Final Environmental Assessment
Communications Tower Replacement
(TX 13487)
Rio Grande Valley Sector
Falfurrias, Texas

September 2023

U.S. Customs and Border Protection

DEPARTMENT OF HOMELAND SECURITY
U.S. CUSTOMS AND BORDER PROTECTION
U.S. BORDER PATROL
PROGRAM MANAGEMENT OFFICE DIRECTORATE

FINAL

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EXECUTIVE SUMMARY

INTRODUCTION

This final Environmental Assessment (EA) analyzes the potential environmental consequences of replacing an existing communications tower and supporting infrastructure (fixed network equipment, antennae, and equipment shelter) with a new tower and supporting infrastructure within U.S. Border Patrol (USBP) Rio Grande Valley (RGV) Sector, Falfurrias Station (FLF), Falfurrias, Texas.

U.S. Customs and Border Protection (CBP) is responsible for securing the borders of the United States while facilitating the effective movement of legitimate trade and travel. CBP serves as the first line in defending the United States against terrorists and instruments of terror and protects the United States' economic security by regulating and facilitating the lawful movement of goods and people across the borders of the United States.

As CBP officers and agents often work in remote areas where commercial communications do not exist, communications equipment and towers are critical to mission execution and vital to agent safety. CBP's existing communications system at the TX 13487 site is antiquated and fails to meet CBP operational and functional requirements. In addition, the existing infrastructure lacks the capacity to accommodate future growth of CBP personnel and communications requirements.

To improve CBP operational effectiveness and enhance officer safety, CBP proposes to improve tactical communications in the RGV Area of Responsibility (AOR) through replacement of the existing tower and associated communications equipment.

The Proposed Action includes the lease, construction, installation, operation, and maintenance of a new 440-foot, guyed wire communications tower and associated communications equipment and decommissioning of the existing tower located approximately 500-feet west of the replacement tower. Supporting infrastructure such as equipment shelters, and generator systems would also be included under this initiative. The Proposed Action would result in a robust, secure communications system, allowing CBP to interoperate with public sectors of law enforcement to ensure that day-to-day operational missions are achieved.

PROJECT LOCATION

The proposed replacement of the TX13487 tower site would take place in Brooks County, Texas. The site is approximately 0.25-mile east of U.S. Highway 281, on an unnamed gravel road.

PURPOSE AND NEED

CBP proposes the lease, construction, installation, operation, and maintenance of a new communications tower and associated communications equipment at the existing TX13487 site. The purpose of the Proposed Action is to maintain tactical communications in Border Patrol's RGV AOR for Federal agents working for CBP and other agencies. The existing tower is

structurally unsound, and in need of replacement. The TX13487 site provides critical operational capabilities for USBP within the RGV AOR.

The need for the Proposed Action is to provide the following:

- adequate communication coverage in the RGV AOR
- sustained safety of CBP agents through continued communication coverage and technology
- an opportunity for future expansion of communication services, as necessary
- a more safe, effective, and efficient work environment for CBP agents

PROPOSED ACTION AND ALTERNATIVES

Preferred Action Alternative:
The Proposed Action includes the lease, construction, installation, operation, and maintenance of a new 440-foot, guyed wire communications tower and associated communications equipment and the decommissioning and removal of the existing tower and supporting infrastructure located approximately 500-feet away from the new tower site location.

No Action Alternative:
The No Action Alternative would preclude the lease, construction, installation, operation, and maintenance of communications equipment on a replacement tower. The existing tower would continue to remain overloaded, structurally unsound, and inadequate for support of CBP operations.

Alternatives Removed from Consideration:

Structural Enhancement of Existing Tower Only: Structural Enhancement of the Existing Tower Only was evaluated by CBP and found to not be a feasible alternative due to excessive costs related to structural engineering studies and analysis, engineering and construction oversight, and few bidders interested in the project. Additionally, communications in this critical operational area would be severely degraded or non-existent during the tower enhancement process. This alternative was dismissed from further evaluation.

AFFECTED ENVIRONMENT AND CONSEQUENCES

The construction and operation of the communication equipment would potentially result in minimal to moderate impacts, including temporary increased air pollution from soil disturbance, permanent loss of 0.5 acre of vegetation and wildlife habitat, and minor increases in ambient noise. No adverse impacts on historic properties would occur. The Proposed Action would have no effect on any protected species. No residences occur near the site; thus, the replacement tower's construction and operation would have no effect relative to environmental justice or protection of children issues.

FINDINGS AND CONCLUSION

Based upon the analyses of the Environmental Assessment and the environmental design and mitigation measures to be implemented, the Proposed Action would not have an adverse effect on the environment. Therefore, no additional environmental evaluation is warranted.

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APPENDICCES

1. INTRODUCTION

1.1. INTRODUCTION

The Department of Homeland Security (DHS), U.S. Customs and Border Protection (CBP), is preparing this Final Environmental Assessment (EA) to document the analysis of the proposed replacement of the existing tower at the TX13487 communications site, within U.S. Border Patrol (USBP) Rio Grande Valley (RGV) Sector, Falfurrias Station (FLF), Falfurrias, Texas

CBP is responsible for securing the borders of the United States while facilitating the effective movement of legitimate trade and travel. CBP serves as the first line in defending the United States against terrorists and instruments of terror and protects the United States' economic security by regulating and facilitating the lawful movement of goods and people across the borders of the United States.

As CBP officers and agents often work in remote areas where commercial communications do not exist, communications equipment and towers are critical to mission execution and vital to agent safety. CBP's existing communications system at the TX 13487 site is antiquated and fails to meet CBP operational and functional requirements. In addition, the existing infrastructure lacks the capacity to accommodate future growth of CBP personnel and communications requirements.

To improve CBP operational effectiveness and enhance officer safety, CBP proposes to improve tactical communications in the RGV Area of Responsibility (AOR) through replacement of the existing tower.

The Proposed Action would include the construction of a new tower and the installation of supporting equipment. Supporting infrastructure such as equipment shelters, and generator systems would also be included under this initiative. The Proposed Action also includes the deconstruction and removal of the existing communication tower at the TX13487. The Proposed Action would result in a robust, secure communications system, allowing CBP to interoperate with public sectors of law enforcement to ensure that day-to-day operational missions are achieved.

1.2. PROJECT LOCATION

The proposed communications tower is located north of Encino in Brooks County, Texas approximately 0.25 miles east of U.S. Highway 281, on an unnamed gravel road (Figure 1-1, Appendix A).

1.3. PURPOSE AND NEED

The purpose of the Proposed Action is to maintain and improve tactical communications in Border Patrol's RGV AOR for Federal agents working for CBP and other agencies. The existing tower is structurally unsound and in need of replacement. The TX13487 site provides critical operational capabilities for USBP within the RGV AOR.

The need for the Proposed Action is to provide the following:

- Adequate communication coverage in the RGV AOR
- Sustained safety of CBP agents through continued communication coverage and technology
- Opportunity for future expansion of communication services, as necessary
- A safer, more effective, and efficient work environment for CBP agents

1.4. SCOPE OF ENVIRONMENTAL ANALYSIS & DECISION TO BE MADE

The scope of this National Environmental Policy Act (NEPA) compliance includes the analysis of effects resulting from the lease, construction, installation, operation, and maintenance of a replacement communication tower constructed and the deconstruction and removal of the existing tower in Border Patrol's RGV FLF AOR. This analysis does not include an assessment of operations conducted in the field by CBP agents. These operations would continue regardless of the tower replacement of communication equipment.

1.5. APPLICABLE ENVIRONMENTAL GUIDANCE, STATUTES & REGULATIONS

This analysis was prepared by CBP in accordance with the NEPA of 1969 (42 U.S. Code [U.S.C.] 35 4321-4347) and the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and DHS Directive 023-01) and other pertinent environmental statutes, regulations, and compliance requirements. The final EA will be the vehicle for compliance with all applicable environmental statutes, such as the Endangered Species Act (ESA) of 1973, 16 United States Code (U.S.C.) Part §1531 et seq., as amended, and the National Historic Preservation Act (NHPA) of 1966, 16 U.S.C. §470a et seq., as amended.

1.6. PUBLIC INVOLVEMENT

Consultation and coordination with Federal, state, and local agencies and federally recognized Tribes and Nations occurred during this NEPA analysis (Appendix B). Coordination was conducted with the following agencies and tribes:

- U.S. Fish and Wildlife Service (USFWS)
- Federal Aviation Administration (FAA)
- Texas Historical Commission (SHPO)
- Apache Tribe of Oklahoma
- Comanche Nation

- Tonkawa Tribe of Indians of Oklahoma
- Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie), Oklahoma

The draft EA and Finding of No Significant Impact (FONSI) were available for public review for 38 days, and the Notice of Availability (NOA) was published in the *Falfurrias Facts* on July 24 and 31, 2023. The draft EA and FONSI were made available electronically at https://www.cbp.gov/about/environmental-management. Notice of Availability letters were also sent to three individuals (see Section 10). No public comments were received.

2. PROPOSED ACTION AND ALTERNATIVES

2.1. PROPOSED ACTION (REPLACEMENT TOWER NEW LOCATION)

The Proposed Action includes the decommissioning/removal of an existing tower and the construction, operation, and maintenance of a new tower to the east of the existing tower and construction of an 1800-ft of approach road from the existing access road to the tower site (Figure 1, Appendix A). The description of the proposed construction activities is provided below.

The Proposed Action includes the lease, construction, installation, operation, and maintenance of a new 440-foot, guyed wire communications tower and associated communications equipment and decommissioning of the existing tower located approximately 500-feet west of the proposed tower. The communications equipment would include one or more repeaters, receivers, microwave dishes, and antennas. In addition to the tower, one 16-feet x 14-feet prefabricated shelter to house equipment and racks, one ice bridge for data and power cables, one 20-kilowatt (kW) backup generator, one electrical transformer, and one 500-gallon propane aboveground storage tank would be installed in the immediate vicinity of the tower. A permanent footprint of 70-feet x 70-feet (4,900 square feet) surrounding the tower and its associated equipment would be cleared, graded, and covered with Geo-textile fabric and gravel. This permanent footprint will be surrounded by an 8-ft. tall chain link fence. A four-foot-high hog wire fence would be installed around each of the guyed wire anchor posts. Equipment staging may require up to one acre; any area impacted by equipment staging or other construction operations would be revegetated or otherwise returned to its original condition.

The tower components would be delivered by truck to the site and assembled onsite adjacent to the new tower location. No additional staging areas outside of the construction area are anticipated. Additional components, such as the electrical generator and aboveground storage tank, would be delivered and installed onsite with no assembly required. The antennas would be removed from the existing tower and placed on the new tower. They would be lifted either manually by personnel climbing the towers or mechanically by a crane parked adjacent to the tower. Antennas would be attached to the communications tower using hand tools. The prefabricated shelter, generator, aboveground storage tank, and an electrical transformer would all be located on poured-in-place concrete pads. Cables and lines connecting the tower equipment, generator, and shelter would be routed under the ice bridge. Other improvements would include security fencing, buried grounding rings and rods, and lighting protection as needed for security and safety. Installation of the tower would be completed within a 30-day period. Periodic maintenance of antennas, tower, backup generator, and communications equipment located in the shelter would be needed. The method and schedule of operations and maintenance would be performed similar to other CBP communications sites in the region. Operation and maintenance would include regular visits by CBP employees or their contractors traveling by car or truck, checking shelter and tower equipment, running the backup generators for 1 to 5 hours per month, refueling the storage tank as needed, and repairing or replacing faulty equipment. Any replaced equipment would be recycled or otherwise disposed of properly.

CBP would also remove the existing, antiquated communication tower. All communication equipment on the existing tower would be moved to the new tower site and installed by CBP. Tower decommissioning is expected to take 15 calendar days. Prior to the demolition of the tower, the shelter foundation and stoops would be completely removed. Once lowered, the tower would be hauled from its current location and disposed of properly. The tower foundation would be removed to a minimum of 1-foot below grade. It would be backfilled with soil and stabilized. The existing tower footprint would be allowed to naturally revegetate. All conductors or cables from abandoned underground conduits would be removed. Conduit would be capped. A total of six guy anchor foundations and associated hog wire fencing would be removed and backfilled with soil and stabilized. The existing propane tank, slab and piping would be removed and disposed of properly.

2.2. NO ACTION ALTERNATIVE

The No Action Alternative would preclude the lease, construction, installation, operation, and maintenance of new communications equipment on a replacement tower. The existing tower would continue to remain overloaded, structurally unsound, and inadequate for support of CBP operations.

2.3. ALTERNATIVES EVALUATED BUT ELIMINATED FROM FURTHER CONSIDERATION

Structural Enhancement of Existing Tower Only:
This alternative was evaluated by CBP and found to not be feasible due to excessive costs related to structural engineering studies and analysis, engineering and construction oversight, and few bidders interested in the project. Additionally, communications in this critical operational area would be severely degraded or non-existent during the tower enhancement process.

2.4 ALTERNATIVES SUMMARY – SUMMARY OF IMPACTS

The Proposed Action describes the current TX13487 tower site and the need for its replacement. It has been determined by CBP that no other alternatives meet the project's purpose and need. Table 2-1 summarizes the impacts of the Proposed Action and No Action Alternatives on the resources evaluated in the EA.

Table 2-1 Summary of Impacts

Affected Environment	Proposed Action Alternative	No Action Alternative
Land Use (Section 3.2)	The Proposed Action would have a permanent, negligible impact on land use.	No direct impacts would occur
Soils (Section 3.3)	The Proposed Action would have a direct, minor impact on soils.	No direct impacts would occur
Vegetation (Section 3.4)	The Proposed Action would permanently alter approximately 0.5 acres.	No direct impacts would occur
Wildlife (Section 3.5)	The Proposed Action would have a long-term, negligible impact on wildlife resources due to the permanent removal of approximately 0.5 acres.	No direct impacts would occur
Protected Species (Section 3.6)	Proposed would have no effect on protected species. No designated critical habitat is present within the project footprint.	No direct impacts would occur
Cultural Resources (Section 3.7)	No Adverse Effect	No Historic Properties Affected
Air Quality (Section 3.8)	Temporary and minor increases in air pollution would occur from the use of construction equipment (combustion emissions) and the disturbance of soils (fugitive dust) during construction and the maintenance and repair of approach roads.	No direct impacts would occur
Noise (Section 3.9)	Temporary and negligible increases in noise would occur during construction and maintenance and repair of access roads.	No direct impacts would occur
Hazardous Materials (Section 3.10)	The Proposed Action would not result in the exposures of the environment or public to any hazardous materials. The potential exists for minor releases of petroleum, oil, and lubricant during construction or operational activities. BMPs would be implemented to minimize any potential contamination at the tower site during construction and tower operation.	No direct impacts would occur
Climate Change (Section 3.11)	The proposed action would result in temporary and negligible increases in GHG emissions from construction, maintenance and repair of the access road.	No direct impacts would occur

3. AFFECTED ENVIRONMENT AND CONSEQUENCES

3.1. PRELIMINARY IMPACT ANALYSIS

This section of the final EA describes the natural and human environment that exists within the project region of influence (ROI), and the potential impacts of the Proposed Action and No Action Alternative outlined in Section 2.0 of this document.

The ROI for this project is Brooks County, TX. Per CEQ regulation (40 CFR 1502.2 [b]), only those resources with the potential to be affected by the Proposed Action are described in this document. The impact analysis presented in this final EA is based upon existing regulatory standards, scientific and environmental knowledge, and best professional opinions. Some analysis is limited in scope due to the lack of direct, indirect, or cumulative effects from the Proposed Action on the resource, or because that resource is not located within the project area. Resources eliminated from further consideration and justifications for their elimination are listed in Table 3-1.

Table 3-1 Resources Eliminated from Further Consideration

Resource	Potential to Be Affected by Implementation of the Proposed Action	Analyzed in this EA	Rationale for Elimination
Geology	No	No	No geologic resources would be affected.
Wild and Scenic Rivers	No	No	No rivers designated as Wild and Scenic Rivers (16 U.S.C. § 551, 1278[c], 1281[d]) are located within or near the project.
Water Resources	No	No	No ground disturbance would occur that could adversely impact surface or groundwater quality. No wetlands or Waters of the United States would be affected by the Proposed Action because none are present within the proposed tower site. There would be no water use at the either site.
Floodplains	No	No	The site is not located within a floodplain.
Utilities and Infrastructure	No	No	The Proposed Action would not require the installation of new utility lines or infrastructure, as the tower is near existing paved roads with overhead utilities. Discountable impacts on utility demand are expected during operation of the tower. The Proposed Action does not require a need for potable water, wastewater treatment, and solid waste disposal.
Roads and Traffic	No	No	The site is in a remote area on a privately-owned road. Access to the tower site is via U.S. 281 and an unnamed ranch road. Construction traffic accessing the tower site would be negligible compared to annual traffic volume within the area; therefore, no impacts on traffic or roads are anticipated
Socioeconomics	**No**	**No**	Implementation of the Proposed Action could provide a negligible beneficial impact on the local economies due to minimal increases in revenues for local businesses because of construction activities and materials obtained. Any increase in workforce and revenue, however, would be temporary and negligible, lasting for the duration of construction

Resource	Potential to Be Affected by Implementation of the Proposed Action	Analyzed in this EA	Rationale for Elimination
Greenhouse Emissions	**No**	**No**	No exceedance of greenhouse gas thresholds would occur (40 CFR 93 § 153). BMPs would be incorporated to minimize and avoid the generation of emissions. The emissions generated during the construction of the replacement tower, demolition of existing tower, and all associated road construction, repair, and improvement would not exceed Federal de minimis thresholds and would be short-term and minor. Generator emissions would be sporadic and would not exceed Federal de minimis thresholds. There would be a negligible long-term increase in vehicular traffic in the region's airshed because of maintenance trips.
Environmental Justice	No	No	The tower is a replacement of an existing tower on private land in a rural area where no sensitive receptors are located within a 1,145-foot radius of the project site. There would be no potential impact to any children, low-income, or minority populations.
Radio Frequency Environment	No	No	Existing equipment would be installed on the replacement tower at comparable heights. There would be no change to the current radio frequency environment.
Aesthetics and Visual Resources	No	No	The replacement tower is the same dimensions as the existing tower. There would be no change to the current aesthetics and visual resources at the site.

