August
2023

Final

Environmental Assessment

Proposing Improvement of Existing Patrol Roads in the U.S. Border Patrol Laredo Sector, Texas

U.S. Customs and Border Protection

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ABBREVIATIONS AND ACRONYMS

ACI	Archaeological Consultants, Inc.
ACM	Asbestos-containing material
ACS	American Community Survey
APE	Area of Potential Effect
AQCR	Air quality control region
ARPA	Archaeological Resources Protection Act
BLIAQCR	Brownsville-Laredo Intrastate AQCR
BLM	Bureau of Land Management
BMP	Best management practices
CAA	Clean Air Act
CBP	Customs and Border Protection
CBV	Cross-border violators
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon monoxide
CO_2	Carbon dioxide
CWA	Clean Water Act
DHS	Department of Homeland Security
DNL	day-night average A-weighted noise level
EA	Environmental Assessment
EIS	Environmental Impact Statement
E.O.	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
GHG	Greenhouse gas
HAP	Hazardous air pollutant
LBP	Lead-based paint
LRGV	Lower Rio Grande Valley
MBTA	Migratory Bird Treaty Act
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
O_3	Ozone
PCB	polychlorinated biphenyls

PGA	Peak ground acceleration
PM	Particular matter
POE	Port of Entry
POL	Petroleum, Oil, and Lubricants
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
RTHL	Recorded Texas Historic Landmark
ROI	Region of influence
SIP	State Implementation Plan
SCGN	Species of greatest conservation need
SFHA	Special Flood Hazard Area
SGCN	Species of greatest conservation need
SOP	Standard operating procedure
SO_x	Sulfur oxide
SPCCP	Spill Prevention, Control, and Countermeasure Plan
SWPPP	Storm Water Pollution Prevention Plan
TBBA	Texas Bird Breeding Atlas
TCEQ	Texas Commission on Environmental Quality
TDOT	Texas Department of Transportation
TGLO	Texas General Land Office
THC	Texas Historical Commission
THPO	Tribal Historic Preservation Office
TIMR	Tactical Infrastructure Maintenance and Repair
TPWD	Texas Parks & Wildlife Department
tpy	tons per year
TSCA	Toxic Substances Control Act
UPRR	Union Pacific Railroad
U.S.	United States
U.S.C.	United States Code
USBP	United States Border Patrol
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USIBWC	United States International Boundary and Water Commission
USGS	United States Geologic Survey
VOC	Volatile organic compounds
WOTUS	Waters of the United States
%g	percent gravity

Cover Sheet

Final Environmental Assessment
Proposing Improvement of Existing Patrol Roads in the
U.S. Border Patrol Laredo Sector, Texas

Responsible Agencies: Department of Homeland Security, U.S. Customs and Border Protection (CBP), U.S. Border Patrol (USBP).

Affected Location: Webb County, Texas.

Report Designation: Final Environmental Assessment (EA).

Abstract: CBP proposes to improve approximately 16 miles of existing patrol roads in the USBP Laredo Sector, Webb County, Texas. As part of the proposed project, the roads would be improved to Functional Class-2 (FC-2), all-weather roads. An FC-2 road is a two-lane, 24-foot-wide, unpaved, all-weather road consisting of a surface of imported aggregate material such as milled bituminous material or processed stone and gravel. The upgraded all-weather road would improve mobility and accessibility for USBP agents responding to illegal cross-border traffic. The proposed roads are located where the vanishing points for cross-border violators are measured in seconds to minutes. In addition to road improvement, the Proposed Action includes the construction of three bridges, multiple low water crossings, and pipe/culvert drainage crossings.

The EA presents the analysis and documents potential environmental consequences associated with the Proposed Action and No Action Alternative. The analyses presented in this EA indicate that implementation of the Proposed Action would not result in significant environmental impacts, and a Finding of No Significant Impact is appropriate.

Status updates for the EA can be obtained via the CBP EA website at *https://www.cbp.gov/about/environmental-management* or by emailing *LaredoComments@cbp.dhs.gov*. Comments on the EA or information requests can be submitted to *Environmental Assessment Proposing Improvement of Existing Patrol Roads in the U.S. Border Patrol Laredo Sector, Webb County, Texas*, c/o Paul Enriquez, U.S. Customs and Border Protection, U.S. Border Patrol Headquarters, 1300 Pennsylvania Ave. 6.5E Mail Stop 1039, Washington, D.C. 20229, or by email at *LaredoComments@cbp.dhs.gov*.

Privacy Advisory

Comments on this document are requested. Letters or other written comments provided may be published in the EA. Comments will be addressed in the EA and made available to the public. Any personal information provided will be used only to identify a desire to make a statement during the public comment period or to fulfill requests for copies of the EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the EA. However, only the names of the private citizens making comments and specific comments will be disclosed; personal home addresses and telephone numbers will not be published in the EA.

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FINAL

ENVIRONMENTAL ASSESSMENT

PROPOSING IMPROVEMENT OF EXISTING PATROL ROADS IN THE U.S. BORDER PATROL LAREDO SECTOR, WEBB COUNTY, TEXAS

DEPARTMENT OF HOMELAND SECURITY
U.S. CUSTOMS AND BORDER PROTECTION
U.S. BORDER PATROL

August 2023

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APPENDICES

1 INTRODUCTION

U.S. Customs and Border Protection (CBP) proposes to improve approximately 16 miles of existing patrol roads in the U.S. Border Patrol (USBP) Laredo Sector, Webb County, Texas (i.e., the Proposed Action). The Proposed Action would also include the construction of three bridges, multiple low water crossings, and pipe/culvert drainage crossings. As part of the proposed project, the roads would be improved to Functional Class-2 (FC-2), all-weather roads. An FC-2 road is a two-lane, 24-foot-wide, unpaved, all-weather road consisting of a surface of imported aggregate material such as milled bituminous material or processed stone and gravel. The upgraded all-weather road would improve mobility and accessibility for USBP agents responding to illegal cross-border traffic. The proposed roads are located where the vanishing points for cross-border violators (CBV) are measured in seconds to minutes.

An Environmental Assessment (EA) has been prepared to describe and assess the potential environmental and socioeconomic impacts associated with the Proposed Action and alternatives. The EA complies with the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [U.S.C.] Section 4321–4347); the Council on Environmental Quality's (CEQ) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations [CFR] Parts 1500–1508); Department of Homeland Security's (DHS) Directive 023-01, Rev-01, *Environmental Planning Program*; and DHS's Directive 023-01-001-01, Rev-01, *Implementation of the National Environmental Policy Act*.

This EA is organized into six chapters plus appendices. **Chapter 1** provides background information on existing security measures and the USBP mission, identifies the purpose of and need for the Proposed Action, describes the area in which the Proposed Action would occur, and explains the public involvement process. **Chapter 2** provides a detailed description of the Proposed Action and alternatives, including the No Action Alternative. **Chapter 3** describes existing environmental conditions in the area where the Proposed Action would occur and identifies potential environmental impacts that could occur within each resource area. **Chapter 4** contains a cumulative analysis of impacts that the Proposed Action, combined with other projects in the area, could have on the environment. **Chapters 5** and **6** provide a list of references used to develop the EA, and a list of preparers who developed the EA, respectively. Finally, the appendices include other information pertinent to the development of the EA.

1.1 BACKGROUND

The mission of the USBP is to detect and prevent CBVs, terrorists, and terrorist weapons from entering the United States, and prevent illegal trafficking of people and contraband. In many areas, tactical infrastructure, of which roads are considered an important component, is a critical element of border security, and contributes as a force multiplier for controlling and preventing illegal border intrusion.

To achieve effective control of our nation's borders, CBP uses a multi-prong approach including a combination of personnel, technology, and infrastructure; the mobilization and rapid deployment of people and resources; and fostering of partnerships with other law enforcement agencies. CBP

must ensure that tactical infrastructure functions as intended, which includes facilitation of meeting the following mission requirements:

- Establish substantial probability of apprehending terrorists and their weapons as they attempt to illegally enter between the Ports of Entry (POEs)
- Deter illegal entries through improved enforcement
- Detect, apprehend, and deter smugglers of humans, drugs, and other contraband.

Furthermore, well-maintained tactical infrastructure allows ready access to the U.S./Mexico international border and surrounding areas for rapid response to detected threats and facilitates the ability to quickly adjust to changing threats.

1.2 LOCATION

The USBP Laredo Sector encompasses 96 counties and covers 84,041 square miles of southwestern and northeastern Texas. The USBP Laredo Sector is situated between the Del Rio, Marfa and Rio Grande Valley Sectors. The Laredo Sector extends south to U.S./Mexico border and north to the Oklahoma and Louisiana state border. There are approximately 139 miles of riverfront between the northwestern point of intersection between Webb County and the Rio Grande and the southeastern corner of Zapata County at a point on Falcon Lake near the Falcon Dam. Eight stations fall within the USBP Laredo Sector including Laredo North, Laredo South, Zapata, Hebbronville, Cotulla, Freer, Dallas, and San Antonio.

The Proposed Action would consist of improving and widening approximately 14.2 miles of existing patrol road and 1.7 miles of access roads in Webb County, Texas. The existing patrol road is split into two separate segments of 7.5 miles and 6.7 miles within USBPs Laredo North and Laredo South sectors, respectively. The Laredo North patrol road begins approximately 1 mile south of the World Trade Bridge POE and runs south along the U.S./Mexico international border stopping at the Texas Mexican Railway International Bridge POE (refer to **Figure 1-1**). The Laredo South patrol road begins at the Juarez-Lincoln POE and runs south along the U.S./Mexico international border stopping approximately one-half of a mile south of the Laredo College South Campus (refer to **Figure 1-2**). The existing patrol road is currently used primarily by CBP for USBP operations and is generally not used by the public. In addition to road improvements, the Proposed Action includes the construction of three bridges, multiple low water crossings, and pipe/culvert drainage crossings.

1.3 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to ensure that the physical integrity of the existing patrol road, access roads, and associated supporting elements continue to perform as intended. The roads assists the USBP in securing the U.S/Mexico international border in Texas. The improvement of the roads would enhance agent safety and effectiveness by providing efficient, reliable, and safe routes to remote areas that require patrolling. The roads are critical to USBP Laredo Sector's ability to maintain easy access to portions of the border region. The current FC-4, two-track patrol road is

Figure 1-1. Laredo North Patrol Road Project Area

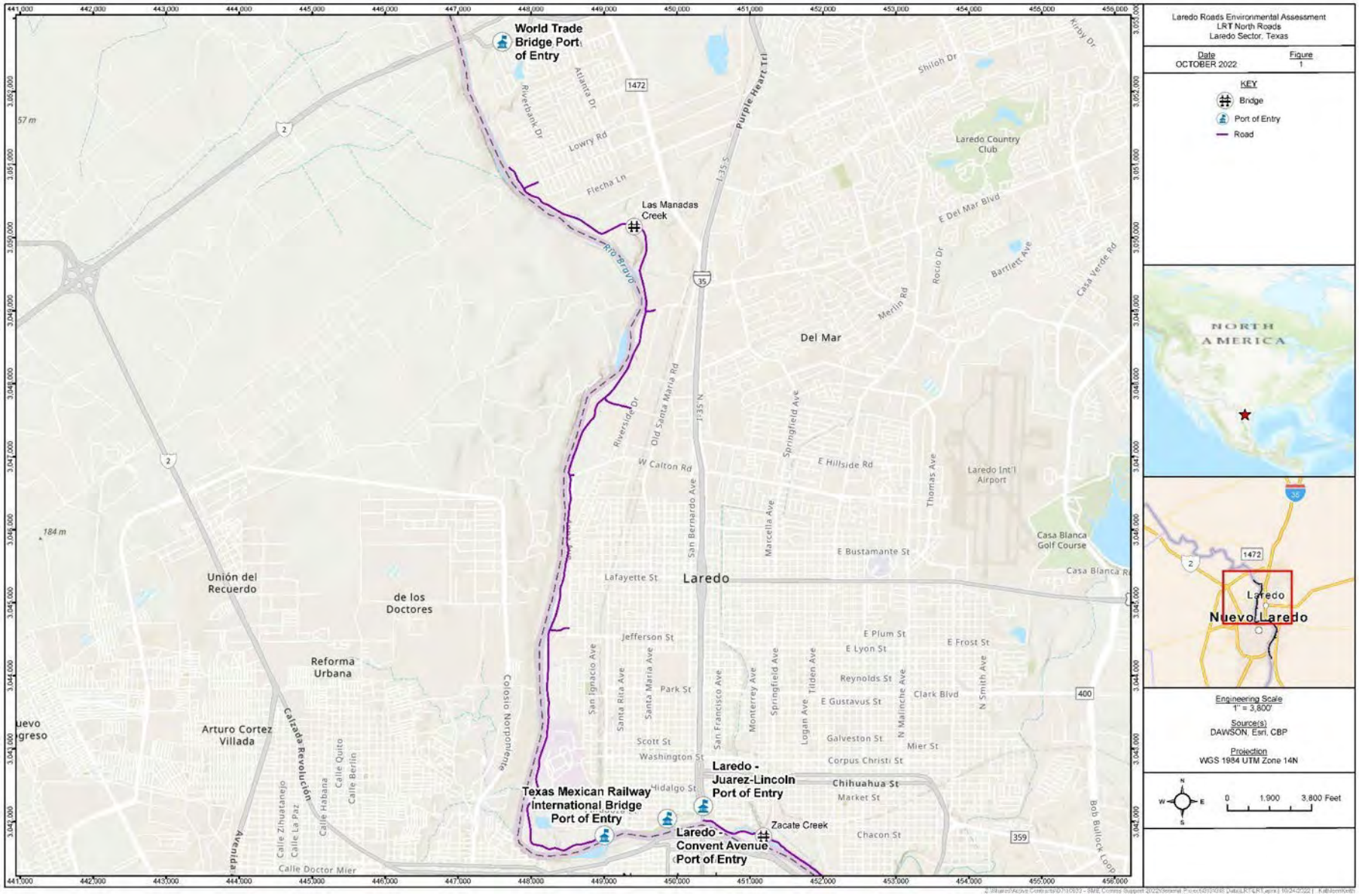
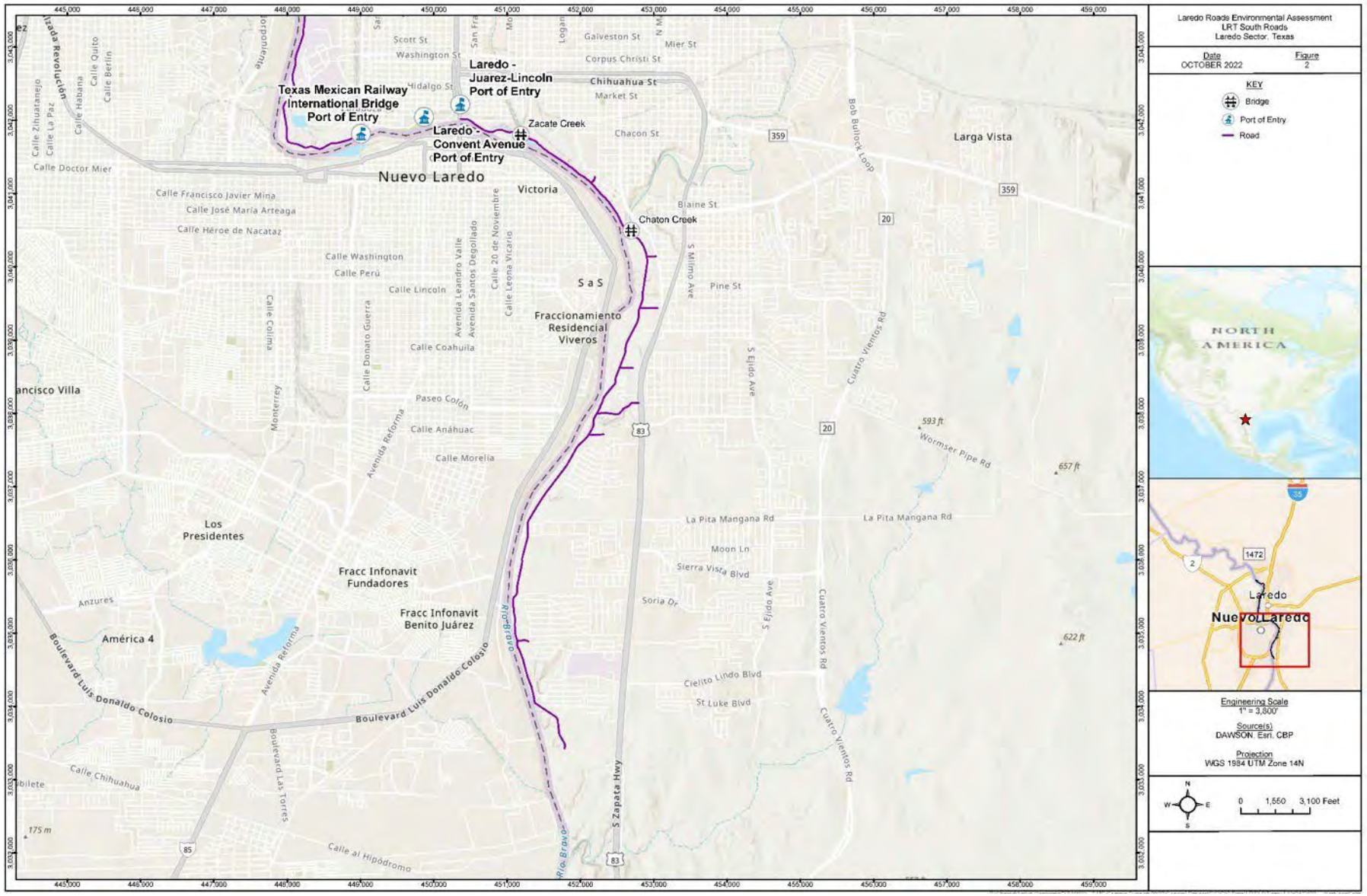


Figure 1-2. Laredo South Patrol Road Project Area



composed of unimproved road, wagon trail, and 4-wheel drive road and is 10–12-feet wide through most of its length. As "two-track" implies, the road consists of two parallel tracks created by the loss of vegetation where the tires contact and compact the earth, between which lies a strip of low-growth vegetation (refer to **Figure 1-3** for current road conditions). In many areas, the central vegetated strip has succumbed to erosion. The road has received no maintenance since it was built 10 years ago. The road has no crown and does not have any improved drainage features or ditches. The proposed activities would ensure that the road is passable, providing faster response time to border incidents in strategically valuable areas.

Figure 1-3. Current Project Area Conditions

The need for the Proposed Action is to ensure that the increased level of border security provided by the Laredo North and South patrol roads is not compromised by natural events or breaches in road integrity. Furthermore, roads and other tactical infrastructure are crucial to mission readiness and need to be kept in optimal working order to facilitate successful day-to-day USBP operations.

1.4 PUBLIC INVOLVEMENT

Agency and public involvement in the NEPA process promotes open communication between the public and the government and enhances the decision-making process. All persons or organizations with a potential interest in the Proposed Action are encouraged to submit input into the decision-making process. NEPA and implementing regulations from CEQ direct agencies to make their NEPA documents available to the public as part of the decision-making process and prior to actions being taken. One of the premises of NEPA is that the quality of Federal decisions will be enhanced if proponents provide information to the public and involve the public in the planning process.

As part of the public involvement process, CBP held a 30-day comment period between November 1, 2022 and December 1, 2022 to collect feedback on the Draft EA. CBP sent informational materials to solicit input on potential impacts on natural and cultural resources from Federal, state, and local agencies; non-governmental organizations; and local Tribes; and solicited input on potential impacts. CBP also solicited input from the general public. The opportunity to provide comments was advertised in local newspapers, sent to local stakeholders via mail and email, posted on CBP.gov and briefed at stakeholder meetings. Hard copies of the Draft EA were made available at the Joe A. Guerra; Barbara Fasken; Bruni Plaza; Lamar Bruni Vergara Inner City; and Sophie Christen McKendrick, Francisca Ochoa, and Fernando A. Salinas branches of the Laredo Public Library (see **Appendix A** for all stakeholder coordination materials). CBP will continue to coordinate with agencies such as U.S. Fish and Wildlife Service (USFWS); Bureau of Land Management (BLM); U.S. Army Corps of Engineers (USACE); U.S. Forest Service; Texas

Department of Transportation (TDOT); Texas Parks & Wildlife Department (TPWD); Texas Historical Commission (THC); Texas Commission on Environmental Quality (TCEQ); Texas General Land Office (TGLO); Texas Department of Agriculture, U.S. International Boundary and Water Commission (USIBWC); local agencies; and with appropriate Native American tribes and nations.

Throughout the NEPA process, the public can obtain information concerning the status and progress of the EA via the project website at *https://www.cbp.gov/about/environmental-management*. Comments received from tribal, state, and Federal agencies have been incorporated into this Final EA.

1.5 FRAMEWORK FOR ANALYSIS

CEQ is the principal Federal agency responsible for the administration of NEPA. The purpose of NEPA is to help inform decision-making regarding the environment. CEQ regulations mandate that all Federal agencies use a systematic, interdisciplinary approach to environmental planning and the evaluation of actions that might affect the environment. This process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action, as well as the No Action Alternative.

The process for implementing NEPA is codified in 40 CFR §§ 1500–1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*. CEQ was established under NEPA to implement and oversee Federal policy in this process. CEQ regulations specify that an EA can be prepared for the following reasons:

- Provide evidence and analysis to determine whether to prepare a Finding of No Significant Impact or an Environmental Impact Statement (EIS),
- Aid in an agency's compliance with NEPA when an EIS is unnecessary,
- Facilitate preparation of an EIS when one is necessary.

Within DHS and CBP, NEPA is implemented using DHS Directive 023-01, *Environmental Planning Program*, DHS's Directive 023-01-001-01, Rev-01, *Implementation of the National Environmental Policy Act*, and CBP policies and procedures.

The NEPA process for actions proposed by Federal agencies involves a study of other relevant environmental statutes and regulations. However, the NEPA process does not replace procedural or substantive requirements of other environmental statutes and regulations. It addresses them collectively in the form of an EA or EIS, which enables the decision maker to have a comprehensive view of major environmental issues and requirements associated with a proposed action. According to CEQ regulations, the requirements of NEPA must be integrated "with other environmental review and consultation requirements."

Within the framework of environmental impact analysis under NEPA, additional authorities that might be applicable include the Clean Air Act (CAA), Clean Water Act (CWA) (including a National Pollutant Discharge Elimination System [NPDES] storm water discharge permit and

Section 404 permit), Noise Control Act, Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), National Historic Preservation Act (NHPA), Archaeological Resources Protection Act (ARPA), Native American Graves Protection and Repatriation Act (NAGPRA), Resource Conservation and Recovery Act, Toxic Substances Control Act, and various Executive Orders (E.O.). Major Federal and state permits, approvals, and interagency coordination required for the proposed improvement of the existing patrol roads are listed in **Table 1-1**. CBP has conducted consultation with USFWS and the THC to comply with Section 7 of the ESA and Section 106 of the NHPA. Comments received during the consultation process would be incorporated into the document, as appropriate.

Table 1-1. Key Permits and Approvals (as applicable) and Interagency Coordination

Agency	Permit/Approval/Coordination
USACE	- CWA Section 404 permit
USFWS	- Section 7 ESA coordination/consultation - MBTA coordination
Federally recognized Indian Tribes	- Consultation regarding potential effects on traditional cultural properties
THC	- NHPA Section 106 consultation
Texas CEQ	- CWA Section 401 State Water Quality Certification - CWA NPDES permit - CAA permit consultation

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2 PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

This chapter provides detailed information on CBP's Proposed Action to improve existing patrol and access roads in the USBP Laredo Sector, Webb County, Texas. As discussed in **Section 1.5**, the NEPA process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for a proposed action, which are defined for this action in **Section 1.3**. CEQ guidance advocates the inclusion of a No Action Alternative against which potential effects can be compared. While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, it is analyzed in detail as recommended by CEQ regulations.

2.2 SCREENING CRITERIA FOR ALTERNATIVES

The range of reasonable alternatives considered in this EA is constrained to those that would meet the purpose of and need for the Proposed Action as described in **Section 1.3**, which is to improve existing patrol roads in the USBP Laredo Sector. Such alternatives must also meet essential technical, engineering, and economic threshold requirements to ensure that each is environmentally sound and economically viable and complies with governing standards and regulations.

CBP developed and applied selection criteria during earlier phases of planning to assist in determining suitable locations consistent with the project's purpose and need for the road improvements. The site-selection criteria applied are as follows:

- ***Maintaining Situational Awareness.*** Implementation of proposed activities must provide USBP Laredo agents the ability to stay abreast of cross-border violations around the Laredo North and South patrol roads.

- ***Facilitating Effective Response.*** Implementation of proposed activities must facilitate the efficient and effective response to cross-border violations around Laredo North and South patrol roads.

- ***Minimize and/or Avoid Environmental Impacts.*** Implementation of proposed activities must consider the environment to minimize and avoid current and future impacts.

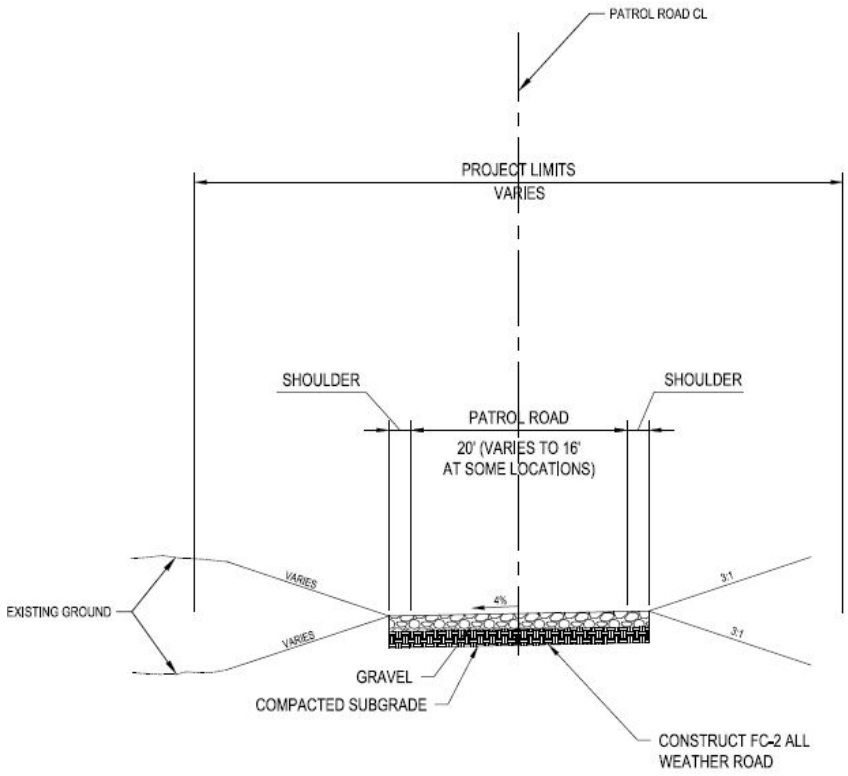
2.3 ALTERNATIVE 1: IMPROVEMENT OF THE EXISTING LAREDO NORTH AND LAREDO SOUTH PATROL ROADS (PREFERRED ALTERNATIVE)

The Proposed Action would include the improvement and widening of approximately 16 miles of the existing patrol and access roads in Laredo, Webb County, Texas, as described in **Section 1.2**. The Proposed Action would also include the construction of three bridges, multiple low water crossings, and pipe/culvert drainage crossings. The Proposed Action would result in 44 acres of land disturbance. The Proposed Action would not include nor does this EA analyze the impacts of continued maintenance of the patrol and access roads. The patrol and access roads would continue

to be maintained under USBPs Comprehensive Tactical Infrastructure Maintenance and Repair program.

Under this alternative, the patrol and access roads would be improved to FC-2 all-weather roads. An FC-2 road is a two-lane, 24-foot-wide, unpaved, all-weather road consisting of a surface of imported aggregate material such as milled bituminous material or processed stone and gravel. FC-2 roads typically consist of two 12-foot travel lanes at a 4 percent cross-slope (refer to **Figure 2-1**). A cross-slope is built into the road to provide a drainage gradient so water will run off the surface to a drainage system such as a street gutter or ditch (refer to **Appendix B** for details on road classifications). The upgraded all-weather road would improve mobility and accessibility for USBP agents responding to illegal cross-border traffic. The proposed roads are located where the vanishing points for CBVs are measured in seconds to minutes.

Figure 2-1. Typical Road Section



Bridges would be constructed across three major tributaries that run through the project area – Las Manadas Creek, Zacate Creek, and Chacon Creek (refer to **Figures 1-1** and **1-2**).

All necessary materials such as gravel, topsoil, or fill would be imported to the site. No on-site materials will be used except for the material within the existing roadway. To the maximum extent practicable, all material sources would be certified weed-free.

Wherever possible, CBP would limit disturbance to the proposed width of the proposed FC-2 road and ancillary structures. Where turnouts and passing lanes would be required for construction, CBP would use currently disturbed areas (e.g., locations where a secondary trail has been created due to impassable road conditions), to the maximum extent practicable, and would restore all such areas upon completion of the Proposed Action.

Equipment and materials would be stored at a staging area within the project area. The staging area would be an unimproved, previously disturbed area. The types and numbers of equipment used would be kept to a minimum. It is anticipated that backhoes, graders, and dump trucks would be necessary for road improvement activities. Water trucks would be employed to aid in dust

suppression. All equipment would be cleaned prior to entering and departing the project corridor to minimize the spread and establishment of non-native invasive plant species.

The finished roads would be a reinforced roadbed with a soil stabilizer (e.g., Lignin, Soiltac, Envirotec, or some other suitable soil stabilizer) applied during the late summer/early fall months. Proper use of a non-toxic road stabilizer helps to avoid impacts on federally listed species habitat by minimizing road runoff and is neither toxic nor harmful to sensitive species.

