build Condition) Section 4 From IH-410 To Old Hwy 90 Bexar County	85,000	131,400	52	9.4	4.4	2.3						

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San Antonio District **September 18, 2017**

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2042	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2022 to 2042) Flexible Pavement	S N	Rigid Pavement	SLAB
U.S. 90 Main Lanes (Proposed Condition) Section 4 From IH-410 To Old Hwy 90 Bexar County	85,000	115,900	52	9.4	4.4	2.3						

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	Base Year	
Vehicle Class	% of ADT	% of DHV
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U.S. 90 Main Lanes (Proposed Condition) Section 4 From IH-410 To Old Hwy 90 Bexar County	85,000	131,400	52	9.4	4.4	2.3						

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Loop 1604 Main Lanes (No-Build Condition) Section 5 From Potranco Rd FM 143 Bexar County	46,000	66,100	60	10.6	4.4	2.3						

Data for Use in Air & Noise Analysis		
	Base Year	
Vehicle Class	% of ADT	% of DHV
Light Duty	95.6	95.7
Medium Duty	1.4	0.6
Heavy Duty	3.0	1.7

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
Loop 1604 Main Lanes (No-Build Condition) Section 5 From Potranco Rd FM 143 Bexar County	46,000	73,700	60	10.6	4.4	2.3						

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District **September 18, 2017**

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Loop 1604 Main Lanes (Proposed Condition) Section 5 From Potranco Rd FM 143 Bexar County	46,000	66,100	60	10.6	4.4	2.3						

Data for Use in Air & Noise Analysis		
	Base Year	
Vehicle Class	% of ADT	% of DHV
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Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
Loop 1604 Main Lanes (Proposed Condition) Section 5 From Potranco Rd FM 143 Bexar County	46,000	73,700	60	10.6	4.4	2.3						

FILE

Texas Department of Transportation

MEMO

May 12, 2017

To: Mario Jorge, P.E., District Engineer
Attention: Jonathan Bean, P.E., Director of TPD

Through: William E. Knowles, P.E.
Traffic Analysis Section Director, TPP

From: Bruce R. Uphaus
Planner, TPP

Subject: Traffic Data
CSJ: 0024-07-059
US 90:
Along US 90 from Old Hwy 90 to 1 mile west of SH 211, along I-410 from Marbach to US 90, along Loop 1604 from Potranco to FM 143

Bexar County

Attached is a corridor analysis package for the defined limits of the route.

Due to differences in traffic the project was divided into sections.

Section One: From Old Highway 90 to SH 13
Section Two: From SH 13 to I-410
Section Three: From I-410 to Loop 1604
Section Four: From Loop 1604 to FM 143

Please refer to your original memorandum dated September 29, 2016.

If you have any questions or need additional information, please contact Bruce R. Uphaus at (512) 486-5104.

Attachments

CC: Richard De La Cruz, P.E., Transportation Engineer, San Antonio District

BRU

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District

May 11, 2017

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2042	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2022 to 2042) Flexible Pavement	S N	Rigid Pavement	SLAB
US 90 Section 1 From Old Highway 90 To SH 13 Bexar County	81,200	113,300	60 - 40	9.4	3.0	1.8	0	0	0	3	0	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	97.0	98.2
Medium Duty	1.4	0.8
Heavy Duty	1.6	1.0

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
US 90 Section 1 From Old Highway 90 To SH 13 Bexar County	81,200	127,100	60 - 40	9.4	3.0	1.8	0	0	0	3	0	8"

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District

May 11, 2017

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2042	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2022 to 2042) Flexible Pavement	S N	Rigid Pavement	SLAB
US 90 Section 2 From SH 13 To I-410 Bexar County	94,800	132,300	60 - 40	9.4	2.7	1.6	0	0	0	3	0	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	97.3	98.4
Medium Duty	1.3	0.8
Heavy Duty	1.4	0.8

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
US 90 Section 2 From SH 13 To I-410 Bexar County	94,800	148,500	60 - 40	9.4	2.7	1.6	0	0	0	3	0	8"

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District

May 11, 2017

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2042	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2022 to 2042) Flexible Pavement	S N	Rigid Pavement	SLAB
US 90 Section 3 From I-410 To Loop 1604 Bexar County	82,100	114,600	60 - 40	9.4	3.0	1.8	0	0	0	3	0	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	97.0	98.2
Medium Duty	1.4	0.8
Heavy Duty	1.6	1.0

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
US 90 Section 3 From I-410 To Loop 1604 Bexar County	82,100	128,600	60 - 40	9.4	3.0	1.8	0	0	0	3	0	8"

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

San Antonio District

May 11, 2017

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2042	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2022 to 2042) Flexible Pavement	S N	Rigid Pavement	SLAB
US 90 Section 4 From Loop 1604 To FM 143 Bexar County	58,400	81,500	60 - 40	9.4	3.3	2.0	0	0	0	3	0	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	96.7	98.0
Medium Duty	1.6	1.0
Heavy Duty	1.7	1.0

Description of Location	Average Daily Traffic 2022	Average Daily Traffic 2052	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2022 to 2052) Flexible Pavement	S N	Rigid Pavement	SLAB
US 90 Section 4 From Loop 1604 To FM 143 Bexar County	58,400	91,400	60 - 40	9.4	3.3	2.0	0	0	0	3	0	8"

REQUEST FOR TRAFFIC DATA

Date: 9/29/2016

District: San Antonio **County:** Bexar **CSJ:** 0024-07-059

Highway: US 90
Limits: Along US 90 from Old Hwy 90 to 1 mile west of SH 211, along IH 410 from Marbach to US 90, along Loop 1604 from Potranco to FM 143
Layman's Description: Expand from 4-lane divided to expressway. With partial interchange at IH 410, full interchange at Loop 1604. Interchange modifications at SH 211

Texas Reference Marker System

From Marker:	556	From Displacement:	.522	From DFO:	438.190
To Marker:	562	To Displacement:	.446	To DFO:	444.101

Is it in the UTP? ☒ Yes ☐ No Est. Letting Date: 9/21

Existing Number of Lanes: 4
Proposed Number of Lanes: 4

Please attach an 8-1/2" x 11" location map and make note of any existing or proposed development that will be a traffic generator.