Per 40 CFR §1508.1(g), effects are defined as changes to the human environment from the Proposed Action or alternatives that are reasonably foreseeable and have a close causal relationship to the Proposed Action or alternatives, including those effects that occur at the same time and place as the Proposed Action or alternatives and may include effects that are later in time or farther removed in distance from the Proposed Action or alternatives.

For this EA, per 40 CFR §1508.1(g) effects are not considered if they are remote in time, geographically remote, or would be a result of a lengthy causal chain. They were also not considered if CBP has no ability to prevent the effect or if the effect would occur regardless of the Proposed Action. Also, per 40 CFR §1501.3(b)(2), CBP has considered as appropriate to the Proposed Action whether effects would be short-term, long-term, beneficial, or adverse. CBP also considered the effects on public health and safety and whether effects would violate federal, state, tribal, or local law protecting the environment.

Impacts (consequence or effect) can be either beneficial or adverse and can be either directly related to the action or indirectly caused by the action. This also includes ecological (such as the effects on natural resources and on the components, structures, and function of affected ecosystems), aesthetic, historic, cultural, economic (such as the effects on employment), social, and health effects. Direct impacts are those effects that are caused by the action and occur at the same time and place (40 CFR 1508.8[a]). Indirect impacts are those effects that are caused by the

action and are later in time or further removed in distance but are still reasonably foreseeable (40 CFR 1508.8[b]).
As discussed in this section, the No Action Alternative and Proposed Action Alternative may create temporary (lasting the duration of construction), short term (up to 3 years), long-term (greater than 3 years), or permanent impacts or effects. Impacts on each resource can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For this analysis, the intensity of impacts will be classified as negligible, minor, moderate, or major. The intensity thresholds are defined as follows:

- Negligible**:** A resource would not be affected, or the effects would be at or below the level of detection, and changes would not result in any measurable or perceptible consequences.

- Minor**:** Effects on a resource would be detectable, although the effects would be localized, small, and of little consequence to the sustainability of the resource. Mitigation measures, if needed to offset adverse effects, would be simple and achievable.

- Moderate**:** Effects on a resource would be readily detectable, long-term, localized, and measurable. Mitigation measures, if needed to offset adverse effects, would be extensive and likely achievable.

- Major**:** Effects on a resource would be obvious, long-term, and would have substantial consequences on a regional scale. Extensive mitigation measures to offset the adverse effects would be required and success of the mitigation measures would not be guaranteed.

3.2. LAND USE

3.2.1. Affected Environment

The TX13487 tower site is located in Brooks County (Figure 2, Appendix A), Texas. Brooks County encompasses approximately 603,747 acres. Falfurrias, the Spanish name for the desert flower “heart’s delight” is the county seat. Located in the Central Plain Region of Texas, Brooks County is unique because of its low rainfall, high rate of evaporation, and persistent southeasterly winds. These southeasterly winds have affected nearly all the topographic features within the county (U.S. Department of Agriculture (USDA), 1993).
The county is predominately composed of private ranches with approximately 458,872 acres being used as agricultural land. The major use of agricultural land in Brooks County is cattle ranching. In 2017, 81 percent of the agricultural land was classified as pastureland from the production of cattle, 3 percent was cropland, 15 percent was woodland, and 1 percent was other (U.S. Department of Agriculture (USDA) , 2017). The major recreational activity for Brooks County is outdoor recreation.
The proposed tower site is located just north of Encino on the east side of Highway 281. It is situated off an unnamed ranch road. The area surrounding the site is predominately undeveloped rangeland with developments such as oil and gas refineries, cellular towers and recreational spots scattered throughout the area.

3.2.2. Environmental Consequences

3.2.2.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

Under the Proposed Action, approximately 0.5 acres of rangeland would be converted to a developed land use at the new tower site and up to 25 acres would be temporarily disturbed during construction and decommissioning activities. Upon decommissioning of the existing tower, approximately 0.5 acres, of once permanent land impacts, would be allowed to naturally revegetate. Existing access roads adjacent to the project site would be utilized during construction. The direct impact from the conversion of approximately 0.5 acres of rangeland to law enforcement infrastructure would be negligible due to the decommissioning of the existing site and small size of the permanent project footprint (<1 acre).

The Proposed Action could result in indirect and long-term beneficial impacts on land use by reducing the adverse impacts of illegal cross-border violator activities in the project ROI The proposed TX13487 tower would enhance CBP's detection and threat classification capabilities and increase the efficiency of operational activities within the tower coverage area.

3.2.2.2. Alternative 2: No Action Alternative

Under the No Action Alternative, no direct impacts on land use would occur. No tower lease, construction, installation, operation, and maintenance would occur. The existing tower would remain in place and continue to be overloaded and structurally unsound.

3.3. SOILS

3.3.1. Affected Environment

The soils at the TX13487 site are classified as Falfurrias fine sand, which are very deep soils on uplands, mainly in a series of long discontinuous ridges. The slopes range from 0 to 8 percent. The surface layer is loose fine sand about 38 inches thick. Falfurrias soil is somewhat excessively drained, and runoff is very slow. The permeability of this soil is rapid, and the available water capacity is low. This soil is used mainly as rangeland or wildlife habitat and is not suited to cultivated crops because of the hazard of wind erosion and low available water capacity (U.S. Department of Agriculture (USDA), 1993).

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture (USDA). It is of major importance in meeting the Nation's short and long-range needs for food and fiber. The Farmland Protection Policy Act (FPPA) of 1980 and 1995 was established to preserve the nation's farmland. In Section 7 of CFR Part 657.5, prime farmlands are defined as having the best combinations of physical and chemical properties to produce fiber, animal feed, and food, and are available for these uses. Under 7 CFR Part 658.3 of the FPPA, ''Farmland'' does

not include land already in or committed to urban development or water storage (Natural Resources Conservation Service, USDA, 1984). Prime farmland soils usually receive an adequate and dependable supply of moisture from precipitation or irrigation. Soils that have an inadequate supply of moisture may qualify as prime farmland if this limitation is overcome by irrigation. Soils identified as prime farmland in Brooks County are identified in Table 3-1 (U.S. Department of Agriculture (USDA), 1993). The soils at the TX13487 site are classified as Falfurrias fine sand and are therefore not considered prime farmland.

Table 3-1 Prime Farmland Soils in Brooks County, Texas

Soil Series	Soil Description
COB	Comitas loamy fine sand, gently undulating (where irrigated)
CzA	Czar fine sandy loam, rarely flooded
DeB	Delfina loamy fine sand, 0 to 2 percent slopes (where irrigated)
DfB	Delfina fine sandy loam, 0 to 2 percent slopes
YtB	Yturria fine sandy loam, 0 to 3 percent slopes (where irrigated)

3.3.2. Environmental Consequences

3.3.2.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

Demolition of the existing tower and deployment of the replacement tower would permanently impact approximately 0.5 acres and temporarily impact 25 acres of soils. Although these impacts are long-term, they would be minor when examined on a regional scale, due to the small amount of soil lost relative to the quantity of the same soils regionally. Additionally, Best Management Practices (BMPs) to reduce soil erosion would be implemented during construction activities, as outlined in Section 5.0.

3.3.2.2. No Action Alternative

No ground-disturbing activities would occur under this alternative. Therefore, the No Action Alternative would have no direct impacts, either beneficial or adverse on soils. The existing tower would remain in place and continue to be overloaded and structurally unsound.

3.4. VEGETATION

3.4.1. Affected Environment

The Texas Parks and Wildlife Department (TPWD) labels the habitat types within the ROI as Deep Sand Grassland, Deep Sand Live Oak Forest Woodland, and Sandy Mesquite Woodland and Shrubland. The annual precipitation is 23.8 inches, and the average temperature is 72.5 degrees Fahrenheit (TPWD, 2022a).

A biological survey of the TX13487 site was conducted by Gulf South Research Corporation (GSRC) in July 2022. Vegetation observed at the site was identified and recorded. The site was described as prairie with pockets of Texas live oak and honey mesquite. Invasive species, such as buffelgrass (*Pennisetum ciliare*), were present but relatively sparse. Croton, sunflowers, and legumes dominate the understory (TPWD, 2022a) (GSRC, 2022a). Table 3-2 shows a list of all observed plant species.

Table 3-2. Observed Flora Species of the Proposed TX13487 Tower Site

Common Name	Scientific Name
Alamo vine	***Distimake dissectus***
American snoutbean	***Rhynchosia americana***
Ballmoss	***Tillandsia recurvata***
Bermuda grass	***Cynodon dactylon***
Buffelgrass	***Pennisetum ciliare***
Butterfly pea	***Clitoria ternatea***
Cardinal feather	***Acalypha radians***
Christmas cholla	***Cylindropuntia leptocaulis***
Climbing milkweed	***Funastrum cynanchoides***
Coastal sandbur	***Cecnhrus spiniflex***
Croton	***Croton* sp.**
Golden prairie clover	***Dalea aurea***
Green carpetweed	***Mollugo verticillata***
Guinea grass	***Megathyrsus maximus***
Vervain	***Verbena stricta***
Hogwort	***Croton capitatus***
Honey mesquite	***Prosopis glandulosa***
Horseweed	***Conyza canadensis***
Indian blanket	***Gaillardia pulchella***
King Ranch bluestem	***Bothriochloa ischaemum***
Lazy daisy	***Aphanostephus ramosissimus***
Least snoutbean	***Rynchosia minima***
Partridge pea	***Chamaecrista fasciculata***
Pine barren flatsedge	***Cyperus retrorsus***
Plains snakecotton	***Froelichia floridana***
Prairie Mexican clover	***Richardia tricocca***
Priarie sunflower	***Helianthus petiolaris***
Prickly ash	***Zanthoxylum hirsutum***
Purple three awn	***Aristida purpurea***
Rio Grande phlox	***Phlox gladbriflora***
Rosette grass	***Dicanthelium* sp.**
Rough nama	***Nama hispida***
Rush	***Juncus* sp.**
Sidebeak pencil flower	***Stylosanthes biflora***
Silverleaf sunflower	***Helianthus argophyllus***
Spotted beebalm	***Monarda fruticulosa***
Spotted spurge	***Euphorbia maculata***
Texas lantana	***Lantana urticoides***

Common Name	Scientific Name
Texas live oak	***Quercus fusiformis***
Texas palafox	***Palafoxia texana***
Texas pricklypear	***Opuntia lindheimeri***
Texas vervain *Verbena*	***Verbena halei***
Trailing fuzzy bean	***Strophostles helvola***
Tropic croton	***Croton glandulosus***
Turkey tangle frogfruit	***Phyla nodiflora***
White prickly poppy	***Argemone albiflora***
Whitemouth dayflower	*Commelina erecta*
Whitethorn acacia	*Vachellia constricta*
Woolly globemallow	*Sphaeralcea lindheimeri*

3.4.2. Environmental Consequences

3.4.2.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

The Proposed Action would have a permanent, minor adverse impacts on vegetation at the project site. Approximately 0.5 acres of vegetation would be permanently removed due to the deployment of the replacement tower and construction the access road and associated communications equipment.

The plant communities found at the site are common to the region. The permanent vegetation loss at the replacement tower would be offset by the abandonment of the existing tower. Approximately 25 acres of vegetation would be temporarily impacted during construction activities. These impacts would only last the duration of the construction activities, which is not expected to exceed 30 days, and all temporarily impacted areas would be allowed to naturally revegetate at the completion of the construction activities.

To ensure the Proposed Action does not actively promote the establishment of non-native and invasive species in the area, BMPs which are described in Section 5.0, would be implemented to minimize the spread and reestablishment of nonnative vegetation. These BMPs, as well as measures protecting vegetation in general, would reduce potential impacts from non-native invasive species to a negligible amount.

3.4.2.2. No Action Alternative

Under the No Action Alternative, no impacts on vegetative habitat would occur as construction activities would not occur.

3.5. WILDLIFE RESOURCES

3.5.1. Affected Environment

The Proposed Action is in Deep Sand Grassland, Deep Sand Live Oak Forest Woodland, and Sandy Mesquite Woodland and Shrubland. This habitat has a distinctive mix of native wildlife and invasive species, such as feral pigs and nilgai. Nilgai, a large antelope native to India, was introduced to the area by the King Ranch in the 1930's for game hunting (Fulbrignt, Diamond, Rappole, & Norwine, 1990).

Texas currently lists 52 species of wildlife and 21 plants species as rare, threatened or endangered under Texas Administrative Codes §65.175 and §65.176 (TPWD, 2022b) that have the potential to occur within Brooks County (Appendix C). Three state listed threatened animal species were encountered during the biological survey: the northern beardless tyrannulet (*Camptostoma imberbe*), Texas horned lizard (*Phrynosoma cornutum*), and northern cat-eyed snake (*Leptodeira septentrionalis*) (GSRC, 2022a).

The biological survey conducted by GSRC resulted in the observation of 23 bird species, 15 invertebrate species, 9 reptile species, and 3 mammal species. Table 3-3 provides a list of all faunal species observed, as well as the number of individuals that were detected. Birds were detected with binoculars and by listening. Mammals, such as white-tailed deer (*Odocoileus virginianus*) and voles (*Microtus sp.),* were found during vegetation delineations. While gophers themselves were not detected visually, their mounds were observed throughout the prairie habitat. Arthropods and reptiles were generally observed underneath the cover of fallen logs or debris (GSRC, 2022a).

Table 3-3. Observed Wildlife Species TX13487 Tower Site

Common Name	Scientific Name	Number Of Individuals Observed
Bewick's wren	*Thryomanes bewickii*	1
Black vulture	*Coragyps atratus*	1
Blue grosbeak	*Passerina caerulea*	1
Blue-gray gnatcatcher	*Polioptila caerulea*	2
Buff-bellied hummingbird	*Amazilia yucatanensis*	1
Common ground dove	*Columbina passerina*	1
Couch's kingbird	*Tyrannus couchii*	2
Crested caracara	*Caracara plancus*	1
Eurasian collared dove	*Streptopelia decaocto*	2
Golden-fronted woodpecker	*Melanerpes aurifrons*	2
Great-tailed grackle	*Quiscalus mexicanus*	15
Ladder-backed woodpecker	*Dryobates scalaris* 1	1
Lesser goldfinch	*Spinus psaltria*	12
Mourning dove	*Zenaida macroura*	4
Northern cardinal	*Cardinalis cardinalis*	2

Common Name	Scientific Name	Number Of Individuals Observed
Northern mockingbird	*Mimus polyglottos*	2
Northern-beardless tyrannulet	*Camptostoma imberbe*	1
Olive sparrow	*Arremonops rufivirgatus*	2
Painted bunting	*Passerina ciris*	1
Red-winged blackbird	*Agelaius phoeniceus*	1
Summer tanager	Summer tanager *Piranga rubra* 2	2
Turkey vulture	Turkey vulture *Cathartes aura* 3	3
Western kingbird	Western kingbird *Tyrannus verticalis* 1	1
Gopher	*Geomys* sp.	~50 mounds
Vole	*Microtus* sp.	1
White-tailed deer	*Odocoileus virginianus*	5
Black phaenaeus	*Phanaeus triangularis*	1
Bordered patch	*Chlosyne lacinia*	3
Ceraunus blue	*Hemiargus ceraunus*	1
Cloudless sulphur	*Phoebis sennae*	2
Green june bug	*Cotinis nitida*	2
Green-striped grasshopper	*Chotophaga viridifasciata*	3
Swallowtail	*Battus philenor*	1
Queen butterfly	*Danaus gilippus*	4
Red harvester ant	*Pogonomyrmex barbatus*	2 nests
Spinybacked orbweaver	*Gasteracantha cancriformis*	2
Sumichrast toothpick grasshopper	*Achurum sumichrasti*	1
Texas millipede	*Orthoporus texicolens*	4
Tropical orbweaver	*Eriophora ravilla*	1
Yellow garden spider	*Argiope aurantia*	1
Western giant swallowtail	*Papilio rumiko*	2
Great Plains skink	*Plestiodon obsoletus*	1
Keeled earless lizard	*Holbrookia propinqua*	8
Little brown skink	*Scincella lateralis*	2
Northern cat-eyed snake	*Leptodeira septentrionalis*	1
Six-line racerunner	*Aspidoscelis sexlineatus*	12
Spotted whiptail	*Aspidoscelis gularis*	1
Texas horned lizard	*Phrynosoma cornutum*	1
Texas prairie lizard	*Sceloporus consobrinus*	4
Western diamondback rattlesnake	*Crotalus atrox*	2

3.5.2. Environmental Consequences

3.5.2.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

A half an acre of wildlife habitat would be permanently impacted by the Proposed Action and approximately 25 acres would be temporarily impacted by construction during the installation and decommissioning of the towers. However, these impacts would be considered minor, as the project components occur in, near, and within previously disturbed areas, and the wildlife habitat is locally and regionally common. All temporarily impacted areas would be allowed to naturally revegetate.

Noise associated with the replacement tower and access drive construction, access road maintenance, and repair would result in temporary, negligible impacts on wildlife. Elevated noise levels associated with construction and maintenance activities would occur. The impacts of this disturbance would include temporary avoidance of work areas and competition for unaffected resources. BMPs outlined in Section 5.0 would reduce noise associated with operation of heavy equipment.

Noise levels associated with the operation and maintenance of the tower would have a permanent, negligible impact on wildlife species. The permanent increase in noise levels associated with operation at the tower site (i.e., generators) would be sporadic, only occurring when this equipment is operating. It is anticipated that wildlife would become accustomed to these intermittent and minimal increases in noise and that subsequent avoidance of the tower, and any adjacent habitats would be minor.

There is a possibility that the proposed replacement tower could pose hazards to migratory birds and even some bird mortality through bird strikes with the tower or guy wires. The loss of a few individual birds from the tower operation would not adversely affect the population viability or fertility of bird species in the region. The number and extent of bird strikes in relation to the size of migratory bird populations and the extent of the migratory flyway would be minor and would not affect sustainability of migratory bird populations in the region. The Proposed Action would, however, have a long-term, negligible adverse impact on migratory birds.