2.3.1 Summary of Environmental Impacts and Best Management Practices

The Proposed Action could result in impacts on several resource categories; however, best management practices (BMPs) are recommended to minimize or eliminate impacts on the evaluated resources. Specific BMPs would be implemented to ensure minimal disturbance to the resources within the project area.

An overview of potential environmental impacts by specific resource area and a summary of associated BMPs are provided in **Table 2-1**. A full list of BMPs is provided in **Appendix C**. **Sections 3.2** through **3.13** provide an evaluation of potential environmental impacts.

Table 2-1. Summary of Environmental Impacts, Mitigation, and Best Management Practices

Resource Area	Impacts of the Proposed Action	Best Management Practices/ Conservation Measures
Noise	Construction noise from the Proposed Action would result in short-term, minor, adverse impacts on the ambient noise environment. The nearest sensitive receptors would not be substantially impacted by temporary construction equipment noise. Noise from construction would vary depending on the type of equipment being used, the area in which the activity would occur, and the distance of the receptor from the noise source.	Equipment would be operated on an as-needed basis. Mufflers and properly working construction equipment would be used to reduce noise. Generators would have baffle boxes, mufflers, or other noise abatement capabilities. Blasting mats would be used to minimize noise and debris.
Land Use, Recreation, and Aesthetics	The Proposed Action would result in minor to moderate, adverse, short- and long-term impacts to land use.	CBP would limit disturbance to the proposed width of the proposed road and ancillary structures. All necessary materials such as gravel, topsoil, or fill would be imported to the site.
Air Quality	Short-term, minor impacts on air quality would occur during construction; all calculated air emissions would likely remain below *de minimis* levels. Fugitive dust emissions would likely decrease in the long-term due to the Proposed Action.	Bare soil would be wetted to suppress dust, and equipment would be maintained according to specifications. Speed limits during construction work would be implemented.

Resource Area	Impacts of the Proposed Action	Best Management Practices/ Conservation Measures
Geology and Soils	The Proposed Action would result in minor to moderate, long-term, adverse impacts to the local topography and soil resources. Approximately 44.2 acres of soil would be permanently disturbed by the Proposed Action.	Construction-related vehicles would remain on established or existing roads as much as possible, and areas with highly erodible soils would be avoided where possible. Gravel or topsoil would be obtained from developed or previously used sources. Where grading is necessary, surface soils would be stockpiled and replaced following construction.
Groundwater	The Proposed Action would have short- and long-term, negligible impacts on the availability of water resources in the region.	Equipment maintenance, staging, laydown, or fuel dispensing would occur upland to prevent runoff. A Storm Water Pollution Prevention Plan (SWPPP) and Spill Prevention, Control, and Countermeasure Plan (SPCCP) would be implemented as part of the Project.
Surface Waters and Wetlands	Approximately 0.94 acres of potentially jurisdictional wetlands and 8.02 acres of Waters of the U.S. (WOTUS) features could experience short- and long-term, moderate, adverse impacts.	Construction activities would stop during heavy rains. All fuels, oils, and solvents would be collected and stored. Stream crossings would not be located at bends to protect channel stability. Equipment maintenance, staging, laydown, or fuel dispensing will occur upland to prevent runoff. A SPCCP and SWPPP would be implemented as part of the project. CBP would pursue a Section 401 Certification from TDEQ and 404 permit from USACE.
Floodplains	The Proposed Action has the potential to result in moderate, short- and long-term, permanent impacts on floodplains. There are approximately 22.9 acres of regulatory floodway and 20.6 acres of floodplain subject to the 1 percent annual chance flood within a 100-foot corridor that could be impacted.	Construction activities within the floodplain would be conducted in a manner consistent with E.O. 11988 and other applicable regulations. Appropriate agencies would be notified.
Vegetation	Under the Proposed Action, short- and long-term, negligible to minor, direct and indirect, adverse effects on vegetation would occur from construction activities.	Construction equipment would be cleaned to minimize spread of non-native species. Removal of brush in federally protected areas would be limited to the smallest amount possible. Invasive plants that appear on project area would be removed. Fill material, if

Resource Area	Impacts of the Proposed Action	Best Management Practices/ Conservation Measures
		required, will be weed-free to the maximum extent practicable.
Terrestrial and Aquatic Wildlife Resources	The Proposed Action would have short- and long-term, negligible to minor, direct and indirect, adverse effects on wildlife. A permanent loss of a relatively small area of wildlife habitat would result from widening the patrol roads.	All project activities would occur within the defined project area and necessary construction turnouts and equipment and staging areas would be placed in previously disturbed areas. General BMPs would avoid and reduce impacts on wildlife and aquatic resources. CBP will comply with the MBTA to avoid impacts to nesting birds during the migratory bird breeding season.
Protected Species and Critical Habitat	The Proposed Action may affect, but is unlikely to adversely affect the ashy dogweed, Zapata bladderpod, Texas hornshell, jaguarundi, and ocelot.	Biological BMPs would be implemented to minimize impacts to species. Any work adjacent to the Rio Grande, including these areas where large creek tributaries merge with the Rio Grande, would follow all appropriate BMPs to prevent sediment from erosion to the river or creek channel, prevent streamflow alteration, and avoid degradation of water quality. CBP provided mitigation for impacts to federally listed threatened and endangered species habitat in coordination with USFWS through Section 7 ESA consultation.
Cultural Resources	The Proposed Action could cause moderate adverse, short- and long-term impacts to cultural resources. At least eight archaeological sites would be impacted. No impacts are anticipated for above-ground built environment resources.	All construction would be restricted to previously surveyed areas. If any cultural material is discovered during construction, all activities within the vicinity of the discovery would be halted until consultation with the THC, Tribal Historic Preservation Office (THPO) (if applicable). Tribes and if needed, the Advisory Council on Historic Preservation. Potential impacts to above-ground resources have been identified and assessed during the cultural resources survey of the project area.
Infrastructure	The Proposed Action would result in minor, adverse, short- and long-term impacts on local infrastructure, such as transportation, stormwater system, and the solid waste management system.	Access to the project area would use existing roads. Off-road vehicular travel would be limited to the designed/approved construction

Resource Area	Impacts of the Proposed Action	Best Management Practices/ Conservation Measures
		corridor. All parking would occur in designated disturbed areas.
Hazardous Materials and Waste	Long-term, negligible to minor, adverse impacts due to hazardous substances, petroleum products, and hazardous and petroleum wastes would be expected from implementation of the Proposed Action.	All waste materials and other discarded materials would be removed from the project area as quickly as possible. Equipment maintenance, staging, laydown, or fuel dispensing would occur upland to prevent runoff.
Safety	Project activities could cause long-term beneficial impacts to health and human safety as the Proposed Action would offer a more stable and safer driving surface for vehicles. Short-term, negligible, adverse impacts on human safety could occur during construction. The Proposed Action would not expose members of the general public to increased safety risks.	All personnel would be required to adhere to regulatory requirements and safety protocols. Contractors would be required to establish and maintain safety programs at the construction site.
Socioeconomics	The Proposed Action is expected to have short- and long-term, beneficial impacts on socioeconomic resources in the surrounding community. There would be no measurable adverse impact because the patrol road already exists, and the Proposed Action would improve the road. Short-term, negligible, beneficial impacts on the local socioeconomics would be expected because of expenditures necessary for the Proposed Action.	None required.
Environmental Justice and Sensitive Receptors	The Proposed Action is expected to cause minor, short-term, adverse impacts to minority and low-income populations.	Access to the construction site would be restricted to prevent residents or non-crew members from entering the site. Additionally, all OSHA guidelines would be followed.

CBP followed specially developed design criteria to reduce adverse environmental impacts, which involved consulting with Federal and state agencies and other stakeholders to develop appropriate BMPs and minimize physical disturbance where practicable. BMPs include implementation of a SPCCP, SWPPP, Environmental Protection Plan, Dust Control Plan, and Fire Prevention and Suppression Plan. CBP would have environmental monitors on site and impacts would be documented during construction to determine the extent and scope of mitigation measures necessary to reduce or offset adverse environmental impacts.

2.4 ALTERNATIVE 2: NO ACTION ALTERNATIVE

Under the No Action Alternative, CBP would not improve the existing patrol and access roads in the USBP Laredo Sector. As described in **Section 1.3**, the current FC-4, two-track roads have received no maintenance in more than 10 years and many areas have succumbed to erosion. The roads have no crown and do not have any improved drainage features or ditches. Failure to improve the roads could lead to continued erosion and poor drainage control, which could diminish agent safety and operational security. Under continued use of the current roads, CBP would be unable to meet operational requirements to secure the U.S./Mexico international border within the USBP Laredo Sector.

The No Action Alternative does not satisfy CBPs purpose of and need for the Proposed Action, as identified in **Section 1.3**. However, inclusion of the No Action Alternative is prescribed by CEQ regulations and has been analyzed in tis EA. The No Action Alternative also serves as a baseline against which to evaluate the impacts of the Proposed Action.

2.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DETAILED ANALYSIS

CBP evaluated other possible alternatives to improving the patrol roads in Laredo, Texas. This section addresses options that were reviewed but not carried forward for further detailed analysis in the EA.

2.5.1 Alternative Roadway Alignment

CBP considered alternate routes for the Laredo North and South patrol roads. However, as alternate routes would include the construction of new roadway in addition to the improvement of existing roadway, the action would result in more significant impacts on resources. Therefore, CBP has not carried this alternative forward for further analysis in the EA.

Additionally, these alternate routes were evaluated to determine whether they could be constructed outside of the floodplain. However, considering the proximity of the border to the City of Laredo and the need for CBP to operate patrol roads safely to maintain its mission, there is no practicable alternative to working in the floodplain.

2.6 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

CBP has identified its Preferred Alternative as Alternative 1: Proposed Action. Implementation of the Proposed Action would best meet CBP's purpose and need as described in **Section 1.3**.

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3 AFFECTED ENVIRONMENT

This section provides a discussion of the affected environment, as well as an analysis of the potential direct and indirect impacts that the alternatives could have on the affected environment. Cumulative impacts and unavoidable adverse impacts are also included in the chapter. Cumulative effects, which are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. All potentially relevant resource areas were initially considered in this EA. In accordance with NEPA, CEQ regulations, and DHS Instruction Manual 023-01-001-01, Rev-01, this evaluation focuses on those resources and conditions potentially subject to effects, and are, therefore, deserving of study and consideration. It does not go into detail on insignificant issues.

The following categories describe various types, durations, and degrees of impacts that could potentially result from the proposed project:

- *Short-term or long-term.* These characteristics are determined on a case-by-case basis and do not refer to any rigid time period. In general, short-term effects are those that would occur only with respect to a particular activity or for a finite period or only during the time required for maintenance and repair activities. Long-term effects are those that are more likely to be persistent and chronic.

- *Direct or indirect.* A direct effect is caused by and occurs contemporaneously at or near the location of the action. An indirect effect is caused by a proposed action and might occur later in time or be farther removed in distance, but still be a reasonably foreseeable outcome of the action. For example, a direct effect of erosion on a stream might include sediment-laden waters in the vicinity of the action, whereas an indirect impact of the same erosion might lead to lack of spawning and result in lowered reproduction rates of indigenous fish downstream.

- *Negligible, minor, moderate, or major.* These relative terms are used to characterize the magnitude or intensity of an impact. Negligible effects are generally those that might be perceptible but are at the lower level of detection. A minor effect is slight, but detectable. A moderate effect is readily apparent. A major effect is one that is severely adverse or exceptionally beneficial.

- *Adverse or beneficial*. An adverse effect is one having unfavorable, or undesirable, outcomes on the man-made or natural environment. A beneficial effect is one having positive outcomes on the man-made or natural environment. A single act might result in adverse effects on one environmental resource and beneficial effects on another resource.

3.1 PRELIMINARY IMPACT SCOPING

Some environmental resources and issues that are often analyzed in an EA have been omitted from detailed analysis. The following provides the basis for such exclusions.

3.1.1 Roadways and Traffic

Project activities could cause short-term roadway closures and detours while work is underway; however, most of the roadways proposed for repair are used solely by USBP. Therefore, the public would not be impacted by these roadway closures or detours. Roadway closures and detours would be temporary, so USBP patrols would experience only minor disruptions. As a result, impacts on roadways and transportation would be negligible and are not discussed further.

3.2 NOISE

3.2.1 Definition of the Resource

Sound is a physical phenomenon consisting of vibrations that travel through a medium, such as air, and are sensed by humans. Noise can be defined as unwanted sound that interferes with communication, poses a threat to health, or is irritating. Noise can be intermittent or continuous, steady or impulsive, and can involve any number of sources and frequencies. Response to noise varies depending on the type and characteristics of the noise, distance between the noise source and the receptor, receptor sensitivity, and time of day. Noise-sensitive land uses include areas where an excessive amount of noise would interfere with normal activities. Noise is often generated by activities essential to a community's quality of life, such as construction or vehicular traffic.

Sound Metrics. Sound varies by both intensity and frequency. Sound pressure level, expressed in decibels (dB), is used to quantify sound intensity. Within the range of human hearing, a sound may vary in intensity by more than one million units. A logarithmic scale is used to compress the range of audible decibels into a more manageable form so that noise can be quantified. The A-weighted decibel (dBA) is used to characterize sound levels that can be sensed by the human ear. The threshold of audibility is generally within the range of 10 to 25 dBA for normal hearing. The upper boundary of audibility is 135 dBA and can be painfully loud (USEPA 1981). Sounds encountered in daily life and their dBA levels are provided in **Table 3-1**.

Table 3-1. Common Sounds and Their Levels

Outdoor Noise Sources	Sound Level (dBA)	Indoor Noise Sources
Motorcycle	100	Subway train
Tractor	90	Garbage disposal
Noisy restaurant	85	Blender
Downtown (large city)	80	Vacuum cleaner
Freeway traffic	70	TV audio
Normal conversation	60	Sewing machine
Rainfall	50	Refrigerator
Quiet residential area	40	Library

Source: Harris 1998

The sound pressure level noise metric describes steady noise levels. Very few noises are constant; therefore, additional metrics have been developed to describe noise. The day-night average A-

weighted noise level (DNL) averages the sum of all noise-producing events over a 24-hour period. DNL is a useful descriptor for noise because it averages ongoing yet intermittent noise and measures total sound energy over a 24-hour period with penalties applied to noise levels during nighttime hours (FAA 2022).

Regulatory Overview. Under the Noise Control Act of 1972, the Occupational Safety and Health Administration (OSHA) established workplace standards for noise. The minimum requirement states that constant noise exposure must not exceed 90 dBA over an 8-hour period (OSHA 2018). If noise levels exceed these standards, employers are required to provide hearing protection equipment that reduce sound levels to acceptable limits. The highest allowable sound level to which workers can be constantly exposed is 115 dBA; exposure to this level must not exceed 15 minutes within an 8-hour period (OSHA 2018). The standards limit instantaneous exposure, such as impact noise, to 140 dBA.

Construction Sound Levels. Noise generated by construction activities has the potential to quickly surpass ambient sound levels. The type and intensity of the sound is dependent upon the type of construction activity taking place. The predicted noise levels for various construction equipment that might be used during the Proposed Action are presented in **Table 3-2**.

3.2.2 Affected Environment

The proposed project site is bounded by residential homes and businesses on both the United States and Mexico sides of the project corridor for the whole of the two segments. The immediate proposed project area consists of developed land, which includes the existing patrol roads. However, the project corridor falls within 100 feet of residential areas in some portions of the segments. Sensitive receptors in the vicinity include residences, shopping centers, schools, Sacred Heart Children's Home, the Laredo Community College South Campus, and various other commercial buildings.

3.2.3 Environmental Consequences

The impacts associated with noise were evaluated based on the changes to the ambient noise environment that would result from implementation of the Proposed Action. Impacts would be considered adverse if the Proposed Action were to result in the violation of applicable Federal, state, or local noise regulations, or create appreciable areas of incompatible land use.

Table 3-2. Predicted Noise Levels for Typical Construction Equipment

Construction Equipment	Predicted Noise Level at 50 feet (dBA)	Predicted Noise Level at 500 feet (dBA)	Predicted Noise Level at 1,000 feet (dBA)	Predicted Noise Level at 2,000 feet (dBA)	Predicted Noise Level at 4,000 feet (dBA)
Clearing and Grading					
Bulldozer	80	60	54	48	42
Grader	80-93	60-73	54-67	48-61	42-55
Truck	83-94	63-74	57-68	51-62	45-56
Excavation					
Backhoe	72-93	52-73	46-67	40-61	34-55

Construction Equipment	Predicted Noise Level at 50 feet (dBA)	Predicted Noise Level at 500 feet (dBA)	Predicted Noise Level at 1,000 feet (dBA)	Predicted Noise Level at 2,000 feet (dBA)	Predicted Noise Level at 4,000 feet (dBA)
Jackhammer	81-98	61-78	55-72	49-66	43-60
Roadway Improvement					
Concrete Mixer	74-88	54-68	48-62	42-56	36-50
Paver	86-88	66-68	60-62	54-56	48-50

Source: USEPA 1971

Note: Construction equipment equipped with noise control devices (e.g., mufflers) and use of sound barriers would result in lower noise levels than shown in this table.

3.2.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

Construction noise from the proposed improvements to the Laredo North and South patrol roads would result in short-term, minor, adverse impacts on the ambient noise environment. Increases in noise levels would occur intermittently during construction. Noise from construction would vary depending on the type of equipment being used, the area in which the activity would occur, and the distance of the receptor from the noise source. No impacts due to operations would be expected.

Heavy construction equipment would be periodically used during construction; therefore, noise levels would fluctuate. Most equipment used would be expected to produce noise levels between approximately 70 and 100 dBA at a distance of 50 feet (refer to **Table 3-2**). Noise levels at the upper end of this range would be limited to intermittent spurts. Sound levels on the lower end of the range would be more constant during construction activities. These noise levels would decrease with distance from the construction area. Noise levels associated with typical construction equipment would noticeably attenuate to below 65 dBA between approximately 500 and 4,000 feet from the source, depending on the equipment used (refer to **Table 3-2**).

Construction activities usually require simultaneous use of several pieces of equipment. In general, the addition of a piece of equipment with identical noise levels to another piece of equipment would add approximately 3 dB to the overall noise environment, which is barely perceptible by the human ear (TRS Audio 2017). Aggregate noise associated with multiple pieces of construction equipment operating simultaneously would increase the overall noise environment by a few dB over the noisiest equipment, depending on the noise levels.

In addition, noise generation due to construction would be temporary, only lasting for the duration of construction activities. All applicable noise laws and guidelines would be followed to reduce effects from noise produced by construction. Construction workers would be required to use proper personal hearing protection to limit exposure and would use the appropriate noise attenuation equipment.

The nearest sensitive receptors (i.e., permanent residences within approximately 100 feet of the footprint of the proposed project area) would not be substantially impacted by temporary construction equipment noise. For example, a paver would register at 86–88 dBA 50 feet from the source. This is approximately the same sound level as a noisy restaurant (refer to **Table 3-1**). Construction equipment noise impacts on sensitive receptors would be minor because of the

minimal aggregate contribution of the construction equipment to existing ambient noise levels from traffic and the use of noise attenuation equipment to ensure that noise levels would not exceed an average of 75 dB over an 8-hour period. While existing noise sources produce elevated noise levels intermittently, noise during construction would be more continuous (with temporary increases in noise levels from the use of the loudest equipment) between the hours of 7 a.m. and 7 p.m.

Short-term, minor, adverse impacts on wildlife would occur as a result of temporary noise disturbances associated with construction activities. Temporary, adverse effects on wildlife due to noise would be expected, but the effects should be minor and short-term in nature as there is sufficient habitat for wildlife to move away from project-related noise. Additionally, it is unlikely that the entire project area would be subject to project activities at the same time. Project-specific noise-reduction BMPs would be implemented to decrease impacts. No night-time work would occur. **Section 3.7** discusses impacts of noise on biological resources in greater detail.

3.2.3.2 Unavoidable Adverse Impacts

Construction activities require the use of heavy construction equipment, which is inherently noisy, causing increased noise levels. To reduce adverse impacts on the ambient noise environment, construction equipment would include noise abatement components and noise-reducing BMPs would be implemented. Although these measures would help reduce impacts on the ambient noise environment, construction equipment could still produce noise levels beyond ambient levels. These unavoidable impacts would be negligible to minor.

3.2.3.3 No Action Alternative

The No Action Alternative would eventually result in greater deterioration of the roadways over time due to a lack of preventative maintenance, which could result in more frequent maintenance and repair activities over time and create more frequent noise generation. Long-term, minor, adverse impacts due to noise generation would be expected from the No Action Alternative. Therefore, the No Action Alternative could result in greater impacts from noise than the Proposed Action.

3.3 LAND USE, RECREATION, AND AESTHETICS

3.3.1 Definition of the Resource

Land use refers to real property classifications indicating either natural conditions or the types of human activity occurring on a parcel of land. In many cases, land use descriptions are organized in master planning and local zoning laws. Land use planning helps ensure orderly growth and compatible uses among adjacent property parcels or areas. Land use is described by humans' economic and cultural activities that are practiced in a given place (USEPA 2022a). Natural property conditions can be described or categorized as unimproved, undeveloped, conservation or preservation area, and natural or scenic area. A wide variety of land use categories result from human activity. Descriptive terms for human activity land uses generally include commercial, industrial, military, residential, agricultural, institutional, transportation, communications, and utilities, and recreational.

For Federal projects, a proposed action needs to be evaluated for its potential effects on a project area and adjacent land uses. The foremost factor affecting a proposed action in terms of land use is its conformity with any applicable land use or zoning regulations. Other relevant factors include matters such as existing land use at the project area, the type of land uses on adjacent properties and their proximity to a proposed action, the duration of a proposed activity, and its permanence.

In general, a land use impact would be considered adverse if it were to cause the following:

- Be inconsistent or in nonconformity with existing land use plans or policies,
- Preclude the viability of existing land use,
- Preclude continued use or occupation of an area,
- Be incompatible with adjacent land use to the extent that public health or safety is threatened,
- Conflict with planning criteria established to ensure the safety and protection of human life and property,
- Interfere with the use or function or otherwise diminish the value of recreation areas.

3.3.2 Affected Environment

The proposed project area runs through the City of Laredo, Texas, along the northern bank of the Rio Grande on the U.S./Mexican border. The city of Nuevo Laredo, Mexico is located on the southern bank of the Rio Grande. Land use impacts would be focused on those anticipated to occur in the United States. The existing unimproved patrol roads are generally close to the Rio Grande River on undeveloped property in the riparian corridor. A mixture of the residential, recreational, commercial, and industrial properties is present beyond the riparian corridor, generally 50 to 200 yards from the project area.

The existing patrol and access roads traverse parcels of land owned by the City of Laredo and private landowners. A prior agreement between CBP and the landowners enabled CBP to construct the existing patrol roads on land owned by the City of Laredo and private landowners. CBP has no ownership or rights to the land surrounding the patrol roads.

It is necessary for CBP to acquire additional land or obtain permission from the existing landowners to expand the road to the proposed 24-foot width under the Proposed Action. The current patrol roads and road expansion, under the Proposed Action, traverse a total of 83 parcels of land. Land use class designation information for the affected parcels is indicated in **Table 3-3** below.

Table 3-3. Land Parcels affected by the Proposed Action

Land Use Class	Number of Parcels Affected by Patrol Roads (out of 83)	Percentage of Land Use Class Affected
Commercial	24	28.91
Industrial	16	19.28
Residential	43	51.81

Source: Castaneda 2022

As indicated above, residential parcels are the most frequently affected by the existing patrol roads and road expansion under the Proposed Action, followed by commercial and residential.

3.3.3 Environmental Consequences

3.3.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

All necessary materials such as gravel, topsoil, or fill would be imported to the site. Wherever possible, CBP would limit disturbance to the proposed width of the proposed FC-2 road and ancillary structures. Where turnouts and passing lanes would be required for construction, CBP would use currently disturbed areas (e.g., locations where a secondary trail has been created due to impassable road conditions), to the maximum extent practicable, and restore all such areas upon completion of the Proposed Action.

Equipment and materials for the construction would be stored at a staging area within the project area. The staging area would be an unimproved, previously disturbed area. It is anticipated that additional land would be required by CBP under the Proposed Action for construction purposes for the road expansion and staging areas. The land use of the additionally acquired land would change from the respective designated land use to road. However, the overall land use designation of the parcels owned by the City of Laredo and private landowners are not anticipated to change.

3.3.3.2 Unavoidable Adverse Impacts

The Proposed Action would result in minor to moderate, adverse, long-term impacts on land use.

Additional land would need to be acquired by CBP, or CBP would need to obtain additional permission from the City of Laredo and private landowners, to execute the Proposed Action. The land would be used for the road expansion and would result in permanent land use change of the acquired land to infrastructural elements owned and operated by CBP.

Land would be acquired, or CBP would need to obtain permission from landowners, for use during the construction process as staging areas for equipment and turnouts and passing lanes. CBP would use currently disturbed areas (e.g., locations where a secondary trail has been created due to impassable road conditions) to the maximum extent practicable and restore all such areas upon completion of the Proposed Action. This would result in minor, adverse, short-term impacts as the construction is a temporary activity.

Land acquired and converted to road and used for construction under the Proposed Action is expected to have minor impacts on the overall long-term functions of the commercial, industrial, and residential uses of properties.

3.3.3.3 No Action Alternative

Under the No Acton Alternative, the proposed infrastructure would not be constructed, and the existing conditions would remain unchanged. No new impacts on land use would occur as a result of the No Action Alternative.

3.4 AIR QUALITY

3.4.1 Definition of the Resource

Air quality is defined by the concentration of various pollutants in the atmosphere at a given location. The air quality in a region is a result of not only the types and quantities of atmospheric pollutants and pollutant sources in an area, but also surface topography, the size of the topological "air basin," and the prevailing meteorological conditions.

Under the CAA, the USEPA developed numerical concentration-based standards, or National Ambient Air Quality Standards (NAAQS), for pollutants that have been determined to affect human health and the environment. The NAAQS represent the maximum allowable concentrations for ozone (O_3), measured as either volatile organic compounds (VOCs) or total nitrogen oxides (NO_x), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur oxides (SO_x), respirable particulate matter (including particulate matter equal to or less than 10 microns in diameter [PM_{10}] and particulate matter equal to or less than 2.5 microns in diameter [$PM_{2.5}$]), and lead (40 CFR Part 50). The CAA also gives the authority to states to establish air quality rules and regulations.

Texas has not established its own ambient air quality standards for these pollutants.

The USEPA classifies the air quality in an air quality control region (AQCR), or in subareas of an AQCR, according to whether the concentrations of criteria pollutants in ambient air exceed the NAAQS. Areas within each AQCR are therefore designated as either "attainment," "nonattainment," "maintenance," or "unclassified" for each of the six criteria pollutants. Attainment means that the air quality within an AQCR is better than the NAAQS. Nonattainment indicates that criteria pollutant levels exceed NAAQS. Maintenance indicates that an area was previously designated nonattainment but is now attainment, and an unclassified air quality designation by USEPA means that there is not enough information to appropriately classify an AQCR, so the area is considered to be in attainment. In accordance with the CAA, each state must develop a State Implementation Plan (SIP), which is a compilation of regulations, strategies, schedules, and enforcement actions designed to move the state into compliance with all NAAQS.

The General Conformity Rule requires that any Federal action meet the requirements of a SIP or Federal Implementation Plan. More specifically, CAA conformity is ensured when a Federal action does not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of violations of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestones, or other milestones towards achieving compliance with the NAAQS. The General

Conformity Rule applies only to regionally significant actions in nonattainment or maintenance areas.

Federal Prevention of Significant Deterioration (PSD) regulations apply in attainment areas to a major stationary source, (i.e., source with the potential to emit of 250 tons per year [tpy] of any criteria pollutant), and a significant modification to a major stationary source, (i.e., change that adds 15 to 40 tpy to the facility's potential to emit, depending on the pollutant). PSD regulations can also apply to stationary sources if (1) a proposed project is within 6.21 miles of national parks or wilderness areas, (i.e., Class I Areas), and (2) regulated stationary source pollutant emissions would cause an increase in the 24-hour average concentration of any regulated pollutant in the Class I area of 1 microgram per cubic meter or more (40 CFR 52.21[b][23][iii]). A Class I area includes national parks larger than 6,000 acres, national wilderness areas and national memorial parks larger than 5,000 acres, and international parks. PSD regulations also define ambient air increments, limiting the allowable increases to any area's baseline air contaminant concentrations, based on the area's class designation (40 CFR 52.21[c]).

Title V of the CAA Amendments of 1990 requires states and local agencies to use a permitting process for major stationary sources. A major stationary source has the potential to emit more than 100 tpy of any one criteria air pollutant, 10 tpy of a hazardous air pollutant (HAP), or 25 tpy of any combination of HAPs. The purpose of the permitting rule is to establish regulatory control over large, industrial-type activities and monitor their impact on air quality. Section 112 of the CAA defines the sources and kinds of HAPs.

Greenhouse gases (GHGs) are gaseous emissions that trap heat in the atmosphere. These emissions occur from natural processes and human activities. The most common GHGs emitted from natural processes and human activities include carbon dioxide (CO_2), methane, and nitrous oxide. GHGs are mainly produced by the burning of fossil fuels and through industrial and biological processes. On September 22, 2009, the USEPA issued a final rule for mandatory GHG reporting from large GHG emissions sources in the United States. The purpose of the rule is to collect comprehensive and accurate data on CO_2 and other GHG emissions that can be used to inform future policy decisions. In general, the threshold for reporting is 25,000 metric tons or more of CO_2-equivalent (CO_2-e) emissions per year, but excludes mobile source emissions. CO_2-e emissions are calculated as the number of metric tons of CO_2 emissions with the same global warming potential as one metric ton of another greenhouse gas.

GHG emissions are also factors in PSD and Title V permitting and reporting, according to a USEPA rulemaking issued on June 3, 2010 (75 FR 31514). GHG emissions thresholds of significance for stationary sources are 75,000 tons CO_2-e per year and 100,000 tons CO_2-e per year under these permit programs.

