

Environmental Assessment and Alternative Site/Route Analysis



CPS Energy

**Proposed Tezel Substation and
138-kV Transmission Line Project
Project No. 121323**

March 2021

Environmental Assessment and Alternative Site/Route Analysis

prepared for

CPS Energy
Proposed Tezel Substation and
138-kV Transmission Line Project
Bexar County, Texas

Project No. 121323

March 2021

prepared by

Burns & McDonnell Engineering Company, Inc.
Austin, Texas

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LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
AACOG	Alamo Area Council of Governments
ANSI	American National Standards Institute
APLIC	Avian Power Line Interaction Committee
AWBP	Aransas–Wood Buffalo population
BEG	Bureau of Economic Geology
BFZ	Balcones Fault Zone
BGEPA	Bald and Golden Eagle Protection Act
BLS	U.S. Bureau of Labor Statistics
BMP	best management practice
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
CCN	Certificate of Convenience and Necessity
CFR	Code of Federal Regulations
COSA	City of San Antonio
CWA	Clean Water Act
CWCTP	Cooperative Whooping Crane Tracking Project
DoD	Department of Defense
EA	Environmental Assessment and Alternative Site/Route Analysis
EAA	Edwards Aquifer Authority
EARZ	Edwards Aquifer Recharge Zone
EMST	Ecological Mapping Systems of Texas
EPA	U.S. Environmental Protection Agency

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
ft	foot/feet
FVZ	foreground visual zone
GCEC	Grayson-Collin Electric Cooperative
GLO	General Land Office
HPA	high probability area
IPaC	Information, Planning, and Conservation
ISD	Independent School District
kV	Kilovolt
MBTA	Migratory Bird Treaty Act
ME	Miscellaneous Easement
msl	mean sea level
MVA	Megavolt amperes
NAIP	National Agriculture Imagery Program
NASS	National Agricultural Statistics Service
NDD	TPWD's Natural Diversity Database
NEPA	National Environmental Policy Act

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
NESC	National Electrical Safety Code
NOI	Notice of Intent
NOT	Notice of Termination
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWP	Nationwide Permit
NWR	National Wildlife Refuge
OTHM	Official Texas Historical Marker
PALM	Potential Archaeological Liability Map
Project	Tezel Substation and 138-kV Transmission Line Project
PSF	Permanent School Fund
PUC	Public Utility Commission of Texas
PURA	Public Utility Regulatory Act
ROW	right-of-way
RRC	Railroad Commission of Texas
RTHL	Recorded Texas Historic Landmarks
SAL	State Antiquities Landmark
SARA	San Antonio River Authority
SAWS	San Antonio Water Systems
SCS	Soil Conservation Service

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
SH	State Highway
SWCD	Soil & Water Conservation District
SWPPP	Storm Water Pollution Prevention Plan
TAC	Texas Administrative Code
TARC	Texas Association of Regional Councils
TARL	Texas Archeological Research Laboratory
TASA	Texas Archeological Sites Atlas
TCEQ	Texas Commission on Environmental Quality
TEA	Texas Education Agency
THC	Texas Historical Commission
TPDES	Texas Pollution Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
TSS	Texas Speleological Society
TWC	Texas Workforce Commission
TWDB	Texas Water Development Board
TxDOT	Texas Department of Transportation
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WPAP	Water Pollution Abatement Plan

1.0 DESCRIPTION OF THE PROPOSED PROJECT

1.1 Scope of Project

CPS Energy is proposing to construct a new electric substation and transmission line in the northwestern area of San Antonio near the intersection of Tezel Road and Guilbeau Road in Bexar County, Texas. The proposed Tezel Substation and 138-kilovolt (kV) Transmission Line Project (Project) will provide additional electric capacity to support community growth and to improve the reliability of electric services to homes and businesses in the surrounding area. The new substation (Tezel Road Substation [H2]) will cover an area of approximately 1.5 to 2.5 acres and will be designed as a 35-kV, three-unit (three bays, two transformers) site with the initial buildout to include one 100-megavolt amperes (MVA) transformer unit and one four-feeder switchgear. The substation will be looped into the existing Bandera to Helotes 138-kV transmission line, requiring two 138-kV line terminals. Depending on the site/route ultimately selected, the proposed transmission line will be between 0 and 4 miles long, will require a 100-foot wide right-of-way (ROW), unless it is located along a road in which case it would be reduced, and be located entirely within Bexar County. Figure 1-1 shows the Project location; the Study Area is described in Section 2.3.1 and shown on Figure 2-1.