BMPs would be implemented to reduce disturbance and loss of wildlife such as surveys prior to construction activities scheduled during nesting season and covering or providing an escape ramp for all steep-walled holes or trenches left open at the end of the construction workday. Guy wires would have visual markers on them to alert birds of the wires' presence. The proposed replacement tower could provide raptor perch and nesting sites, but BMPs would also be used to discourage this activity.

3.5.2.2. No Action Alternative

The No Action Alternative would preclude the installation, construction, operation, and maintenance of a replacement tower, equipment, or access roads, and wildlife habitat on the site would not be altered.

3.6. THREATENED AND ENDANGERED SPECIES

3.6.1. Affected Environment

The Endangered Species Act (ESA) was enacted to protect and recover imperiled species and the ecosystems upon which these species (endangered and threatened) depend for their survival. All Federal agencies are required to implement protective measures for designated species and to use their authorities to further the purposes of the ESA. The Secretary of the Interior and the Secretary of Commerce (marine species) are responsible for the identification of threatened or endangered species and development of any potential recovery plan. USFWS is the primary agency responsible for implementing the ESA and is responsible for birds and other terrestrial and freshwater species. USFWS responsibilities under the ESA include (1) the identification of threatened and endangered species; (2) the identification of critical habitats for listed species; (3) implementation of research on, and recovery efforts for, these species; and (4) consultation with other Federal agencies concerning measures to avoid harm to listed species.

An endangered species is a species officially recognized by USFWS as being in danger of extinction throughout all or a significant portion of its range. A threatened species is a species likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Proposed species are those that have been formally noticed in the Federal Register by the applicable agency (USFWS or National Marine Fisheries Service) for official listing as threatened or endangered.

A biological survey of the TX13487 tower site was conducted by GSRC during July 2022. These investigations included surveys for all Federal and State listed species potentially occurring at or near the proposed tower site. CBP coordinated with the USFWS regarding the potential impacts as they relate to the construction, operations, maintenance, and decommissioning activities at the tower site. The USFWS concurred with CBP's determinations for all species (Appendix A).

3.6.2. Federally Listed Species – Brooks County

Four (4) Federally protected species are known to occur within Brooks County, Texas (U.S. Fish & Wildlife Service, IPaC Information for Planning and Consultation, 2022). One mammal, the Ocelot (*Leopardus pardalis*) and three birds; the endangered Northern Aplomado falcon (*Falco femoralis septentionalis)* the threatened Piping plover (*Charadrius melodus*), and the threatened Red Knot (*Calidris canutus rufa*). Both the piping plover and red knot are only affected by wind projects during the flyover period of the migration season.

Table 3-4. List of Federally Listed Threatened And Endangered Species That Potentially Occur Within Or In Proximity To The Project Area

Species Name	Status	Habitat	Potential Habitat	Critical Habitat (2 miles or less)	Effects Determination	Rationale
Ocelot *(Leopardus (Felis) pardalis)*	E	Commonly active during Require dense vegetation cover, high prey availability, and proximity to water sources.	No	No	No Effect	The ocelot's presence in the project area is unlikely due to the absence of suitable habitat and lack of connectivity of the project area to potentially suitable habitat patches.
Northern Aplomado Falcon *(Falco femoralis septentrionalis)*	E	Open grassland terrain with scattered trees, relatively low ground cover, an abundance of small to medium-sized birds, and a supply of suitable nesting platforms, particularly yuccas and mesquite. Typical habitat ranges in elevation from 1,189 to 2,743 m (3,500 to 9,000 ft). Woody vegetation, fence posts, and telephone poles serve as perches.	No	No	No Effect	The Northern Aplomado Falcon's presence is unlikely due to the lack of established breeding populations in the vicinity of the project area.
Piping Plover *Charadrius melodus*	T	Only considered for wind related projects within migratory route.	No	No	No Effect	Habitat not present.
Red Knot *Calidris canutus rufa*	T	Only considered for wind related projects within migratory route.	No	No	No Effect	Habitat not present.
Monarch Butterfly *Danaus plexippus*	C	Requires milkweed.	Yes	No	No Effect	The presence of the Monarch Butterfly is unlikely due to the lack of milkweed present at the site.

E = Endangered; T = Threatened; C = Candidate

The habitat within the survey area is best classified as sandy prairie interspersed with a mosaic of honey mesquite (*Prosopis glandulosa*) and Texas live oak (*Quercus fusiformis*). No federally protected species listed under the ESA were observed during the biological surveys. The project area is not located within designated Critical Habitat for any Federally listed species. In addition, no active bird nests were observed during MBTA surveys.

3.6.3. State Listed Species

Texas Plants and Wildlife Department currently lists 52 species of wildlife and 21 plants species as rare, threatened or endangered under Texas Administrative Codes §65.175 and §65.176 (TPWD - Texas Parks & Wildlife Division, 2022a) that have the potential to occur within Brooks County (Appendix B). Three state listed threatened animal species were encountered during the biological surveys: the northern beardless tyrannulet (*Camptostoma imberbe*), Texas horned lizard (*Phrynosoma cornutum*), and northern cat-eyed snake (*Leotoderia septentrionalis)*.

3.6.4. Environmental Consequences

3.6.4.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

Under the Proposed Action, the installation of the replacement tower and equipment and decommissioning of the existing tower would not cause the removal of any suitable habitat for Federally protected species. CBP made the determination of "no effect" for the ocelot (*Leopardus (=Felis) pardalis*), Northern aplomado falcon (*Falco femoralis septentrionalis*), piping plover (*Charadrius melodus*), and red knot (*Calidris canutus rufa*). USFWS reviewed CBP's Section 7 letter and believes that CBP has complied with Section 7(a)(2) of the Endangered Species Act of 1973, as amended. Impact to state listed species would be minor and temporary. BMPs would be implemented to offset potential adverse impacts to state listed species.

3.6.5. No Action Alternative

3.6.6.

The No Action Alternative would preclude the installation, construction, operation, and maintenance of a replacement tower, equipment, or access roads. No adverse impacts on Federally listed endangered species or state listed species would occur as construction activities would not occur.

3.7. CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act (NHPA) of 1966 requires Federal agencies to consider the effects of their undertakings on historic properties. Historic properties are properties that are included in the National Register of Historic Places (NRHP) or that meet the criteria for the National Register. Such properties can be buildings, structures, objects, sites, or districts.

Cultural resources are prehistoric and historic sites, structures, districts, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for traditional, religious, scientific, or any other reason. Cultural resources are discussed here in terms of archeological sites including both prehistoric and historic occupations, architectural resources (i.e., standing structures), and Properties of Religious or Cultural Significance to Native American Tribes including Traditional Cultural Properties (TCPs). Historic properties, as defined by the NHPA, represent the subset of cultural resources listed on, or eligible for, inclusion in the NRHP.

Procedures for the identification, evaluation, and treatment of cultural resources are contained in a series of federal and state laws and regulations and agency guidelines. Archeological, architectural, and Native American resources are protected by a variety of laws and their implementing regulations: the NHPA of 1966, as amended in 2016 and codified in Title 54 of the U.S.C. the Archeological and Historic Preservation Act of 1974; the Archeological Resources Protection Act (ARPA) of 1979; the American Indian Religious Freedom Act (AIRFA) of 1978; and the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990. The Advisory Council on Historic Preservation (ACHP) further guides treatment of archeological and architectural resources through the implementing regulations for Section 106 of the NHPA (54 U.S.C. 306108), 36 CFR 800, Protection of Historic Properties.

3.7.1. Affected Environment

3.7.1.1. Previous Investigations

A records search was conducted by a Secretary of Interior (SOI) qualified individual by remote terminal of the *Texas Historic Sites Atlas (Atlas)*, maintained by the Texas Historical Commission (SHPO). The records search was conducted by an SOI prior to the initiation of fieldwork to identify previously conducted cultural resources investigations, previously recorded archeological sites, and previously recorded NRHP-listed or eligible aboveground resources. In addition, records searches were complete for other resources that may have been recorded as part of the Texas Historic Sites Inventory or other local survey, such as Recorded Texas Historic Landmarks (RTHLs), Official Texas Historic Markers (OTHMs), and recorded Historic Texas Cemeteries (HTCs). A visual Area of Potential Effect (APE) (approximately 1.50-mile radius) was used in the records search based upon tower height.

Five previously conducted archeological investigations are on record with the *Atlas* within the 1.5-miles radius of the TX13487 tower site (Table 3-5). All these investigations were surveys and most of them were associated with projects along U.S 281 to the west of the project area. Only one of those investigations overlaps with the current survey area, 8500025595.

Table 3-5 Previously Conducted Archeological Investigations within 1.5-mile of the TX13487 Tower Replacement Project Area of Potential Effect

Atlas Number	Title/Sponsor	Project Type	Texas Antiquities Commission Permit	Sites Discussed
8400001192	Texas A&M University	Survey	NA	NA
8500000699	Texas Department of Highways and Public Transportation	Survey	NA	NA
8500025595	Towers (CBP)	Survey	NA	NA
8500058346	Cultural Resources Investigations for the Construction, Operation, and Maintenance of the U.S. Customs and Border Protection Falfurrias Traffic Checkpoint, Brooks County, Texas	Survey	6689	None
8500061069	Falfurrias Checkpoint (CBP)	Survey	NA	NA

Towers (8500025595)

One of the previously conducted archeological survey falls entirely within the TX13487 replacement tower APE, 8500025595. This project is referred as "Towers" in the *Atlas* entry and was performed by Northland Research, Inc. for CBP in 2012. Given its size and placement, it most likely represents the survey of the expansion of the tower footprint, excluding the guy wires, for the existing TX13487 tower that is being replaced. No abstract number is associated with this record and no additional information about the survey was available in the *Atlas*. No archeological sites are depicted within the survey project footprint and the survey was probably negative for cultural resources.

Previously Recorded Archeological and Historic Resources

No previously recorded archeological resources, OTHMs, RTHLs, or HTCs were on record within the *Atlas* within 1.5-miles of the proposed replacement TX13487 project APE. Both the new replacement tower and the existing tower to be removed are located within the King Ranch National Historic Landmark (GSRC., 2022b).

3.7.2. Environmental Consequences

3.7.2.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

In compliance with Section 106, CBP, in consultation with the SHPO determined the APE for the undertaking consists of the combined footprints of the existing and proposed replacement towers and associated temporary work areas, ingress and egress routes, and estimated guy wire anchor points.

The archeological APE of 25 acres includes any areas of ground disturbance. This includes the new replacement tower footprint itself inclusive of the estimated guy wires and anchor points and the area associated with the removal of the existing tower including the tower footprint itself and its guy wire anchors which are estimated to extend from 175 to 350 feet from the existing tower site. The combined existing and replacement tower footprints constitute the APE for the project. An archeological survey conducted by GSRC within the APE identified no archeological sites either from the surface or within the 41 shovel test pits excavated within the tower footprint. (GSRC., 2022b).

A 1.5-mile visual APE was used for assessing potential visual effects on aboveground resources. The project footprint falls within the King Ranch National Historic District which could be affected by the proposed undertaking. The King Ranch National Historic District is listed on the National Register of Historic Places (NRHP) and is also a National Historic Landmark. An architectural survey conducted by GSRC of the APE identified two newly recorded aboveground architectural historical resources, the La Becerra Windmill and Stock Pond. Neither of the resources had sufficient significance to be recommend eligible for listing in the NRHP (GSRC, 2022b).

Section 110 of the NHPA requires CBP, to the maximum extent possible, to undertake such planning and actions as may be necessary to minimize harm on Historic Districts and National Historic Landmarks. CBP has ensured that the replacement tower will be similar in size and design to the existing tower. Once the replacement tower is operational, the existing tower would be removed. As a result, CBP and the SHPO have determined the undertaking would have No Adverse Effect on the King Ranch Historic District and National Historic Landmark and no adverse effects on cultural resources would be anticipated at the TX13487 site from the implementation of the Proposed Action.

While it is unlikely that unanticipated archeological sites and/or human burials will be encountered during construction, BMPs would include construction contract language that identifies a process for unanticipated archeological sites or human burials that may be discovered during construction.

3.7.2.2. No Action Alternative

The No Action Alternative, which would leave the existing tower in place, would have No Effect on King Ranch Historic District and National Historic Landmark or on cultural resources.

3.8. AIR QUALITY

3.8.1. Affected Environment

The USEPA established National Ambient Air Quality Standards (NAAQS) for specific pollutants determined to be of concern with respect to the health and welfare of the general public. Ambient air quality standards are classified as either "primary" or "secondary." The major pollutants of concern, or criteria pollutants, are carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone (O_3), particulate matter less than 10 microns (PM-10),

particulate matter less than 2.5 microns (PM-2.5) and lead. NAAQS represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect the public health and welfare. Areas that do not meet these NAAQS standards are called non-attainment areas; areas that meet both primary and secondary standards are known as attainment areas. Brooks County is in attainment for all NAAQS (USEPA, 2022).

3.8.2. Environmental Consequences

3.8.2.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

Construction Air Emissions:

Temporary and minor increases in air pollution would occur from the use of construction equipment (combustion emissions) and the disturbance of soils (fugitive dust) during tower construction. Particulate emissions would occur because of construction activities such as vehicle trips on unimproved roads, bulldozing, compacting, truck dumping, and grading operations. Emission factors attributable to Non-Road Equipment were generated using the CARB emissions factors contained in Title 13, California Code of Regulations, Chapter 9 (13 CCR 9), §2433(b), (California Air Resources Board (CARB), 1999) . Combustion emission calculations were made for standard construction equipment, such as front-end loaders, backhoes, cranes, and cement trucks. Assumptions were made regarding the total number of days each piece of equipment would be used and the number of hours per day each type of equipment would be used. The analysis indicates Non-Road Air Emissions related to construction activities would not exceed the thresholds established in 30 TAC §116.164(a)(2)

Table 3-6 Total Air Emissions from the Proposed Action Construction (TPY) versus the *de Minimis* Threshold Levels

Pollutant	Total (tons/year)	*De minimis* Thresholds (tons/ year)
CO	2.65	100
Volatile Organic Compounds (VOC)	0.586	50
Nitrous Oxides (NOx)	4.99	100
PM-10	0.129	100
PM-2.5	0.0129	100
SO_2	0.0126	100
CO_2 and CO_2 Equivalents	1239	25,000

Mobile (On-Road) Air Emissions:

Construction workers would temporarily increase the combustion emissions in the airshed during their commute to and from the project area. Emissions from delivery trucks would also contribute to the overall air emission budget. Emissions from delivery trucks and construction worker commuters traveling to the job site were generated using the South Coast Air Quality Management Emissions Factors for On-Road Passenger Vehicles and Delivery Trucks (EMFAC

2007) for scenario years 2007-2026 (South Coast Air Quality Management District, SCAQMD, 2007) (Table 3-7). The analysis indicates On-Road Air Emissions related to mobile activities would not exceed the thresholds established in 30 TAC §116.164(a)(2)

Table 3-7 On-Road Emissions (TPY) versus the *de minimis* Threshold Levels

Pollutant	Total (tons/year)	*De minimis* Thresholds (tons/ year)
CO	0.033	100
Volatile Organic Compounds (VOC)	0.005	50
Nitrous Oxides (NOx)	0.039	100
PM-10	0.002	100
PM-2.5	0.001	100
SO_2	0.0001	100
CO_2 and CO_2 Equivalents	18.449	25,000

Operational Air Emissions:

Operational air emissions refer to air emissions that may occur after the tower has been constructed, such as maintenance and the use of generators. Generator run times for systems connected to the commercial power grid would be limited to 1 to 5 hours once per month for maintenance purposes. System conditioning would occur during off-grid operational schedules or if grid power is interrupted, and generators would temporarily be operated, as needed, until grid power is again available.

3-8 Operational Air Emissions (TPY) versus the de minimis Threshold Levels

Pollutant	Total (tons/year)	*De minimis* Thresholds (tons/ year)
CO	0.038	100
Volatile Organic Compounds (VOC)	0.009	50
Nitrous Oxides (NOx)	0.0625	100
PM-10	0.0019	100
PM-2.5	0.00019	100
SO_2	0.00018	100
CO_2 and CO_2 Equivalents	18.33	25,000

The emergency generator meets the requirements and emissions limits set under 30 TAC §106.4 and §106.511 and is therefore permitted by rule.

Air emissions associated with the Proposed Action do not meet or exceed the named or un-named thresholds established in 30 TAC §116.164(a)(2). Therefore, Prevention of Significant Deterioration (PSD) review is not required.

3.8.2.2. No Action Alternative

The No Action Alternative would not result in any direct impacts on air quality associated with construction. However, operations and maintenance impacts would be like those associated with the Proposed Action. USBP's detection and threat classification capabilities would not be enhanced, and operational efficiency would not be improved within the area of tower coverage.

3.9. NOISE

3.9.1. Affected Environment

Noise is generally described as unwanted sound, which can be based either on objective effects (i.e., hearing loss, damage to structures) or subjective judgments (e.g., community annoyance). Sound is usually represented on a logarithmic scale in a unit called the decibel (dB). Sound on the decibel scale is referred to as sound level. The perceived threshold of human hearing is 0 dB, and the threshold of discomfort or pain is around 130 dB. The A-weighted sound level (dBA) is a measurement of sound pressure adjusted to conform to the frequency response of the human ear (California Public Utilities Commission, 2013).

Background Sound Conditions:

The background sound level is selected as the baseline for evaluating construction noise impacts based on existing site conditions. The background sound level is a composite of sound from all sources including anthropogenic sources. Background sound levels vary depending on the level of development. Urban areas have the highest background sound levels, with daytime levels approximating 60 to 65 dBA. Suburban or residential areas have background levels around 45 to 50 dBA, while rural areas are the quietest with sound levels of 35 to 40 dBA (U.S. Environmental Protection Agency, 1978). Background noise levels are often influenced by noise intrusions from traffic and aircraft overflights ranging from 45 dBA to 72 dBA. The level of highway traffic noise depends upon traffic volume, the vehicle speeds, and the mix of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased when traffic is heavier, when traffic speed is increased, and then a greater proportion of the traffic flow is heavy trucks (U.S. Department of Transportation [USDOT], 2017).