The nearest sensitive receptors (i.e., permanent residences within approximately 100 feet of the footprint of the proposed project area) would not be substantially impacted by temporary increase in fugitive dust due to construction activities. BMPs (i.e., water application for dust suppression) would be stringently implemented when construction activities generate dust in the vicinity of sensitive receptors.

3.4.2 Affected Environment

The project area is within the City of Laredo and Webb County, and within the Brownsville-Laredo Intrastate AQCR (BLIAQCR) (40 CFR 81.185). Neither the BLIAQCR nor Webb County is designated by USEPA as nonattainment or maintenance status for any criteria pollutant (USEPA 2022b). No statewide SIPs exist for the criteria pollutants listed above.

Air emission sources in the area consist of typical urban activities, including vehicle traffic, water treatment plants, and a natural gas-fired power plant.

The project corridor falls within 100 feet of residential areas in some portions of the segments. Sensitive receptors in the vicinity include residences, shopping centers, the Laredo Community College South Campus, and various other commercial buildings.

3.4.3 Environmental Consequences

The environmental consequences on local and regional air quality conditions near a proposed action are determined based upon the increases in regulated pollutant emissions relative to existing conditions and ambient air quality.

Based on compliance with the NAAQS, the General Conformity Rule is not applicable in Webb County to emissions of any criteria pollutants. However, as outlined in 40 CFR § 93.153(b), the applicable *de minimis* threshold for criteria pollutants listed above is 100tpy in nonattainment areas. And while the General Conformity Rule is not applicable to emissions of the criteria pollutants, it is being applied as a conservative measure to determine the level of impacts under NEPA. The rationale for this conservative threshold is that it is consistent with the highest General Conformity *de minimis* levels for nonattainment areas and maintenance areas. In addition, it is consistent with Federal stationary source major source thresholds for Title V permitting, which formed the basis for the nonattainment *de minimis* levels.

The TCEQ does not provide quantitative screening level thresholds for construction or mobile source-related impacts. Major, adverse impacts on air quality would occur if the Proposed Action meaningfully contributed to the potential effects of global climate change.

3.4.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

The Proposed Action would only generate temporary air pollutant emissions during construction activities. The road improvement activities associated with this alternative would generate air pollutant emissions through grading, filling, compacting, trenching, and other activities related to road improvement; however, these emissions would be temporary and would not be expected to generate major offsite effects.

In addition, fugitive dust (PM_{10} and $PM_{2.5}$) generation would likely decrease in the long-term due to the proposed roadway improvements because traffic on gravel-surfaced roads typically generates less dust than traffic on unimproved roads. The Proposed Action is not anticipated to result in a net increase in USBP traffic along the roadway. Therefore, the emissions associated

with the Proposed Action from existing USBP traffic would not result in an adverse impact on local or regional air quality.

Criteria pollutant and GHG emissions would be produced from the combustion of fuels in heavy equipment. Particulate matter air emissions, such as fugitive dust, would be produced from ground-disturbing activities and the combustion of fuels in heavy equipment. Fugitive dust emissions would be greatest during the initial site grading and excavation and vary day to day depending on the work phase, level of activity, and prevailing weather conditions. The quantity of uncontrolled fugitive dust emissions from a construction site is proportional to the area of land being worked and the level of activity. Construction would incorporate BMPs and environmental control measures (e.g., wetting the ground surface) to minimize fugitive emissions. Additionally, work vehicles would be well-maintained and use diesel particulate filters to reduce particulate matter emissions.

Workers and truck drivers commuting to and from the job site in their personal vehicles and heavy-duty diesel vehicles hauling materials and equipment to the job site would also result in criteria pollutant and GHG emissions.

All criteria pollutant and GHG emissions resulting from the Proposed Action as well as applicable thresholds are summarized in **Table 3-4**. Criteria pollutant emissions from construction would be below the *de minimis* threshold of 100 tpy of each pollutant; therefore, impacts would be minor and a General Conformity determination (applicable to O_3 and CO) is not required. TCEQ screening level thresholds do not apply to construction emissions. Detailed emissions calculations are provided in **Appendix D.**

The road improvement activities associated with the Proposed Action would have minor effects on regional or local air quality. The Proposed Action would generate emissions well below *de minimis* levels for all criteria pollutants in the BLIAQCR, and all increased emissions would be temporary. Once construction activities have subsided, operations would be anticipated to generate emissions similar to or slightly less than current levels due to road improvements resulting in reduced fugitive dust emissions.

The Proposed Action would contribute directly to emissions of GHGs from the combustion of fossil fuels from construction activities and commuting of support personnel. CO_2 accounts for 92 percent of all GHG emissions; transportation is the primary source of anthropogenic CO_2, followed by electric utilities (CARB 2019).

Table 3-4. 2020 Estimated Construction Air Emissions from the Proposed Action

Emissions Source[1]	NO_x (tpy)	VOC (tpy)	CO (tpy)	SO_2 (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	GHG_S (tpy)
Combustion	5.978	0.346	2.428	0.515	0.366	0.355	737.75
Fugitive Dust	-	-	-	-	63.0	6.75	-
Haul Truck On-Road	2.661	0.238	0.886	0.006	0.105	0.097	730.75
Construction Commuter	0.033	0.033	0.501	<0.001	0.001	0.001	51.80
Total	**8,067**	**0.62**	**3.81**	**0.52**	**63.47**	**6.75**	**1,520.30**
Thresholds[2]	100	100	100	100	100	100	NA

Key: NA = not applicable

1 Lead, sulfates, hydrogen sulfide, and visibility reducing particulates emissions are not included as they are negligible for the types of emission sources under this Proposed Action.
2 General Conformity Rule de minimis thresholds or surrogate.

The U.S. Energy Information Administration estimated that in 2019, gross CO_2 emissions in the State of Texas were 683.2 million metric tons of CO_2-e (EIA 2019). The total annual CO_2 emissions from the Proposed Action would be 1,520.3 metric tons, or approximately 0.0002 percent of the state CO_2 emissions (refer to **Appendix D**). Therefore, the Proposed Action would represent a negligible contribution towards statewide GHG inventories.

The Proposed Action is estimated to emit approximately 1,520 metric tons of GHGs from construction during 2022. By comparison, 1,520 metric tons of CO_2-e are approximately the respective GHG footprints of 328 gasoline-powered passenger vehicles driven for one year (USEPA 2022c). As such, these increases and decreases of GHG emission rates would not meaningfully contribute to or lessen the potential effects of global climate change (e.g., increases in atmospheric temperature, sea level, storm activity, accelerated coastal erosion, hydrological changes and flooding, and vegetation and wildlife changes).

Ongoing changes to regional climate patterns could increase average temperatures, alter precipitation patterns, and increase the frequency and severity of droughts in Southern Texas (Kloesel et al. 2018). However, even under severe drought conditions or during warmer temperatures, it is unlikely these ongoing climate change impacts would impair implementation of The Proposed Action or prevent CBP from fulfilling its mission.

3.4.3.2 Unavoidable Adverse Impacts

The use of heavy construction equipment and ground disturbance activities are required for implementation of the Proposed Action. Combustion of fuels, which produces emissions of criteria pollutants, is needed to operate construction equipment, and ground disturbance activities intrinsically produce fugitive dust air emissions. To reduce emissions of criteria pollutants and suppress fugitive dust, construction activities would incorporate BMPs and environmental control measures, which could include employing diesel particulate filters to reduce particulate matter air emissions and wetting the ground surface to reduce fugitive dust emissions. Therefore, the unavoidable impacts would be minor.

3.4.3.3 No Action Alternative

Under the No Action Alternative, CBP would not be improving the patrol and access roads. CBP enforcement actions would be maintained at current levels or diminish over time due to increasingly reduced accessibility of the area to CBP agents. Therefore, no impacts on air quality would be expected from the implementation of the No Action Alternative because no improvement activities would occur in the project area.

3.5 GEOLOGY AND SOILS

3.5.1 Definition of the Resource

Geological resources consist of the Earth's surface and subsurface materials. Within a given physiographic province, these resources typically are described in terms of topography and physiography, geology, soils, and, where applicable, geologic hazards. Geology is the study of the Earth's composition and provides information on the structure and configuration of surface and subsurface features. Topography and physiography pertain to the general shape and arrangement of the land surface, including its height and the position of its natural and man-made features. In appropriate cases, soil properties must be examined for their compatibility with construction activities or types of land use.

Geologic hazards are defined as a natural geologic event that can endanger human lives and threaten property. Examples of geologic hazards include earthquakes, landslides, rock falls, ground subsidence, and avalanches.

3.5.2 Affected Environment

Regional Geology. The Proposed Action footprint is within the Gulf Coastal Plains physiographical region, which includes three sub-provinces. From the northwest to the southeast, the Gulf Coastal Plains includes: Blackland Prairies, the Interior Coastal Plains, and the Coastal Prairies. The existing Laredo patrol roads are in the Interior Coastal Plains sub-province; however, this area is riverine as the site is directly adjacent to the Rio Grande (CBP 2016). The geological area of the Proposed Area is within the Laredo formation, comprised of sands, sandstones, limestones, and clay (Gardner 1938).

Topography and Soils. Elevations along the Interior Coastal Plains within the border region gently decrease in the southeastern direction. The highest elevations are approximately 800 feet above sea level and lowest elevations are approximately 300 feet above sea level. There are parallel ridges and valleys with chalks and marls bedrock types in the Interior Coastal Plains physiographical region. The elevation of the Proposed Action area is approximately 420 feet above sea level (BEG 1996; CBP 2016).

Soil characteristics determine their potential for wind and water erosion, and the soil's suitability for siting buildings, roads, and pipelines, which are important factors to consider when planning for construction and stabilization of disturbed areas. The predominant soils found within the project area are listed in **Table 3-5** and shown in **Figures 3-1** to **3-7** (USDA 2016). Though there are soils with prime farmland designation, none of the project area is available for agricultural use.

Geological Hazards. The U.S. Geological Survey (USGS) 2014 Texas Seismic Hazard Map shows that the seismic hazard for the Texas portion of the U.S./Mexico international border ranges from having a 2-4 percent gravity (%g) peak ground acceleration (PGA) in the past 50 years, which is the second to lowest range possible. PGA is a parameter used to index hazard to short building infrastructure up to seven stories, and %g is how the force caused by an earthquake is measured. Approximately 10 faults have been identified within 30 miles of the Texas portion of the U.S./Mexico international border. The Proposed Action area is depicted as a geologically and

seismically stable (2-4 %g PGA) area over the past 50 years on the USGS 2014 Texas Seismic Hazard Map (USGS 2014; USGS 2019).

3.5.3 Environmental Consequences

3.5.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

The Proposed Action would result in both short- and long-term impacts on the local topography and soil resources. No impacts on regional geology or geologic hazards are anticipated, and thus there would be no change to the existing geologic features. Therefore, regional geology and geologic hazards will not be discussed further.

Topography and Soils. The Proposed Action is expected to result in minor to moderate, long-term, adverse impacts on the local topography and soil resources due to the improvement activities of the existing patrol roads. Under the Proposed Action, approximately 44.2 acres of soil would be permanently disturbed from ground disturbance from the patrol road upgrade construction.

Table 3-5. Soil Characteristics

Soil Series	Slope (percent)	Runoff	Drainage Class	Farmland Classifications	Acreage Within Proposed Action Area (Acres)
Lagloria Silt Loam	0 to 1%	Low	Well-drained	Prime farmland if irrigated	9.1
Lagloria Silt Loam	1 to 3%	Negligible	Well-drained	Prime farmland if irrigated	6.0
Rio Grande Very Fine Sandy Loam	0 to 1%	Negligible	Well-drained	Not prime farmland	28.0
Verick Fine Sandy Loam	1 to 5%	Low	Well-drained	Not prime farmland	0.4
Jimenez-Quemado Complex	1 to 7%	High	Well-drained	Not prime farmland	0.7
Total Acreage					44.2

Source: USDA 2022a

Of the total disturbed 44.2 acres, 15.1 acres is designated as Lagloria Silt Loam, which is prime farmland, if irrigated. Prime farmland as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, and oilseed crops and is available for these uses. Both the North and South segments of the Proposed Action contain Lagloria Silt Loam. The direct impact of soils from ground disturbance would be negligible due to the small size of the project footprint relative to the amount of the same soils throughout the region of influence (ROI). Additionally, the soils within the project area are not currently irrigated and are therefore not considered to be available as prime farmland soils (USDA 2022b; USDA 2022).

The improvement activities could include minor ground disturbance, minor disturbances to soils, grading to address surface water runoff during storm events, and potential installation of grade-control structures. Construction activities could further disturb the already-exposed soils, which would increase their susceptibility to water and wind erosion. However, BMPs such as wetting soils to decrease erosion would be implemented.

The use of heavy equipment or vehicles during construction could potentially result in localized soil compaction, altering their normal function relative to water storage, infiltration, or filtration. However, the use of existing paved roads, and already disturbed surfaces during improvement activities would minimize these soil effects within the project area. CBP intends to use locations where impacts outside of the existing roadbed have previously occurred due to impassable road conditions for turnouts, passing lanes, and staging areas for equipment and materials. To the maximum extent practicable, CBP would restore all such areas upon completion of the Proposed Action, to include regrading and any revegetation.

All necessary materials such as gravel, topsoil, or fill would be imported to the site. No on-site materials would be used except for the material within the existing roadway. The types and numbers of equipment used would be kept to a minimum. Water trucks would be employed to aid in dust suppression to reduce soil erosion.

The Proposed Action would implement strategies to minimize soil erosion and sedimentation using environmental protection measures and appropriate BMPs. The finished road would be reinforced roadbed with a soil stabilizer (e.g., Lignin, Soiltac, Envirotec, or some other suitable soil stabilizer) that minimizes road runoff as well as avoids impacts on sensitive species and habitats. Temporary waterbars would be included during construction activities to help manage erosion and water runoff. The upgraded all-weather road would improve the existing road conditions and enhance agent safety and effectiveness by providing efficient, reliable, and safe routes to remote areas that require patrolling.

3.5.3.2 Unavoidable Adverse Impacts

Under the Proposed Action, unavoidable short-term, negligible, adverse impacts would occur and include topographical and soil disturbances. Implementation of environmental controls and BMPs would minimize disturbances to the Proposed Action area, and ultimately the improved patrol roads would minimize overall disturbance to the area and improve mobility and accessibility for USBP agents responding to illegal cross-border traffic.

3.5.3.3 No Action Alternative

Under the No Action Alternative, the existing patrol roads would not be improved upon and conditions would remain the same. Over time, road conditions would continue to decline, which could result in increasingly deteriorating conditions, including increased soil erosion and sedimentation. Therefore, the impact on geological resources would continue to worsen and USBP agents would be unable to meet operational requirements to secure the U.S./Mexico international border within the USBP Laredo Sector.