CPS Energy has tasked Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) to prepare an Environmental Assessment and Alternative Routing/Siting Analysis (EA). This document is intended to provide information and address issues concerning the natural, human, and cultural environment within the Study Area. This document may also be used in support of any local, State, or Federal permitting activities that may be required for the proposed Project.

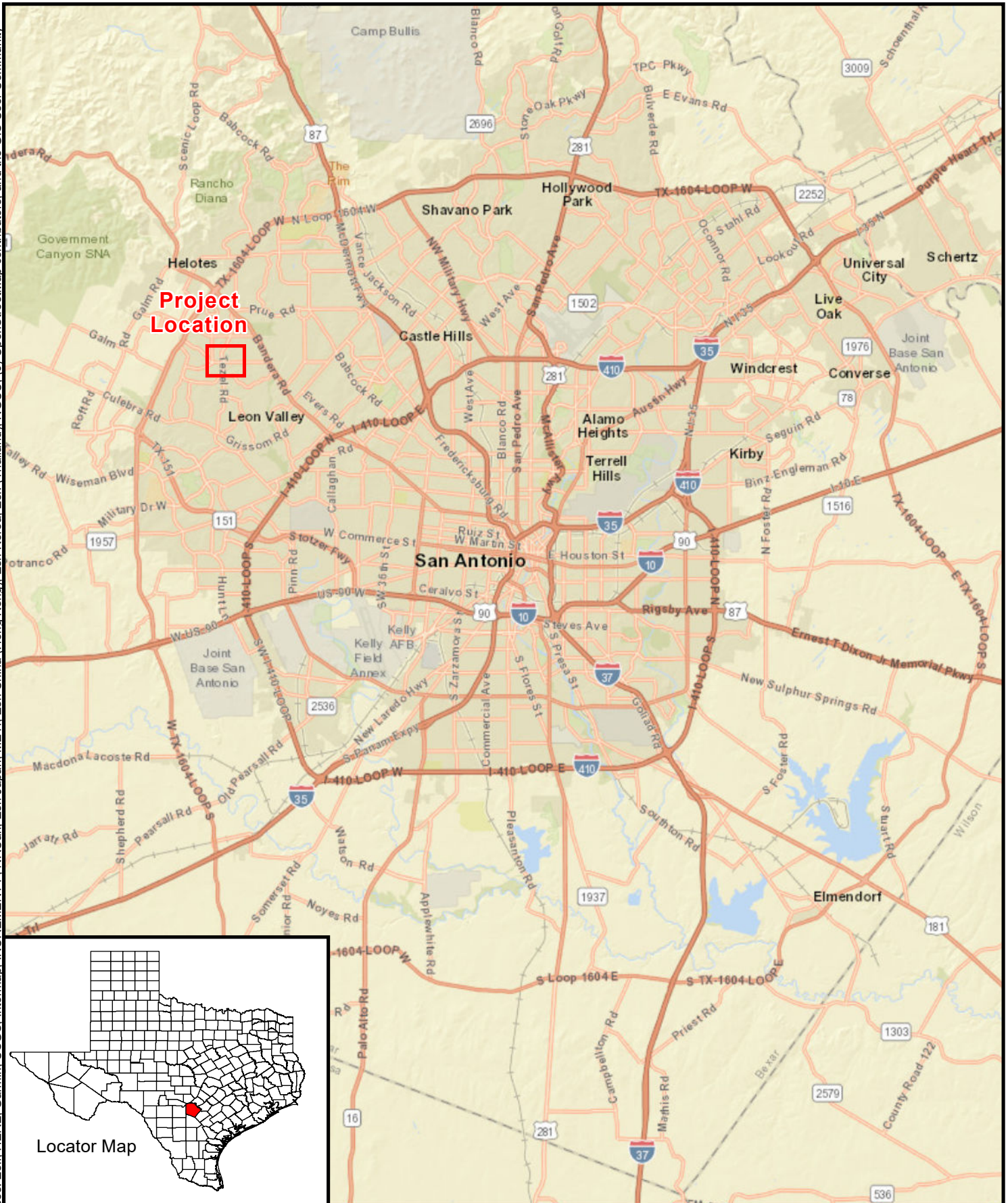
1.2 Purpose and Need


1.2.1 Capacity

The new Tezel Road Substation is necessary to support growth in the surrounding area from Bandera Road to Wiseman Road outside Loop 1604 and improve reliability by shortening existing distribution lines serving homes and businesses in the Guilbeau and Tezel Roads area. The new shorter distribution lines will create strong distribution backbones and sufficient field ties that will reduce the potential for overloading and outages.