Brooks county is predominately rural with a population density of less than 100 people per square mile (U.S. Census Bureau, 2020); without background traffic noise, the site's background sound level would be approximately 35 dBA (U.S. Department of Transportation [USDOT] Federal Transit Administration (FTA], 2018). The noise level at the site is affected by Highway 281 which is approximately 1,600-feet away. Noise models calculated the background noise level at the site, incorporating traffic noise, to be 60 dBA. The 60 dBA criterion threshold is used to measure the impacts from short-term noise emissions associated with constructing the proposed tower and associated infrastructure. For long-term noise emissions this 60 dBA threshold is used to measure the impacts from noise emissions associated with tower operations and maintenance.

To determine the distance point source construction noise will travel before it attenuates to the background sound level; the following equation is used:

$$D = Do * 10^{((\text{Traffic Noise} - \text{Ambient Sound Level in dBA})/\alpha))}$$

Where D = the distance from the traffic noise
D_o = the reference measurement distance (50 feet in this case)
α = 25 for soft ground. For line source noise, a cylindrical spreading loss model is used. These alpha (α) values assume a 7.5 dBA reduction per doubling distance over soft ground.

3.9.2. Environmental Consequences

3.9.2.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

Short-Term Construction Noise Emissions:

The construction of the tower and associated infrastructure would require the use of common construction equipment. Table 3-9 describes noise emission levels for construction equipment that range from 68 dBA to 91 dBA at a distance of 50-feet (U.S. Department of Transportation [USDOT], Federal Highway Admnistration [FHWA], 2006).

Table 3-9. Average maximum noise levels at 50-ft. from common construction equipment

Equipment Description	Actual Measured Average L_{max} at 50-feet
Pickup truck	75
Combination tractor	84
Trencher	85
Dozer	86
Concrete mixer truck	82
Crane	79
Drill rig	79
Dump truck	91
Excavator	87
Front-end loader	81
Generator	68

Source: FHWA 2006

Assuming the worst-case scenario of 92 dBA if all general construction equipment were operating together, the noise model predicts that noise emissions would have to travel approximately 1,145-ft. before they would be attenuated to background levels (60 dbA). No sensitive noise receptors (i.e., residential houses, wildlife refuges, etc.) are within a 1,145-foot radius of the tower site. Noise generated at the site by the construction activities would be intermittent and last for approximately 30 days, after which noise levels would return to background levels. To minimize impacts, construction activity would be limited to daylight hours, between 7-am to 5-pm on

Monday through Friday. The noise impacts from construction activities would be adverse to the area; however, these impacts would be temporary and minor.

Long-Term Operational Noise Emissions:

Long-term noise emissions refer to noise emission's that would occur after the replacement tower has been installed. The tower would be connected to commercial grid power. It would also have a propane generator installed for backup power. The propane generator would be expected to operate a total of 1 to 5 hours twice per month for maintenance purposes. While in operation, the generator dBA would be 68 at 50 feet from the source. System conditioning would occur during off-grid operational schedules or if grid power is interrupted, and the generator would be operated temporarily, as needed, until grid power is again available. The noise impacts from ongoing tower activity would be adverse to the area; however, these impacts would be temporary and minor.

3.9.2.2. No Action Alternative

Under the No Action Alternative, the TX13487 tower site and its surrounding area would experience no temporary increase in noise during construction activities. The area would continue to experience long-term, minor operational and maintenance noise from the existing tower.

3.10. HAZARDOUS MATERIALS

3.10.1. Affected Environment

Hazardous materials are substances that cause physical or health hazards (29 CFR 1910.1200). Materials that are physically hazardous include combustible and flammable substances, compressed gases, and oxidizers. Health hazards are associated with materials that cause acute or chronic reactions, including toxic agents, carcinogens, and irritants. Hazardous materials are regulated in Texas by a combination of mandated laws promulgated by the USEPA and the Texas Commission on Environmental Quality (TCEQ)

A search of USEPA's Superfund Enterprise Management System (SEMS) and NEPAssist, and TCEQ's Central Registry was conducted for the tower site. The EPA databases contain information on hazardous waste sites, potentially hazardous waste sites, and remedial activities, including sites that are on the National Priorities List (NPL) or being considered for the NPL. The search found no active NPL sites within a 1-mile radius of the TX13487 tower site. The TCEQ Central Registry also found negative results within the area of the replacement tower location. Additionally, during the biological and cultural resources surveys conducted by GSRC, no evidence of hazardous waste or materials (e.g., drums, soil staining) were observed at the tower site.

3.10.2. Environmental Consequences

3.10.2.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

Construction Activities:
Construction of the replacement tower and associated infrastructure would involve the use of heavy equipment. There is a potential for the release of hazardous materials such as fuels, lubricants, hydraulic fluids, and other chemicals. The impacts from spills of hazardous materials during construction would be minimized by utilizing BMPs such as fueling only in controlled and protected areas away from surface waters, maintaining emergency spill cleanup kits during fueling operations, maintaining all equipment in good operating condition to prevent fuel and hydraulic fluid leaks, and providing stormwater runoff protection. Cleanup materials (e.g., oil mops) would be maintained at the site during construction activities for appropriate spill response and cleanup in case an accidental spill occurs. Drip pans would be provided for any stationary equipment to capture any POL that is accidentally spilled during maintenance activities or leaks from equipment. To ensure oil pollution prevention, the construction contractor would have a Spill Prevention, Control, and Countermeasure Plan in place prior to the start of construction activities.
All waste would be disposed of in compliance with Federal, state, and local regulations, and in accordance with contractors' permits. The Proposed Action would have a temporary, minor impact on the environment due to the implementation of BMPs and incorporation of federal and state guidelines.

Maintenance and Operations Activities:
All solid and hazardous wastes and materials, including universal waste (i.e., batteries, motor oil), would be handled in accordance with applicable Federal and state laws and guidelines governing these items. Additionally, hazardous material handling guidelines would be included as part of the maintenance plan for the communication site. These guidelines would include spill prevention and spill response measures. The Proposed Action would have a temporary, minor impact on the environment due to the implementation of BMPs and incorporation of federal and state guidelines.

3.10.2.2. No Action Alternative

The No Action Alternative would not contribute any hazardous waste or materials to the project area through the construction of communication tower. However, ongoing maintenance and operations activities of the existing tower would have impacts like those of the Proposed Action.

3.11. Climate Change

3.11.1. Affected Environment

Under Executive Order 14008 on Tackling the Climate Crisis and Home and Abroad, it is federal policy to incorporate climate considerations into decision-making and build resilience against the impacts of climate change.

A proposed project should consider the likely impacts of climate change on the project's short- and long-term suitability and resilience. Many natural systems are expected to be affected by climate change, so these considerations will be wide-ranging.

The frequency and severity of natural hazards may be affected by climate change, including:

- Flooding
- Sea level rise
- Hurricanes and extreme storms
- Drought
- Extreme heat
- Wildfire
- Landslides
- Extreme cold (e.g., from "polar vortex" destabilization)

Similarly, climate change may alter site suitability factors, such as:

- Air quality
- Urban heat island effects
- Soil stability
- Water resources

It is DHS policy to integrate climate change into DHS missions, assets, and personnel; by adapting operations to account for climate change and mitigate any additional harm; by reducing greenhouse gas emissions, promoting resilience, and reducing the multiple risks posed by the climate crisis. Climate change endangers national security and DHS's mission of safeguarding the American people, our homeland, and our values. Changing climate conditions threaten critical DHS mission essential facilities and assets and the continuity of the mission essential functions they perform throughout the U.S. and territories. Anticipated climate impacts on DHS facilities and infrastructure include higher average temperatures, changing precipitation patterns, rapid Arctic change, more frequent severe storm events, rising sea levels, increased coastal flooding, increases in wildfires, and ecosystem degradation (DHS, 2021).

According to the Fourth National Climate Assessment, "global climate is changing rapidly compared to the pace of natural variations in climate that have occurred throughout Earth's history." Sea-level rise, extreme weather events, drought, changes in migration patterns, workforce health, and other direct, indirect, and cumulative impacts of climate change will affect essential functions and supporting infrastructure across the United States (USGCRP, 2018).

The Texas climate is characterized by hot summers and mild to cool winters. Three geographical features largely influence the state's varied climate: the Rocky Mountains block intrusions of moist Pacific air from the west and tend to channel arctic air masses southward during the winter; the relatively flat central North American continent allows easy north and south movement of air masses; and the Gulf of Mexico serves as the primary source of moisture, which is most readily available to the eastern part of the state. As a result of these factors, the state exhibits large east-west variations in precipitation and is subject to frequent and varied extreme events, including hurricanes, tornadoes, droughts, heat waves, cold waves, and extreme precipitation. Due to rapid population growth, especially in urban areas, increased demand for limited water supplies may increase Texas's vulnerability to naturally occurring droughts (NCICS, 2022).

Temperatures in Texas have risen almost 1.5˚F since the beginning of the 20th century. While there is no overall trend in extremely hot days, the number of very warm nights was particularly high during the 2010s. The summer of 2011 was the warmest summer on record (since 1895) and broke the state record for highest average number of days with temperatures of 100°F or more (NCICS, 2022).

Texas is consistently ranked in the top 10 states affected by extreme climate events. In 2020, the state was hit by eleven of the nation's billion-dollar disasters. The three most impactful events were drought, extreme heat, and wildfires. The warmest and the driest summer in the historical record helped fuel the worst wildfire season since statewide records began (approximately 1990), with nearly 4 million acres burned and almost $750 million in damages. Since the creation of the United States Drought Monitor Map in 2000, Texas has been completely drought-free for approximately 8% of the time (2000–2014), and at least half of the state has been under drought conditions for approximately 42% of the same period. Higher temperatures and drought conditions are likely to increase the severity, frequency, and extent of wildfires in the future, threatening significant harm to property, human health, and the livelihood of residents (NCICS, 2022).

In the 1990s and early 2000s, the number of 3-inch extreme precipitation events was above average, and after the dry period of 2005– 2014, they were well above average during the 2015–2020 period. The five wettest months on record have all occurred since the year 2000, led by 9.1 inches in May 2015 (NCICS, 2022).

Over the period of 1900 to 2020, Texas endured more than 85 tropical storms and hurricanes (about 3 storms every 4 years); approximately half of them (46) were hurricanes. Since 2000, Texas has experienced 19 named storms, including 8 destructive hurricanes, with Hurricane Harvey (Category 4), Hurricane Rita (Category 3), and Hurricane Ike (Category 2) causing the most significant damage (NCICS, 2022).

The frequency of hurricanes along any fifty-mile segment of the Texas coast is one about every six years. Annual probabilities of a strike along a fifty-mile segment range from 31% at Sabine Pass to 41% around Matagorda Bay. The annual average occurrence of a tropical storm or hurricane per year is 0.8, or 3 per every 4 years. Since 1829, the longest hurricane-free period for

Texas was nearly 10 years: between October 1989 and August 1999. In contrast, one or more hurricanes affected the coast each year from 1885 to 1888. In 1886, four hurricanes struck the Texas coast with the first and last both hitting Sabine Pass. By far, the most serious threat from a tropical cyclone to Texas residents is flooding. And the worst thing about it is that the weaker the system is, the more efficient it is at producing heavy rains and catastrophic flooding (NCICS, 2022).

Brooks County, Texas has experienced a variety of weather since 1900, impacting people, communities, and geographies. In the most recent month, March 2023, the average temperature in Brooks County was 73°F, which is 6°F warmer than average when compared to all Marchs. The largest temperature difference was recorded in December 2021 where temperatures were 12°F warmer. The 12-month total precipitation decreased 2.9 inches from March 1900 to March 2023. From March 1900 to March 2023, the average 12-month total precipitation was 23.8 inches (NCEI-NOAA, 2023).

The Office of the Texas State Climatologist predicts the following extreme weather trends for Brooks County. Increase in yearly temperature of 0.70 -0.75 degrees (1975-2018), 5-10% increase in precipitation (1895-2018), 10-20% increase in the 100-year one-day storm event (1960-2017) (TAMU, 2020).

3.11.2. Environmental Consequences

3.11.2.1. Alternative 1: Replacement Tower New Location (Preferred Alternative)

Temporary and minor increases in GHG emissions would occur from the use of construction equipment (combustion emissions) during construction (see Section 3.9). The analysis indicated the Proposed Action would generate 390 Tons of CO2e. This anticipated level does not exceed the potential to emit of 75,000 tpy or more CO2e.

While difficult to predict, climate impacts most likely to affect the proposed action are wildlife and events associated with tropical storms and hurricanes (high winds and localized flooding). Driving these events are projected increases in temperature and precipitation. At approximately 80 miles from the Gulf Coast (Corpus Christi), the probability of tropical force winds and localized flooding is a distinct possibility over the lifespan of the proposed action. Increased temperatures and heat indices have the potential to result in prolonged drought conditions that could result in wildfires.

The tower site is located in FEMA Flood Zone X (Area of minimal flood hazard). In building the new tower, CBP will follow the guidelines contained in ANSI/TIA/EIA/222-H – Structural Standard for Antenna Supporting Structures, Antenna and Small Wind Support Structures. The standard incorporates revised Wind maps with ultimate wind speeds based on risk category. Revision H has updated load factors to account for the ultimate wind speeds and ground elevation factors.

To prevent or mitigate the effects of wildfires, CBP will create a 25- foot fire break around the site outside the chain link to help protect the tower infrastructure from fire. The area within the fenced perimeter will be clear of vegetation buildup.

3.11.2.2. No Action Alternative

The No Action Alternative would not result in any direct impacts on climate change because there would be no construction activities. Impacts from Climate Change and extreme weather events would be like those predicted for the Preferred Alternative. Given the structural condition of the existing tower and primary reason for its replacement, wind loading associated with tropical storms or hurricanes could result in an adverse effect to the tower structure.

4.0 CUMULATIVE IMPACTS

This section of the final EA defines cumulative impacts, identifies past, present, and reasonably foreseeable projects relevant to cumulative impacts, and analyzes the potential cumulative impacts associated with the implementation of the Proposed Action and other projects/programs planned within Brooks County.

4.1 Definition of Cumulative Impacts

The CEQ defines cumulative impacts as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR § 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period by various agencies (Federal, state, or local) or individuals. CEQ guidance on cumulative impacts requires the definition of the scope of the other actions and their interrelationship with the Proposed Action (CEQ 1997). The scope must consider geographic and temporal overlaps with the Proposed Action and all other actions occurring within the ROI. Informed decision making is served by consideration of cumulative impacts resulting from activities that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably foreseeable future.

This analysis of cumulative impacts summarizes expected environmental impacts from the combined impacts of past, current, and reasonably foreseeable future activities affecting any part of the human or natural environment impacted by the Proposed Action. Activities were identified for this analysis by reviewing CBP and USBP documents, news/press releases, and published media reports, and through consultation with planning and engineering departments of local governments and state and Federal agencies.

4.2 Past Impacts within the Region of Influence

The ecosystems within the ROI have been significantly impacted by historical and ongoing activities such as ranching, livestock grazing, mining, agricultural development, cross-border violator activity and resulting law enforcement actions, and climate change. All these actions have, to a greater or lesser extent, contributed to several ongoing threats to the ecosystem, including loss and degradation of habitat for both common and rare wildlife and plants and the proliferation of roads and trails due to cross-border violator activity and resulting law enforcement actions.

Past CBP projects regulated by NEPA include:

- Construction, operation, and maintenance of existing TX13487 tower
- Construction, operation, and maintenance of the USBP FLF Traffic Checkpoint

***Current and Reasonably Foreseeable CBP Projects within and near the ROI*:**

USBP has conducted law enforcement actions along the border since its inception in 1924 and has continuously transformed its methods as new missions, modes of operations of cross-border violators, agent needs, and national enforcement strategies have evolved. Development and maintenance of training ranges, station and sector facilities, detention facilities, roads, and fences have impacted thousands of acres, with synergistic and cumulative impacts on soil, wildlife habitats, water quality, and noise. Beneficial impacts, too, have resulted from the construction and use of these roads and fences, including, but not limited to, increased employment and income for border regions and its surrounding communities; protection and enhancement of sensitive resources north of the border; reduction in crime within urban areas near the border increased land value in areas where border security has increased, and increased knowledge of the biological communities and prehistory of the region through numerous biological and cultural resources surveys and studies.

With continued funding and implementation of CBP's environmental conservation measures, including use of biological monitors, wildlife water systems, and restoration activities, adverse impacts due to future and ongoing projects would be avoided or minimized. Recent, ongoing, and reasonably foreseeable proposed actions would result in cumulative impacts; however, the cumulative impacts would not be significant. CBP is currently planning, is conducting, or has completed several projects within the ROI:

- Maintenance and repair of existing communication and surveillance towers
- Maintenance and repair of tactical infrastructure
- Construction, operation, and maintenance of three Remote Video Surveillance System (RVSS) monopole towers.

In addition, other parties are currently planning or conducting several projects in the ROI and include the following:

- The Texas Department of Housing and Community Affairs Single Family HOME Housing to undertake necessary repairs, rehabilitation, and/or new construction of residential units within Brooks County
- USDA under the Rural Utilities and Community Facilities programs to undertake infrastructure improvements

4.3 Analysis of Cumulative Impacts

4.3.1 Land Use

A major impact would occur if any action were inconsistent with adopted land use plans or if an action would substantially alter those resources required for, supporting, or benefiting the current

use. Majority of the project area is currently undeveloped rangeland located in a rural area. Under the No Action Alternative, land use would not change. Although the Proposed Action would convert approximately 0.5-acres of undeveloped land to developed use, the decommissioning of the existing tower would convert approximately 0.5-acres of once developed land to its natural state. No other CBP actions would initiate an increase of development in immediate vicinity of the project area; therefore, the proposed action, when combined with past, present, and future actions in the area, would not be expected to result in a major cumulative adverse impact.