Figure 3-1. Map of Soil Associations - Map 1

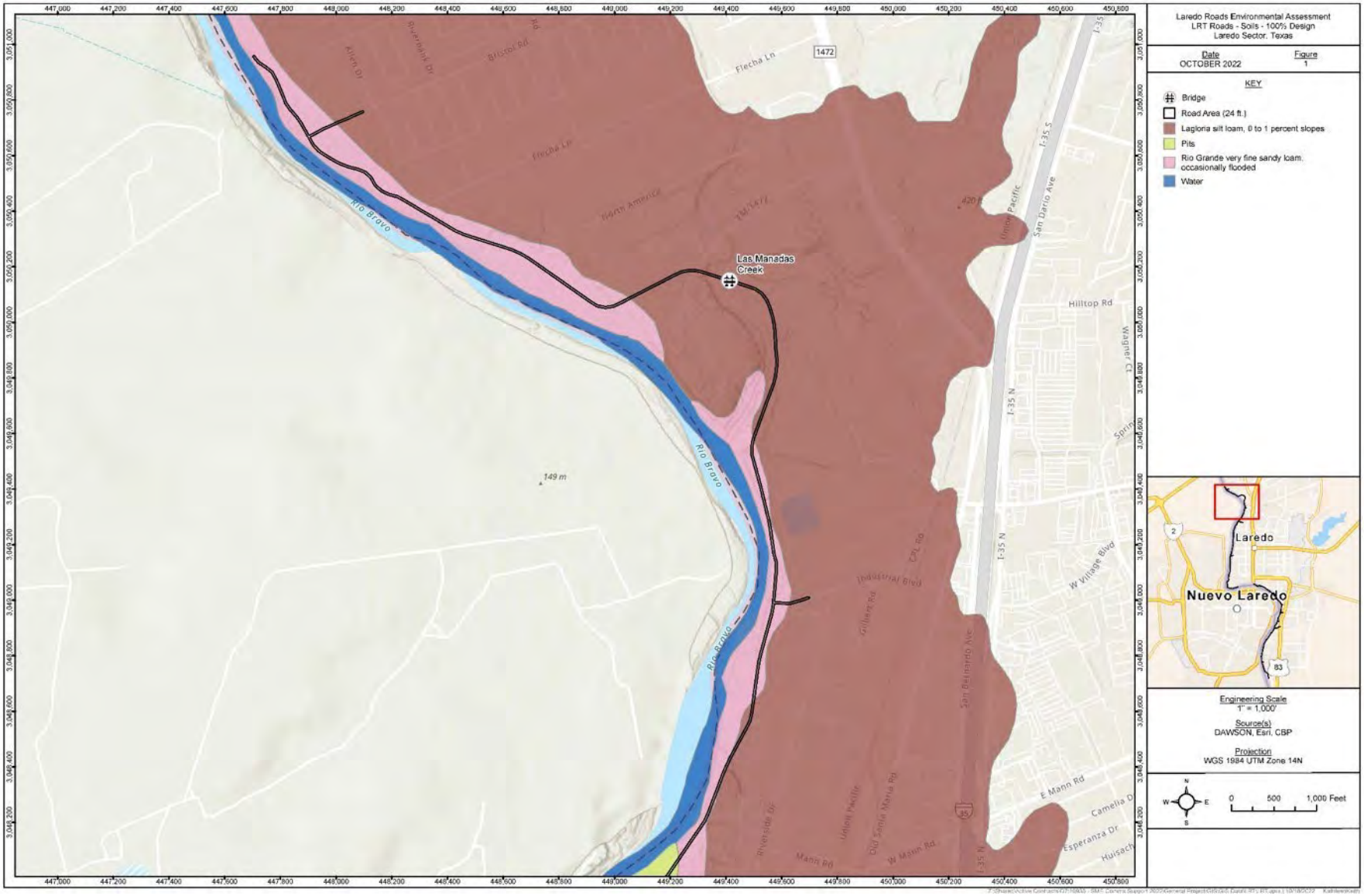


Figure 3-17. Map of Soil Associations - Map

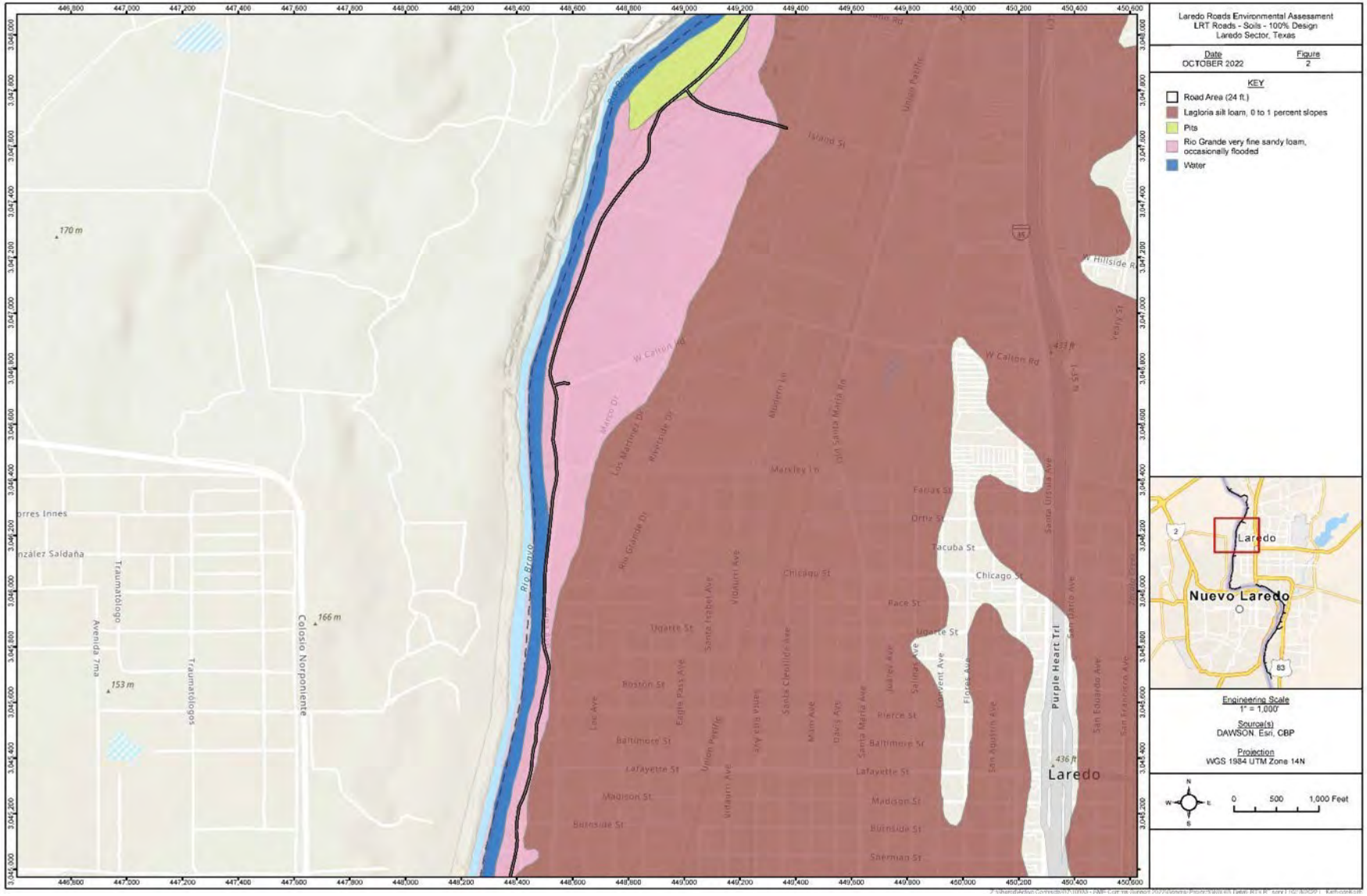


Figure 3-18. Map of Soil Associations - Map

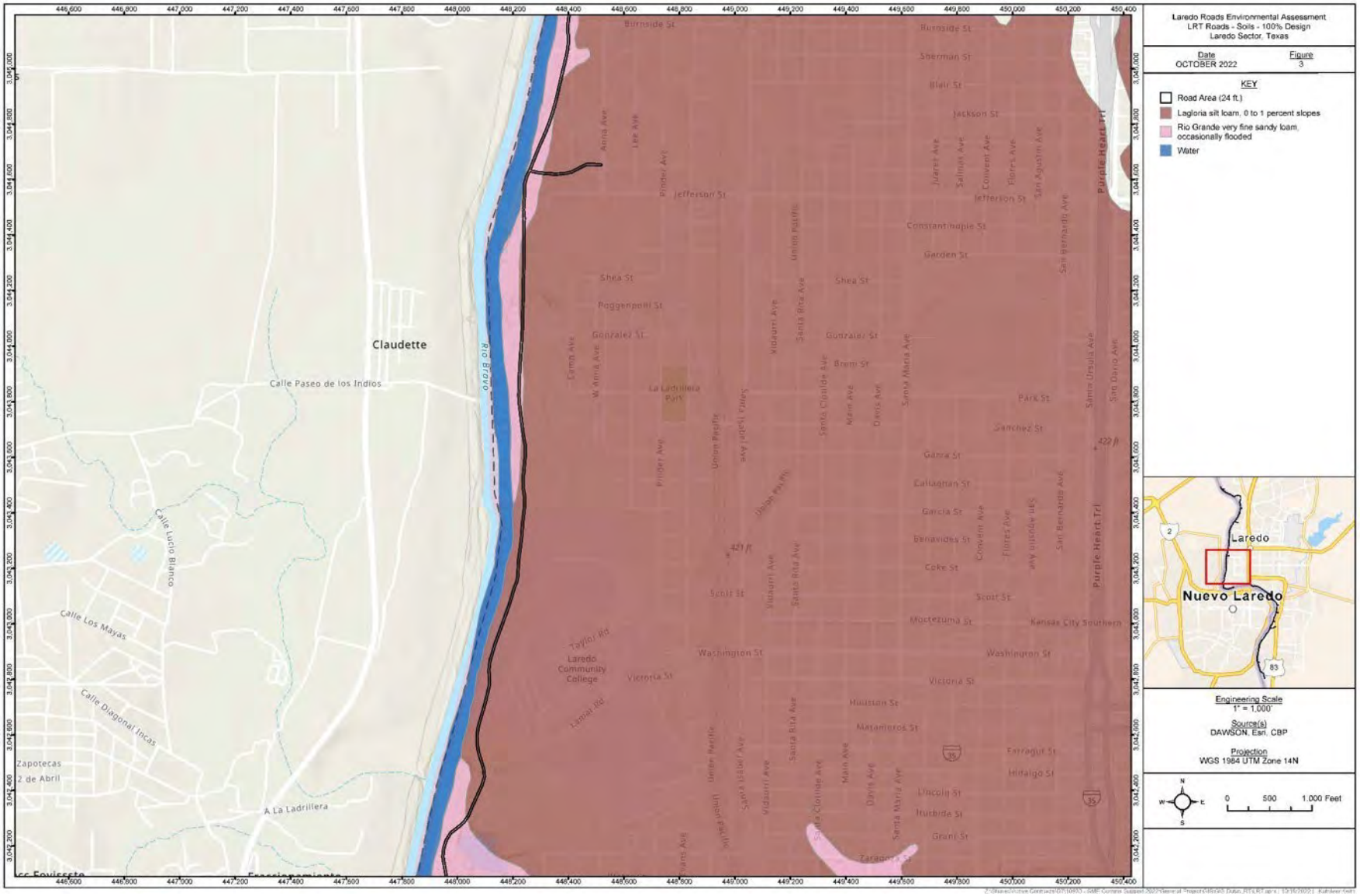


Figure 3-19. Map of Soil Associations - Map

Figure 3-20. Map of Soil Associations - Map

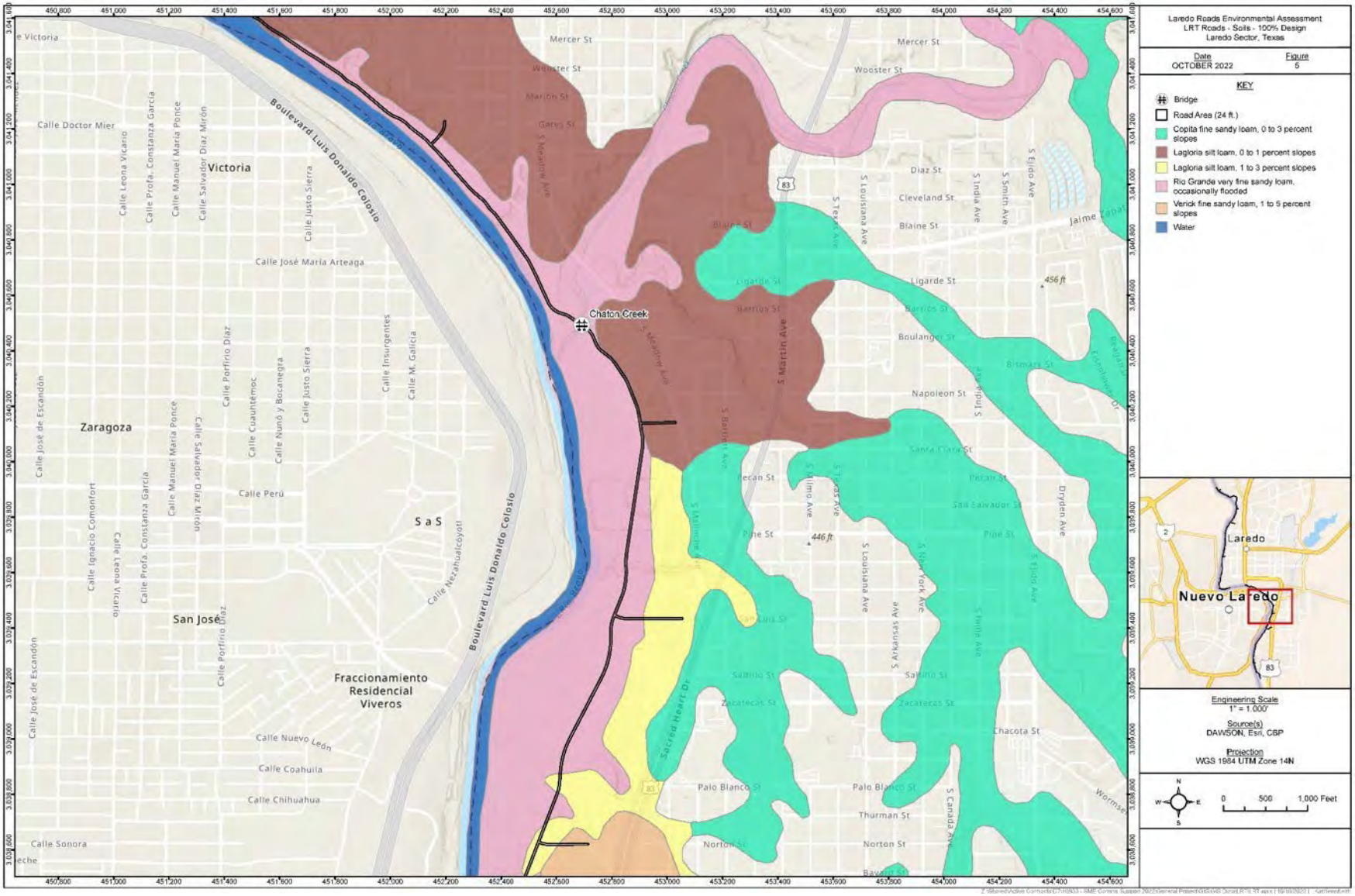


Figure 3-21. Map of Soil Associations - Map

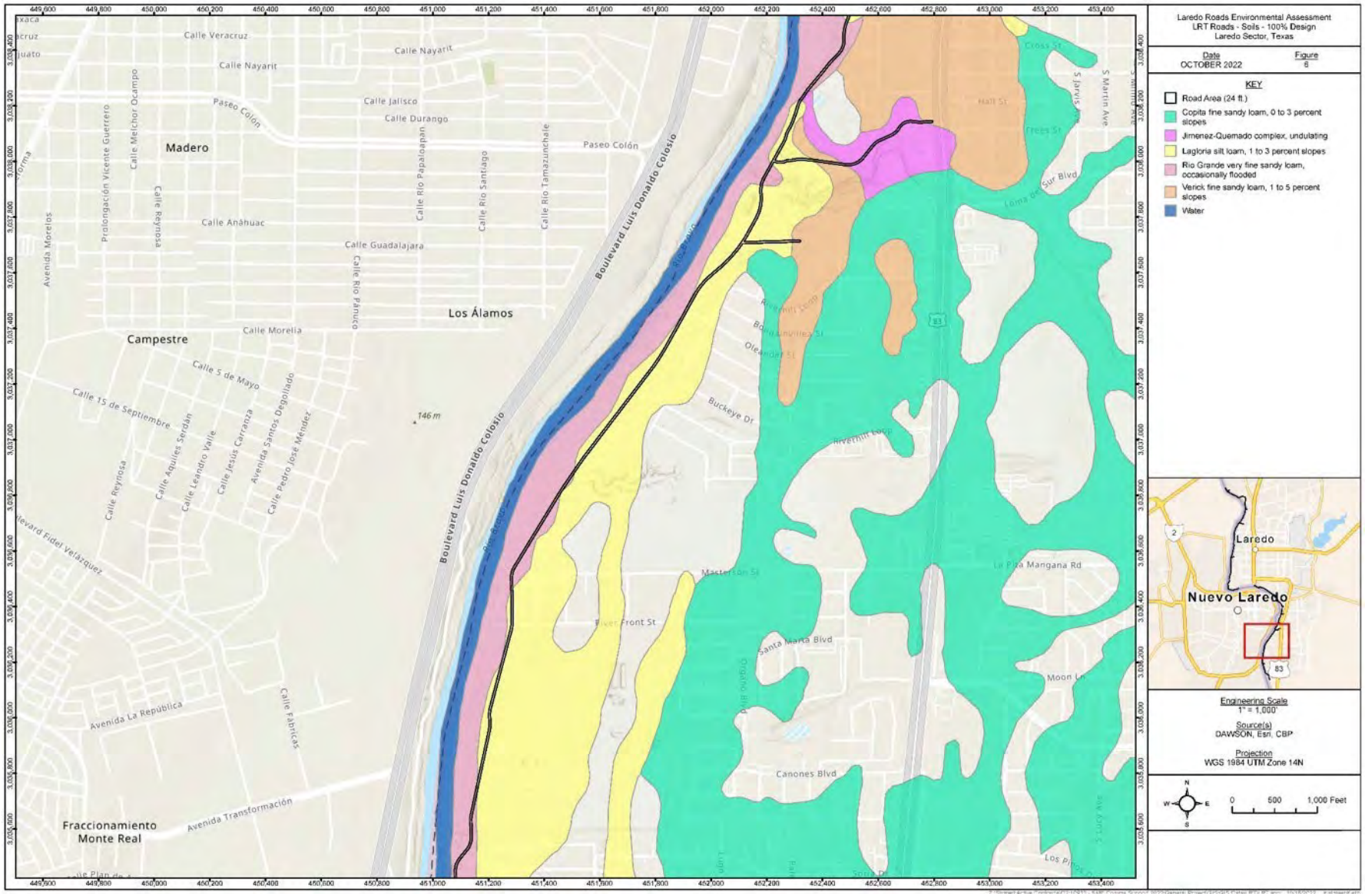
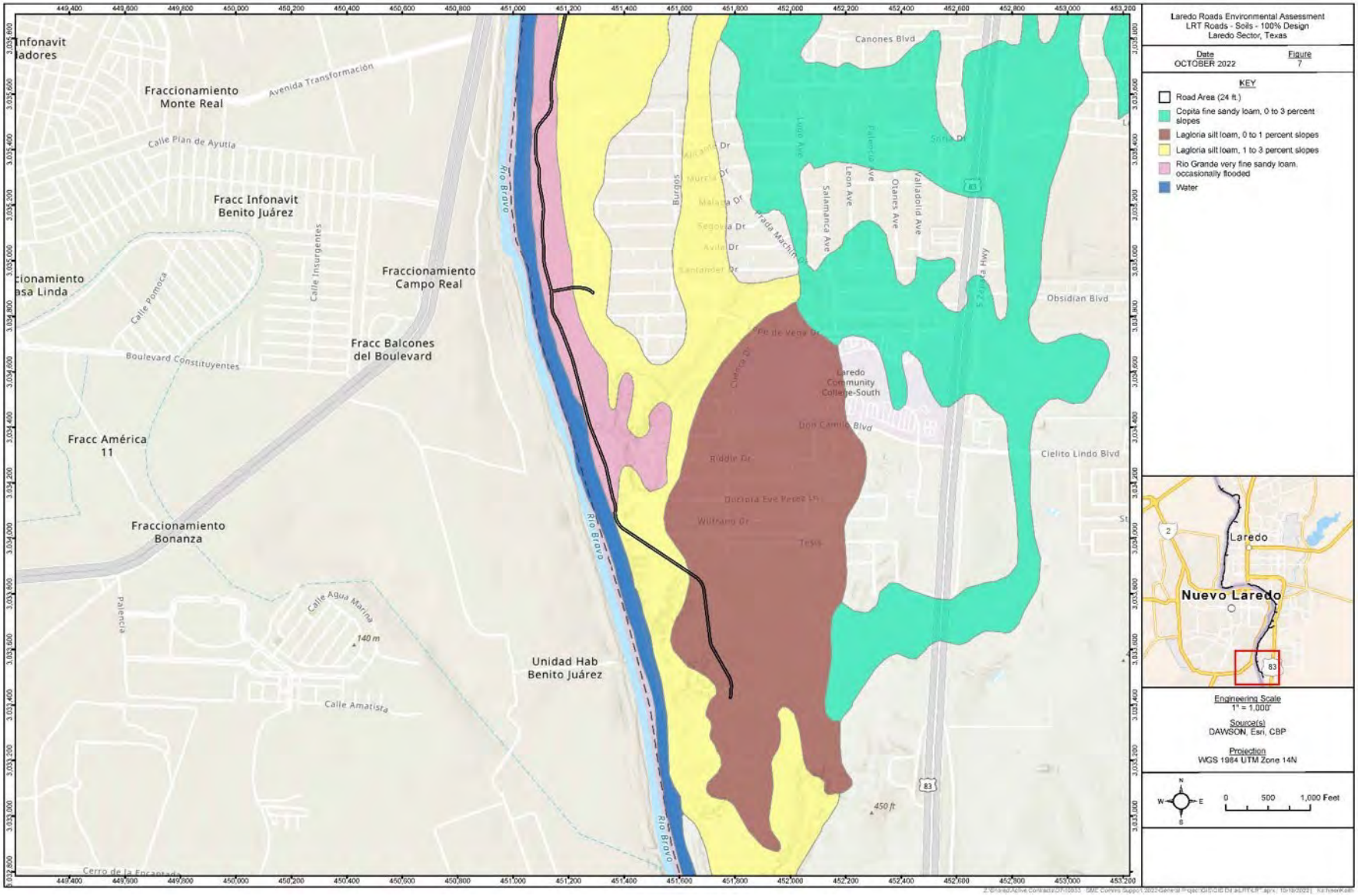


Figure 3-22. Map of Soil Associations - Map



3.6 WATER RESOURCES

3.6.1 Definition of the Resource

Water resources are natural and man-made sources of water that are available for use by, and for the benefit of, humans and the environment. Water resources relevant to the location of the Proposed Action in and near the City of Laredo, Texas, include groundwater, surface waters, wetlands, and floodplains.

Groundwater. Groundwater is water that exists in the saturated zone beneath the Earth's surface that collects and flows through aquifers and is used for drinking, irrigation, and industrial purposes. Groundwater typically can be described in terms of depth from the surface, aquifer or well capacity, water quality, and recharge rates.

Surface Water. Surface water includes natural, modified, and man-made water confinement and conveyance features above groundwater that may or may not have a defined channel and discernable water flow. Stormwater is an important component of surface water systems because of its potential to introduce sediments and other contaminants that could degrade surface waters, such as lakes, rivers, or streams. Energy Independence and Security Act Section 438 (42 U.S.C. § 17094) establishes into law stormwater design requirements for Federal development projects that disturb a footprint of greater than 5,000 square feet. Under these requirements, pre-development site hydrology must be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow.

Water quality standards are regulated by U.S. Environmental Protection Agency, under the Safe Drinking Water Act and the CWA. Section 303(d) of the CWA requires states to identify and develop a list of impaired water bodies where technology-based and other required controls have not provided attainment of water quality standards. The CWA also establishes Federal limits, through the NPDES permit process, for regulating point and non-point discharges of pollutants into the WOTUS and quality standards for surface waters. The term "Waters of the United States" has a broad meaning under the CWA and incorporates deep water aquatic habitats and special aquatic habitats (including wetlands).

USACE regulates WOTUS under authority of the Section 404 of the CWA and under the Rivers and Harbors Act of 1899. WOTUS is defined in the CFR as traditionally navigable waters that are susceptible to use in commerce or subject to the ebb and flow of the tide, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). TCEQ is responsible for conducting Section 401 certification reviews of all permits issued in Texas under the Section 404 Nationwide Permitting and Individual Permit Program.

Wetlands are a protected resource under E.O. 11990, Protection of Wetlands, "to avoid to the extent possible the short- and long-term, adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." Wetlands have been defined by agencies responsible for their management.

Potential wetland areas are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "non-wetland waters" and are characterized by an Ordinary High Water Mark. Non-wetland waters generally include lakes, rivers, streams, and other open-water habitats.

Floodplains. Floodplains are areas of low, level ground present along rivers, stream channels, or coastal waters that are subject to periodic or infrequent inundation because of rain or melting snow. Flood potential is evaluated by Federal Emergency Management Agency (FEMA), which defines the 100-year floodplain as an area within which there is a one percent chance of inundation by a flood event in a given year, or a flood event in the area once every 100 years. Executive Order (E.O.) 11988, *Floodplain Management*, requires Federal agencies to determine whether a proposed action would occur within a floodplain and to avoid floodplains to the maximum extent possible wherever there is a practicable alternative. Where the only practicable alternative is to site in a floodplain, a specific step-by-step process must be followed to comply with E.O. 11988 outlined in the FEMA document *Further Advice on E.O. 11988 Floodplain Management*.

Floodplains within the United States are protected under E.O. 11988, which requires Federal agencies to determine whether a proposed action would occur within a floodplain. This determination typically involves consultation of appropriate FEMA Flood Insurance Rate Maps (FIRMs), which contain enough general information to determine the relationship of the project area to nearby floodplains. If a Federal agency action encroaches within the floodplain and alters the flood hazards designated on a FIRM (e.g., changes to the floodplain boundary), an analysis reflecting any changes must be submitted to the FEMA.

3.6.2 Affected Environment

Groundwater. The Proposed Action overlies the Carrizo-Wilcox Aquifer, which extends from the Louisiana border to the Mexico border in a wide band covering 66 counties in Texas (Bruun et al. 2016). The aquifer is primarily composed of sand locally interbedded with gravel, silt, clay, and lignite. Hydraulic connectivity ranges from 0.01 to 4,000 feet per day and has a mean of about 6 feet per day. Transmissivity ranges from 0.1 to 10,000 feet squared per day. While some portions of the aquifer are unconfined, the portion of the aquifer that underlies the project area is confined by the Reklaw Formation. The sum of average annual baseflow is approximately 0.3 cubic feet per second within Webb County where the Proposed Action is located.

Total storage within the aquifer is estimated to be about 5.2 billion acre-feet; however, annual groundwater availability within the aquifer is about 1.2 million acre-feet. Well yield is commonly 500 gallons per minute but can reach 3,000 gallons per minute in some areas (TWDB, n.d.). Webb County and other areas in Southern Texas that overly the aquifer have experienced increasing drawdown since 2005. The presence of high iron and manganese is characteristic of much of the aquifer. Groundwater near the Proposed Action is saline to moderately saline.

Surface Water. Surface water is important to the water supply in Texas since it accounts for approximately 40 percent of water used in the state. The Proposed Action lies within the Rio Grande River Basin – the largest basin in Texas (TWDB 2022a). The Rio Grande originates in Colorado and flows 1,896 miles to the Gulf of Mexico. The basin is approximately 182,000 square

miles in size, of which 49,000 square miles is located in Texas. The river's average flow is 645,000 acre-feet per year (TWDB 2022b). The Proposed Action generally runs along the international border through the City of Laredo.

The Rio Grande serves as the primary source of drinking water for the City of Laredo and other cities along the border in Webb County (Laredo 2020, USGS 2005). The City of Laredo owns approximately 62,009 acre-feet of municipal water rights. Portions of the river that run near the Proposed Action are on the 303(d) list of impaired water bodies for bacteria and other microbes (USEPA 2022d).

The Proposed Action includes the construction of three bridges. The first bridge would cross Las Manadas Creek above the creek's confluence with the Rio Grande. Aerial images of the creek show a defined, unimproved channel with mostly woody vegetation. The second bridge would cross Zacate Creek above the creek's confluence with the Rio Grande. The Zacate Creek watershed drains approximately 16 square miles. Aerial images show a defined, improved trapezoidal channel that runs in the middle of the watershed. The third bridge would cross Chacon Creek above the creek's confluence with the Rio Grande and downstream of Lake Casa Blanca.

Wetlands. Between December 2020, and September 2022, CBP conducted a wetland delineation of a 100-foot corridor of the Proposed Action in accordance with *Section D, Subsection 2, of Technical Report Y-87-1, Corps of Engineers Wetlands Delineation Manual* and the *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region* (USACE 1987, USACE 2010), which involved establishing sampling plots within each observed vegetation community. A soil boring pit was excavated within each sampling plot. Dominant vegetation and wetland hydrology indicators were also recorded at each sample plot. Survey results are provided in **Section 3.6.3**.

Floodplains. The Rio Grande is the major surface water in the project area associated with the floodplain in the region. Other floodplains are associated with Las Manadas Creek, Zacate Creek, Chacon Creek and numerous other arroyos, streams, and resacas.

A review of the FIRMs shows that parts of the Proposed Action occur within a regulatory floodway (refer to **Figures 3-3 and 3-4**). A regulatory floodway is defined as the channel of a river or other watercourse and the adjacent land area that must be kept free of encroachment so that the 1 percent annual chance flood can be free to water flow without substantial increases in flood heights. (FEMA 2021). Parts of the Proposed Action also occur within a Special Flood Hazard Area (SFHA) subject to inundation by the 1 percent annual chance flood (100-year floodplain) (FEMA 2022). Other parts of the Proposed Action are determined to be in areas subject to 0.2 percent annual chance flood and 1 percent annual chance flood (FEMA 2022).

3.6.3 Environmental Consequences

3.6.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

Groundwater. The Proposed Action is expected to cause short- and long-term, negligible, adverse impacts on groundwater resources. During road improvement activities, soil disturbances could

lead to increased sediment transportation during rainfall events that could eventually enter groundwater through recharge points. Best practices and planning during construction could minimize such impacts by controlling the movement of surface water runoff and ensuring no direct access to groundwater recharge points. BMPs could include using temporary construction of barriers such as fiber logs or silt fences, which would be placed based on site-specific evaluations on an as-needed basis. Impacts on groundwater would also be minimized due to the confined nature of the underlying aquifer.

Vehicles and equipment used during the implementation of the Proposed Action could increase the potential for petroleum or hazardous material spills, typically due to leaks or accidents at the work site. Any such leaks or spills could be transported to groundwater either by surface water runoff or soil leaching. Proper housekeeping, maintenance of equipment, and containment of fuels and other potentially hazardous materials would be conducted to minimize the potential for an unintended release of fluids. Due to the implementation of best practices and minimal groundwater recharge in the area, implementation of the Proposed Action would result in minor impacts on groundwater.

Surface Water and Wetlands. Short- and long-term, moderate, adverse impacts would be expected during implementation of the Proposed Action. Within the surveyed project area, the Proposed Action could impact approximately 0.94 acres of potentially jurisdictional wetlands in the form of wetland fringe along Chacon Creek and a floodplain wetland along the Rio Grande and 8.02 acres of WOTUS features in the form of rivers, large and small creeks, and seasonal, ephemeral drainages (**Appendix E**).

CBP would need to obtain a Section 404 permit prior to the start of construction. Mitigation for impacts to wetlands and non-wetland WOTUS would be required as conditions of permit approval. A Section 401 Water Quality Certification would also be required through TCEQ. CBP would also adhere to the City of Laredo Ordinance 2004-0-105 to protect Laredo's streams, wetlands, and floodplains to the greatest extent possible.

The Proposed Action could transport sediment and other material into the WOTUS features and the nearby Rio Grande, which acts a source water supply of drinking water for the region, or other surface water drainages. Unmanaged stormwater flow also causes general erosion to occur, washing out complete sections of road and in many instances making roads impassable. Erosion-control BMPs would be adopted to maintain runoff on site and would minimize the potential for adverse effects on downstream water quality. Pertinent local, state, and Federal permits would be obtained for any work, including work that could occur near surface water or ephemeral drainages.

Due to the proximity of the Proposed Action to the international boundary and the Rio Grande River, it would be necessary to coordinate with the USIBWC prior to the implementing the Proposed Action. A USIBWC out-grant application is necessary for any work, such as construction or dredging, that results in the use of USIBWC Federal real property by lease, easement, license, or permit.

Floodplains. The Proposed Action has the potential to result in moderate, short- and long-term, impacts on SFHAs, including regulatory floodways and floodplains that are subject to inundation by the 1 percent annual chance flood. There are approximately 22.9 acres of the regulatory

floodway and 20.6 acres of floodplain subject to the 1 percent annual chance flood within the 24-foot project area. A floodplain development permit would be required prior to any construction or development within any SFHA (44 CFR 60.3). Approximately 2.3 acres of the project area are within areas subject to the 0.2 percent annual chance flood (**Figures 3-8** to **3-14)**.

Widening of the road and clearing of vegetation would result in an increase in the volume and velocity of flow. The construction contractor would implement BMPs, appropriate design standards and practices, and drainage measures to minimize any potential impacts on floodplains.

Per E.O. 11988, CBP conducted a thorough analysis to determine the viability of alternatives to the Proposed Action to avoid working within a floodplain. As discussed in **Section 2.5.1**, there is no practicable alternative to working in the floodplain as the patrol roads need to be sited in proximity to the border to ensure CBP mission and operational success. The Proposed Action, however, would not introduce any new habitable structures or obstructions that would impede or divert overland floodwater flow nor increase/create flood hazards. Therefore, CBP has determined a Finding of No Practicable Alternative is suitable for this action.

3.6.3.2 Unavoidable Adverse Impacts

The Proposed Action would cause unavoidable impacts to floodplains and surface water features, including wetlands and jurisdictional waters. Mitigation would be required to achieve a no-net-loss of wetland and non-wetland waters, as a condition of the appropriate Section 401 and 404 permit obtained from USACE. Floodplain mitigation measures would be implemented as necessary. The Proposed Action would also require water for dust suppression during construction activities. Adverse impacts would be minimized to the greatest possible through the implementation of BMPs.

3.6.3.3 No Action Alternative

Under the No Action Alternative, patrol road improvements would not occur, and the existing conditions would remain unchanged. Since maintenance and repair activities would not be conducted, degrading roadway and blocked drainage structure could impair flow, which could increase flood risk. Additionally, without road improvements, surface waters could be impacted during standard operation by increased runoff, resulting in increased erosion, sedimentation, and conveyance of non-point source pollutants in runoff.