The following to be completed by the District Office:

☐1. Basic Highway Traffic Data for pavement
(No line diagram analysis required.)
- A. Base year/Beginning year:2022
- B. Forecasted 20 year: 2042
- C. Forecasted 30 year: 2052
- D. Directional Distribution
- E. K-factor
- F. Percent Trucks ADT/DHV
- G. Average Ten Heaviest Wheel Loads (ATHWLD)
- H. Percent Tandem Axles in the ATHWLD
- I. One Directional cumulative 18 KSA at the end of the 20 years/30 years
- J. Slab Thickness (8" unless otherwise specified): _____
- K. Structural Number (3 unless otherwise specified): _____

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OCT 5 2016
BY TPP

☐2. Vehicle classification for environmental studies (Air and Noise Analysis).

☐3. Line diagram analysis (straight line turning movements; please provide line diagram).

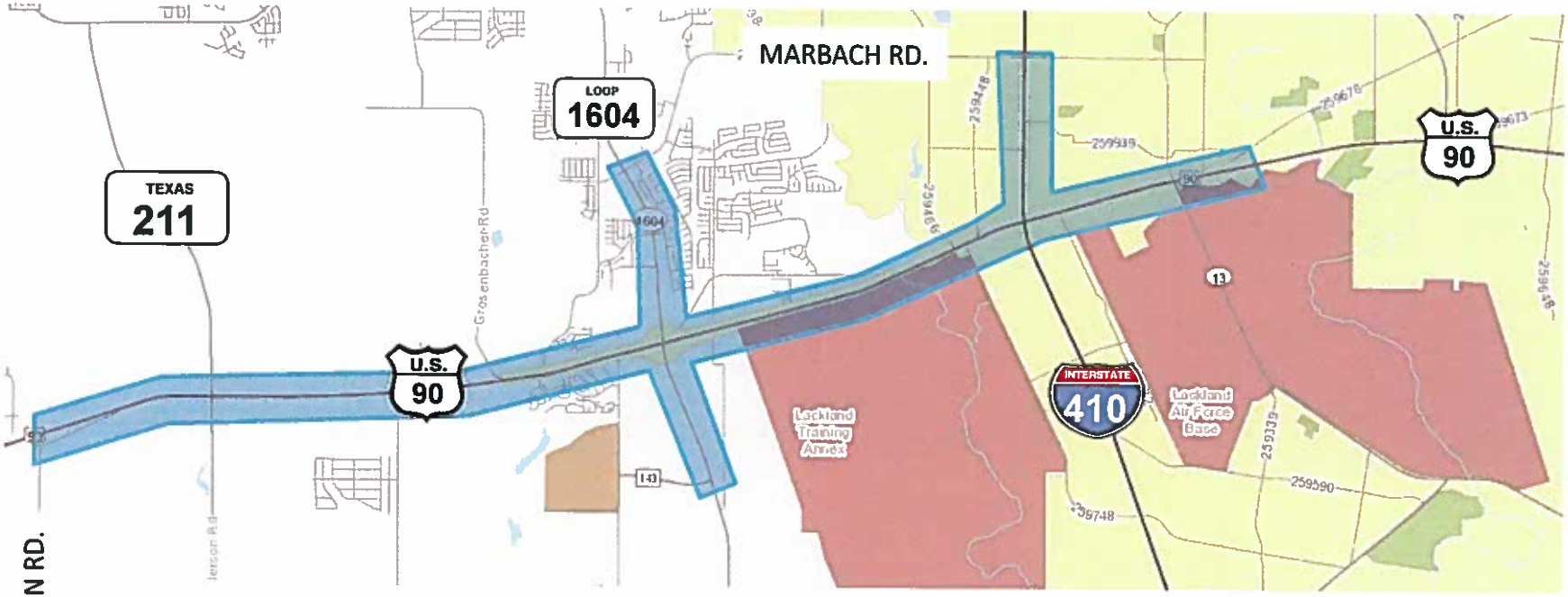
☒4. Complete Corridor Analysis (includes basic highway traffic data for pavement design, environmental studies and detailed schematic turning movements; *please provide detailed schematic*).

Note: If complete corridor analysis is requested, please attach a traffic schematic diagram.

Requestor: Clayton Ripps Office: SAT Planning Phone Number: 210-615-6076

District Contact Person: Jesse Hayes
Phone Number: 210-615-5860
District Priority: _____

US 90 PROJECT LOCATION MAP
CSJ 0024-07-059



Texas Department of Transportation

MEMO

October 5, 2016

To: Mario Jorge, P.E.
Attention: Jonathan Bean, P.E.

From: William E. Knowles, P.E
Traffic Analysis Section Director, TPP

Subject: Traffic Data Request

The Transportation Planning and Programming Division received the following request October 5, 2016

Request Date: October 5, 2016

CSJ: 0024-07-059

Highway/Limits:
US 90/Along US 90 from Old HWY 90 to 1 mile west of SH 211, along IH 410 from Marbach to US 90, along loop 1604 from Potranco to FM 143

The project will be entered into our Project Priority List at the priority level requested by the district. If no priority was indicated in your request, this project will be entered as your district's last priority. You will be contacted by a member of our staff if additional information is needed.