4.3.2 Soils

A major impact would occur if the proposed action worsened or promotes long-term erosion, if the soils are inappropriate for the proposed construction and would create a risk to life or property, or if there would be a substantial reduction in agricultural production or loss of prime farmland soils. The Proposed Action would permanently impact 0.5 acres of soils. Pre- and post-construction plans would include a Stormwater Pollution Prevention Plans that implement soil erosion control measures. The impact from construction of the new communication equipment, when combined with past and proposed projects in the region, would not be considered a major cumulative adverse effect relative to soil erosion and sedimentation.

4.3.3 Vegetation

The significance threshold for vegetation would include a substantial reduction in ecological processes, communities, or populations that would threaten the long-term viability of a species or result in the substantial loss of a sensitive community that could not be offset or otherwise compensated. The TX13487 tower site would permanently remove less than 0.5 acres of vegetation, most of which occurs near existing development. Although the placement of communication equipment at the tower site would impact minimal amounts of vegetation, the cumulative impacts on vegetation communities in south plains Texas from CBP tactical infrastructure projects, facilities projects, and land management activities from other agencies, are minimal to moderate, and result in the long-term degradation of plant communities.

4.3.4 Wildlife Resources

A major impact on wildlife and aquatic resources would occur if a substantial reduction in ecological processes, communities, or populations would threaten the long-term viability of a species or result in the substantial loss of a sensitive community that could not be offset or otherwise compensated. Under the No Action Alternative, no direct impacts on wildlife or wildlife habitats would occur. The wildlife habitat present in the project area is both locally and regionally common.

Therefore, due to the permanent impact of only 0.5-acres of habitat, in conjunction with other past, ongoing, and proposed regional projects, the amount of habitat potentially removed would be minor on a regional scale. Thus, the Proposed Action would not create a major cumulative impact on wildlife populations in the region.

4.3.5 Threatened and Endangered Species

Under the No Action Alternative, there would be no direct impacts on threatened or endangered species or their habitats as no construction activities would occur. However, the direct and long-term impacts of illegal border activities throughout the project area and surrounding areas would continue due to the creation of trails, damage to vegetation, and the promotion of the dispersal and establishment of invasive species which can result in catastrophic wildfires.
The construction, operation, and maintenance activities associated with the towers and road improvements, construction, and maintenance would either not likely adversely affect or not effect these species. Likewise, BMPs, which limit potential impacts on these species, would be in place during the construction of the Proposed Actions and would continue to be in place once the replacement tower is operational. Thus, when combined with other existing and proposed actions in the region, the Proposed Action would not result in major cumulative impacts on protected species or designated Critical Habitats. Any indirect, cumulative impacts on protected species would be negligible to minor.

4.3.1 Cultural Resources

No impacts on cultural resources would occur from construction and decommissioning activities under the No Action Alternative. The Proposed Action would not directly affect cultural resources or historic properties. Both the replacement tower and the existing tower to be removed are located within the NRHP listed King Ranch National Register Historic District and National Historic Landmark. The King Ranch National Register Historic District has historically been compromised with development such as oil and gas refineries. Therefore, when the Proposed Action is combined with other past, present, and future actions in the region, the Proposed Action would not result in major cumulative impacts on cultural resources or historic properties. Additionally, beneficial impacts in the form of increased knowledge of the past, including site density and distribution, would be realized because of the survey conducted.

4.3.2 Air Quality

No direct impacts on air quality would occur due to construction activities under the No Action Alternative. The emissions generated during the construction of the replacement tower, demolition of existing tower, and all associated road construction, repair, and improvement would not exceed Federal de minimis thresholds and would be short-term and minor. Generator emissions would be sporadic and would not exceed Federal de minimis thresholds. There would be a negligible long-term increase in vehicular traffic in the region's airshed because of maintenance trips. Therefore, the Proposed Action, when combined with other past, ongoing, and proposed actions in the region, would not result in major adverse cumulative impacts.

4.3.3 Noise

A major impact would occur if background noise levels permanently increased to over 60 dBA. Under the No Action Alternative, the project site and its surrounding would not experience construction noise; however, operational and maintenance noise would continue under the existing tower. Majority of the noise generated by the Proposed Action would occur during the construction of the replacement tower and associated infrastructure and the decommissioning of the existing tower. These activities would be temporary and intermittent and would not contribute to cumulative impacts of background noise levels. Operational and maintenance noise would also be intermittent and would not change background noise levels, given the existing tower is currently operational and requires maintenance. Therefore, the noise generated by the Proposed Action, when considered with other past, present, and future actions in the area, would not result in a major cumulative adverse impact.

4.3.4 Hazardous Materials

Major impacts would occur if an action created a public hazard or if the action would impair the implementation of an adopted emergency response or evacuation plan. Under the No Action Alternative, no impacts associated with the use of hazardous materials would be expected. Only minor increases in the use of hazardous substances would occur because of the Proposed Action. BMPs would be implemented to minimize the risk from hazardous materials during construction of the replacement tower. With BMPs, no health or safety risks would be created by the Proposed Action. The impacts of the Proposed Action, when combined with other past, ongoing, and proposed actions in the region, would not be considered a major cumulative impact.

4.3.5 Climate Change

A major impact would occur if any action were to worsen climate change stressors such as increased greenhouse gas emissions or threatened the suitability of the site or tower infrastructure through climate induced phenomena such as wildlife, drought, storms, or flooding. Most of the project area is currently undeveloped rangeland located in a rural area. Under the No Action Alternative, greenhouse emissions would not increase. However, climate related changes such as increased tropical storm and hurricane events, drought, localized flooding, and wildfire, have the potential to occur based on current State and Federal climate change projections. If not replaced, the aging tower could be affected by high wind loads associated with tropical storms and hurricanes. The cumulative effects of increased greenhouse gas emissions associated with the Proposed Action would not exceed potential to emit levels of 75,000 tpy or more CO2e. Climate related changes such as increased tropical storm and hurricane events, drought, localized flooding, and wildfire, have the potential to occur based on current State and Federal climate change projections.

No other CBP actions would initiate an increase of development in immediate vicinity of the project area; therefore, the proposed action, when combined with past, present and future actions in the area, would not be expected to result in a major cumulative adverse impact.

5.0 BEST MANAGEMENT PRACTICES

This chapter describes those measures that would be implemented to reduce or eliminate potential adverse impacts on the human and natural environments. Many of these measures have been incorporated as standard operating procedures by CBP on past projects. BMPs are presented for each resource category that would be potentially affected.

5.1 Soils

- Clearly demarcate the perimeter of all new areas to be disturbed using flagging or temporary construction fencing. Do not allow any disturbance outside that perimeter.
- Areas at will be disturbed later in the construction period will be used for staging, parking, and equipment storage.
- The area of disturbance will be minimized by limiting deliveries of materials and equipment to only those amounts needed for effective project implementation.
- Within the designated disturbance area, grading or topsoil removal will be limited to areas where this activity is needed to provide the ground conditions necessary for construction or maintenance activities.
- Only the road necessary for construction of tower site will be constructed, improved, maintained, or repaired.
- Rehabilitation will include revegetating or the distribution of organic and geological materials over the disturbed area to reduce erosion while allowing the area to naturally revegetate.
- Vehicular traffic associated with the construction activities and operational support activities will remain on established roads to the maximum extent practicable.

5.2 Vegetation

- Materials used for on-site erosion control will be free of non-native plant seeds and other plant parts to limit potential for infestation.
- Identify by its source location any fill material, sandbags, hay bales, and mulch brought in from outside the project site. These materials will be free of non-native plant seeds and other plant parts to limit potential for infestation.
- Obtain materials such as gravel, topsoil, or fill from existing developed or previously used sources that are compatible with the project site and are from legally permitted sites. Do not use materials from undisturbed areas adjacent to the project site.

5.3 Wildlife Resources

- Anti-perching devices will be incorporated into the site design and installed on the communication tower.
- Visual deterrents installed on guy wires to minimize bird strikes
- To prevent entrapment of wildlife species, ensure that excavated, steep-walled holes or trenches are either completely covered by plywood or metal caps at the close of each

workday or provided with one or more escape ramps (at no greater than 1,000-foot intervals and sloped less than 45 degrees) constructed of earthen fill or wooden planks.

- Each morning, before the start of construction or maintenance activities and before such holes or trenches are filled, ensure that they are thoroughly inspected for trapped animals. Ensure that any animals discovered are allowed to escape voluntarily (by escape ramps or temporary structures), without harassment, and before construction activities resume, or are removed from the trench or hole by a qualified person and allowed to escape unimpeded.
- The MBTA (16 U.S.C. 703-712, [1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989]) requires that federal agencies coordinate with the USFWS if a construction activity would result in the *take* of a migratory bird. If construction or clearing activities are scheduled during the breeding season (March 15 through September 15) within potential nesting habitats, surveys will be performed to identify active nests. If construction activities will result in the *take* of a migratory bird, then coordination with USFWS will be required, and applicable permits would be obtained prior to construction or clearing activities. Other mitigation measures that would be considered are to install visual markers on any guy wires used, and to schedule all construction activities outside nesting season, negating the requirement for nesting bird surveys. The proposed communications tower would also comply with USFWS guidelines for reducing fatal bird strikes on communications towers (Clark 2000), to the greatest extent practicable.
- Conduct surveys prior to construction activities scheduled during nesting bird season (typically March 15 to September 15).
- CBP will not, for any length of time, permit any pets inside the project site or adjacent native habitats. This BMP does not pertain to law enforcement animals.
- USFWS Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance, and Decommissioning (U.S. Fish & Wildlife Service, Recommended Best Practices for Communication Tower, 2021) would be implemented to reduce nighttime atmospheric lighting and the potential adverse effects of nighttime lighting on migratory bird and nocturnal flying species.
- Additionally, CBP would incorporate day/night visual markers on the tower guy wires.

5.4 Threatened and Endangered Species

- Construction and operations activities for the Proposed Action will occur during daylight hours to the greatest extent practicable.
- If a Federally listed species is found in the designated project area, work will cease in that area until either a qualified biologist can safely remove the individual, or it moves away on its own, to the extent possible, construction schedule permitting.
- Site will be accessed using only designated access roads.
- Parking will occur within the proposed site location and footprint of existing access roads. This will limit the use of multiple trails to such site and reduce the effects to Federal-listed species' habitats.
- On-site personnel will be trained in identifying the listed species to ensure no adverse effects to the species and their habitat.
- On-site activities would be restricted to daylight hours, to the greatest extent practicable.

- Visual bird deterrents installed on guy wires.

5.5 Cultural Resources

- If unanticipated archeological resources are discovered during construction or any other project-related activities or should known archeological resources be inadvertently affected in a manner that was not anticipated, the project proponent or contractor shall immediately halt all activities in the immediate area of the discovery and take steps to stabilize and protect the discovered resource until it can be evaluated by a qualified archaeologist.
- Construction contract language that identifies a process for unanticipated archeological sites or human burials that may be discovered during construction.

5.6 Air Quality

- BMPs will include the placement of flagging and construction fencing to restrict traffic within the construction limits to reduce soil disturbance. Soil watering will be utilized to minimize airborne particulate matter created during construction activities. Bare ground may be covered with hay or straw to lessen wind erosion during the time between tower construction and the revegetation of temporary impact areas with either a mixture of native plant seeds, nursery plantings, and/or allowed to revegetate naturally. All construction equipment and vehicles will be kept in good operating condition to minimize exhaust emissions.
- Standard construction BMPs such as routine watering of the construction site, as well as access roads to the site, would be used to control fugitive dust and thereby would assist in limiting potential PM-10 excursions during the construction phase of the Proposed Action.
- All construction equipment and vehicles would be required to be maintained in good operating condition to minimize exhaust emissions.

5.7 Noise

- All generators will have an attached muffler or use other noise-abatement methods in accordance with industry standards.
- Avoid noise impacts during the night by conducting construction and maintenance activities during daylight hours only. If construction or maintenance must occur during non-daylight hours, minimize the duration and frequency of these activities to the greatest extent possible.
- All Occupational, Safety, and Health Administration requirements will be followed. To lessen noise impacts on the local wildlife communities, construction will only occur during daylight hours, whenever possible. All motor vehicles will be properly maintained to reduce the potential for vehicle-related noise.

5.8 Hazardous Materials

- Where handling of hazardous and regulated waste or materials is required, all fuels, waste oils, and solvents will be collected and stored in clearly labeled tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein.

- Implement proper and routine maintenance of all vehicles and other maintenance equipment such that emissions are within the design standards of all maintenance equipment. The refueling of machinery will be conducted following accepted industry guidelines, and all vehicles will have drip pans during storage to contain minor spills and drips.
- Nonhazardous waste materials and other discarded materials, such as construction waste, will be contained until removed from the construction and maintenance sites.
- Minimize site disturbance and avoid attracting predators by promptly removing waste materials, wrappers, and debris from construction site. Any waste that must remain on-site more than 12 hours should be properly stored in closed containers until disposal. All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed daily from the project site.
- Herbicide and pesticide applications must be made under the supervision of a licensed applicator. A log of the chemical used, amount used, and specific location must be maintained.
- Use a ground cloth or an oversized tub for tool cleaning. Properly dispose of the wastes offsite, at an approved facility, in accordance with Federal, State, local, and tribal laws and regulations.
- Never clean tools in a natural drainage or over a storm drain.

5.9 Roadways and Traffic

- Construction vehicles will travel, and equipment will be transported on established roads with proper flagging and safety precautions.

5.10 Climate Change

Mitigation measures that can be used to prevent or mitigate the effects of wildfires include:

- Create a 25- foot fire break around the site outside the chain link to help protect the tower infrastructure from fire. Mechanically remove mesquite and other shrub species and invasive grasses from within the tower site compound and 25-foot buffer areas.
- Maintain a clear zone within the fenced perimeter of the site. Clear site of vegetation buildup. Maintain as required, but at least annually, prior to fire season.
- Install and test lightning grounding system for each site. Test and maintain as required.
- Enforce parking limitations to the prescribed parking area or access roadway. Maintain roadways and parking areas to be free of plant growth.
- Methods and procedures will be developed and implemented for all construction, maintenance and repair activities that require welding or otherwise have a risk of starting a wildfire.
- Post signs warning of fire hazard of careless use of fire.

- Provide additional fire containment/firefighting equipment on site to include Class A fire extinguisher(s) during maintenance operations.
- Ensure visitors to site have two-way communication capabilities to report any fire on or approaching site.
- Do not store paints, thinners, solvents, and other flammable materials on the site unless specifically coordinated in advance, and then only in an approved container for storing flammables

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7.0 PERSONS and ORGANIZATIONS CONTACTED

The Honorable Bobby Komardley
Chairman
Apache Tribe of Oklahoma
P.O. Box 1330
Anadarko, OK 73005

The Honorable Mark Woommavovah
Chairman
Comanche Nation
P.O. Box 908
Lawton, OK 73502

Russell Martin
President
Tonkawa Tribe of Indians of Oklahoma
1 Rush Buffalo Rd.
Tonkawa, OK 74653

Terri Parton
President
Wichita and Affiliated Tribes
P.O. Box 729
Anadarko, OK 73005

Ernesto Reyes
U.S. Fish and Wildlife Service
Department of the Interior
Ecological Services Field Sub-Office
Route 2, Box 202-A
Alamo, TX 78516

8.0 ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
AIFRA	American Indian Religious Freedom Act
AOR	Area of Responsibility
APE	Area of Potential Effect
ARPA	Archeological Resources Protection Act
BMP	Best Management Practice
C	Candidate
CARB	California Air Resources Board
CBP	U.S. Customs and Border Protection
CCR	California Code of Regulations
CEQ	Council on Environmental Quality
CO	carbon monoxide
CFR	Code of Federal Regulations
dB	decibel
dBA	A-weighted sound level
DHS	Department of Homeland Security
E	Endangered
EA	Environmental Assessment
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FLF	Falfurrias Station
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
GSRC	Gulf South Research Corporation
HTC	Historic Texas Cemeteries
IPAC	Information for Planning and Consultation
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
NO2	Nitrogen Dioxide
NOA	Notice of Availability
NPL	National Priorities List
NRHP	National Register of Historic Places
O3	Ozone
OTHM	Official Texas Historic Marker
Pb	Lead
PM	Particle Pollution

PSD	Prevention of Significant Deterioration
RGV	Rio Grande Valley
ROI	Region of Influence
RTHL	Recorded Texas Historic Landmark
RVSS	Remote Video Surveillance
SCAQMD	South Coast Air Quality Management District
SEMS	Superfund Emergency Management System
SHPO	State Historic Preservation Officer
SO2	Sulfur Dioxide
T	Threatened
TCEQ	Texas Commission on Environmental Quality
TCP	Traditional Cultural Property
TPWD	Texas Parks and Wildlife Department
TPY	Tons Per Year
US	United States
USBP	United States Border Patrol
U.S.C.	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VOC	Volatile Organic Compounds

9.0 LIST OF PREPARERS

Name	Agency/ Organization	Discipline/ Expertise	Experience	Role in Preparing PEA
Margaret Rockwell	LMI Government Consulting	Environmental Planning Specialist	12 years of environmental related experience	Research, Environmental analysis and technical writing
Shea Nelson	LMI Government Consulting	Senior Environmental Scientist	22 years of NEPA and environment al programs	Environmental analysis and technical writing
David Walls	LMI Government Consulting	Senior Environmental Scientist	42 years of NEPA and environment al programs	Environmental analysis and technical writing
Ashley Rivero	LMI Government Consulting	Environmental Planning Specialist	7 years of environment alscience and regulatory compliance	Environmental analysis and technical writing
Jennifer Brown	LMI Government Consulting	Environmental Planning Specialist	4 years of environmental related experience	Environmental analysis and technical writing
Jacqueline Cromwell	LMI Government Consulting	Senior Cultural Resource Archaeologist	35 years of environmental related experience	Cultural analysis

10.0 DISTRIBUTION LIST

Justo Ramirez
Falfurrias Mayor
120 W. Rice St.
Falfurrias, TX 78355

Eric Ramos
Brooks County Judge
100 E. Miller St.
P.O. Box 515
Falfurrias, Texas 78355

Arch H. Aplin, III
Chairman
Texas Parks and Wildlife Commission
327 FM 2004
Lake Jackson, TX 77566