Figure 3-8. Floodplains within the Proposed Action – Map 1

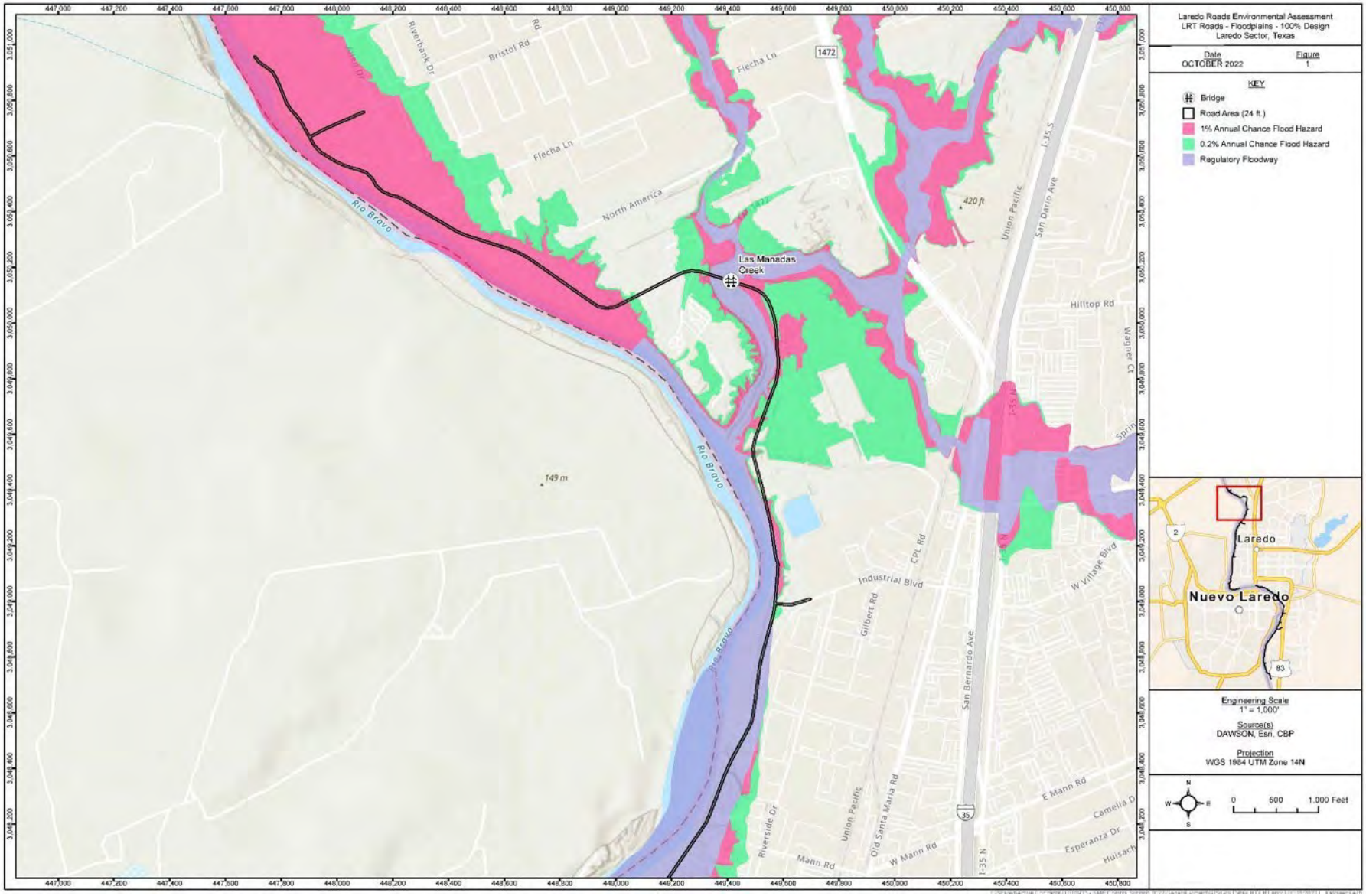


Figure 3-9. Floodplains within the Proposed Action – Map 2

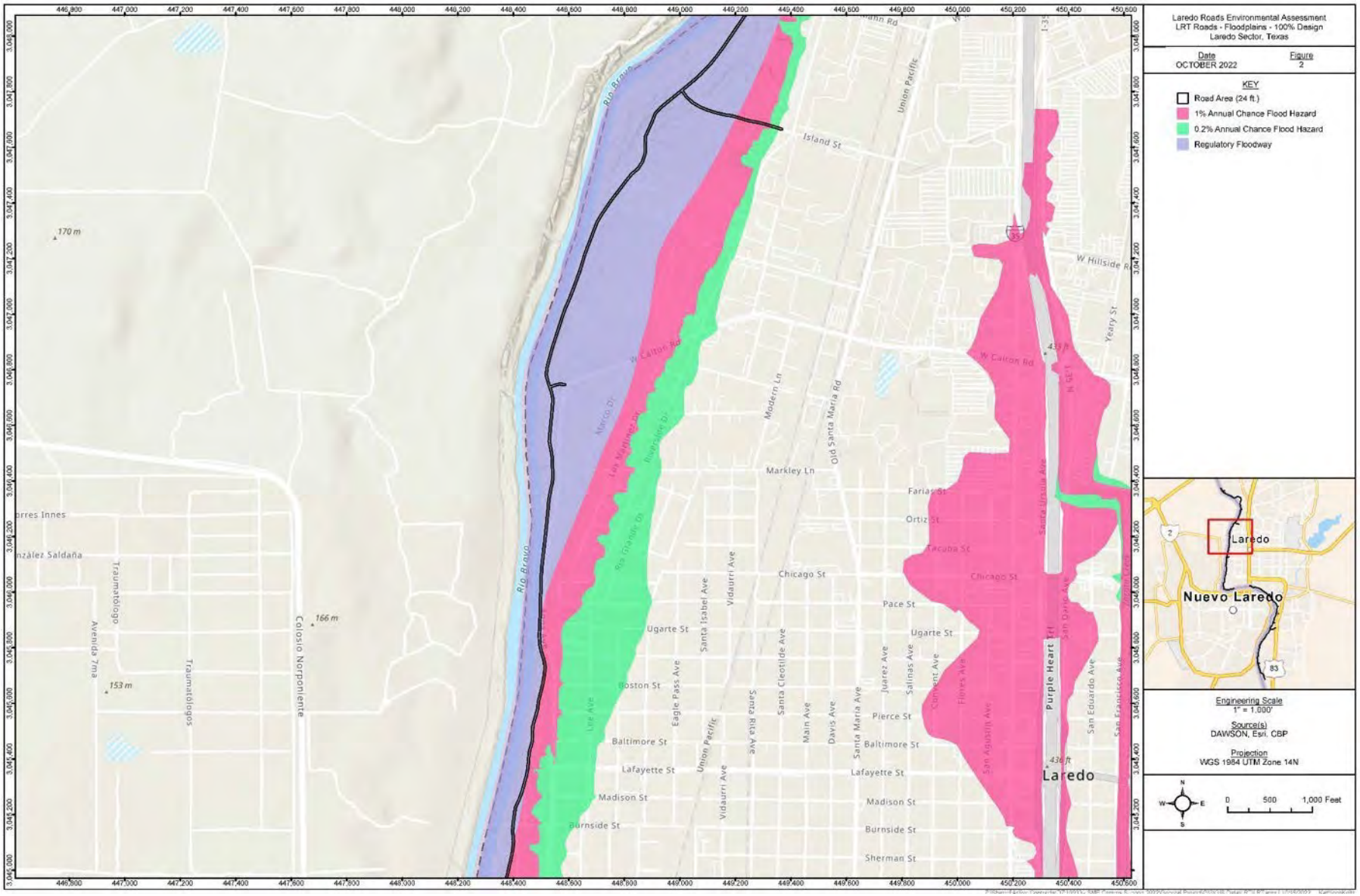


Figure 3-10. Floodplains within the Proposed Action – Map 3

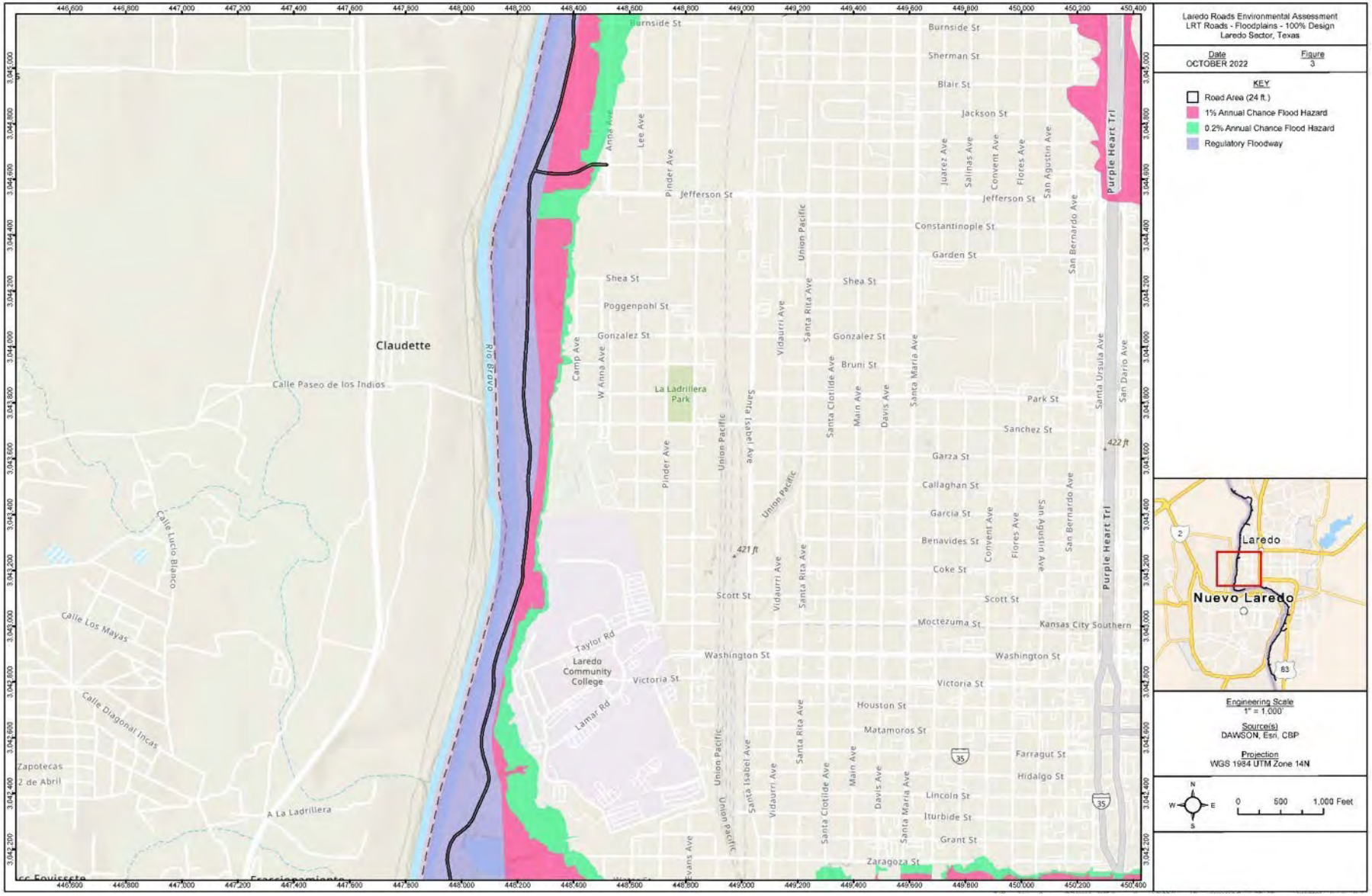


Figure 3-11. Floodplains within the Proposed Action – Map 4

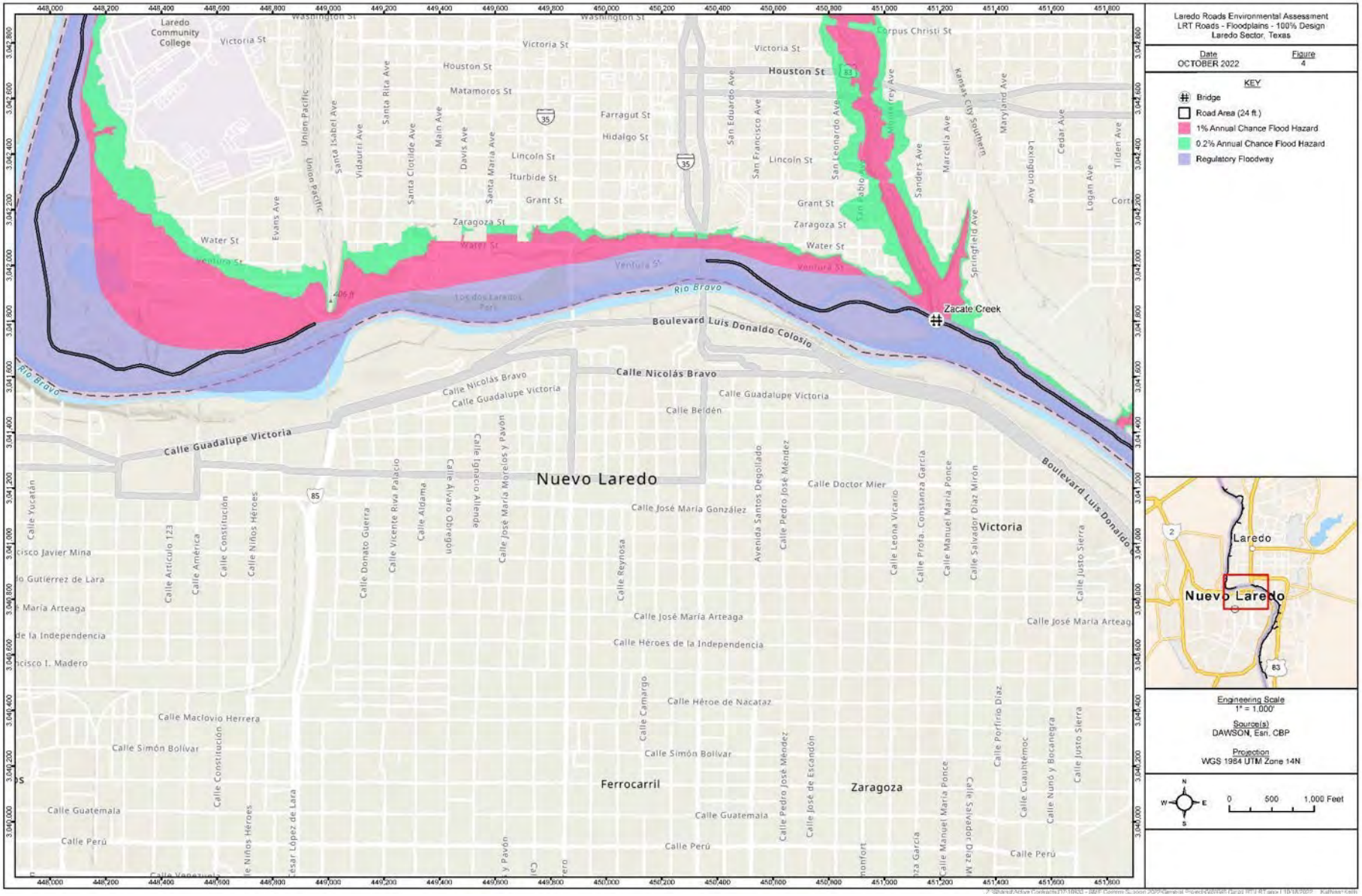


Figure 3-12. Floodplains within the Proposed Action – Map

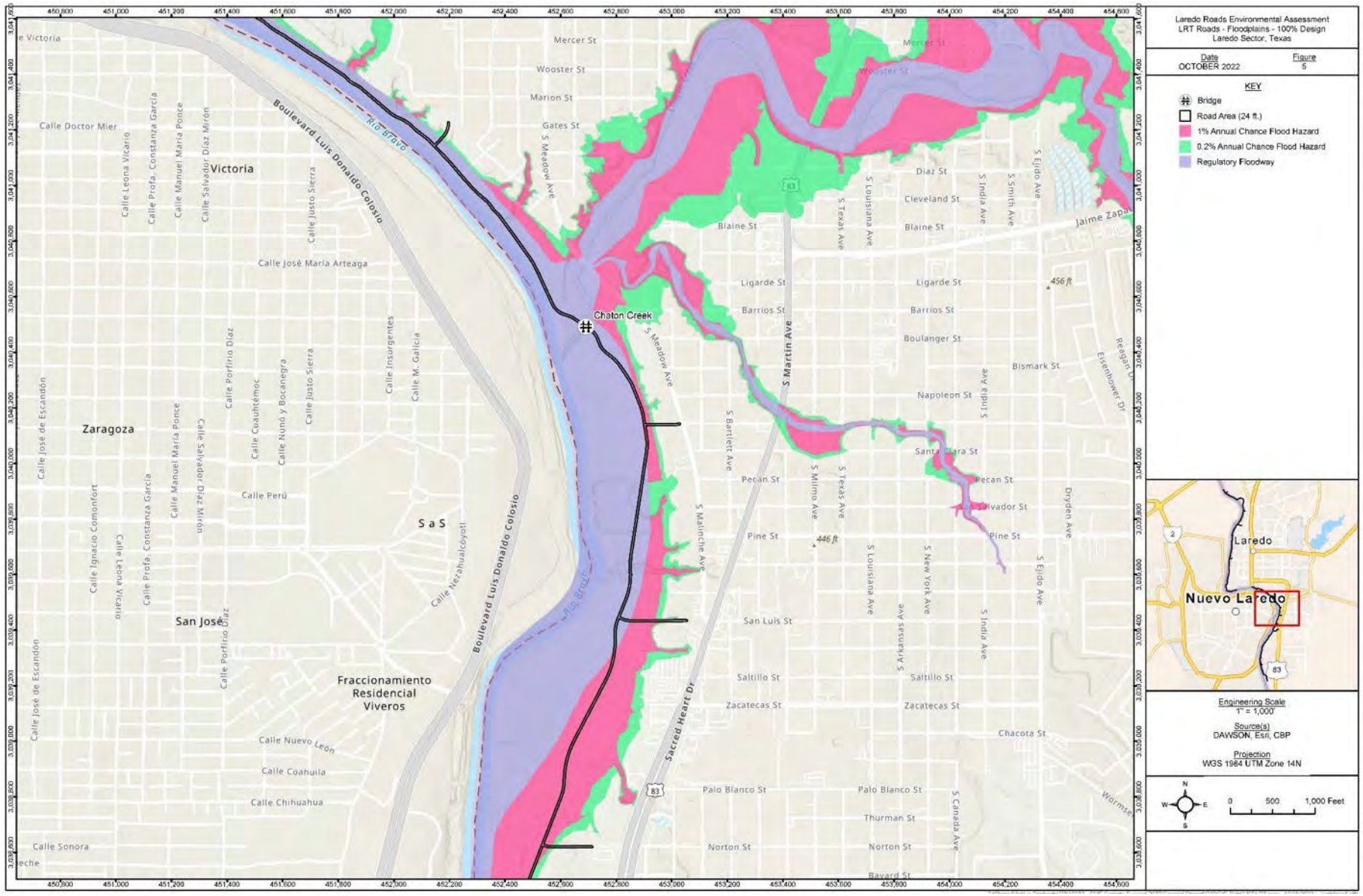


Figure 3-13. Floodplains within the Proposed Action – Map

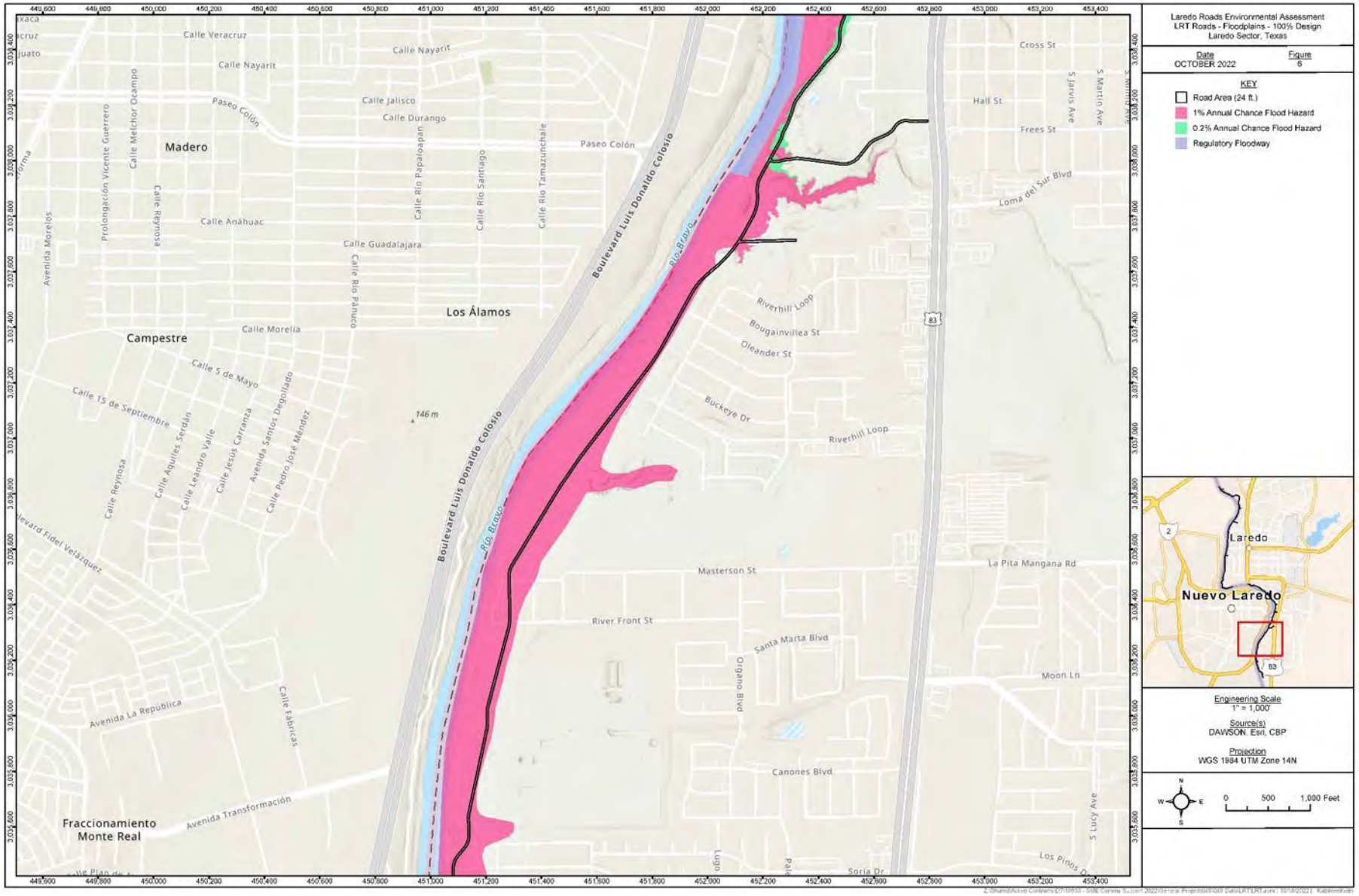
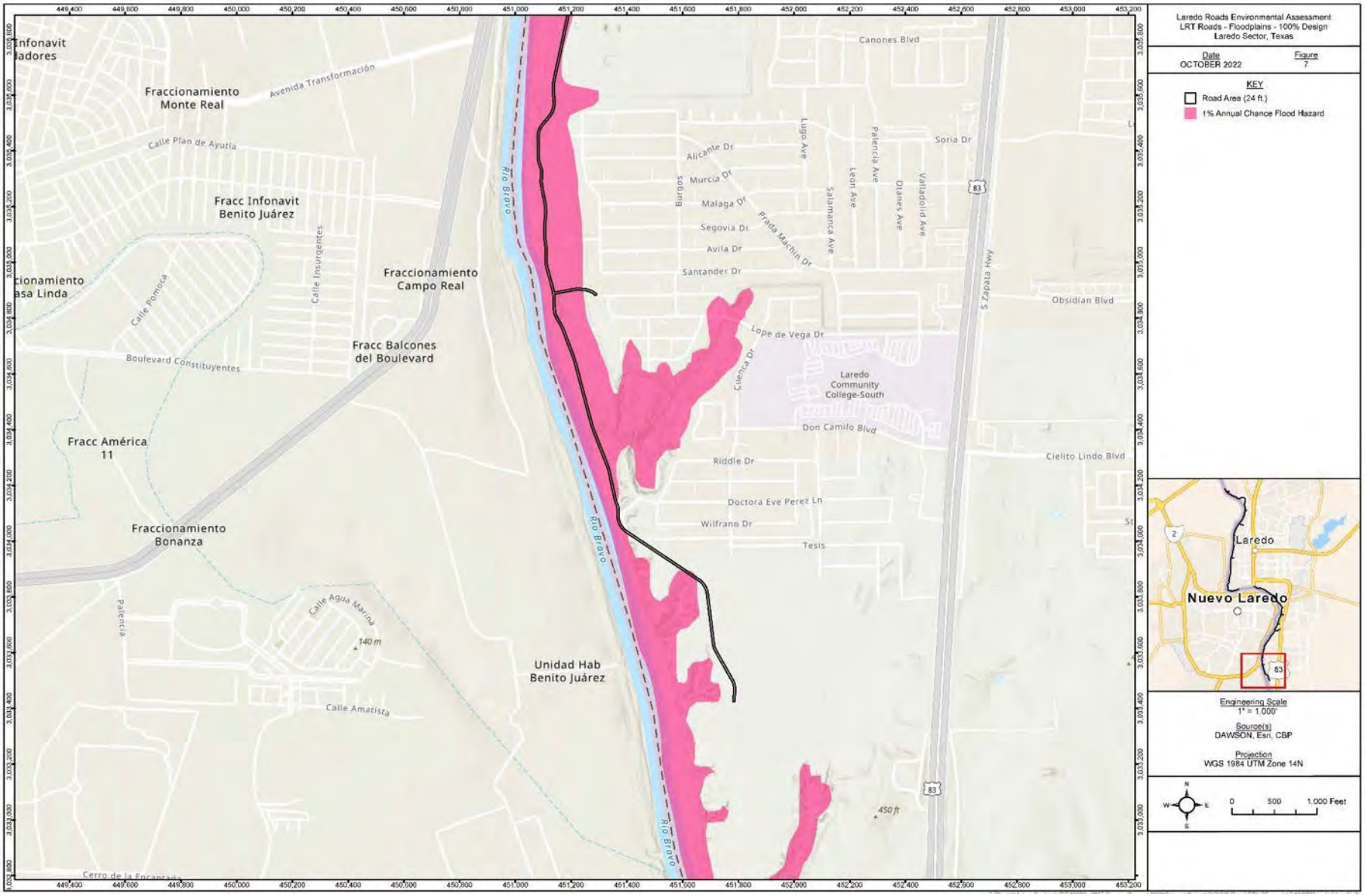


Figure 3-14. Floodplains within the Proposed Action – Map



3.7 BIOLOGICAL RESOURCES

3.7.1 Definition of the Resource

Vegetation. Vegetation includes native, non-native, and naturalized plants and the vegetation communities in which they exist. This section includes a description of all plant species and vegetation communities occurring within the affected environment of the proposed project area. Vegetation communities defined within the project area are derived from the TPWD Ecological Mapping System (TPWD 2022) and NatureServe Explorer (NatureServe 2022).

Local special status, rare plants or vegetation communities as defined by TPWD are discussed and considered in the same general manner in this section and are not individually analyzed by species in this EA. Federal and state-threatened, endangered, and candidate plant species are discussed further in the Terrestrial and Aquatic Wildlife Species portion of this section and in **Appendices F** and **G.**

Terrestrial and Aquatic Wildlife Species. Terrestrial and aquatic wildlife resources include native or naturalized terrestrial and aquatic wildlife and the habitats in which they exist. This section includes a description of terrestrial and aquatic wildlife species and their habitats that are likely to be found in the project area.

Threatened and Endangered Species. Threatened and endangered species are frequently protected due to reductions in their historic range or available suitable habitat, and remaining habitat can only support a small number of individuals. Some species have declined for natural reasons, but declines are commonly exacerbated or accelerated by anthropogenic influences. Anthropogenic influences that have contributed to decreased species range, declining habitat quality or reduced populations include habitat conversion to agriculture, declining native habitat due to livestock grazing, habitat fragmentation from urban development and road construction, overcollection, trampling and off-road vehicle use, hydrologic modifications, and altered fire regimens. The physical disturbance of natural vegetation communities and wildlife habitat can expose these areas to non-native species who can take advantage of disturbed conditions to out-compete native species. Some species occupy narrow ecological ranges, so even minor alterations can result in major effects to a species.

Species listed as threatened or endangered under the ESA (federally listed species), as well as designated critical habitat that have the potential to be affected, are discussed in this section. A list of potential threatened, endangered, or candidate species was compiled from USFWS and TPWD. USFWS is responsible for maintaining and tracking a list of federal threatened, endangered, and candidate species. TPWD is responsible for maintaining a similar list of species for the State of Texas. In terms of protection and habitat suitability, any species listed as a federal or state candidate is assessed in a manner as though it has already been listed threatened or endangered. This section presents those federal-and state-listed species that are known to occur or have the potential to occur within the project area.

CBP has conducted consultation with USFWS to comply with Section 7 of the ESA. USFWS concurred with CBP's determination of "may affect but not likely to adversely affect" for the ocelot (*Leopardus pardalis*), Gulf Coast jaguarundi *(Puma yagouaroundi cacomitli*), ashy

dogweed *(Thymophylla tephroleuca)*, Zapata bladderpod ((*Physaria thamnophila*), and the Texas hornshell mussel *(Popenaias popeii)*. USFWS does not provide concurrence for "no effect" determinations, but by making a determination, CBP has complied with Section 7 of the ESA. CBP's species determinations are provided in **Table 3-7**.

3.7.2 Affected Environment

Vegetation. Vegetation communities were identified during surveys conducted from winter 2020 through spring 2022 and described in a biological survey report (**Appendix F**). The project area is in the South Texas Plains ecoregion, between the Chihuahuan Desert to the west and Tamaulipan brushland and subtropical woodlands of the Rio Grande and coastal grasslands to the east. The project area is characterized by thorny shrubs and trees with scattered patchy distributions of palms and subtropical woodland vegetation communities. The South Texas Plains ecoregion is an area of high species diversity and is home to a number of rare plant and animal species.

A total of 140 native and non-native plant species in five vegetation communities were identified within the project area in addition to developed areas (**Table 3-6**). Vegetation communities in the project area include Tamaulipan thornscrub, Mesquite savannah/woodland, Tamarisk woodland, Disturbed woodland, and Maintained vegetation (**Appendix G**). The most common vegetation community observed was the Mesquite savanna/woodland.

Local Special Status Plant Species. Special status plant species include those that are listed as endangered or threatened at the Federal or state level, and TPWD species of greatest conservation need (SGCN).

Two federally listed plant species were assessed as having the potential to occur in the project area: ashy dogweed and Zapata bladderpod, which are discussed further in the document**.** (TPWD lists 19 special status plant species occurring in Webb County, Texas (TPWD 2020, TPWD 2022b). One special status plant species was observed in the project area, Fitch's hedgehog cactus (*Echinocereus reichenbachii* ssp. *fitchii*), which is a TPWD SGCN, but not a Federal- or state-listed species.

Table 3-6. Vegetation Communities in the Project Area

Vegetation Community	Acres in the Survey Area	Proposed Action Project Area
Tamaulipan thornscrub	9.23	1.95
Mesquite savanna/woodland	150.33	29.48
Tamarisk woodland	7.71	0.54
Disturbed woodland	17.28	3.02
Sub-total	*184.55*	*34.99*
Maintained vegetation	8.11	1.8
Developed	8.00	0.3
No Data*	8.72	8.72
Sub-total	*24.83*	*10.82*
TOTAL	**209.38**	**45.81**

Terrestrial and Aquatic Wildlife Species. The proposed project area can support a variety of terrestrial wildlife, including reptiles, amphibians, birds, mammals, insects and mollusks. TPWD list 46 species of terrestrial wildlife in Webb County as sensitive at the level of state-listed threatened or endangered, or SCGN (TPWD 2020, TPWD 2022b, **Appendix G**). The TPWD also lists eight sensitive aquatic species known to occur in Webb County (**Appendix G**).

Threatened and Endangered Species. Based on the results of biological surveys (**Appendix F**) and a review of previous projects in the Laredo Sector (CBP 2016), CBP determined that eight federally listed species have potential to occur in or adjacent to the project area: Ashy dogweed (*Thymophylla tephroleuca*), Zapata bladderpod (*Physaria thamnophila*), Texas hornshell (*Popenaias popeii*), piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), Golf Coast jaguarundi, and ocelot. One Federal candidate species, the monarch butterfly (*Danaus plexippus*), has the potential to occur. No federally listed or candidate species were observed during 2022 biological surveys (**Appendix F** and **G**).

Per USFWS directive (USFWS 2022), effects on piping plover and red knot do not need to be discussed unless the proposed action concerns the development of a wind-energy generation facility in the species' flyway. Therefore, these two species will not be discussed further.

No critical habitat designations overlap the project area; however, critical habitat for the Texas hornshell ends approximately 0.25 miles north of the project area within the Rio Grande.

Ashy dogweed (*Thymophylla tephroleuca*). Ashy dogweed was listed as a federally endangered species in July 1984. At the time of listing, ashy dogweed was only known from Starr County (USFWS 2011) but additional populations have been identified in southern Webb and Zapata counties. Ashy dogweed is an erect perennial herb of the Sunflower Family (Asteraceae) numerous woolly stems up to 12 inches in height with oil-bearing cells that give off a pungent aroma when crushed. Flowers are yellow and consist of 30-to-70-disc flowers surrounded by 12-to-13-ray flowers in a typical sunflower-like arrangement. Ashy dogweed is restricted to sandy pockets of Maverick-Catarina, Copita-Zapata, and Nueces-Comita soils in Tamaulipan thornscrub vegetation communities of the South Texas Plains ecoregion.

Ashy dogweed has be observed growing in disturbed habitats, but it is unknown if it prefers this or undisturbed vegetation communities. Critical habitat has not been designated for this species.

No ashy dogweed was observed in the project area during biological surveys and Tamaulipan thronscrub vegetation capable of supporting ashy dogwood occurrences are limited to one small segment (**Appendix F**). Suitable sandy soils for ashy dogweed do not occur in the project area.

Zapata bladderpod (*Physaria thamnophila*). Zapata bladderpod is a silvery-green herbaceous perennial plant with sprawling stems. It can be found growing in open thorn shrublands consisting of cenizo (*Leucophyllum frutescens*) and guajillo (*Acacia berlanderi*) on graveled to sandy loam upland terraces above the Rio Grande floodplain (USFWS 2004). Current populations occur in the Jimenez-Quemado soil association and

Catarina series soils in Starr County and Zapata-Maverick soil association in Zapata County. Soils are generally well-drained with a calcareous sandstone and clays, shales, or gypsum. Zapata bladderpod can be found in sparse vegetation communities or under a canopy of shrubs where the shrubs act as "nurse" plants, reducing the intensity of the sunlight or maintaining soil moisture in the root area (USFWS 2004). Associated shrubs may also reduce soil erosion around bladderpod roots and deter browsing by native wildlife and livestock.

Zapata bladderpod is known from Starr and Zapata Counties, however there is also potential for it to be found in Webb County where the project is located. There are small areas of suitable Jimenez-Quemando soil association within the project rea in disturbed woodland habitat.

Texas hornshell (*Popenaias popeii*). The Texas hornshell is a medium-size freshwater mussel that formerly ranged throughout the Rio Grande drainage in the United States and Mexico and in Gulf Coast streams in Mexico. Five populations are known to exist in the United States (USFWS 2020).

The Texas hornshell has an olive green to dark brown exterior shell coloration and may reach a length of 4.5 inches, with a lifespan of up to 20 years. Texas hornshell had not been documented in the wild since the mid-1970s until a large population was discovered near Laredo. This population was estimated to contain approximately 8,000 individuals and is the largest population reported from the Rio Grande (USFWS 2020). Texas hornshell are found in "flow refuges" within river habitats that include crevices, undercut banks, travertine shelves and under large boulders where small-grained material, such as clay, silt or sand gathers to provide substrata for anchoring. These flow refuges allow the mussel to remain secure during high-volume flow events. They are not known to live in water impoundments and low-head dams potentially restrict its habitat and distribution. Larval Texas hornshell are obligate parasites on fish where they attach to the gills, fins, or head of suitable host fish species and feed off the host's body fluids. As adults, they are filter feeders like all adult freshwater muscles, and feed on bacteria, plankton, and organic and inorganic material siphoned from the water column (USFWS 2020).

Threats to the long-term persistence of the Texas hornshell include river fragmentation due to habitat inundation by impoundments, alterations to natural streamflow (e.g., impoundments, drought, groundwater withdrawal, and sediment accumulations that smother mussels), and declining water quality throughout its range. The segment of the Rio Grande in and above Laredo where Texas hornshell were recently discovered has been designated a mussel sanctuary, prohibiting the collection of mussels, but the species is still vulnerable to water flow alteration that impact habitat quality (USFWS 2020).

No focused surveys Texas hornshell mussels were observed during biological surveys; however, suitable habitat is present where the project area crosses freshwater at Chacon Creek, Zacate Creek, and Las Manadas Creek (**Appendix F**). The Rio Grande between Eagle Pass and Laredo is considered to be an area currently occupied by Texas hornshell (TWPD 2014). Critical habitat has been designated for this species in the Rio Grande, approximately 0.25 miles north of the project area (**Appendix G**).

Monarch butterfly (*Danaus plexippus*). The monarch butterfly was given Federal candidate species status in December 2020 (USFWS 2022) and has not yet been listed or proposed for listing. Adult monarch butterflies are large, conspicuous, and readily identified with orange wings with black and white borders and covered with black wing veins. Monarchs lay their eggs primarily on plants of the milkweed genus (*Asclepias* spp.). Larvae emerge from eggs after two to five days and develop through five larval instars over a 9- to 18-day period while feeding on milkweed vegetation. It is during this period of larval feeding that the larvae will build up appropriate levels of cardenolide chemicals from the milkweed host plants used as defense against predators. Following larval development, a chrysalis is formed for the larvae to pupate and after a period of 6 to 14 days, an adult butterfly emerges from the chrysalis. Multiple generations of adult monarchs are produced during the breeding season, with each adult living approximately two to five weeks. Individuals overwintering as adults suspend reproductive activities and live six to nine months. Monarchs in warmer regions may breed year-round, but in temperate climates, like eastern and western North America, they will undertake a long-distance migration. Migrating monarchs live for a longer period and may travel as much as 1,800 miles over a period of two months to reach overwintering sites. In the spring, these same migrating adults return northward to their respective breeding grounds to start the seasonal cycle again.

No monarch butterflies were observed in the project area during biological surveys and no critical habitat is designated for candidate species. Suitable milkweed host plants of the genus Asclepias were not observed. Climbing milkweed (*Funastrum cynanchoides*) was noted during biological surveys and may serve as a secondary or less preferred host plant species (Nature Collective 2022). The project area does, however, contain nectar sources that could potentially support adult butterflies during migration through the region.