1.2.2 Distribution System

Distribution lines connect substations to businesses and homes. The existing distribution infrastructure is nearing the limit of its capability, so more distribution lines must be built. The length of



 Study Area

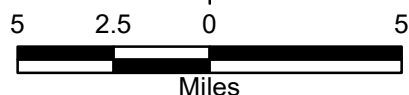


Figure 1-1
 Project Location
 Tezel Substation and
 Transmission Line Project
 CPS Energy
 Bexar County, Texas

new lines should be minimized to reduce costs and construction impacts. Furthermore, shorter lines help the continual need to improve reliability and power quality.

1.2.3 Reliability and Power Quality

As a distribution line is extended over a longer distance and as more customers are connected to the line, the reliability and quality of the electric service can decline. The longer the line, the more opportunity for electrical disturbances caused by squirrels, wind, trees, and other factors. Spreading the electric load (customers) among more, shorter distribution lines generally improves the reliability and the quality of power that customers receive. Furthermore, since it will be close to the customers being served, the new substation will improve distribution reliability and power quality in ways that cannot be achieved with the existing substations.

1.3 Description of Proposed Design

Details of the proposed installation will be determined after a site is selected. A general description is provided below.

1.3.1 Substation Design

The substation will be designed as a three-unit (three bays, two transformers) site with one 138/35-kV, 100-MVA transformer and one four-feeder switchgear initially. The substation will be looped into the existing Bandera to Helotes 138-kV transmission line, requiring two 138-kV line terminals. The substation will include one 138-kV circuit switcher and a 2000-A main bus design. Figure 1-2 shows an example of a substation, Figures 1-3 and 1-4 show an example of a high-voltage transmission line, and Figure 1-5 shows an example of a lower voltage distribution line.

1.3.2 Construction Schedule

CPS Energy plans to construct the substation/transmission line between mid-2022 and May 2024. The schedule will be refined as the site is selected and engineering designs progress. The substation and transmission line will be constructed by a combination of contractor and CPS Energy crews. Under normal circumstances, work will typically be performed Monday through Friday, with weekend work if needed.

1.4 Description of Proposed Transmission Line Design

Details of the proposed installation will be determined after a route is selected. A general description is provided below.



Figure 1-2
Typical Substation
Tezel Substation and
Transmission Line Project
CPS Energy
Bexar County, Texas





Figure 1-3
Typical Single-Circuit Monopole
Tezel Substation and
Transmission Line Project
CPS Energy
Bexar County, Texas



Figure 1-4
Typical Double-Circuit Monopole
Tezel Substation and
Transmission Line Project
CPS Energy
Bexar County, Texas



Figure 1-5
Typical Distribution Line
Tezel Substation and
Transmission Line Project
CPS Energy
Bexar County, Texas

1.4.1 Transmission Line Easements

The line will be constructed in easements obtained by CPS Energy and defined by a metes and bounds descriptions prepared by licensed land surveyors after a route is approved. The proposed ROW width will be 100 feet unless the transmission line is located within or adjacent to existing pipeline, road, or transmission/distribution line ROW, in which case it may be less. In rare instances the needed ROW width may be greater than 100 feet. Temporary construction easements or separate access easements may also be required for the facilities.

Generally, the ROW will be unfenced, and landowners will have access to easements located on their land. However, gates or gaps will be installed with locks in fences that cross the ROW and in any fences that restrict CPS Energy personnel from accessing the ROW. ROW will be maintained, as required, to allow access for the construction, operation, and maintenance of the transmission line. For example, culverts may be installed in areas to provide access along the ROW.

1.4.2 Structures

The CPS Energy transmission system consists of several different structure types, which vary due to location, terrain, and specific project requirements. The proposed 138-kV transmission line will be constructed on steel poles, as shown on Figure 1-3. Structure heights will vary based upon the topography, structure location, and span lengths, but typically will be between 90 and 125 feet above ground level. Typical span distances between structures will range from 400 to 600 feet, with possible exceptions due to site conditions and/or engineering requirements (e.g., near corners, road crossings, or substations and where longer spans are necessary). Design criteria will meet or exceed the National Electric Safety Code (NESC), American National Standards Institute (ANSI) C2, and CPS Energy standard design specifications.