Appendix A – Figures

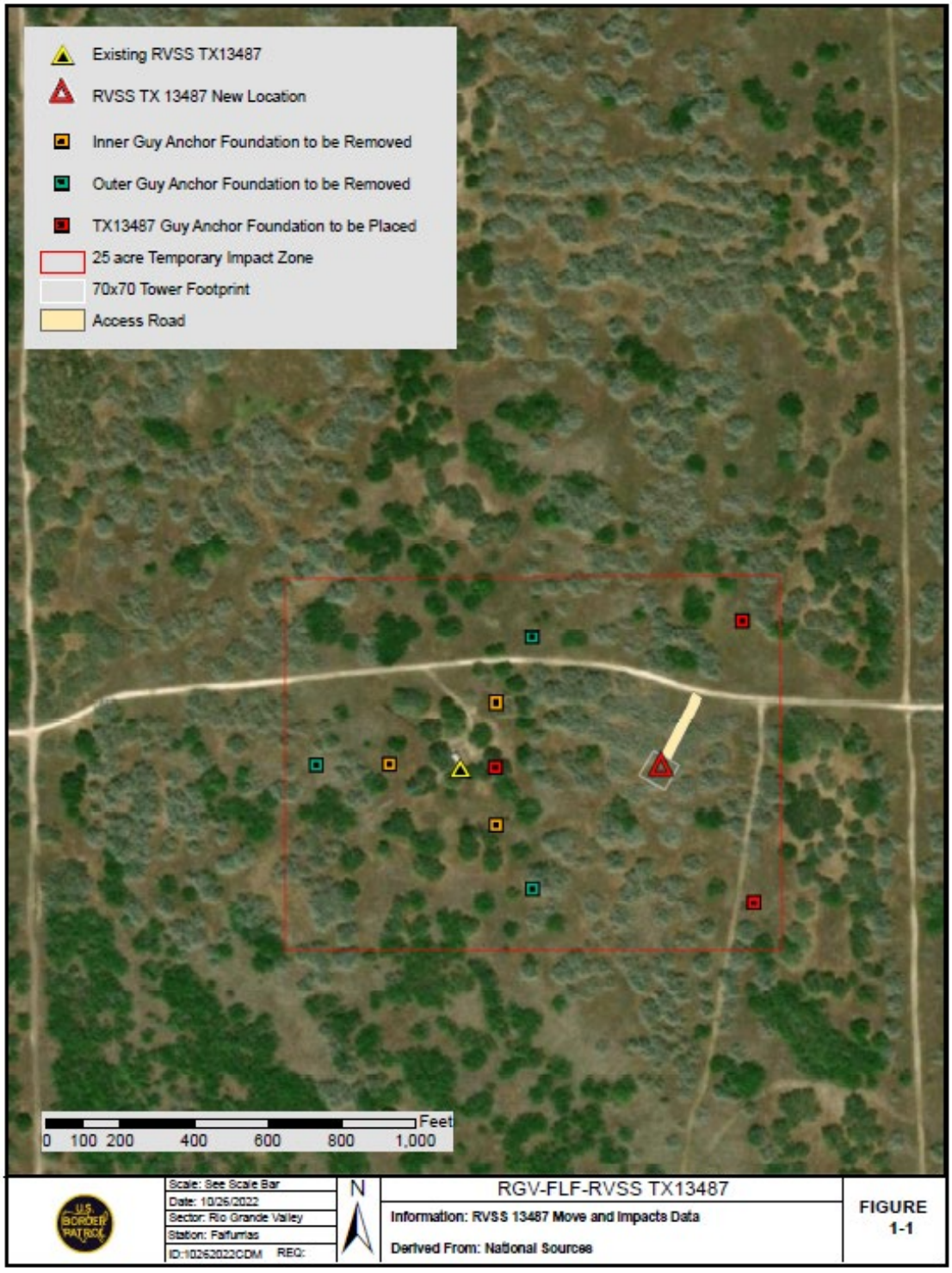

Figure 1: TX13487 Site

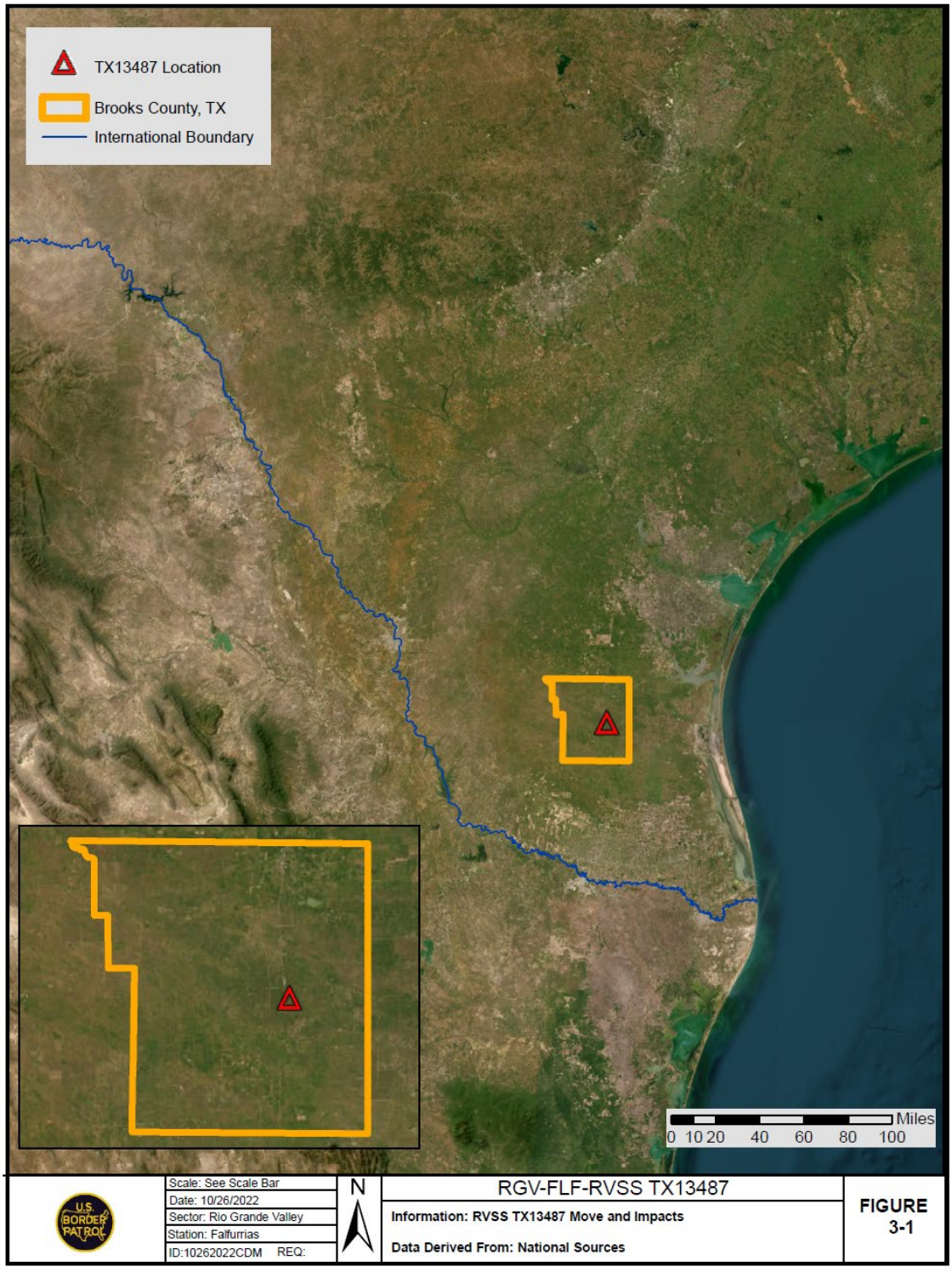

Figure 2: Overview of TX13487 Site

Appendix B – Correspondence

1300 Pennsylvania Avenue,
NW Washington, DC 20229

U.S. Customs and Border Protection

November 7, 2022

United States Fish and Wildlife Service
Attn: Ernesto Reyes, Fish and Wildlife Biologist
Ecological Service Alamo Sub Office
3325 Green Jay Road
Alamo, Texas 78516
Ernesto_reyes@fws.gov

Subject: TX13487 Tower Replacement Project, Brooks County, Texas

Dear Mr. Reyes:

U.S. Customs and Border Protection (CBP) proposes replacing an existing tower with a fixed tower on a parcel of land immediately adjacent to the existing site. CBP plans to remove the existing shelter and tower and construct a new shelter, foundations, tower, and overhead electrical services. The land within the proposed new tower footprint would be cleared of vegetation, leveled, and a fixed tower would be erected along with a perimeter fence and shelter. The old tower would be removed, and the footprint would be allowed to revegetate naturally. The project area is located within the Rio Grande Valley Sector of CBP on private property.

CBP carefully reviewed the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) tool for a list of species and critical habitat that "may be present" within the project area.

CBP commissioned biological resources surveys to examine the potential effects of the proposed project on sensitive biological resources, including federally protected species. Background research determined that based on habitat requirements and environmental factors, four species from the IPaC website have the potential to occur in the project area: piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), northern aplomado falcon (*Falco femoralis septentrionalis*), and ocelot (*Leopardus pardalis*).

On July 7 and 8, 2022, a biological resources survey was conducted within the project area. The survey area consisted of a single tract located on a property actively used for cattle grazing. Specifically, the project area is approximately 25 acres and located on the east side of Highway 281. Coordinates for the site are 27.0053261º, -98.1304145º. The habitat within the survey area is best classified as sandy prairie interspersed with a mosaic of honey mesquite (*Prosopis glandulosa*) and Texas live oak (*Quercus fusiformis*). No federally listed threatened or endangered species were documented in the project area, and the project area does not intersect designated Critical Habitat for any threatened or endangered species. While piping plover and red knot would not utilize the habitats located at the project area, ocelot and northern aplomado falcon could potentially inhabit this location. However, three state listed threatened species were observed either through direct observation or through vocalizations during the survey: northern

beardless tyrannulet (*Camptostoma imberbe*) were heard singing in the project area, Texas horned lizard (*Phrynosoma cornutum*) was directly observed, and northern cat-eyed snake (*Leptodeira septentrionalis*) was directly observed. The biological resources survey report is appended to this letter.

We conclude that the proposed project will have "no effect" on federally listed species or their proposed or designated Critical Habitat.

If you require additional information or have any questions, please contact me at (202) 425 1669 or by e-mail at michelle.l.barnes@cbp.dhs.gov. Thank you.

Sincerely,

MICHELLE L BARNES
Digitally signed by MICHELLE L BARNES
Date: 2022.11.07 12:50:46 -07'00'

Michelle Barnes
Environmental Branch Chief
Infrastructure Program
Program Management Office Directorate
U.S. Border Patrol

Enclosures

1. Biological Resources Survey Report, The King Ranch Tower Replacement Project, Brooks County, Texas, Contract No. GS00Q14OADU141, Order No. SB19-00039.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Texas Coastal Ecological Services Field Office
3325 Green Jay Road
Alamo, Texas 78516
PHONE: 956/784-7560
FAX: 956/787-8338

In Reply Refer To:
2023-I-0036811

January 30, 2023

Ms. Michelle L. Barnes
Environmental Branch Chief
Infrastructure Program
Program Management Office Directorate
United States Border Patrol
1300 Pennsylvania Avenue NW
6.5E Mail Stop 1039
Washington, DC 20229

Dear Ms. Barnes:

We received your November 7, 2022, letter regarding effects of a proposed tower replacement on federally listed species in Brooks County, Texas. Additionally, this action was evaluated for impacts to wetlands and other federal trust fish and wildlife resources.

U.S. Customs and Border Protection (CBP) proposes replacing an existing tower with a fixed tower on a parcel of land immediately adjacent to the existing site. CBP plans to remove the existing shelter and tower and construct a new shelter, foundations, tower, and overhead electrical services. The land within the proposed new tower footprint would be cleared of vegetation, leveled, and a fixed tower would be erected along with perimeter fence and shelter. The old tower would be removed, and the footprint would be allowed to revegetate naturally.

The Proposed Action includes the decommissioning of the existing 440-feet (ft) tower located approximately 500-ft west of the proposed tower and the lease, construction, installation, operation, and maintenance of a new 440-ft, guyed wire communications tower and associated communications equipment. The communications equipment would include:

- one or more repeaters, receivers, microwave dishes, and antennas.
- one 10-foot x 16-foot prefabricated shelter to house equipment and racks,
- one ice bridge for data and power cables,
- one 20-kilowatt backup generator,

- one electrical transformer, and
- one 500-gallon propane aboveground storage tank would be installed in the immediate vicinity of the tower.

A permanent footprint of 70 square foot surrounding the tower and its associated equipment would be cleared, graded, and covered with Geo-textile fabric and gravel. This permanent footprint will be surrounded by an 8-ft tall chain link fence. Four-foot-high hog wire fencing will be around each of the guyed wire anchor posts. Equipment staging may require up to 1 acre; any area impacted by equipment staging or other construction operations would be revegetated or otherwise returned to its original condition.

The following general Best Management Practices are recommended:

1. If a Federally listed species is found in the designated project area, work will cease in that area until either a qualified biologist can safely remove the individual, or it moves away on its own, to the extent possible, construction schedule permitting.
2. Sites will be accessed using only designated access roads.
3. Parking will occur within the proposed site location and footprint of existing access roads. This will limit the use of multiple trails to such sites and reduce the effects to Federal-listed species' habitats.
4. On-site personnel will be trained in identifying the listed species to ensure no adverse effects to the species and their habitat.
5. On-site activities would be restricted to daylight hours, to the greatest extent practicable.
6. Visual bird deterrents installed on guy wires.

To avoid or minimize impacts to birds protected by the Migratory Bird Treaty Act, the U.S. Fish and Wildlife Service (Service) recommends conducting bird surveys no more than five days prior to ground disturbing activities or mechanical clearing of brush and trees between March 15 and September 15. Surveys should include searches for birds, nests, and eggs. The Service recommends leaving a buffer of vegetation (≥100 feet) around songbird nests detected until young have fledged or the nest is abandoned. Surveys should be conducted within a responsible time frame prior to construction to ensure valid results. Other species such as water birds or raptors require larger buffer distances of 500 feet or more.

CBP made the determination of "no effect" for the ocelot (*Leopardus (=Felis) pardalis*), Northern aplomado falcon (*Falco femoralis septentrionalis*), piping plover (*Charadrius melodus*), and red knot (*Calidris canutus rufa*). The Service does not provide concurrence for "no effect" determinations, but by making a determination, we believe CBP has complied with

1300 Pennsylvania Avenue NW
Washington, DC 20229

U.S. Customs and Border Protection

November 7, 2022

Jeff Durst
Regional Reviewer
Texas Historical Commission (THC)
1511 Colorado St.
Austin, TX 78701

Subject: **Request for Concurrence with NO ADVERSE EFFECT on the *Cultural Resources Survey of 25 Acres for the Proposed Construction of a Replacement TX13487 Tower and Removal of Old Tower, Brooks County, Texas*** (CBP PMOD TX13487 Tower Replacement)

Dear Jeff Durst:

U.S. Customs and Border Protection (CBP) is planning the installation, operation, maintenance, and repair of a new replacement TX13487 tower and the removal of the old TX13487 tower in Brooks County, Texas.

Description of the Undertaking

The proposed undertaking consists of the construction, maintenance, and operation of a 400-foot-tall steel tower along with the associated guy wire and infrastructure. Once the new tower is functional, the old tower would be removed. The replacement tower would be a 400-foot-tall steel tower with concrete foundation. Additional facilities associated with the tower would include an ice bridge, shelter, propane tank, and engine generator. The facility will be enclosed with a 48-inch-high hog wire fence and the total facility footprint would measure an estimated 70 feet by 70 feet. Guy wires would extend from the tower footprint for an estimated 400 feet. The tower site would be accessed from an existing access road that is adequate for the construction and maintenance of the tower site. As a result, no access road construction or improvements are required for the undertaking. Also included in the action is the removal of the old tower.

Area of Potential Effect

The archeological Area of Potential Effect (APE) includes any areas of ground disturbance which include the new replacement tower footprint itself inclusive of the estimated guy wires and anchor points and the area associated with the removal of the old tower including the tower footprint itself and its guy wire anchors which are estimated to extend from 175 to 350 feet from the exiting tower site. The combined old and new tower footprints constitute the APE for the project which totals 25 acres (ac).

The tower is estimated to be 400 feet in height and a 1.5-mile visual APE was used for assessing potential visual effects on aboveground resources. The aboveground/architectural resource survey was a windshield survey conducted using publicly accessed roads to record and evaluate aboveground resources that were 50 years old or older. This investigation constitutes CBP's good faith effort to determine any affects that may occur as a result of the proposed undertaking in compliance with Section 106 of the National Historic Protection Act (NHPA) (Public Law 89-665; 54 U.S.C. 300101 et seq).

Identification and Evaluation of Historic Properties

Five previously conducted archeological investigations are on record with the Texas Archeological Sites Atlas within a 3.2-kilometer (km) (1.5-mile) radius of the proposed tower site. All these investigations were surveys and the vast majority of them were associated with projects along U.S. 281, located west of the project area. One of those investigations overlaps with the current survey area. That survey did not record any archeological resources within the APE. No previously recorded archeological resources, Official Texas Historic Markers (OTHMs), Recorded Texas Historic Landmarks (RTHLs), or Historic Texas Cemeteries (HTCs) were on record within 3.2 km (1.5 miles) of the proposed TX13487 tower replacement APE. Both the new replacement tower and the old tower to be removed are located within the National Register of Historic Places (NRHP)-listed King Ranch National Register Historic District and National Historic Landmark.

No archeological sites or isolated occurrence were recorded during the archeological survey of the TX13487 tower replacement APE. Two newly recorded aboveground resources that are 50 years old or older were recorded during the aboveground/architectural survey, the King Ranch Windmill and Stock Pond, and the Escondido Ranch. Neither of the resources had sufficient significance to be recommended eligible for the NRHP under any criteria. The replacement tower would be similar in size and design to the existing tower. Once the new tower is operational, the old tower would be removed. As a result, no adverse effects on the King Ranch NRHP-listed historic district are anticipated from the replacement of the TX13487 Tower.