Gulf Coast jaguarundi (*Puma yagouaroundi cacomitli*). The Gulf Coast subspecies of the jaguarundi was listed as an endangered species in 1976 (41 FR 24062). The jaguarundi is a small cat, with a slender build, long neck, short head, and a flattened head. It has a long tail that resembles that of a weasel (*Mustela* sp.) more than a cat (USFWS 2013). The jaguarundi is a nocturnal species inhabiting lowland forest and brush habitats. In Mexico, it occurs in the eastern lowlands but has not been recorded in the Central Highlands. In Southern Texas, jaguarundis will use dense thorny shrublands (USFWS 2013).

The historic range of the jaguarundi in Texas has been limited to the southern portion of the state and includes Starr, Willacy, Hidalgo, and Cameron counties (USFWS 2013). Verified records of the Gulf Coast subspecies only occur in the extreme southern part of Texas; however, there is little historic information to determine the extent and abundance of the species (USFWS 2013). The last confirmed sighting of a jaguarundi in the United States was in 1986 when a road-killed specimen was collected two miles east of Brownsville, Texas. Numerous unconfirmed sightings have been reported, including sightings in Webb County in the mid-1980s and 1993 (USFWS 2013). The closest known population of jaguarundi is in Nuevo Leon, Mexico.

Evidence of Gulf Coast jaguarundi was not reported from biological surveys, but suitable habitat may be present in Tamaulipan thronscrub vegetation communities.

Ocelot *(Leopardus pardalis).* The U.S. population of ocelot was listed as an endangered species on July 21, 1982, following an inadvertent oversight that omitted the U.S. population when foreign populations of ocelot were listed in 1972 (47 FR 31670). The ocelot is a medium-sized cat with a spotted fur pattern and nocturnal habits (USFWS 2016). Up to 11 subspecies of ocelot range from the southwestern United States. south to northern Argentina (USFWS 2016). Two subspecies range into the United States, the Arizona/Sonoran ocelot, *L. p. sonoriensis*, and the Texas/Tamaulipas ocelot, *L. p. albescens*.

Ocelots use a variety of habitats throughout their range, but it is not a true habitat generalist. They make use of a relatively narrow range of habitats that are linked by dense vegetative cover (USFWS 2016). Ocelots in Southern Texas prefer shrub-dominated communities with greater than 95 percent canopy cover and avoid areas with less than 75 percent canopy cover (USFWS 2016). Other features that characterize preferred ocelot habitat is a canopy height of more than 7.8 feet with approximately 89 percent visual obscurity at a range of 3 to 6 feet. Ground cover has large amounts of woody debris with little herbaceous cover, which are the likely result of the dense canopy. Between 1980 and 2010, ocelots have been verified from specimens or photographs in Cameron, Willacy, Kenedy, Hidalgo, and Jim Wells counties with a current estimated state population of approximately 50 individuals in two separate populations. One population is at the laguna Atoscosa National Wildlife Refuge, and the other is on private ranches in Willacy and Kenedy counties (USFWS 2016). Individuals observed outside of these locations are assumed to be dispersing individuals that are not part of a breeding population.

Potential habitat for ocelots may be present in Tamaulipan thornscrub, or potentially denser portions of mesquite savanna/woodlands. However, these vegetation communities are generally small in acreage and not suitable for permanent residence of one or more ocelots. They may, however, be valuable habitat patches for dispersing individuals moving to more distant suitable habitat from established populations in Southern Texas.

Critical Habitat. The ESA calls for the conservation of designated critical habitat, defined as the areas of land, water, and air space necessary for an endangered species to survive. Critical habitat includes such things as food and water, breeding sites, cover or shelter habitat, and sufficient areas of habitat to allow for normal population growth and behavior. Critical habitat has been designated for the Zapata bladderpod and Texas hornshell, but both boundaries occur outside the project area.

3.7.3 Environmental Consequences

Impacts on vegetation would be considered major and adverse if a large portion of the vegetation community was affected or if the Proposed Action permanently affected the range of a sensitive species or population size of a rare plant community.

Impacts on wildlife and aquatic resources would be considered major and adverse if they included a substantial reduction in ecological processes or populations that would threaten the long-term viability of a sensitive species or result in the substantial loss of a sensitive species' habitat that could not be offset or otherwise compensated.

3.7.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

Vegetation. Under the Proposed Action, short- and long-term, negligible to minor, direct and indirect, adverse effects on vegetation would occur from construction activities due to vegetation clearing, crushing, and potential accidental spills. Turnouts or passing lanes that are required during road widening and installation of the all-weather road would be kept to a minimum and would occur in previously disturbed areas to the maximum extent practicable. Areas used temporarily during construction that do not become part of the improved road would be restored upon completion of construction activities.

To minimize potential impacts, staging areas would be designated in unimproved, previously disturbed areas; staged construction equipment and materials would be kept to a minimum. Construction equipment would be cleaned prior to entering and departing the project area and all materials such as gravel, topsoil, or fill would be certified weed-free to the extent practicable. A non-toxic soil stabilizer (e.g., Lignin, Soiltac, Envirotec, or other suitable soil stabilizer) would be used to avoid impacts on special status species.

CBP would adhere to the City of Laredo Ordinance 2004-0-105 to protect Laredo's riparian vegetation to the greatest extent possible. In accordance with the ordinance, if vegetation is expected to be removed near protected first or second order stream systems are, CBP would replace removes trees with equal caliper sized trees of the same species. Trees would be replaced within the stream system of buffer where the removed tree was located.

Long-term, negligible to minor, adverse impacts would occur from the loss of 1.95 acres of Tamaulipan thornscrub, 29.48 acres of mesquite savanna/woodland, 3.02 acres of disturbed woodland, and 0.54-acre of tamarisk woodland habitat during widening of the road into two 12-foot travel lanes. Road improvement activities have the potential to create dust, which could lightly cover vegetation communities adjacent to the construction area and reduce plant photosynthesis and respiration. To minimize the potential for dust impacts on vegetation, water trucks would be employed to wet soil during construction.

Under this alternative, a long-term, beneficial impact on erosion would occur from the improved control of surface water as storm water would be diverted into street gutter or drainage systems by way of a 4 percent cross-slope grade. Erosion and associated sedimentation would further be minimized by channeling runoff into appropriate drainage location, potentially improving water quality and habitat.

Terrestrial and Aquatic Wildlife Species. The Proposed Action would have short- and long-term, negligible to minor, direct and indirect, adverse effects on wildlife. A permanent loss of a relatively small area of wildlife habitat would result from widening the patrol roads. Clearing vegetation to expand the width of the existing road could also result in the temporary relocation of mammals, migratory breeding birds, and reptiles in areas adjacent to the project area. Smaller, less mobile species, like some insects, terrestrial mollusks, and spiders could be inadvertently impacted during construction activities. Wildlife could additionally be impacted during the transportation of materials, equipment, and personnel during project activities. To minimize these effects, all project

activities would occur within the defined project area and necessary construction turnouts and equipment and staging areas would be placed in previously disturbed areas.

The direct disturbance of vegetation would result in a disturbed habitat edge at the lateral extents of the expanded road width and could lead to the establishment of invasive plant species and lead to a degradation or conversion of the habitat. However, appropriate BMPs would be implemented to minimize the potential for the introduction and establishment of new invasive species in the project area, or the expansion of existing invasive species populations resulting from the disturbance of habitat.

Localized habitat degradation would also occur through accidental release of petroleum products or other hazardous materials into terrestrial or aquatic habitats. However, all regulatory requirements for handling and storage of fuels, oils, and other hazardous materials (such as the development of a CBP-approved SWPPP) would be implemented. Thus, habitat degradation resulting from accidental releases of hazardous materials would be negligible.

Temporary, adverse effects could result from the erosion of sediment and subsequent siltation of aquatic habitats. These impacts would be minimized through the development and implementation of a CBP-approved SWPPP that identifies the use of appropriate sediment barriers to prevent construction-related sediment from entering adjacent aquatic habitats. The SWPPP will also define appropriate requirements for handling and storage of fuels, oils and other hazardous materials.

Short-term, minor, adverse impacts on wildlife would occur as a result of temporary noise disturbances associated with construction activities. Loud noise can disturb wildlife resulting in escape or avoidance behaviors; however, these effects would be temporary. Noise can also distort or mask bird communications signals (e.g., songs, warning calls, fledgling begging calls) and their ability to find prey or detect predators. If noise persists in a particular area, animals could leave their habitat and avoid it permanently. Avoidance behavior by animals requires the expenditures of excess energy that is needed for survival (e.g., finding new food sources, water sources, and breeding and nesting habitats) (Ellis et al. 1991). Noises associated with construction would only be expected to affect individual animals within close proximity (typically within 400 to 800 feet) to the noise sources. Wildlife species would generally be expected to recover quickly from noise disturbance once the construction activities have ceased. As a result, population-level impacts would not be expected to occur. Additionally, it is unlikely that the entire project area would be subject to project activities at the same time. Project-specific noise-reduction BMPs would be implemented to decrease impacts. No night-time work would occur.

To minimize effects to nesting migratory birds, CBP would conduct MBTA surveys prior to project activities, to identify active nests of migratory bird species, and take appropriate steps to avoid disturbing these areas until migratory bird nesting activities at that location are complete. CBP operates under Special Purpose – Miscellaneous Permit Number MBPER0014908 issued by USFWS.

Threatened and Endangered Species. The Proposed Action may affect but is unlikely to adversely affect any threatened or endangered species or their habitat (**Table 3-7)**. CBP has conducted Section 7 consultation for the following species: Ashy dogweed, Zapata bladderpod, ocelot, Gulf

Coast jaguarundi, Texas hornshell, piping plover, and red knot for concurrence with CBP's determination.

Ocelot or Gulf Coast jaguarundi could potentially wander through the project area; however, the vegetation communities within the project area are not considered typical or preferred habitat for either species. Additionally, the areas area is not large in size to support a breeding population. Both species prefer thick thornscrub habitat with restrictive canopy cover and vertical cover limitations that do not occur to substantial quantity in the project area. Any occurrences of either species would be considered transient individuals dispersing to other habitats. Therefore, CBP has determined that the Proposed Action is not likely to adversely affect the ocelot or Gulf Coast jaguarundi. USFWS concurred with that determination.

No designated critical habitat exists within the project area and the known populations are located north of the project area. However, suitable habitat is present near proposed bridge installations at Chaton Creek, Zacata Creek, and Las Manadas Creek. CBP has completed Section 7 consultation with USFWS and concurred with CBP's determination that the Proposed Action may affect, but not likely to adversely affect the Texas hornshell. CBP will develop mitigation measures and implement BMPs, as described below.

Any work adjacent to the Rio Grande, including these areas where large creek tributaries merge with the Rio Grande, should follow all appropriate BMPs to prevent sediment from erosion to the river or creek channel, prevent streamflow alteration, and avoid degradation of water quality that could damage Texas hornshell habitat.

Temporary, minor degradation to Texas hornshell habitat could result from sedimentation and alteration of water flow during the construction of water crossings at these large creek locations. Localized degradation of Texas hornshell habitat would also occur if petroleum products or other hazardous materials are accidentally released during operation or storage of maintenance vehicles and other equipment.

After construction, the FC-2 all-weather road would be topped with an application of non-toxic soil stabilizer (e.g., Lignin, Soiltac, Environtec, or other suitable soil stabilizer) to minimize sediment runoff from the finished road into adjacent aquatic habitats. Soil stabilizer would be reapplied following any road maintenance that disturbs the roadbed surface in the area of the disturbance; when the road surface shows signs of wear and erosion, leading to sediment runoff into adjacent aquatic habitats; or at a minimum annual reapplication to maintain the surface. The soil stabilizer used to top the upgraded FC-2 all-weather road will be confirmed by aquatic wildlife specialists to be non-toxic to freshwater mussels and host fish species that are integral to the Texas hornshell lifecycle to prevent long-term adverse impacts to Texas hornshell.

Construction of the water crossings would minimize the disruption of waterflow through the creek and into the Rio Grande. This would include conducting water-crossing construction work during the dry-season to the extent practicable to minimize water levels in the construction area. Creek flow could be temporarily diverted around active construction areas, providing that downstream flow rates are not reduced. Should Texas hornshell individuals be encountered in the construction area, all construction would stop until the appropriate regulatory agency (e.g., USFWS) can be contacted for input on how to proceed. Long-term, indirect, beneficial effects to Texas hornshell

would result from a reduction of sediment runoff from the existing FC-4 jeep track by upgrading to the FC-2 all-weather road surface with associated channeling of stormwater and reduced erosion. Reduced sediment runoff would improve water quality in aquatic habitats adjacent to the existing patrol road.

Table 3-7. Species and Determination of Effect

Common Name	Scientific Name	Federal Status	State Status	CBP Determination
Ashy dogweed	*Thymophylla tephroleuca*	FE	SE	May affect, not likely to adversely affect USFWS concurs
Zapata bladderpod	*Physaria thamnophila*	FE	SE	May affect, not likely to adversely affect USFWS concurs
Texas hornshell	*Popenaias popeii*	FE	SE	May affect, not likely to adversely affect USFWS concurs
Gulf Coast jaguarundi	*Puma yagouaroundi cacomitli*	FE	SE	May affect, not likely to adversely affect USFWS concurs
Ocelot	*Leopardus pardalis*	FE	SE	May affect, not likely to adversely affect USFWS concurs
Piping plover	*Charadrius melodus*	FT	ST	No effect
Red knot	*Calidris canutus rufa*	FT	N/A	No effect

Key:
N/A – Not Applicable
FE: Federal Endangered
FT: Federal Threatened
ST: State Threatened

Short-term, negligible, indirect adverse effects on monarch butterflies would occur from removal of flowering vegetation used by adult butterflies as foraging resources through the widening of the existing FC-4 jeep track. Suitable preferred larval host plants of the monarch butterfly are not present in the project area. Climbing milkweed, a secondary host plant has been identified in the project area. Suitable adult nectar food sources are available throughout areas adjacent to the project area and in neighboring urban landscapes. Due to the lack of suitable preferred larval host plants and an abundance of adult butterfly nectar resources in adjoining undeveloped and developed urban landscapes, the implementation of the Proposed Action is not expected to adversely affect monarch butterflies.

3.7.3.2 Unavoidable Adverse Impacts

Vegetation communities and wildlife habitat would be impacted from implementation of the Proposed Action. Adverse impacts would be minimized to the greatest extent possible through the implementation of BMPs.

3.7.3.3 No Action Alternative

Under the No Action Alternative, CBP would not improve the existing patrol roads in the USBP Laredo Sector. Impacts on vegetation would be long-term, minor, and adverse from the continued use of the unimproved roads from increased erosion created from lack of road maintenance. Additionally, continued and increased siltation of aquatic habitats in the region could impact terrestrial and aquatic species. Continued use of the unimproved roads could have long-term, direct and indirect adverse effects on Texas hornshell due to sedimentation into aquatic habitats, which could lead to increase mortality of adult Texas hornshell and would lead to an overall degradation of the Texas hornshell habitat. Under continued use of the current FC-4 two-track road, CBP would be unable to meet operational requirements to secure the U.S./Mexico international border within the USBP Laredo Sector.

3.8 CULTURAL RESOURCES

3.8.1 Definition of the Resource

The term "cultural resources" refers to a broad range of properties relating to history, prehistory, or places important in traditional religious practices. Several Federal laws and E.O.s, including the NHPA, the Archaeological and Historic Preservation Act, the American Indian Religious Freedom Act, the Archaeological Resources Protection Act, and the NAGPRA refer to cultural resources.

The NHPA focuses on property types such as prehistoric and historic sites, buildings and structures, districts, and other places that have physical evidence of human activity considered important to a culture or a community for scientific, traditional, religious, or other reasons. These resources can prove useful in understanding and describing the cultural practices of past peoples or retain cultural and religious significance to modern groups. Resources judged significant under criteria established in the NHPA are considered eligible for listing in the National Register of Historic Places (NRHP). The NRHP refers to these places as "historic properties" and they are protected under the NHPA. The NHPA requires Federal agencies to consider the effects of their activities and programs on NRHP-eligible properties.

Regulations for Protection of Historic Properties (36 CFR Part 800) present a process for Federal agencies to consult with the appropriate State Historic Preservation Office/THPO, federally recognized Indian Tribes, Native Hawaiian groups, other interested parties, and, when appropriate, the Advisory Council on Historic Preservation. This is to ensure that the impacts from the undertaking are adequately considered on historic properties. NAGPRA is a Federal law passed in 1990 that provides a process for museums and Federal agencies to return certain Native American cultural items—human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations.

3.8.2 Affected Environment

A cultural resources records review was conducted for the Proposed Action's project area by a SOI-qualified cultural resources management professional. The entirety of the Proposed Action has been examined for cultural resources from 2020 to 2022 (Hunt et. al 2022). Eight previously

recorded archaeological sites were reexamined during this survey and five newly recorded sites were documented. In addition to the archaeological sites, 19 historical built environment resources (nine which are Recorded Texas Historical Landmarks [RTHL]) were noted near the project area. A summary of recorded resources in or near the project area is summarized in **Table 3-8**. Because some areas of the Proposed Action's project area will be subjected to disturbance below the depth examined by the cultural survey, there may be some additional cultural resources identified in the deeper Holocene deposits during future investigations.

Five above-ground resources are located within, or near to, the project area (**Figure 3-15**). Fort McIntosh (NRIS 75002011), also designated as 41WB11, is a historic district listed on the National Register in 1975. The Fort was established in 1849 (originally named Camp Crawford until 1850). The Battle of Laredo was fought nearby in 1864 and in the late nineteenth century several army units were based there including the tenth Cavalry (Buffalo Soldiers). The Fort was deactivated in 1946. This property is listed on the National Register of Historic Places under criteria A and C, with significance in Military, Transportation and Architecture. There is a prehistoric component located within this property and is discussed below.

The Fort McIntosh Post Cemetery is located between the Lewis Energy Academic Center and the athletic fields at Fort McIntosh, now known as Laredo Junior College. The cemetery was established during the construction of Fort McIntosh in the 1850s. A rock wall surrounds the cemetery and is accessible from the south side. There are no headstones and it is believed that many of the burials were relocated after the establishment of Laredo Junior College in the 1960s. There are no other landscaping features present within the boundaries of the cemetery.

The Barrio Azteca Historic District is a 53-block residential and small-scale commercial section of Laredo. The neighborhood that now comprises Barrio Azteca is actually two separate neighborhoods. El Ranchero, the older of the two, lies on the banks of the Rio Grande and includes Iturbide Street, a major east-west commercial arterial. The blocks above Iturbide are referred to as El Azteca for a ca. 1922 theater of that name in the 300 block of Lincoln Street. Barrio Azteca's earliest known development arose from Spanish/Mexican ranching traditions in the Laredo area in the mid-nineteenth Century. This district was listed in 2003 under criteria A and C, with significance in Architecture, Community Planning and Development, Ethnic Heritage – Hispanic.

The San Agustin (San Augustin in Texas Atlas) de Laredo Historic District was listed in 1973 and is the center of the original townsite of Laredo, established in 1755. Most of the buildings in the district reflect Spanish and Mexican influences and are made from masonry. The district is considered the last example of Spanish colonization of the Lower Rio Grande Valley. Many of the houses are individually significant as well. This district is listed under criterion C, with significance in Architecture.

Table 3-8. Recorded Cultural Resources within the Project Area

Number/Name	Site Type	Designation/Eligibility	Area of Significance
Fort McIntosh	Prehistoric Lithic Scatter/ Historic Fort	Prehistoric Component discussed below. Historic Component is listed on NRHP, NRIS: 75002011,	Criteria A and C, Military, Transportation, Architecture

Number/Name	Site Type	Designation/Eligibility	Area of Significance
Fort McIntosh Post Cemetery	Historic Cemetery	WB-C005; located within Fort McIntosh	There are no headstones and it is believed that many of the burials were 23 relocated after the establishment of Laredo Junior College in the 1960s.
Barrio Azteca Historic District	District	Listed on NRHP, NRIS: 034000431	Criteria A and C, Architecture, Community Planning and Development, Ethnic Heritage - Hispanic
San Augustin de Laredo Historic District	District	Listed on NRHP, NRIS 034000431	Criterion C, Architecture
Laredo Convent Avenue Port of Entry	Historic Building	Listed on NHRP, NRIS: 14000600	Criteria A and C, Architecture, Politics/Government
TX-Mexican Railway Bridge	Historic Bridge	Unknown eligibility not listed on Texas Atlas, (THC Concurrence on no adverse effect 2023)	N/A
Union Pacific Railroad Depot and Tracks	Historic building and rail tracks	Not eligible, (THC Concurrence on no adverse effect 2023)	N/A
Kansas City Southern Railroad Yard	Historic building and rail tracks	Not eligible, (THC Concurrence on no adverse effect 2023)	N/A
Webb County Courthouse	Historic Building	Listed on NRHP, NRIS 8100365	Criteria A and C, Architecture, Architect
Hamilton Hotel	Historic Building	Listed on NRHP, NRIS 92000363	Criterion C, Architecture
Capital of the Republic of the Rio Grande	Historic Building	RTHL 704	Recorded Texas Historic Landmark, Contributing Element to the San Agustin de Laredo Historic District
Juan Francisco Farias Residence	Historic Building	RTHL 15800	Recorded Texas Historic Landmark
Casa Ortiz	Historic Building	RTHL 744	Recorded Texas Historic Landmark, Contributing Element to the San Agustin de Laredo Historic District

Number/Name	Site Type	Designation/Eligibility	Area of Significance
Casa Vidaurri	Historic Building	RTHL 746	Recorded Texas Historic Landmark
San Augustin Cathedral	Historic Building	RTHL 5029	Recorded Texas Historic Landmark
Zuniga House	Historic Building	RTHL 5963	Recorded Texas Historic Landmark
Leyendecker House	Historic Building	RTHL 12290	Recorded Texas Historic Landmark
Benarides-Herra House	Historic Building	RTHL 12387	Recorded Texas Historic Landmark
St Augustine Parochial School	Historic Building	RTHL 12441	Recorded Texas Historic Landmark
41WB11	Prehistoric open campsite; historic scatter	Part of Fort McIntosh; eligible for NRHP	N/A
41WB12	Large, multicomponent prehistoric	Recommended eligible	Criterion D
41WB13	Prehistoric	Undetermined status	N/A
41WB15	Prehistoric open campsite	Not eligible within ROW, (THC Concurrence 2023)	N/A
41WB16	Prehistoric open campsite; historic scatter	Undetermined status in current project area	N/A
41WB20	Prehistoric, contains human remains	State Antiquities Landmark, Eligible for NRHP. Subsequent surveys did not locate evidence of this site in the current project area.	Criterion D. Landmark number 8200000682
41WB54	Prehistoric	Not eligible in ROW	N/A
41WB83	Prehistoric, with some historic trash	Not eligible within ROW	N/A
41WB940	Historic homestead	Not eligible within ROW	N/A
41WB979	Prehistoric open campsite; historic scatter	Undetermined eligibility, testing recommended	Unknown
41WB980	Prehistoric open campsite; historic scatter	Not eligible within ROW, (THC Concurrence 2023)	N/A

Number/Name	Site Type	Designation/Eligibility	Area of Significance
41WB981	Prehistoric open campsite; historic farmstead	Not eligible within ROW	N/A
41WB982	Historic feature and artifact scatter	Not eligible within ROW	N/A

Key:
N/A – Not Applicable
ROW – Right of Way

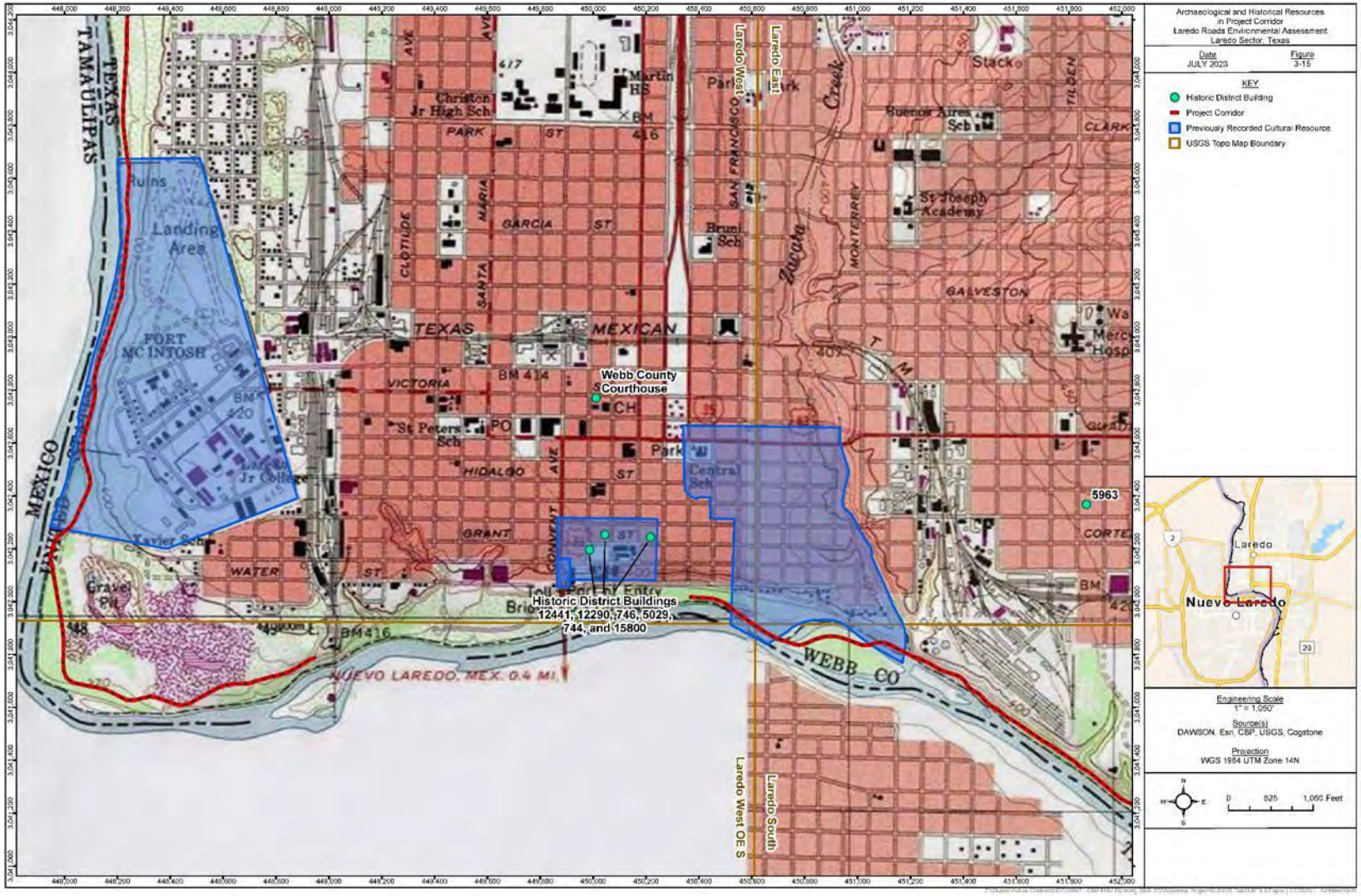


Figure 3-15. Topographic Quadrangles Showing the Previously Conducted Archaeological Investigations, Previously Recorded Archaeological Sites, and Historical Above Ground Resources in the Corridor

The Laredo Convent Avenue Port of Entry is located just north of the Rio Grande. The inspection station consists of a two-story Spanish Colonial Revival style building with a three-story tower, with stucco walls and a terra cotta roof. Some interior architectural details remain unchanged, while the building contains mostly modern office and storage space. Over time, the Laredo Inspection Station has been altered mainly due to flooding and the modernization of the interior office space. This building was listed in 2014 under criteria A and C, with significance in Architecture and Politics/Government.

The Texas Mexican Railway International Bridge is a railway truss bridge crossing the Rio Grande from the United States to Mexico. The bridge was opened in 1920. This bridge is not listed on the Texas Atlas, and one previous survey that intersects the bridge Right-of-Way did not assess its significance. This resource will be treated as NRHP-eligible unless it is determined to be not eligible.

The Union Pacific Railroad (UPRR) depot and tracks are located along Santa Isabel Avenue. The 30 tracks run north/south along the western and eastern side of the depot and cross the Rio Grande into Mexico. Research indicates the railroad was constructed through the area by 1881, then known as the International-Great Northern Railroad. The construction date for the depot is likely circa 1910 based on the style of the depot and historic newspaper articles. The depot faces east and is a two-story Spanish Revival-style building with a rectangular floor plan. It is wood framed and clad in stucco. The roof is both hipped and gabled and clad in terra cotta tiles. A covered platform extends along all elevations and is supported by dual wood supports painted to match the rest of the building. Historic photographs indicate the building once presented Mission-style parapets along the gabled portions of the roofline, as well as a stucco tower at the center of the building. These removed post-1920, although the exact date is not known. Paved parking lots are located at the north and south elevations of the depot. Analysis and documentary efforts led the recorders and an architectural historian to conclude that the UPRR depot and tracks lack sufficient significance for eligibility to the NRHP.

The Kansas City Southern yard is located just north of the Rio Grande. Research indicates the railroad was present as early as 1930 with the full yard constructed by 1955; however, the exact date of construction is unknown. The yard appears to contain approximately 11 facilities that include storage and maintenance facilities. Many of these buildings are wood framed and clad in a brick veneer. Roofs are generally gabled. Analysis and documentary efforts led the recorders and an architectural historian to conclude that the UPRR depot and tracks lack sufficient significance for eligibility to the NRHP.

3.8.3 Environmental Consequences

3.8.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

Adverse effects on cultural resources can include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or that alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or selling, transferring, or leasing the property out of agency ownership (or control)

without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance. Ground-disturbing activities associated with the implementation of the Proposed Action constitute the most relevant potential impacts on archaeological resources. Visual effects can impact above-ground resources. Construction activities including transportation of materials and labor, noise, and dust could have temporary impacts on historic properties.