Conclusion – No Adverse Effect

Based on the results of the archeological survey and the aboveground/architectural survey, it is anticipated that the proposed project will have No Adverse Effect on Historic Properties pursuant to Section 800.4(d)(1). No further work is recommended. Supporting evidence for this determination can be found in the enclosed draft cultural resources technical report.

We request your concurrence with our determination. If no response is received within 30 days, your concurrence will be presumed.

If archeological material or human remains are inadvertently discovered during the installation, all work will cease in the vicinity until a professional archaeologist is on-site and the THC is notified and consulted. The professional archeologist can examine and assess the importance of the inadvertent discovery.

If you have any questions, please feel free to contact Ms. Jacqueline Cromwell at 540-872-6411or via email at Jacqueline.H.Cromwell@cbp.dhs.gov.
Please send your response to Michelle Barnes, U.S. Customs and Border Protection, U.S. Border Patrol, 1300 Pennsylvania Ave NW 6.5E Mail Stop 1039, Washington, D.C. 20229. We also request you provide an electronic copy of your response to Ms. Margaret Rockwell at margaret.j.rockwell@associates.cbp.dhs.gov and to Ms. Cromwell at Jacqueline.H.Cromwell@associates.cbp,dhs.gov.

Sincerely,

MICHELLE L BARNES
Digitally signed by MICHELLE L BARNES
Date: 2022.11.07 12:53:17 -07'00'

Michelle Barnes
on behalf of Paul Enriquez
Infrastructure Program
Program Management Office Directorate
U.S. Border Patrol

Enclosures: Draft Report: *Cultural Resources Survey of 25 Acres for the Proposed Construction of a Replacement TX13487 Tower and Removal of Old Tower, Brooks County, Texas*

John Lindemuth

From: noreply@thc.state.tx.us
Sent: Monday, December 5, 2022 10:21 AM
To: John Lindemuth; reviews@thc.state.tx.us
Subject: Section 106 Submission

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: Project Review under Section 106 of the National Historic Preservation Act
THC Tracking #202302149
Date: 12/05/2022
TX13487 Tower Replacement
US. 281
Encino,TX 78363

Description: U.S. Customs and Border Protection (CBP) is planning the installation, operation, maintenance, and repair of a new replacement TX13487 tower and the removal of the old TX13487 tower in Brooks County

Dear John Lindemuth:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act.

The review staff, led by Jeff Durst, Caitlin Brashear and Ashley Salie, has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- Property/properties are eligible for listing or already listed in the National Register of Historic Places.
- No adverse effects on historic properties.

Archeology Comments

- No historic properties affected. However, if cultural materials are encountered during construction or disturbance activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- THC/SHPO concurs with information provided.
- This draft report is acceptable. To facilitate review and make project information and final reports available through the Texas Archeological Sites Atlas, we appreciate submission of tagged pdf copies of the final report including one restricted version with all site location information (if applicable), and one public version with all site location information redacted; an online abstract form submitted via the abstract tab on eTRAC; and survey area shapefiles submitted via the shapefile tab on eTRAC. For questions on how to submit these please visit our

video training series at: https://www.youtube.com/playlist?list=PLONbbv2pt4cog5t6mCqZVaEAx3d0MkgQC
Please note that these steps are required for projects conducted under a Texas Antiquities Permit.

We have the following comments: Regarding above-ground resources, the History Programs Division review staff led by Caitlin Brashear, has determined that the proposed project area is located within the King Ranch historic district, which was listed in the National Register of Historic Places (NRHP) in 1966. Additionally, we concur that the La Becerra Windmill and Stock Pond and the Escondido Ranch are not eligible for listing in the NRHP. The Division of Architecture review staff recommends that the proposed scope of work will have no adverse effect on aboveground historic resources as the proposed new tower is similar to the existing in terms of size and design.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: Jeff.Durst@thc.texas.gov, caitlin.brashear@thc.texas.gov, ashley.salie@thc.texas.gov.

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

for Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

1300 Pennsylvania Avenue NW
Washington, DC 20229

U.S. Customs and Border Protection

December 7, 2022

William Martin
Archeologist and Reviewer
Texas Historical Commission
PO Box 12276
Austin, Texas 78711-2276

SUBJECT: Final Report Submission: *Cultural Resources Survey of 25 Acres for the Proposed Construction of a Replacement TX13487 Tower and Removal of Old Tower, Brooks County, Texas* (CBP PMOD TX13487 Tower Replacement)

Dear Mr. Martin:

Thank you for your concurrence with our No Adverse Effect determination and the comments provided on the draft report dated December 5, 2022. U.S. Customs and Border Protection (CBP) is pleased to submit the final technical report titled *Cultural Resources Survey of 25 Acres for the Proposed Construction of a Replacement TX13487 Tower and Removal of Old Tower, Brooks County, Texas*.

The final report (Restricted), abstract, and shapefiles of the survey area were submitted electronically through eTrac. Due to a request from the landowner, a public version of the report was not produced.

If you have any questions, or require any additional materials submitted to conclude consultation on this project, please feel free to contact Ms. Jacqueline Cromwell at 540-872-2783 or email at Jacqueline.H.Cromwell@associates.cbp.dhs.gov or Ms. Margaret Rockwell at 202-909-5174 or email at Margaret.J.Rockwell@associates.cbp.dhs.gov.

Sincerely,

Michelle Barnes
on behalf of Paul Enriquez
Infrastructure Program
Program Management Office Directorate
U.S. Border Patrol

1300 Pennsylvania Avenue NW
Washington, DC 20229

U.S. Customs and Border Protection

November 7, 2022

Chairman Bobby Komardley (bkomardley@outlook.com)
Apache Tribe of Oklahoma
PO Box 1330
Anadarko, OK 73005

Subject: Tribal Consultation on the *Cultural Resources Survey of 25 Acres for the Proposed Construction of a Replacement TX13487 Tower and Removal of Old Tower, Brooks County, Texas* (CBP PMOD TX13487 Tower Replacement)

Dear Chairman Komardley:

U.S. Customs and Border Protection (CBP) is planning the installation, operation, maintenance, and repair of a new replacement TX13487 tower and the removal of the old TX13487 tower in Brooks County, Texas.

We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have a potential adverse effect, we would like to discuss with you possible ways to avoid, minimize or mitigate potential adverse effects.

Undertaking

The proposed undertaking consists of the construction, maintenance, and operation of a 400-foot-tall steel tower along with the associated guy wire and infrastructure. Once the new tower is functional, the old tower would be removed. The replacement tower would be a 400-foot-tall steel tower with concrete foundation. Additional facilities associated with the tower would include an ice bridge, shelter, propane tank, and engine generator. The facility will be enclosed with a 48-inch-high hog wire fence and the total facility footprint would measure an estimated 70 feet by 70 feet. Guy wires would extend from the tower footprint for an estimated 400 feet. The tower site would be accessed from an existing access road that is adequate for the construction and maintenance of the tower site. As a result, no access road construction or improvements are required for the undertaking. Also included in the action is the removal of the old tower. The combined old and new tower footprints constitute the Area of Potential Effect (APE) for the project which totals 25 acres (ac).

Background Research

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Copies of the cultural resources technical report for your review are available on request.

Effect Determination

Based on the results of the current investigation, CBP has determined that the undertaking will have No Adverse Effect on Historic Properties. As a result, no further work is recommended.

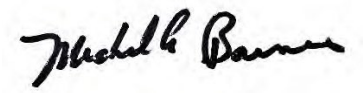
Consulting Parties

Please let us know if you are interested in being a consulting party on this project. Also please note in your response if you have any initial concerns with impacts of the project on religious or cultural properties. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this undertaking.

If you have any questions, please feel free to contact Ms. Jacqueline Cromwell at 540-872-6411 or via email at JACQUELINE.H.CROMWELL@associates.cbp.dhs.gov.

Please send your response to Michelle Barnes, U.S. Customs and Border Protection, U.S. Border Patrol, 1300 Pennsylvania Ave NW 6.5E Mail Stop 1039, Washington, D.C. 20229. We also request you provide an electronic copy of your response to Ms. Margaret Rockwell at margaret.j.rockwell@associates.cbp.dhs.gov and to Ms. Cromwell at JACQUELINE.H.CROMWELL@associates.cbp.dhs.gov.

Sincerely,



Michelle Barnes
on behalf of Paul Enriquez
Infrastructure Program
Program Management Office Directorate
U.S. Border Patrol

Enclosures: Figure 1. Vicinity Map.
Figure 2. Portions of the Cage Ranch, Falfurrias SE, Encino, and San Tomas Camp, TX 7.5-minute topographic quadrangles showing the TX13487 tower replacement survey area.

1300 Pennsylvania Avenue NW
Washington, DC 20229

U.S. Customs and Border Protection

November 7, 2022

Chairman Mark Woommavovah (jennifer.rodriguez@comanchenation.com)
Comanche Nation, Oklahoma
PO Box 908
Lawton, OK 73502

Subject: Tribal Consultation on the *Cultural Resources Survey of 25 Acres for the Proposed Construction of a Replacement TX13487 Tower and Removal of Old Tower, Brooks County, Texas* (CBP PMOD TX13487 Tower Replacement)

Dear Chairman Woommavovah:

U.S. Customs and Border Protection (CBP) is planning the installation, operation, maintenance, and repair of a new replacement TX13487 tower and the removal of the old TX13487 tower in Brooks County, Texas.

We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have a potential adverse effect, we would like to discuss with you possible ways to avoid, minimize or mitigate potential adverse effects.

Undertaking

The proposed undertaking consists of the construction, maintenance, and operation of a 400-foot-tall steel tower along with the associated guy wire and infrastructure. Once the new tower is functional, the old tower would be removed. The replacement tower would be a 400-foot-tall steel tower with concrete foundation. Additional facilities associated with the tower would include an ice bridge, shelter, propane tank, and engine generator. The facility will be enclosed with a 48-inch-high hog wire fence and the total facility footprint would measure an estimated 70 feet by 70 feet. Guy wires would extend from the tower footprint for an estimated 400 feet. The tower site would be accessed from an existing access road that is adequate for the construction and maintenance of the tower site. As a result, no access road construction or improvements are required for the undertaking. Also included in the action is the removal of the old tower. The combined old and new tower footprints constitute the Area of Potential Effect (APE) for the project which totals 25 acres (ac).

Background Research

Five previously conducted archeological investigations are on record with the *Texas Archeological Sites Atlas* within a 3.2-kilometer (km) (1.5-mile) radius of the proposed tower site. All these investigations were surveys and the vast majority of them were associated with projects along U.S. 281, located west of the project area. One of those investigations overlaps with the current survey area. That survey did not record any archeological resources within the APE. No previously recorded archeological resources, Official Texas Historic Markers (OTHMs), Recorded Texas Historic Landmarks (RTHLs), or Historic Texas Cemeteries (HTCs) were on record within 3.2 km (1.5 miles) of the proposed replacement TX13487 tower replacement APE. Both the new replacement tower and the old tower to be removed are located within the National Register of Historic Places (NRHP)-listed King Ranch Historic District and National Historic Landmark.

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Historic Structures, Districts, et al

Two newly recorded aboveground resources that are 50 years old or older were recorded during the aboveground/architectural survey, the King Ranch Windmill and Stock Pond, and the Escondido Ranch. Neither of the resources had sufficient significance to be recommended eligible for the NRHP under any criteria. The replacement tower will be similar in size and design to the existing tower. Once the new tower is operational, the old tower will be removed. As a result, no adverse effects on the King Ranch NRHP-listed historic district/National Historic Landmark are anticipated from the replacement of the TX13487 Tower.

Copies of the cultural resources technical report for your review are available on request.

Effect Determination

Based on the results of the current investigation, CBP has determined that the undertaking will have No Adverse Effect on Historic Properties. As a result, no further work is recommended.

Consulting Parties

Please let us know if you are interested in being a consulting party on this project. Also please note in your response if you have any initial concerns with impacts of the project on religious or cultural properties. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this undertaking.

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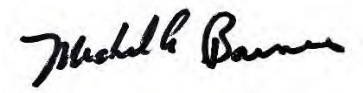

Michelle Barnes
on behalf of Paul Enriquez
Infrastructure Program
Program Management Office Directorate
U.S. Border Patrol

Enclosures: Figure 1. Vicinity Map.
Figure 2. Portions of the Cage Ranch, Falfurrias SE, Encino, and San Tomas Camp, TX 7.5-minute topographic quadrangles showing the TX13487 tower replacement survey area.

1300 Pennsylvania Avenue
NW Washington, DC 20229

U.S. Customs and Border Protection

November 7, 2022

President Russell Martin (rmartin@tonkawatribe.com)
Tonkawa Tribe of Indians of Oklahoma
1 Rush Buffalo Road
Tonkawa, OK 74653

Subject: Tribal Consultation on the *Cultural Resources Survey of 25 Acres for the Proposed Construction of a Replacement TX13487 Tower and Removal of Old Tower, Brooks County, Texas* (CBP PMOD TX13487 Tower Replacement)

Dear President Martin:

U.S. Customs and Border Protection (CBP) is planning the installation, operation, maintenance, and repair of a new replacement TX13487 tower and the removal of the old TX13487 tower in Brooks County, Texas.

We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have a potential adverse effect, we would like to discuss with you possible ways to avoid, minimize or mitigate potential adverse effects.

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Copies of the cultural resources technical report for your review are available on request.

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Based on the results of the current investigation, CBP has determined that the undertaking will have No Adverse Effect on Historic Properties. As a result, no further work is recommended.

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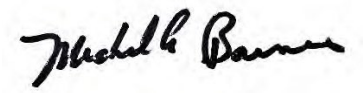

Michelle Barnes
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1300 Pennsylvania Avenue NW
Washington, DC 20229

U.S. Customs and Border Protection

November 7, 2022

President Terri Parton (Terri.Parton@wichitatribe.com)
Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie), Oklahoma
PO Box 729
Anadarko, OK 73005

Subject: Tribal Consultation on the *Cultural Resources Survey of 25 Acres for the Proposed Construction of a Replacement TX13487 Tower and Removal of Old Tower, Brooks County, Texas* (CBP PMOD TX13487 Tower Replacement)

Dear President Parton:

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President Parton, Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie), Oklahoma
CBP PMOD TX13487 Tower Replacement

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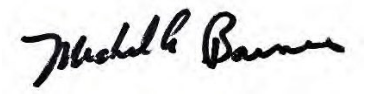

Michelle Barnes
on behalf of Paul Enriquez
Infrastructure Program
Program Management Office Directorate
U.S. Border Patrol

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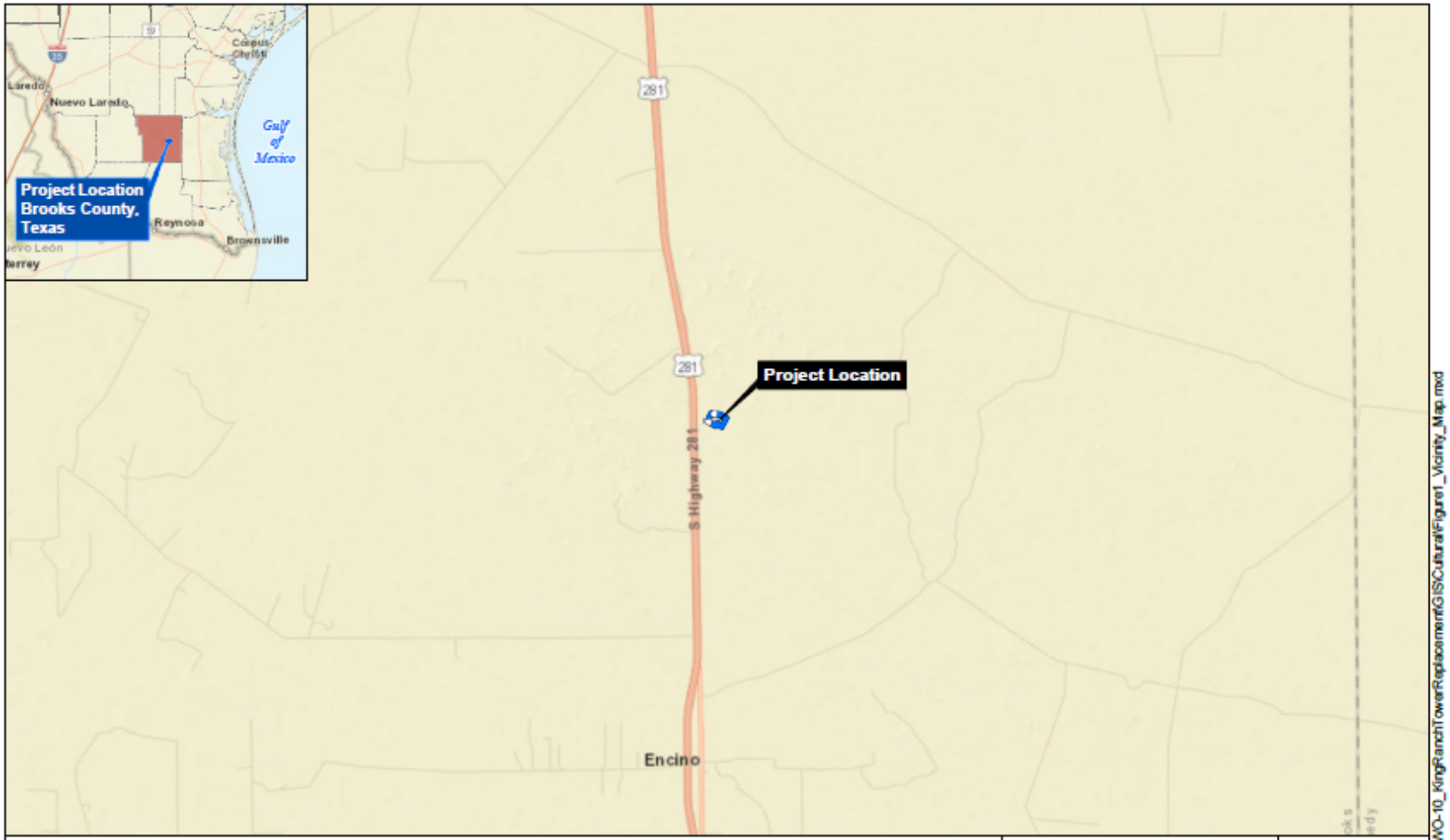

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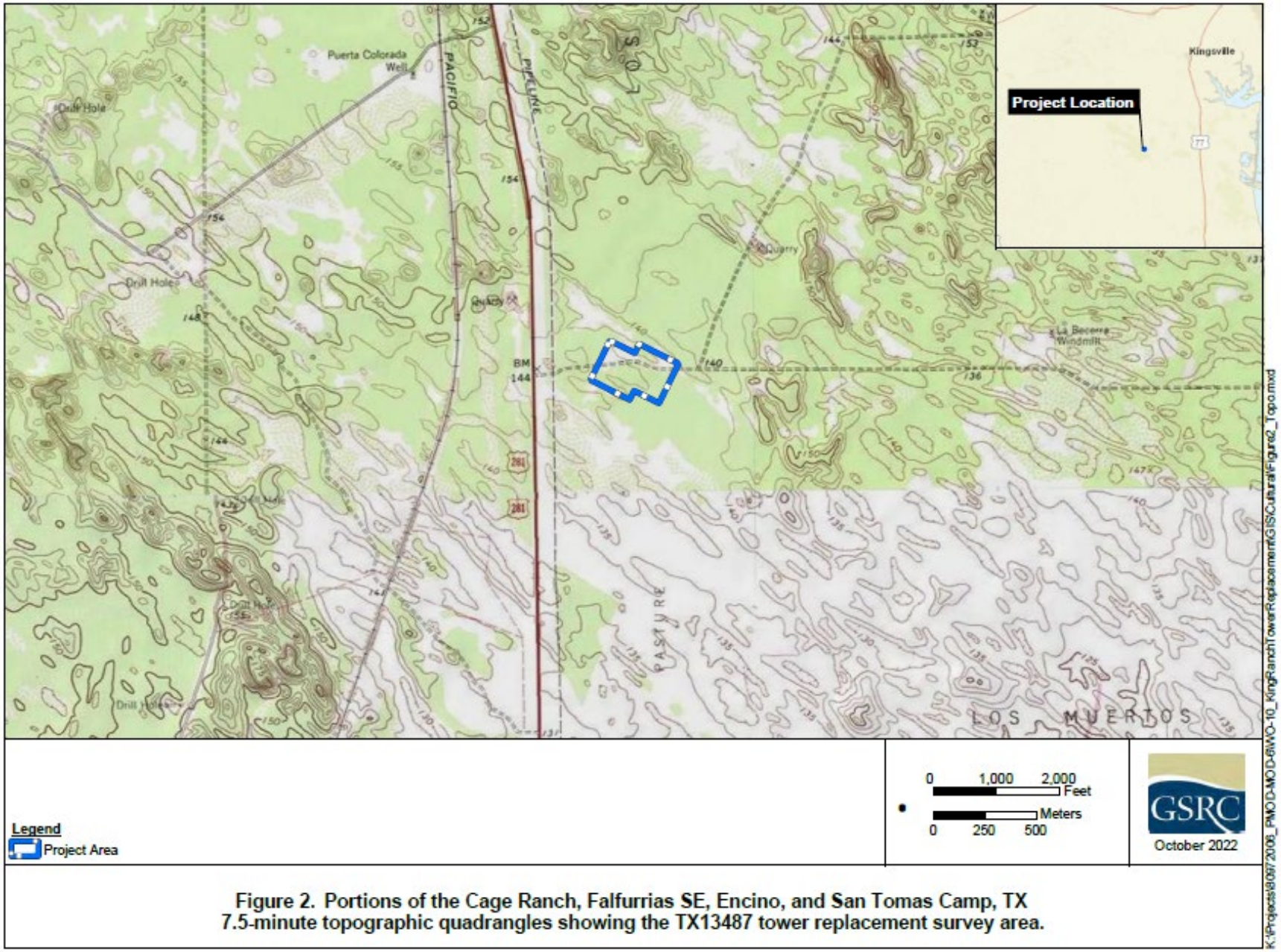

Figure 2. Portions of the Cage Ranch, Falfurrias SE, Encino, and San Tomas Camp, TX 7.5-minute topographic quadrangles showing the TX13487 tower replacement survey area.

Appendix C – Notice of Availability

Newspaper Notification

U.S. Customs and Border Protection (CBP) announces the availability of a Draft Environmental Assessment (EA) for the *Communications Tower Replacement (TX 13487) Rio Grande Valley Sector – Falfurrias, Texas* project. CBP has prepared a Draft EA to identify and assess the potential environmental and socioeconomic impacts associated with the lease, construction, installation, operation, and maintenance of a new Communications Tower (TX 13487) and the decommissioning of an existing tower and supporting infrastructure located approximately 500-feet west of the replacement tower at a location in Border Patrol's Rio Grande Valley Sector, Falfurrias Station, Falfurrias, Texas.

CBP invites comments on the Draft EA during a 30-day comment period beginning on July 24, 2023. The Draft EA can be accessed at the following website: https://www.cbp.gov/about/environmental-management . Comments may be submitted using one of the following methods:

1. By email to RGVComments@cbp.dhs.gov subject line should read Draft EA Communications Tower Replacement, Falfurrias Texas
2. By mail to U.S. Customs and Border Protection, Border Patrol HQ, 1300 Pennsylvania Ave NW 6.5E, Mail Stop 1039, Washington, DC 20229, Attn: Michelle Barnes

To ensure consideration, comments must be received by August 24, 2023.

U.S. Customs and Border Protection (CBP) announces the availability of a Draft Environmental Assessment (EA) for the *Communications Tower Replacement (TX 13487) Río Grande Valley Sector – Falfurrias, Texas* project. CBP has prepared a Draft EA to identify and assess the potential environmental and socioeconomic impacts associated with the lease, construction, installation, operation, and maintenance of a new Communications Tower (TX 13487) and the decommissioning of an existing tower and supporting infrastructure located approximately 500-feet west of the replacement tower at a location in Border Patrol's Río Grande Valley Sector, Falfurrias Station, Falfurrias, Texas.

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To ensure consideration, comments must be received by August 24, 2023.

AD Proof from *Falfurrias Facts*

July 21, 2023

Justo Ramirez
Falfurrias Mayor
120 W. Rice St.
Falfurrias, TX 78355

SUBJECT: Draft Environmental Assessment for Communications Tower Replacement (TX 13487), Rio Grande Valley Sector, Falfurrias, Texas

Dear Mr. Ramirez:

U.S. Customs and Border Protection (CBP) announces the availability of the Draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) addressing the proposed replacement of an existing communications tower and supporting infrastructure with a new tower and supporting infrastructure within U.S. Border Patrol (USBP) Rio Grande Valley (RGV) Sector, Falfurrias Station (FLF), Falfurrias, Texas. The Draft EA was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 as amended (42 U.S. Code 4321, et seq.), the Council on Environmental Quality's NEPA implementing regulations (40 Code of Federal Regulations Part 1500 et seq.), DHS Directive Number 023-01 Rev 01, and DHS Instruction Manual 023-01-001-01, *Implementation of the National Environmental Policy Act*.

The Proposed Action includes the lease, construction, installation, operation, and maintenance of a new 440-foot, guyed wire communications tower and supporting infrastructure and the decommissioning of the existing tower and supporting infrastructure located approximately 500-feet west of the replacement tower. Supporting infrastructure includes a communication equipment (i.e., repeaters, receivers, microwave dishes, and antennas), a shelter, one ice bridge for data and power cables, a backup generator, electrical transformer, and propane storage tank.

CBP invites comments on the Draft EA during the 30-day comment period beginning on July 24, 2023. The Draft Environmental Assessment can be accessed at the following website: https://www.cbp.gov/about/environmental-management . Comments may be submitted using one of the following methods:

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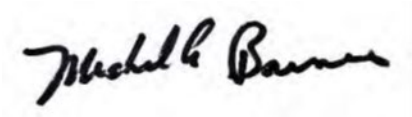
2. By mail to Michelle Barnes, Environmental Planning Lead, U.S. Customs and Border Protection, Border Patrol HQ, 1300 Pennsylvania Ave NW 6.5E Mail Stop 1039, Washington, DC 20229

To ensure consideration, comments must be received by August 24, 2023.

If you require additional information or have questions, please contact Mr. David Walls by telephone at 571-230-4476 or by email david.walls@associates.cbp.dhs.gov .

Respectfully,



Michelle (Shelly) Barnes
Environmental Planning Lead
Program Management Office Directorate
United States Border Patrol

Similar notifications letters were sent to individuals identified in Section 10: Distribution List

Appendix D – State Listed Species

Common Name	Scientific Name
black-spotted newt	(*Notophthalmus meridionalis*)
South Texas siren	*(Large form Siren sp. 1)*
Woodhouse's toad	(*Anaxyrus woodhousii*)
Strecker's chorus frog	(*Pseudacris streckeri*)
sheep frog	*(Hypopachus variolosus*)
white-faced ibis	*(Plegadis chihi)*
wood stork	(*Mycteria americana)*
swallow-tailed kite	(Elanoides forficatus)
white-tailed hawk	(*Buteo albicaudatus*)
zone-tailed hawk	(*Buteo albonotatus*)
piping plover	(*Charadrius melodus*)
mountain plover	(*Charadrius montanus*)
Franklin's gull	(*Leucophaeus pipixcan*)
cactus ferruginous pygmy-owl	(*Glaucidium brasilianum cactorum*)
western burrowing owl	(*Athene cunicularia hypugaea*)
northern beardless-tyrannulet	*(Camptostoma imberbe)*
Sprague's pipit	(*Anthus spragueii*)
tropical parula,	(*Setophaga pitiayumi*)
Botteri's sparrow	(*Peucaea botterii*)
Texas Botteri's sparrow	(*Peucaea botterii texana*)
lark bunting	(*Calamospiza melanocorys*)
cave myotis bat	(*Myotis velifer*)
tricolored bat	*(Perimyotis subflavu*)
eastern red bat	(*Lasiurus borealis*)
hoary bat	(*Lasiurus cinereus*)
northern yellow bat	(*Lasiurus intermedius*)
southern yellow bat	(*Lasiurus ega*)
Coues' rice rat Oryzomys	(*couesi aquaticus*)
white-nosed coati	(*Nasua narica*)
long-tailed weasel	(*Mustela frenata*)
eastern spotted skunk	(*Spilogale putorius*)
western spotted skunk	(*Spilogale gracilis*)
western hog-nosed skunk	(*Conepatus leuconotus*)
mountain lion	(*Puma concolor*)
ocelot	(*Leopardus ardalis*)
western box turtle	*(Terrapene ornate)*
Texas tortoise	*(Gopherus berlandieri)*
slender glass lizard	*(Ophisaurus attenuates)*
Texas horned lizard	*(Phrynosoma cornutum)*
Texas scarlet snake	*(Cemophora lineri),*
Texas indigo snake	*(Drymarchon melanurus erebennus)*
Mexican hog-nosed snake	*(Heterodon kennerlyi)*
western hognose snake	*(Heterodon nasicus)*
northern cat-eyed snake	*(Leotoderiaseptentrionalis)*
western massasauga	*(Sistrurus tergeminus)*
acacia fairy shrimp	(Dendrocephalus acacioidea)
Texas paralimnetis	(Paralimnetis texana)
Los Olmos tiger beetle	(*Cicindela nevadica olmosa*)
No accepted common name	(*Cotinis boylei*)
American bumblebee	(*Bombus pensylvanicus*)
No accepted common name	(*Megachile parksi*)
No accepted common name	(*Arethaea phantasma*)

shortcrown milkvine	(*Matelea brevicoronata*)
Falfurrias milkvine	(*Matelea radiata*)
awnless leastdaisy	(*Chaetopappa imberbis*)
South Texas false cudweed	(*Pseudognaphalium austrotexanum*)
Burridge greenthread	(*Thelesperma burridgeanum*)
Wright's trichocoronis	(*Trichocoronis wrightii var. wrightii*)
yellow-flowered alicoche	(*Echinocereus papillosus*)
Jones' nailwort	(*Paronychia jonesii*)
bristle nailwort	(*Paronychia setacea*)
South Texas yellow clammyweed	(*Polanisia erosa ssp. breviglandulosa*)
Texas stonecrop	(*Lenophyllum texanum*)
Cory's croton	(*Croton coryi*)
velvet spurge	(*Euphorbia innocua*)
sand sheet leaf-flower	(Phyllanthus abnormis var. riograndensis)
stinking rushpea	(*Pomaria austrotexana*)
dune dalea	(*Dalea austrotexana*)
sand Brazos mint	(*Brazoria arenaria*)
Amelia's sand-verbena	(*Abronia ameliae*)
South Texas gilia	(*Gilia ludens*)
Texas peachbush	(*Prunus texana*)
Bailey's ballmoss	(*Tillandsia baileyi*)

Appendix E – Air Calculations

Calculation Sheet - Off Road Emissions Construction

Equipment	ROG (VOC)	CO	NO_x	Sox (SO_2)	PM-10	PM-2.5	CO_2	CH_4
pickup truck	0.073035	0.284805	0.7953525	0.0014175	0.016515	0.001652	140.625	0.006593
combination tractor	0.048815683	0.2214231	0.20970518	0.0013096	0.0075043	0.000752	116.325	0.00441
trencher	0.080985482	0.3416218	0.60592027	0.0013277	0.022487	0.002248	132.075	0.007313
dozer	0.040348617	0.1693142	0.17336524	0.0008765	0.0062423	0.000623	87.075	0.003645
concrete mixer truck	0.01698191	0.1948954	0.11455717	0.0004056	0.0056576	0.000565	36	0.00153
crane	0.1363275	0.466605	1.4343525	0.002205	0.03384	0.003384	218.475	0.012301
drill rig	0.050414085	0.3697546	0.88452859	0.0021001	0.0096223	0.000963	208.8	0.004545
dump truck	0.040348617	0.1693142	0.17336524	0.0008765	0.0062423	0.000623	87.075	0.003645
excavator	0.010658933	0.0476888	0.0388391	0.0002451	0.0012321	0.000124	24.975	0.000968
front-end loader	0.032549364	0.158456	0.24637841	0.0007851	0.0084641	0.000846	78.075	0.002948
generator	0.055656187	0.2282969	0.30980254	0.0010989	0.0111554	0.001116	109.35	0.005018
Total	**0.586121377**	**2.652175**	**4.98616674**	**0.0126474**	**0.1289623**	**0.012895**	**1238.85**	**0.052914**

1. Emission Factors were generated using South Coast Air Quality Management District Off Road Mobile Source Emission Factors (Diesel)– Scenario Year 2021
2. 10% of PM_{10} emissions assumed to be $PM_{2.5}$
3. Assumptions: 10 hours per operational day, 45 operational days. Runtime=450 hours

Calculation Sheet – On Road Emissions

Equipment	CO	NO_x	ROG (VOC)	SO_x	PM10	PM2.5	CO_2	CH_4
Passenger vehicles	16.98870578	1.478305379	2.110508947	0.048150253	0.435435706	0.288207046	4996.051782	0.177785551
Delivery Trucks	29.61552188	30.56163006	4.628337822	0.125563739	1.354920347	1.01619026	12935.9852	0.189805652
Diesel Trucks	20.60557969	46.41329769	4.059472102	0.180420982	2.34547277	1.7816572	18966.75576	0.187938523
TOTAL	**67.209807350**	**78.453233130**	**10.79831887**	**0.354134975**	**4.135828822**	**3.086054506**	**36898.79275**	**0.555529727**
TOTAL (TPY)	**0.033604904**	**0.039226617**	**0.005399159**	**0.000177067**	**0.002067914**	**0.001543027**	**18.44939638**	**0.000277765**

1. Emission Factors were generated using South Coast Air Quality Management District Emissions Factors for On-Road Passenger Vehicles and Delivery Trucks—Scenario Years 2007-2026
2. 10% of PM_{10} emissions assumed to be $PM_{2.5}$
3. Assumptions: 2 trips per operational day, 45 operational days, 50 miles/day trip length

Calculation Sheet – Operations Emissions

Equipment	ROG (VOC)	CO	NO_x	SO_x (SO_2)	PM-10	PM-2.5	CO_2	CH_4
pickup truck	0.0019476	0.0075948	0.0212094	0.0000378	0.0004404	4.4E-05	3.75	0.000176
generator	0.007420825	0.0304396	0.041307	0.0001465	0.0014874	0.000149	14.58	0.000669
Total	**0.009368425**	**0.0380344**	**0.0625164**	**0.0001843**	**0.0019278**	**0.000193**	**18.33**	**0.000845**

1. Emission Factors were generated using South Coast Air Quality Management District Off Road Mobile Source Emission Factors (Diesel)– Scenario Year 2021
2. 10% of PM_{10} emissions assumed to be $PM_{2.5}$
3. Assumptions:
    a. Generator: 5 hours per operational day, 12 operational days. Runtime= 60 hours
    b. Pickup truck: 1 hour per operational day, 12 operational days. Runtime= 12 hours

Appendix F – Noise Calculations

$$D = Do * 10^{((\text{Construction Noise} - \text{Ambient Sound Level in dBA})/\alpha))}$$

D = the distance from the noise source

Do = the reference measurement distance (50 feet)

α = 25 for soft ground. For line source noise, a cylindrical spreading loss model is used. These alpha (α) values assume a 7.5 dBA reduction per doubling distance over soft ground.

Background Noise = 60 dBA; Background noise was calculated by determining the traffic noise using the Annual Average Daily Traffic of a particular point on Highway 281 nearest to the tower site and the distance of the Highway 281 from tower site

Max Construction Noise = 94 dBA; Total dBA when construction equipment is operating at the same time

$D = 50 * 10^{\wedge((94 - 60/25))}$

$D = 50 * 10^{\wedge(34/25)}$

$D= 50 * 10^{\wedge(1.26)}$

D= 50 * 22.90868

D = **1,145-feet**