Under the Proposed Action, 13 archaeological sites would be impacted by the proposed construction and five historic structures will have no impacts. (**Table 3-9**). Three of the archaeological sites are eligible for the NRHP and are considered significant cultural resources. Of the three eligible sites one site (41WB20) is listed as a State Antiquities Landmark. Of the remaining archaeological sites, three have an undetermined or unknown eligibility for the NRHP, pending additional archaeological investigations needed to determine their eligibility for the NRHP. These archaeological sites, as well as any subsequently identified resources identified during the deep deposit examination, would be treated as eligible until testing can be conducted and their eligibility for the NRHP can be determined. Additional NRHP eligibility testing would be conducted on those sites before any ground-disturbing activities are conducted within their boundaries. If any of the sites are determined eligible for the NRHP and cannot be avoided (the first option considered), then appropriate mitigation measures, including avoidance, for those sites would be developed in consultation with the THC prior to any ground-disturbing activities being conducted within those site boundaries. Seven archaeological sites have been recommended as not eligible for the portions that are located within the Proposed Action's footprint.

Table 3-9. Summary of Impacts to Cultural Site in Project Area

Number/Name	Impacts
Fort McIntosh	Project elements are minimal size and will not be visually distinguishable from the listed Property. No direct or visual impact. (THC Concurrence 2023)
Fort McIntosh Post Cemetery (WB C-005)	Project elements are minimal size and will not be visually distinguishable from the listed Property. No direct or visual impact. (THC Concurrence 2023)
Barrio Azteca Historic District	Project elements are minimal size and will not be visually distinguishable from the listed Property. No direct or visual impact. (THC Concurrence 2023)
San Augustin de Laredo Historic District	Project elements are minimal size and will not be visually distinguishable from the listed Property. No direct or visual impact. (THC Concurrence 2023)
Laredo Convent Avenue Port of Entry	Project elements are minimal size and will not be visually distinguishable from the listed Property. No direct or visual impact. (THC Concurrence 2023)
TX-Mexican Railway Bridge	Project elements are minimal size and will not be visually distinguishable from the listed Property. No direct or visual impact. (THC Concurrence 2023)
Union Pacific Railroad Depot and Tracks	Not eligible for NRHP. No impact. (THC Concurrence 2023)

Number/Name	Impacts
Kansas City Southern Railroad Yard	Not eligible for NRHP. No impact. (THC Concurrence 2023)
Webb County Courthouse	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
Hamilton Hotel	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
Capital of the Republic of the Rio Grande	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
Juan Francisco Farias Residence	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
Casa Ortiz	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
Casa Vidaurri	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
San Augustin Cathedral	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
Zuniga House	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
Leyendecker House	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
Benarides-Herra House	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
St Augustine Parochial School	Project elements are minimal size and will not be visually distinguishable from the listed Property. (THC Concurrence 2023)
41WB11	No impact if road is relocated outside of the site boundaries, or if the construction activities are prohibited in site areas. If avoidance is not possible, then data recovery needs to occur prior to road construction, and/or monitor needs to be present during construction activities.
41WB12	No impact if road is relocated outside of the site boundaries, or if the construction activities are prohibited in site areas. If avoidance is not possible, then data recovery needs to occur prior to road construction, and/or monitor needs to be present during construction activities.
41WB13	No impact if road is relocated outside of the site boundaries, or if the construction activities are prohibited in site areas. If avoidance is not possible, the site needs to be evaluated for eligibility. Mitigative measures should be implemented if resource is found eligible to avoid any impacts.

Number/Name	Impacts
41WB15	Site area within project footprint is not eligible for the NRHP. No impact if construction stays within proposed boundaries. (THC Concurrence 2023)
41WB16	Site area within project footprint is not eligible for the NRHP. No impact if construction stays within proposed boundaries. (THC Concurrence 2023)
41WB20	No impact if road is relocated outside of the site boundaries, or if the construction activities are prohibited in site areas. If avoidance is not possible, then data recovery needs to occur prior to road construction, and/or monitor needs to be present during construction activities.
41WB54	Site area within project footprint is not eligible for the NRHP. No impact if construction stays within proposed boundaries.
41WB83	Site area within project footprint is not eligible for the NRHP. No impact.
41WB940	Site area within project footprint is not eligible for the NRHP. No impact if construction stays within proposed boundaries.
41WB979	No impact if road is relocated outside of the site boundaries, or if the construction activities are prohibited in site areas. If avoidance is not possible, the site needs to be evaluated for eligibility. Mitigative measures should be implemented if resource is found eligible to avoid any impacts.
41WB980	Site area within project footprint is not eligible for the NRHP. No impact if construction stays within proposed boundaries. (THC Concurrence 2023)
41WB981	Site area within project footprint is not eligible for the NRHP. No impact if construction stays within proposed boundaries.
41WB982	Site area within project footprint is not eligible for the NRHP. No impact if construction stays within proposed boundaries.

Visual impacts to the historic structures were assessed during the cultural resources survey. Of the ten properties, only one is located within the current project area. None of the RTHLs are in the project footprint, which means they will not be impacted. Since none of the proposed activity would result in a raised profile of the project road, there are no visual impacts. In addition, all the properties are surrounded by other in-use roadways. The Texas Historical Commission has concurred with the determination that the Proposed Action will have no adverse effect on built environment resources (THC letter dated 05 June 2023).

All mitigation measures developed for archaeological sites through consultation with the THC would be implemented or instigated prior to construction in any of those site areas. Full compliance with Section 106 of the NHPA ensures proper mitigative measures, including avoidance, would be implemented. In addition, a cultural resources survey of the unexamined project area needs to

occur. Mitigation measures for impacts to above-ground resources may continue after the project is completed.

Beneficial impacts in the form of increased knowledge of the past, including site density and distribution, are realized as a result of surveys conducted as part of this EA. Additionally, previously recorded and unidentified cultural resource sites within the project area and the region would receive increased protection from disturbance by deterring illegal foot and vehicle traffic moving through surrounding areas. Furthermore, improved access provided by the road improvements would reduce the enforcement footprint in non-disturbed habitats and subsequently reduce potential impacts on cultural resources.

3.8.3.2 Unavoidable Adverse Impacts

The Proposed Action would not cause unavoidable impacts to cultural resources. Any cultural sites or archaeological materials found with the project area would be undergo data collection and appropriate treatment. Visual impacts to existing structures are considered to be non-existent.

3.8.3.3 No Action Alternative

The No Action Alternative would remove the necessity for construction activities and therefore cultural resources in the project area would not be directly impacted. However, the continuation of natural impacts would continue.

3.9 INFRASTRUCTURE

3.9.1 Definition of the Resource

Infrastructure consists of the man-made systems and physical structures that enable a population in a specified area to function. Infrastructure components to be discussed in this section include transportation elements, utilities, and solid waste management. Transportation includes the existing patrol road and bridges that are being improved as the Proposed Action and access paths for construction vehicles. Utilities generally include electrical supply, water supply, natural gas/propane supply, sanitary sewer and wastewater, stormwater drainage, and communications systems. Solid waste management primarily relates to the availability of landfills to support a population's residential, commercial, and industrial needs.

3.9.2 Affected Environment

Transportation / Road Network. The transportation network under the Proposed Action consists of 16 miles of patrol road along the northern bank of the Rio Grande River in Webb County, Texas.

Currently, the patrol road consists of an FC-4 two-track road composed of unimproved road, wagon trail, and 4-wheel drive road and is 10-12 feet wide. The two parallel tracks were created by the loss of vegetation where the tires made contact with and compacted the earth, between which lies a strip of low-growth vegetation. In many areas, the central vegetated strip has succumbed to erosion. The existing patrol road was constructed in 2012 and has not received any

general maintenance since. As a result, several areas along the existing road are heavily eroded and could become impassible without maintenance.

Electrical System. Electrical power is not available or provided to the proposed project area. No electrical sources would be installed under the Proposed Action. Equipment requiring electricity would need to be powered via batteries or generators transported on site; however, no impacts on electrical systems would be expected. Therefore, electrical systems are not discussed further.

Natural Gas. Natural gas is not available or provided to the proposed project area. Natural gas would not be required under the Proposed Action. Therefore, natural gas is not discussed further.

Petroleum, Oil, and Lubricants (POL) / Liquid Fuel Systems. POL / liquid fuel is not available or provided to the proposed project area. POL / liquid fuel needed for construction (e.g., construction equipment) would come from local fuel suppliers outside of the proposed project area. Construction contractors and project personnel would be responsible for sourcing the POL / liquid fuel needed under the Proposed Action.

Water Supply System. A water supply system is not available or provided to the proposed project area. Water needed for construction (e.g., drinking water, cleaning equipment) would be obtained from sources outside of the proposed project area. Construction contractors and project personnel would be responsible for sourcing the water needed under the Proposed Action. It is anticipated that water trucks would be used on site to aid in dust suppression during construction activities.

Wastewater System / Collection System. A wastewater treatment and collection system is not available in the proposed project area as there is no water supply available. A wastewater system / collection system would not be constructed under the Proposed Action. Therefore, these systems are not discussed further.

Stormwater Discharge / Collection System. The existing patrol road is unpaved and does not have any improved drainage features or ditches to mitigate surface runoff. As a result, there are segments of the road that have been washed out due to erosion. The proposed project area is within the Chicon Creek-Rio Grande Watershed and all stormwater ultimately drains to the Rio Grande, which is adjacent to the project area (TPWD 2022a).

Heating / Cooling distribution System. A heating / cooling distribution system is not currently available or provided to the proposed project area. If necessary, per the contractor's discretion, heating and cooling would be the responsibility of the construction contractor to provide for construction crews and project personnel in the event of extreme temperature variances.

Solid Waste Management. Reducing waste streams minimizes environmental compliance requirements, disposal and transportation costs and long-term liabilities. Reduced hazardous waste handling and disposal also reduces costs and exposure risks. Solid wastes can be solid, semi-solid, liquid, or a contained gas. Solid wastes include garbage, refuse, sludge, materials that have served their intended purpose, discarded products, and manufacturing by-products. Solid wastes can also be materials with intent to be discarded but are awaiting discarding such as chemicals in storage that are no longer usable and cannot be reclaimed or recycled. Construction and cleanup wastes are properly handled, labeled and disposed of as part of the contract requirements.

A solid waste management system is not currently available or provided to the proposed project area. Solid waste generated during construction of the Proposed Action would be the responsibility of the construction contractors to manage and dispose of safely and appropriately. The goal of the contractor's Waste Management Plan would be to salvage and/or recycle 50 percent of the weight of total nonhazardous solid waste generated by the work.

The closest landfills to the proposed project area are the Laredo Landfill at 6912 TX-359 #10 and the Ponderosa Regional Landfill at 1075 TX-359. Waste generated from the construction of the roads and bridges under the Proposed Action would be transported to this landfill. The closest recycling center is the IMC Recycling, Inc Metal Recycling and Processing at 531 Riverside Drive which will be used to recycle demolition and construction waste. Waste generated from construction activities on this project shall be sorted on-site and placed in their respective containers. Containers shall be collected when full and hauled to the appropriate location by the landfill or recycling center.

3.9.3 Environmental Consequences

3.9.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

Transportation. Under the Proposed Action, the patrol roads would be improved to FC-2 all-weather roads and three bridges would be installed. A cross-slope would be built into the road to provide a drainage gradient so that water would run off the surface to a drainage system such as a street gutter or ditch.

The Proposed Action would result in minor, adverse, short- and long-term impacts on the transportation system. Construction activities associated with the Proposed Action would be expected to result in short-term roadway closures and detours while construction is being completed; however, most of the roadways would be used solely by USBP. Therefore, the public would not be impacted by these roadway closures or detours. Roadway closures and detours would be temporary, so USBP patrols would experience only minor disruptions.

Coordination with CBP would ensure construction vehicles and personnel have access to the existing patrol and access roads and that necessary safety precautions are taken when accessing these patrol roads. Typical construction-related traffic would include backhoes, graders, dump trucks, a water suppression truck, and passenger vehicles. However, these improvements would also be expected to provide long-term, beneficial impacts on the overall road network by reducing erosion and washout.

Stormwater Management. A stormwater mitigation system is not currently in place as no draining features are present along the existing patrol road. Under the Proposed Action, a cross-slope would be built into the road to provide a drainage gradient so that water would run off the surface to a drainage system, such as a ditch.

Construction under the Proposed Action would result in the addition of stormwater management infrastructure, rendering minor, beneficial, short- and long-term impacts on stormwater management. Any disruption in the natural drainage patterns, contamination of stormwater

discharge, and increased sediment loading from construction activities would be mitigated by BMPs. The Proposed Action would include appropriate stormwater-control measures, stormwater runoff requirements, and low impact development techniques in compliance with Section 438 of the Energy Independence and Security Act to reduce, limit, and control stormwater runoff to preconstruction rates. Also, areas of land disturbed as part of the construction would be revegetated.

Solid Waste Management. The Proposed Action would result in minor, adverse, short-term impacts on solid waste management at the proposed project area. Construction activities would generate minimal amounts of solid waste. Waste disposal would be conducted in accordance with all Federal, state, and local laws and regulations.

3.9.3.2 Unavoidable Adverse Impacts

Under the Proposed Action, the use and generation of solid waste during construction of the new infrastructure would be unavoidable; however, the materials and wastes would be handled in accordance with Federal, state, and local policies and is expected to result in minor or negligible impacts.

3.9.3.3 No Action Alternative

Under the No Action Alternative, the new infrastructure improvement to the existing patrol roads and addition of bridges would not be completed. The No Action Alternative would maintain the current inefficient state of the patrol roads.

3.10 HAZARDOUS MATERIALS AND WASTE

3.10.1 Definition of the Resource

Hazardous materials are defined by 49 CFR 171.8 as "hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions" in 49 CFR Part 173. Transportation of hazardous materials is regulated by U.S. Department of Transportation regulations within 49 CFR Parts 105–180.

A hazardous substance, pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601(14)), is defined as "(A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33; (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title; (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of Resource Conservation and Recovery Act (RCRA), as amended, (42 U.S.C. 6921); (D) any toxic pollutant listed under section 1317(a) of Title 33; (E) any HAP listed under Section 112 of the CAA (42 U.S.C. 7412); and (F) any imminently hazardous chemical substance or mixture which the Administrator of the USEPA has taken action pursuant to section 2606 of Title 15." The term hazardous substance does not include petroleum products.

Hazardous wastes are defined by RCRA at 42 U.S.C. 6903(5), as amended by the Hazardous and Solid Waste Amendments, as "a solid waste, or combination of solid wastes, which because of its

quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."

Special hazards are those substances that might pose a risk to human health and are addressed separately from other hazardous substances. Special hazards include asbestos-containing material (ACM), polychlorinated biphenyls (PCBs), and lead-based paint (LBP). The USEPA has authority to regulate these special hazard substances by the Toxic Substances Control Act (TSCA) Title 15 U.S.C. Chapter 53. The USEPA has established regulations regarding asbestos abatement and worker safety under 40 CFR Part 763, with additional regulation concerning emissions (40 CFR Part 61). Whether from lead abatement or other activities, depending on the quantity or concentration, the disposal of LBP waste may be regulated by RCRA at 40 CFR 260. The disposal of PCBs is addressed in 40 CFR Parts 750 and 761.

All generators of hazardous oil and gas waste must employ reasonable and appropriate measures in operating and maintaining the generation site to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous oil and gas wastes to air, soil, or surface water that could threaten human health or the environment. Evaluation of hazardous materials and wastes focuses on the storage, transport, handling, and use of pesticides, herbicides, petroleum products, fuels, solvents, and other hazardous substances. However, pesticides would not be used during roadway improvement and will, therefore, not be discussed further. Evaluation also extends to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site. In addition to being a threat to humans, the improper release of hazardous materials and wastes can threaten the health and well-being of wildlife species, vegetation, soils, and water resources. If hazardous materials or wastes are released, the extent of contamination varies based on the type of soil, topography, and water resources.

Solid waste management primarily relates to the availability of landfills to support a population's residential, commercial, and industrial needs. In some localities, landfills are designed specifically for and limited to disposal of construction debris. Recycling programs are available for various waste categories.

3.10.2 Affected Environment

Federal and state agencies regulate the management of hazardous substances, petroleum products, hazardous and petroleum wastes, pesticides, solid waste, ACMs, LBP, and PCBs. Each state has its own regulatory agency and associated regulations. The state agencies either adopt the Federal regulations or have their own regulations that are more restrictive than the Federal regulations. Likewise, the Federal government and state agencies also have regulations for the handling, disposal, and remediation of special hazards. However, under the Proposed Action no hazardous substances would be stored on site.

The Waste Reduction Policy Act of 1991 was adopted by the Texas Legislature to prevent pollution in Texas. The TCEQ adopted corresponding rules. In conducting infrastructure maintenance and repair activities as needed, USBP or its contractors store, transport, handle, use, generate, and dispose of various types and quantities of hazardous substances, petroleum products,

and hazardous and petroleum wastes. These materials are used for or generated directly by the maintenance and repair activities. The primary hazardous substances and petroleum products likely include materials such as lead-acid batteries, motor oil, antifreeze, paint and paint thinners, cleaners, hydraulic oils, lubricants, and liquid fuels (diesel and gasoline). The hazardous substances, petroleum products, and hazardous and petroleum wastes are stored at various USBP or contractor maintenance shops and managed in accordance with each group's standard operating procedures (SOPs) for hazardous materials. The wastes are recycled or disposed of offsite in accordance with Federal, state, and local regulations.

3.10.3 Environmental Consequences

Impacts on hazardous materials management would be considered adverse if a Proposed Action resulted in worker, resident, or visitor exposure to these materials above established limits or resulted in noncompliance with applicable Federal and state regulations, or increased the amounts generated or procured beyond current CBP hazardous materials management procedures and capacities. An effect on solid waste management would be major if the Proposed Action exceeded existing capacity or resulted in a long-term interruption of waste management, a violation of a permit condition, or a violation of an approved plan for that utility.

3.10.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

Long-term, negligible to minor, adverse impacts due to hazardous substances, petroleum products, and hazardous and petroleum wastes would be expected from implementation of the Proposed Action. Because the roads would be repaired using compacted material and good drainage practices, fewer repairs would be expected to be required in the future. Maintenance vehicles containing hazardous substances such as petroleum products would be deployed less frequently than in the No Action Alternative, decreasing the probability of a spill or release. No impacts due to ACMs, LBP, or PCBs would be expected from the Proposed Action, since there are no plans for the proposed infrastructure to contain ACMs, LBP, or PCBs. No impacts on solid waste management would be expected from the Proposed Action. The volumes of solid waste produced during construction activities would be minimal and unlikely to increase.

Soils in the project area could be impacted by hazardous or toxic materials in the event of an accidental spill, which could lead to groundwater contamination. However, BMPs would be implemented during construction activities to avoid any release into the environment as well as to anticipate capture requirements in advance of any potential release. To prevent contamination, actions would be taken to avoid impacting the project area with hazardous substances (e.g., antifreeze, fuels, oils, lubricants) used during construction activities. These actions would include implementing primary and secondary containment measures, developing a SPCCP prior to the start of construction, and briefing all personnel on the implementation and responsibilities of the SPCCP.

Petroleum, oils, and lubricants would be stored at designated temporary staging areas to maintain and refuel construction equipment. Cleanup materials (e.g., oil mops) would be maintained on site, in accordance with the SPCCP, to allow for immediate action in the event of an accidental spill. Drip pans would be provided for stationary equipment to capture any POLs spilled during

construction activities or in the event of equipment leaks. A concrete washout containment system would be established to ensure concrete washout is safely managed and properly disposed.

Sanitation facilities would be provided during construction activities and waste products would be collected and disposed of by licensed contractors. No gray water would be discharged to the ground. Disposal contractors would use only established roads to transport equipment and supplies. Proper permits would be obtained by the licensed contractor tasked to handle any unregulated solid waste. All waste would be disposed of in strict compliance with Federal, state, and local regulations, in accordance with the contractor's permits. Therefore, no hazards to the public would be expected to occur through the transport, use, or disposal of unregulated solid waste activities.

Long-term, minor, adverse impacts would be expected from the disturbance of green and open spaces that would occur when the existing road is widened. CBP would incorporate environmentally sustainable practices (e.g., solid waste recycling, water conservation practices) during construction and continued maintenance of the road. Impacts on the sustainability of resources and CBP operations from the incorporation of sustainability strategies would be long-term, minor, and beneficial because CBP would meet mission requirements while reducing the depletion of critical resources like water and raw materials. BMPs and SWPP would be used to prevent the introduction of pollutants into waterways.

3.10.3.2 Unavoidable Adverse Impacts

The use and generation of hazardous materials and wastes during construction and operation of the new infrastructure would be unavoidable; however, the materials and wastes would be handled in accordance with Federal, state, and local policies and would result in minor to negligible impacts.

3.10.3.3 No Action Alternative

The No Action Alternative is reactive in nature and would eventually result in greater deterioration of the roadways over time due to a lack of preventative maintenance, which could result in more frequent maintenance and repair activities over time. This would create greater volumes of solid waste. Long-term, minor, adverse impacts due to hazardous substances, petroleum products, and hazardous and petroleum wastes would be expected from the No Action Alternative.

Because the existing roads would not be repaired to design specifications using compacted materials and appropriate drainage infrastructure, repairs could be expected to increase in frequency and severity. The No Action Alternative does not guarantee that all BMPs would be implemented during emergency repair activities. Therefore, the No Action Alternative could result in greater impacts from hazardous materials and wastes than the Proposed Action.

3.11 SAFETY

3.11.1 Definition of the Resource

A safe environment is one in which there is no, or an optimally reduced, potential for death, serious bodily injury or illness, or property damage. Safety addresses workers' and public health and safety during any construction, demolition, or project activities (CBP 2016).

Construction safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and implementation of operational practices that reduce risks of illness, injury, death, and property damage. The health and safety of on-site construction workers are safeguarded by OSHA and the USEPA standards, which specify the amount and type of training required for industrial workers, the use of personal protective equipment and clothing, engineering controls, and maximum exposure limits for workplace stressors (CBP 2019).

Safety and accident hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself together with the exposed (and possibly susceptible) population. The degree of exposure depends primarily on the proximity of the hazard to the population. Activities that can be hazardous include transportation, maintenance and repair activities, and the creation of extremely noisy environments. The proper operation, maintenance, and repair of vehicles and equipment carry important safety implications (CBP 2019).

3.11.2 Affected Environment

The Proposed Action would affect contractors involved in the existing patrol road construction and bridge construction activities and USBP personnel and agents; each are discussed below in further detail.

Contractor Safety. Human health and safety concerns during the Proposed Action of improvement construction towards the existing patrol roads involve exposing workers to conditions that pose a health or safety risk. Construction site safety is largely a matter of adherence to regulatory requirements. These regulatory requirements are imposed for the benefit of employees, and they implement operational practices that reduce risks of illness, injury, death, and property damage. OSHA issues standards that specify the amount and type of safety training and education required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits with respect to workplace stressors (29 CFR § 1910). CBP applies and adheres to these standards in policy and practice (CBP 2019).

USBP Personnel Safety. USBP personnel are responsible for complying with the OSHA and the DHS safety and health requirements. DHS Directive 066-01, Safety and Health Programs, establishes DHSs policies, responsibilities, and requirements regarding safety and health programs. The purpose of DHS safety and health programs are to prevent or minimize the loss of DHS resources and to protect employees, contractors, and the visiting public from accidental death, injury, or illness by managing risks through implementation of the tenets of operational risk management and response plans (CBP 2019).

3.11.3 Environmental Consequences

3.11.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

Project activities could cause long-term, beneficial impacts on health and human safety as the Proposed Action would offer a more stable and safer driving surface for vehicles. Short-term, negligible, adverse impacts on human safety could occur during construction; however, construction site safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and implementation of operational practices. OSHA and USEPA issue standards that specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits with respect to workplace stressors (CBP 2021).

Contractors would be required to establish and maintain safety programs at the construction site. The Proposed Action would not expose members of the general public to increased safety risks because the area is currently, and would remain, closed to the general public. Therefore, because the Proposed Action would not introduce new or unusual safety risks, and assuming appropriate protocols are followed and implemented, no impacts on safety would occur under the Proposed Action.

3.11.3.2 Unavoidable Impacts

No unavoidable impacts on safety would occur, because CBP would adhere to all regulatory requirements and BMPs.

3.11.3.3 No Action Alternative

Under the No Action Alternative, CBP would not improve the existing patrol roads in the USBP Laredo Sector or improve the safety to USBP personnel and border communities. The poor conditions of the existing patrol road limit USBP agents' options when responding to illegal cross border traffic and inhibit the coordinated deployment of resources. Without improving the existing patrol roads in the USBP Laredo Sector, USBP is unable to meet their authorized mission to detect and interdict illicit cross border activity and support USBP operations and agent and personnel safety.

3.12 SOCIOECONOMICS

3.12.1 Definition of the Resource

Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly characteristics of population and economic activity. Regional birth and death rates and immigration and emigration affect population levels. Economic activity typically encompasses employment, personal income, and industrial or commercial growth. Changes in these fundamental socioeconomic indicators typically result in changes to additional socioeconomic indicators, such as housing availability and the provision of public services.

Socioeconomic data at local, county, regional, and state levels permit characterization of baseline conditions in the context of regional and state trends.

Demographics and employment characteristics data provide key insights into socioeconomic conditions that might be affected by a proposed action. Demographics identify the population levels and the changes in population levels of a region over time. Data on employment characteristics identify gross numbers of employees (more than 16 years old and in the labor force), employment by industry, and unemployment trends. Data on industrial or commercial growth or growth in other sectors of the economy provide baseline and trend line information about the economic health of a region.

Socioeconomic data shown in this section are presented at census tract(s), county, and state levels to characterize baseline socioeconomic conditions in the context of regional and state trends.

3.12.2 Affected Environment

For the purposes of this socioeconomic analysis, three different community types are used, as follows:

- The ROI encompassing 12 individual census tracts along the 16-mile stretch of the Proposed Action,
- Webb County, Texas,
- State of Texas.

The ROI is comprised of the 12 individual census tracts (17.16, 17.17, 14.02, 6.02, 19.0, 3.0, 2.0, 1.05, 1.09, 18.06, 18.20, 18.19) along the 16-mile project corridor because most of the construction workers and supplies for the Proposed Action would likely come from those nearest residential and developed areas (**Figure 3-16**). The ROI best illustrates socioeconomic characteristics for where the most impacts from the Proposed Action would be expected because it encompasses the specific population associated with the proposed project area. Additionally, all the proposed improvement construction would occur in this area.

Data from Webb County, the City of Laredo, and the State of Texas is provided below for comparison in **Tables 3-10** and **3-11**. Census tracts 18.20 and 18.19 did not have available 2015 total population census data due to census data collection not occurring in those tracts until the 2020 census. The 12 tracts in the ROI are combined into the census tracts (ROI) column to easily compare the whole collective area to Webb County and the State of Texas.

Table 3-10. 2015 and 2020 Total Population in the Region of Influence as Compared to Webb County, the City of Laredo, and the State of Texas

Location	2015	2020	Percent Change
Census Tracts (ROI)	37,120	43,290	16.6
Webb County	263,251	267,114	1.5
City of Laredo	248,855	260,571	4.7
Texas	26,538,614	28,635,442	7.9

Source: Census 2015, Census 2020

Key: Region of Influence (ROI)

Table 3-11. 2020 Demographics in the Region of Influence as Compared to Webb County and the State of Texas

Categories	Census Tracts (ROI)	Webb County	Texas
Population 16 years and Older	30,322	192,461	22,078,090
Median Household Income (dollars)	22,226.60	50,296	63,826
Unemployment Rate (by percent)	5.0	4.9	5.3
Employment by Industry (by percent)			
Agriculture, forestry, fishing and hunting, and mining	3.9	3.2	2.8
Construction	9.0	6.4	8.6
Manufacturing	3.1	2.3	8.4
Wholesale trade	5.9	3.5	2.8
Retail trade	17.4	13.7	11.3
Transportation and warehousing, and utilities	17.1	14.0	6.0
Information	0.6	1.0	1.7
Finance and insurance, and real estate and rental and leasing	3.8	4.0	6.8
Professional, scientific, and management, and administrative and waste management services	8.9	7.4	11.7
Educational services, and health care and social assistance	28.4	24.3	21.8
Arts, entertainment, and recreation, and accommodation and food services	10.9	8.6	9.0
Other services, except public administration	6.2	5.2	5.1
Public administration	4.9	6.4	4.0

Source: Census 2020
Key: Region of Influence (ROI)

Each community type had an increase in total population between 2015 and 2020, with the ROI having the largest percent increase of 16.6 (Census 2015; Census 2020).

The 2020 American Community Survey (ACS) data shows that the unemployment rate within the ROI is comparable, but slightly higher than the Webb County rate and slightly lower than the State of Texas rate. The median household income (dollars) for the ROI is substantially lower than the county and state (Census 2020).

As of 2020, the ROI had 9.0 percent of the workforce (more than 16 years old and in the labor force) employed in Construction. In contrast, 6.4 percent of the labor force in Webb County and 8.6 percent in Texas were employed in Construction. The industry that employed the lowest percentage of the workforce population for the ROI was Information followed by Agriculture,

forestry, fishing and hunting, and mining, and Manufacturing. The educational, health, and social services industry was the most common employer for all community types (Census 2020).

The proposed project area is in Webb County, Texas. Laredo is the county seat of Webb County. Webb County had a population of 267,114, with most of the population living within the City of Laredo (255,205). The City of Laredo has experienced a 4.7 percent increase in total population from 2015 to 2020. Comparatively, the State of Texas experienced a 7.9 percent growth rate in total population since 2015 (Census 2022a).

3.12.3 Environmental Consequences

Impacts associated with socioeconomic resources are evaluated based on the changes to demographics and employment caused by the implementation of a proposed action. An action could have a major effect with respect to socioeconomic resources if it greatly increased or decreased population or employment type when compared to the larger areas of study such as the census tract compared to the county.

No population changes would occur as a result of the Proposed Action. Therefore, demand on housing, schools, libraries, and parks and recreational facilities in Webb County would not change due to the Proposed Action, and these services would not be affected because the existing capacity would continue to be sufficient to serve the local population. Therefore, these resources are not discussed further.

3.12.3.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

The Proposed Action would occur entirely within the ROI. There would be negligible short- and long-term, beneficial effects on socioeconomic resources in the surrounding community because of expenditures from the implementation of the proposed improvement construction. There would be no measurable adverse impact, disproportionate or otherwise, on low-income or minority communities inside or outside any of the discussed community types, because the patrol road already exists, and the construction would improve the road.

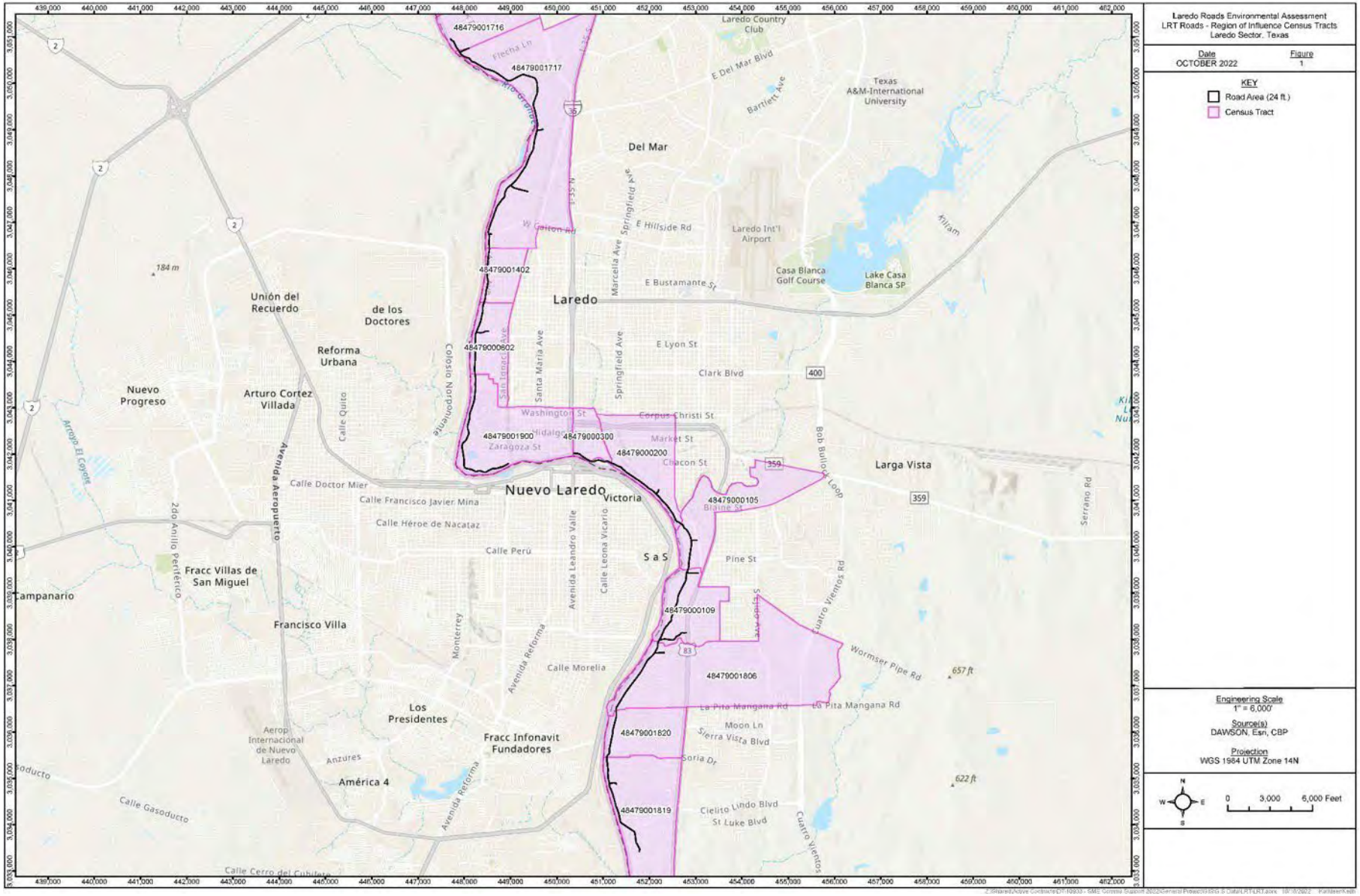
Short-term, negligible, beneficial effects on the local socioeconomics could occur under the Proposed Action because of expenditures from the implementation of the selected construction improvements to the existing patrol roads. There is no guarantee the workforce would reside in the ROI; however, local construction workers would be used where practicable. According to the 2020 ACS, the ROI area including all 12 census tracts along the 16-mile stretch of existing patrol roads, contains approximately 990 construction workers, which collectively should be adequate to meet the demands of the Proposed Action without impacting local construction projects requiring workers. If needed, any additional construction workers would come from outside the region. Short-term, negligible increases in local business volume and employment within the county would be expected under the Proposed Action. The use of local construction workers would produce increases in local sales volumes, payroll taxes, and the purchases of goods and services resulting in short-term, indirect, negligible, and beneficial increases in the local economy.

Substantial short-term population increases during construction would not be expected to occur because construction workers would likely be existing local residents, although a few construction workers could come from outside the region. Therefore, no impacts on social conditions, including property values, school enrollment, county or municipal expenditures, or crime rates due to population increases would be anticipated during construction.

3.12.3.2 Unavoidable Adverse Impacts

No unavoidable adverse impacts on socioeconomics would result from the Proposed Action.

Figure 3-16. Region of Influence for the Proposed Action



3.12.3.3 No Action Alternative

Under the No Action Alternative, the improvement construction to the existing patrol road would not occur, and the existing conditions would remain unchanged. Therefore, no impacts on socioeconomics would be expected because there would be no direct or indirect purchase of goods and services, and no population changes that might require housing or other public services.

ENVIRONMENTAL JUSTICE AND SENSITIVE RECEPTORS

3.12.4 Definition of the Resource

E.O. 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs agencies to identify and address the environmental effects of their actions on minority and low-income populations. The E.O. was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with the respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

E.O. 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each Federal agency "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." Children might be more susceptible than adults to certain environmental effects and risks. Therefore, activities occurring near areas that could have higher concentrations of children during any given time, such as schools and childcare facilities, might further intensify potential impacts on children.

Considerations of concerns related to environmental justice and protection of children include race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

3.12.5 Affected Environment

Minority populations are those persons who identify themselves as Black, Hispanic, Asian American, American Indian/Alaskan Native, Pacific Islander, or Other. Poverty status is used to define low-income. Poverty is defined as the number of people with income below poverty level, which was $27,750 for a family of four in 2022 (HHS 2022). A potential disproportionate impact may occur when the percent minority in the study area exceeds 50 percent and/or the percent low-income exceeds 20 percent of the population.

More than 90 percent of the population in Webb County identifies as Hispanic or Latino (Census 2022b). Communities living near the Proposed Action are linguistically isolated where Spanish is the primary language spoken by the vast majority of the population (USEPA 2022e). Furthermore, the median household income in the ROI ($22,227) is below the national, state, and county median household income, and a greater percentage of the ROI population (32.1 percent) lives in poverty relative to the county, state, and the country (**Table 3-12**). Sensitive receptors, including residences, schools, a children's home, and a college are within 1,000 feet of the Proposed Action. Children make up approximately 32 percent of the ROI (Census 2020).

Table 3-12. Minority Population and Poverty Rates in Webb County, 2020

Area	Median Household Income	Persons in Poverty (Percent)
Census Tracts (ROI)	$22,227	32.1[1]
Webb County	$50,296	19.9
Texas[2]	$63,826	13.4
United States[3]	$64,994	11.4

Key:
1 Eleven of the 12 tracts within the ROI had available census data for persons in poverty
2 Source : Census 2022c
3 Source : Census 2022d

3.12.6 Environmental Consequences

3.12.6.1 Alternative 1: Improvement of the Existing Laredo North and Laredo South Patrol Roads (Preferred Alternative)

Impacts on environmental justice are considered adverse if they have a disproportionately high and adverse effect on minority and low-income populations. The Proposed Action would occur in an area where the percent minority exceeds 50 percent minority and the percent low-income exceeds 20 percent of the population. Therefore, the Proposed Action could affect minority and/or low-income populations due to proximity of these populations near the project area. However, the project would not disproportionately affect these populations because the project site would primarily follow a pre-existing route, construction activities would be temporary, and the project would facilitate the efficient and effective response to cross-border violations for the existing population.

The Proposed Action would result in short-term, minor, adverse impacts to the nearest sensitive receptors, including residential housing and a children's home. Residential housing is located within 100 feet of the Proposed Action and the nearest sensitive receptor that includes children is the Sacred Heart Children's Home located within 350 feet of the Proposed Action. Impacts such as construction noise would be temporary and limited to working hours.

The Environmental Justice Index for communities located near the Proposed Action falls within the 90th percentile in the United States for $PM_{2.5}$, ozone, air toxics cancer risk, air toxics respiratory hazard index, and Risk Management Plan facility proximity (USEPA 2022e). The Proposed Action would cause only temporary impacts on air quality and appropriate air quality BMPs would be used to minimize any potentially disproportionate effects on minority and low-income populations.

3.12.6.2 Unavoidable Adverse Impacts

Unavoidable adverse impacts from the Proposed Action include temporary noise construction from construction equipment. BMPs would be implemented to minimize impacts to the greatest extent possible.

3.12.6.3 No Action Alternative

Under the No Action Alternative, border road improvements would not occur, and the existing conditions would remain unchanged. Long-term, minor, adverse impacts to low income, minority populations and children could occur from the lack of efficient border patrol. Border patrol response time to incidents would decrease as road conditions erode. There would be no impacts on people, so there would be no other disproportionately high and adverse human health or environmental effects on children and minority populations and low-income populations are expected.

3.13 RELATIONSHIP BEWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

The relationship between short-term uses and enhancement of long-term productivity from implementation of the Proposed Action is evaluated from the standpoint of short-term effects and long-term effects. The balance or tradeoff between short-term uses and long-term productivity needs to be defined in relation to the proposed activity in question. Each resource must be provided with its own definitions of short-term and long-term (40 CFR 1502.16).

Short-term effects on the human environment include direct construction-related disturbances and direct impacts associated with changes to population and activity that occur over a period of less than 5 years.

Implementation of the Proposed Action would result in short-term construction-related impacts such as interference with local traffic and circulation, limited air emissions, increase in ambient noise levels, dust generation, disturbance of wildlife, increased storm runoff, and disturbance of recreational and other public facilities. These impacts would be temporary and would occur only during construction and are not expected to alter the long-term productivity of the natural environment.

Long-term effects of the human environment include those impacts that occur over a period of more than 5 years, including permanent resource loss. The Proposed Action requires widening the existing road footprint from 10-12 feet to 24 feet, which means loss of vegetation would be a negative, long-term effect of the project. However, the Proposed Action would also deliver positive effects to long-term productivity: it would enhance USBPs capability for mission success and improve the mobility and accessibility for USBP agents to respond to illegal cross-border traffic.

Long-term maintenance and repair are carried out under the Tactical Infrastructure Maintenance and Repair (TIMR) program and impacts of the respective activities are analyzed under the TIMR EA. TIMR activities include maintenance and repair of fences, gates, roads, bridges/crossovers, drainage structures, grates, designated open observation zones, boat ramps, lighting, ancillary power systems, and communications and surveillance tower components.

3.14 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible and irretrievable resource commitments are related to the use of non-renewable resources and the impacts that the use of these resources would have on future generations. Irreversible impacts primarily result from the use or destruction of a specific resource that cannot be replaced within a reasonable timeframe (e.g., energy and minerals). The irreversible and irretrievable commitments of resources that would result from implementation of the Proposed Action involve the consumption of material resources used for construction, energy resources, biological resources, and human labor resources. The use of these resources is considered to be permanent.

Material Resources. Material resources used for the Proposed Action would potentially include construction materials, gravel, topsoil, fill material, and various materials and supplies. Materials that would be consumed are not in short supply, would not limit other unrelated construction activities, and would be considered negligible to minor.

Energy Resources. Energy resources, including petroleum-based products (e.g., gasoline and diesel), used for the Proposed Action would be irretrievably lost. During construction activities, gasoline and diesel would be used for the operation of vehicles and construction equipment. However, consumption of these energy resources would not place a significant demand on their availability in the region. Therefore, only negligible to minor impacts would be expected.

Biological Resources. The Proposed Action would result in a minimal loss of vegetation and wildlife habitat during the patrol road expansion. Since the project involves primarily the expansion of the existing roads in a previously disturbed area, the impact to biological resources would be minor. Previously disturbed land would be used to the maximum extent possible for construction purposes, such as turnouts and passing lanes. These areas would be restored upon completion of the Proposed Action.

Human Resources. The use of human resources for construction and maintenance activities is considered an irretrievable loss only in that it would preclude such personnel from engaging in other work activities. However, the use of human resources for the Proposed Action represents employment opportunities and is considered beneficial.

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4 CUMULATIVE AND OTHER IMPACTS

4.1 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

Past actions are those within the cumulative impacts analysis areas that have occurred prior to the development of this EA. The impacts of these past actions are generally described in **Chapter 3**. Present actions include current or funded construction projects, CBP or other agency operations near the proposed site, and current resource management programs and land use activities within the cumulative impacts analysis areas. Reasonably foreseeable future actions consist of activities that have been approved and can be evaluated with respect to their effects. The following activities are present or reasonably foreseeable future actions:

Future Construction of Border Barrier System in Rio Grande Valley Sector. CBP proposes to construct and maintain approximately 20 miles of barrier system in the USBP Rio Grande Valley Sector in Starr County, Texas. As part of the proposed project, CBP would be using 18-foot steel bollard fence panels placed in removable concrete jersey barriers. The proposed project would also include the installation of system attributes, such as detection technology, lighting, and access roads.

TDOT Road Resurfacing. TDOT is currently resurfacing upwards 20 miles of roadway and proposes to resurface upwards 30 miles of roadway within the next four years in the vicinity of the project area in the City of Laredo.

4.2 CUMULATIVE ANALYSIS BY RESOURCE AREA

A cumulative impacts analysis must be conducted within the context of the resource areas. The magnitude and context of the impact on a resource area depends on whether the cumulative effects exceed the capacity of a resource to sustain itself and remain productive. The following discusses potential cumulative impacts that could occur as a result of implementing the Proposed Action and other past, present, and reasonably foreseeable future actions. No major, adverse, cumulative impacts were identified in the cumulative impacts analysis. Implementation of the No Action Alternative could lead to moderate, adverse cumulative impacts due to further road deterioration.

4.2.1 Noise

The noise generated during and after construction of the Proposed Action would be short-term and minor. Therefore, cumulative impacts on ambient noise levels from the Proposed Action, when combined with other actions in the vicinity, would not have a major impact on the resource. No significant change in ambient noise levels from operation of the new infrastructure would be expected following the construction period. Additionally, operation of the new infrastructure under the Proposed Action would not result in an increase in the noise environment beyond ambient levels. Therefore, cumulative impacts on the noise environment from the Proposed Action, combined with other actions nearby, would be negligible to minor.

4.2.2 Land Use, Recreation, and Aesthetics

There are no foreseeable cumulative impacts associated with the Proposed Action.

4.2.3 Air Quality

The emissions generated during and after construction of the Proposed Action would be short-term and minor. Therefore, cumulative impacts on air quality from the Proposed Action, when combined with other actions in the vicinity, would not have a major impact on air quality. Construction activities would result in short-term emissions of criteria pollutants and GHGs as combustion products and evaporative emissions, and would generate particulate matter emissions as fugitive dust from ground-disturbing activities. Although the Proposed Action would emit GHGs, it would not meaningfully contribute or lessen the potential effects of global climate change. When the Proposed Action is considered in combination with past, present, and reasonably foreseeable actions, there would not be major, adverse, cumulative air quality impacts.

4.2.4 Geology and Soils

The Proposed Action would result in short-term, minor, adverse and beneficial, impacts on topography and soils due to road improvements. The increase in impervious surfaces because of construction activities could potentially affect stormwater drainage. The Proposed Action and other nearby planned projects would have minor, cumulative, adverse effects on geological resources.

4.2.5 Water Resources

Short-term, negligible to minor, adverse impacts would be expected on groundwater and surface water, including wetlands and WOTUS features, during construction activities due to implementation of the Proposed Action from potential leaks from heavy equipment. Impacts can be minimized through use of BMPs and controls, such as temporary barriers and absorbent pads.

Road improvements within the floodplain would be expected to have long-term impacts on the floodplain. The Proposed Action would require clearing vegetation and widening the road, which could increase speed of water flow during floods and alter flood hazards.

Present and future construction projects conducted in the same region would also be held to the same standard with minimal expected impacts. Therefore, the Proposed Action, in conjunction with other foreseeable actions both on and off-base, would result in minor, cumulative impacts on groundwater or surface water resources.

4.2.6 Biological Resources

The Proposed Action would have minor, cumulative impacts on native vegetation communities, due to the vast amount of similar habitat contained within and surrounding the project area. Some direct adverse impacts on wildlife within the project area could occur due to noise, lighting, or conflict with construction equipment. Impacts would be minimized through the implementation of appropriate BMPs for the protection of general plants and wildlife.

4.2.7 Cultural Resources

There are no foreseeable cumulative impacts associated with the Proposed Action.

4.2.8 Infrastructure

There are no foreseeable cumulative impacts associated with the Proposed Action.

4.2.9 Hazardous Materials and Waste

The Proposed Action, as well as present and reasonably foreseeable future projects in the area, would incorporate appropriate BMPs and environmental protection measures to limit and control hazardous materials and wastes into their design and operations plans. Therefore, the Proposed Action, when combined with other actions nearby, would result in negligible to minor cumulative impacts on hazardous materials and wastes management.

4.2.10 Socioeconomics

The Proposed Action would result in short-term, negligible, beneficial impact on socioeconomics. Direct and indirect, beneficial impacts would result from increased payroll tax revenue and the purchase of construction materials and goods in the area resulting in a beneficial impact on the local economy of the ROI. Therefore, cumulative impacts on socioeconomics from the Proposed Action would not be significant.

4.2.11 Safety

The Proposed Action would have negligible impacts on human safety.

4.2.12 Environmental Justice and Sensitive Receptors

The Proposed Action would result in long-term, minor, indirect, beneficial impacts on children and minority and low-income populations. By increasing the effectiveness of USBP patrol and security operations, the overall impact of the Proposed Action has the potential to decrease crime rates and criminal activity in the vicinity and increase employment opportunities.

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Finding of No Significant Impact (FONSI)

FOR THE

ENVIRONMENTAL ASSESSMENT PROPOSING IMPROVEMENT OF EXISTING PATROL ROADS IN THE U.S. BORDER PATROL LAREDO SECTOR, TEXAS

Purpose of and Need for the Proposed Action

The purpose of the Proposed Action is to ensure that the physical integrity of the existing patrol road and associated supporting elements continue to perform as intended. The road assist the U.S. Border Patrol (USBP) in securing the U.S./Mexico international border in Texas. The improvement of the road would enhance agent safety and effectiveness by providing efficient, reliable, and safe routes to remote areas that require patrolling. The road is critical to USBP Laredo Sector's ability to maintain easy access to portions of the border region. The current FC-4, two-track road is composed of unimproved road, wagon trail, and 4-wheel drive road and is 10–12-feet wide through most of its length. As "two-track" implies, the road consists of two parallel tracks created by the loss of vegetation where the tires contact and compact the earth, between which lies a strip of low-growth vegetation. In many areas, the central vegetated strip has succumbed to erosion. The road has received no maintenance since it was built 10 years ago. The road has no crown and does not have any improved drainage features or ditches. The proposed activities would ensure that the designated road is passable, providing faster response time to border incidents in strategically valuable areas.

The need for the Proposed Action is to ensure that the increased level of border security provided by the Laredo North and South patrol roads is not compromised by natural events or breaches in road integrity.

The Environmental Assessment (EA) proposing the improvement of existing patrol roads in the U.S. Border Patrol Laredo Sector, Webb County, Texas, attached hereto and incorporated herein, analyzes the potential impacts of the Proposed Action. The EA considers all potential impacts of the Proposed Action and the No Action Alternative. The EA also considers aggregate environmental impacts with other projects in the vicinity of the Proposed Action.

Description of the Proposed Action and Alternatives

Proposed Action. The Proposed Action would include the improvement and widening of approximately 16 miles of existing patrol and access roads in Laredo, Webb County, Texas. The existing patrol road is split into two separate segments within USBP's Laredo North and Laredo South sectors. The Laredo North patrol road begins approximately 1 mile south of the World Trade Bridge Port of Entry (POE) and runs south along the U.S./Mexico international border stopping at the Texas Mexican Railway International Bridge POE. The Laredo South patrol road begins at the Juarez-Lincoln POE and runs south along the U.S./Mexico international border stopping

approximately one-half of a mile south of the Laredo College South Campus. In addition to road improvements, the Proposed Action would include the construction of three bridges, multiple low water crossings, and pipe/culvert drainage crossings. The Proposed Action would not include nor analyze the impacts of continued maintenance of the patrol roads. The patrol road would be maintained under USBP's Comprehensive Tactical Infrastructure Maintenance and Repair program.

Under this alternative, the roads would be improved to FC-2 all-weather roads. An FC-2 road is a two-lane, 24-foot-wide, unpaved, all-weather road consisting of a surface of imported aggregate material such as milled bituminous material or processed stone and gravel. FC-2 roads typically consist of two 12-foot travel lanes at a 4 percent cross-slope. A cross-slope is built into the roads to provide a drainage gradient so water will run off the surface to a drainage system such as a street gutter or ditch. The upgraded all-weather road would improve mobility and accessibility for USBP agents responding to illegal cross-border traffic. The proposed roads are located where the vanishing points for cross border violators are measured in seconds to minutes.

Bridges would be constructed across three major tributaries that run through the project area – Las Manadas Creek, Zacate Creek, and Chacon Creek.

All necessary materials such as gravel, topsoil, or fill would be imported to the site. No on-site materials will be used except for the material within the existing roadway. To the maximum extent practicable, all material sources would be certified weed-free.

Wherever possible, U.S. Customs and Border Protection (CBP) would limit disturbance to the proposed width of the proposed FC-2 road and ancillary structures. Where turnouts and passing lanes would be required for construction, CBP would use currently disturbed areas (e.g., locations where a secondary trail has been created due to impassable road conditions), to the maximum extent practicable, and would restore all such areas upon completion of the Proposed Action.

Equipment and materials would be stored at a staging area within the project area. The staging area would be an unimproved, previously disturbed area. The types and numbers of equipment used would be kept to a minimum. It is anticipated that backhoes, graders, and dump trucks would be necessary for road improvement activities. Water trucks would be employed to aid in dust suppression. All equipment would be cleaned prior to entering and departing the project corridor to minimize the spread and establishment of non-native invasive plant species.

The finished road would be a reinforced roadbed with a soil stabilizer (e.g., Lignin, Soiltac, Envirotec, or some other suitable soil stabilizer) applied during the late summer/early fall months. Proper use of a non-toxic road stabilizer helps to avoid impacts on federally listed species habitat by minimizing road runoff and is neither toxic nor harmful to sensitive species.

Alternatives. Potential alternatives for the project were considered but dismissed and not carried forward for full environmental analysis in the EA in accordance with the three universal selection standards discussed in **Section 2.2** of the EA.

No Action Alternative. The No Action Alternative is carried forward for further analysis in the EA to provide a baseline against which the effects of the Proposed Action can be assessed. The No Action Alternative would be "no change" from current practices or continuing with the present course of action until that action is changed.

Under the No Action Alternative, CBP would not improve the existing roads in the USBP Laredo Sector. The current FC-4, two-track road is composed of unimproved road, wagon trail, and 4-wheel drive road and is 10–12 feet wide through most of its length. As "two-track" implies, the road consists of two parallel tracks created by the loss of vegetation where the tires contact and compact the earth, between which lies a strip of low-growth vegetation. In many areas, the central vegetated strip has succumbed to erosion. The road has received no maintenance in more than 10 years; however, some prior blading activity is still evident. The road has no crown and does not have any improved drainage features or ditches. Under continued use of the current roads, CBP would be unable to meet operational requirements to secure the U.S./Mexico international border within the USBP Laredo Sector.

Summary of Environmental Effects

The Proposed Action and alternatives have been reviewed in compliance with the Council on Environmental Quality regulations implementing NEPA; DHS Directive Number 023-01, Rev.01; and DHS Instruction Manual 023-01-001-01, Rev. 01, Implementation of the National Environmental Policy Act. The analysis focuses on the following environmental resources: noise, air quality, land use, geological resources, water resources, biological resources, cultural resources, infrastructure, hazardous materials and wastes, safety, socioeconomics, and environmental justice. The analysis in the EA for each of the environmental resource areas listed identified negligible to moderate adverse impacts under the Proposed Action. Potential environmental effects are not expected to be significant. A summary of the environmental consequences is provided in **Table 2-1** of the EA.

EO 11988, *Floodplain Management*, requires federal agencies to avoid, to the maximum extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of development in a floodplain wherever there is a practicable alternative. If it is found that there is no practicable alternative, the agency must minimize potential harm to the floodplain and circulate a notice explaining why the action is to be located in the floodplain prior to taking action. Additionally, new construction in a floodplain must apply accepted flood proofing and flood protection, such as diverting water away from the area of development and implementing stormwater best management practices (BMPs).

The Proposed Action has the potential to result in moderate, short- and long-term, impacts on special flood hazard areas, including regulatory floodways and floodplains that are subject to inundation by the 1 percent annual chance flood. There are approximately 22.9 acres of the regulatory floodway and 20.6 acres of floodplain subject to the 1 percent annual chance flood within the 24-foot project area. A floodplain development permit would be required prior to any construction or development within any special flood hazard areas. Approximately 2.3 acres of the project area are within areas subject to the 0.2 percent annual chance flood.

Widening of the road and clearing of vegetation would result in an increase in the volume of flow as well as an increase in the velocity. BMPs would be implemented to minimize any potential impacts on floodplains. The maintenance and repair of the existing roadway and appropriate drainage measures would be implemented to minimize impacts on floodplains.

No impacts on floodplains would be expected from routine repair and maintenance of the all-weather road if standard BMPs are implemented and any necessary local, state, or Federal permitting requirements are met.

Pursuant to EO 11988 and in consideration of the findings of the EA, I find that there is no practicable alternative to this action and that this project includes all practicable measures to minimize harm to the environment. There are no practical alternatives to the construction and improvement of the Border Patrol roads within the floodplain that do not compromise the mission of USBP. This decision has been made after considering all submitted information and considering a range of reasonable alternatives that would meet project requirements and are within the legal authority of CBP.

Under the Proposed Action, 13 archaeological sites would be impacted by the proposed construction and five historic structures will have no impacts. Three of the archaeological sites are eligible for the NRHP and are considered significant cultural resources. Of the three eligible sites one site is listed as a State Antiquities Landmark. Of the remaining archaeological sites, three have an undetermined or unknown eligibility for the NRHP, pending additional archaeological investigations needed to determine their eligibility for the NRHP. These archaeological sites, as well as any subsequently identified resources identified during upcoming deep deposit examination, would be treated as eligible until testing can be conducted and their eligibility for the NRHP can be determined. Additional NRHP eligibility testing would be conducted on those sites before any ground-disturbing activities are conducted within their boundaries. If any of the sites are determined eligible for the NRHP and cannot be avoided (the first option considered), then appropriate mitigation measures, including avoidance, for those sites would be developed in consultation with the THC prior to any ground-disturbing activities being conducted within those site boundaries. Seven archaeological sites have been recommended as not eligible for the portions that are located within the Proposed Action's footprint.

Visual impacts to the historic structures were assessed during the cultural resources survey. Of the ten properties, only one is located within the current project area. None of the RTHLs are in the project footprint, which means they will not be directly impacted. Since none of the proposed activity would result in a raised profile of the project roads, there are not visual impacts. In addition, all the properties are surrounded by other in-use roadways. The Texas Historical Commission has concurred with the determination that the Proposed Action will have no adverse effect on built environment resources (THC letter dated 05 June 2023).

All mitigation measures developed for archaeological sites through consultation with the THC would be implemented or instigated prior to construction in any of those site areas. Full compliance with Section 106 of the NHPA ensures proper mitigative measures, including avoidance, would be implemented. In addition, a cultural resources survey of the unexamined project area needs to occur. Mitigation measures for impacts to above-ground resources may continue after the project is completed.

Stakeholder Involvement

Based on the description of the Proposed Action as set forth in the EA, all activities have been found to comply with the criteria or standards of environmental quality. Coordination with appropriate federal, state, and local agencies regarding this EA has been completed. The attached EA and this FONSI were made available to the public for a 30-day review period beginning on November 1, 2022. Agencies received coordination throughout the EA development process, and their comments were addressed as part of the analysis of potential environmental effects performed in the EA.

Finding of No Significant Impact

On the basis of the findings of the EA, which is incorporated by reference, and which has been conducted in accordance with the National Environmental Policy Act, the Council on Environmental Quality regulations, and DHS Directive Number 023-01, Rev.01, and DHS Instruction Manual 023-01-001-01, Rev. 01, *Implementation of the National Environmental Policy Act* and after careful review of the potential environmental impacts of implementing the proposal, we find there would be no significant impact on the quality of the human or natural environments; therefore, there is no requirement to develop an Environmental Impact Statement. Further, we commit to implement BMPs and environmental design measures identified in the EA and supporting documents.

RUYNARD R SINGLETON Digitally signed by RUYNARD R SINGLETON
Date: 2023.08.15 11:33:26 -04'00'

Ruynard R. Singleton Date
Executive Director
Program Management Office Directorate
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Assistant Commissioner
Office of Facilities and Asset Management
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Attachment: *EA Proposing Improvement of Existing Patrol Roads in the U.S. Border Patrol Laredo Sector, Webb County, Texas*