1.4.3 Design Considerations

To minimize any adverse effects to natural and human resources, where practical, the design and placement of structures may be affected by the results of natural resources and cultural resources assessments and by the availability of topographic features and vegetation to effectively screen structures.

1.5 Construction Considerations

Projects of this type require clearing, structure assembly and erection, conductor and shield wire installation, and cleanup when the project is completed. The following criteria will be taken into consideration (these criteria are subject to adjustment befitting the rules and judgments of any public agencies whose lands may be crossed by the proposed line):

1. Clearing and grading of construction areas such as storage areas, setup sites, etc. will be minimized to the extent practicable. These areas will be graded in a manner that will minimize erosion and conform to the natural topography.
2. Soil that has been excavated during construction and not used will be evenly backfilled onto a cleared area or removed from the site. The backfilled soil will be sloped gradually to conform to the terrain and the adjacent land. If natural seeding will not provide ground cover in a reasonable length of time, appropriate vegetation may be planted.
3. Soil disturbance during construction will be minimized and erosion control devices will be constructed where necessary. The project will comply with TCEQ and the City of San Antonio (COSA) requirements for stormwater discharges.
4. Clearing and construction activities in the vicinity of streambeds will be performed in a manner to minimize damage to the natural condition of the area. Where feasible, service and access roads will be constructed jointly. Roads will not be constructed on unstable slopes and as required, side drainage ditches and culverts will be provided to prevent soil or road erosion. Construction of access roads and drainage structures required for the project will comply with any applicable State or Federal permit requirements.
5. Tension stringing of conductors may be employed to reduce the amount of vegetation clearing before final conductor locations are established. Helicopters may be used in otherwise inaccessible areas and to reduce the amount of clearing.
6. When possible, in areas of high wildlife use or in areas of known endangered or threatened species habitat, construction will be performed during seasons of low wildlife occurrence, such as between periods of peak waterfowl migrations (generally spring and fall) and during nonbreeding season (species dependent). A karst survey will be performed prior to construction.
7. If any archeological materials are uncovered during construction, construction will cease in the immediate area of the discovery and the discovery will be evaluated.

1.5.1 Clearing and ROW Preparation

Clearing plans, methods, and practices are extremely important to minimize the potential adverse effects of transmission lines on the environment. The ROW will not be clear cut. Only trees and vegetation that may interfere with the construction, operation, and maintenance of the transmission line will be removed.

Available methods of tree and brush disposal are mulching and salvaging. Landowners' preferences will be considered. The selection of the disposal method will conform with applicable regulations, which often require that cleared brush and trees be stacked and left for wildlife use.

1.5.2 Structure Assembly and Erection

Survey crews will stake or otherwise mark structure locations. Construction crews will install structures by excavating holes and placing a reinforced concrete foundation. After the foundations have cured sufficiently, crews will set the structures and install the conductor and shield wire hardware assemblies. Since a large amount of vehicular traffic will occur during this operation, construction crews will take care to minimize impacts to the ROW by minimizing the number of pathways traveled.

1.5.3 Conductor and Shield Wire Installation

The conductors and shield wires are installed via a tensioning system. A rope is first threaded through the stringing blocks or dollies for each conductor and shield wire. A helicopter may be used for threading the rope through the stringing blocks to help minimize clearing. Conductor and shield wires are then pulled by the ropes and held tight by a tensioner to keep the wires from contacting the ground and other objects that could be damaging to the wire. In addition, guard structures (temporary wood-pole structures or bucket trucks) will be installed where the transmission line crosses overhead electric power lines, overhead telephone lines, roadways, or other areas requiring an additional margin of safety during wire installation. When the wire is tensioned to the required sag, the wire is taken out of the blocks and placed in the suspension and dead-end clamps for permanent attachment.

1.5.4 Cleanup

The cleanup operation typically involves the leveling of all disturbed areas, the removal of all debris, and the restoration of any items damaged by construction of the project. Upon the completion of the construction work, the contractor will promptly remove from the site all scrap, trash, excavated materials, waste materials, and debris resulting from construction of the transmission line. All contractor-owned equipment and materials will also be removed from the site, and waste disposal will be conducted in a legal manner.

1.6 Maintenance Considerations

CPS Energy will periodically inspect the substation, transmission line ROW, structures, and line to provide safe and reliable facilities. The major maintenance item will be the removal or trimming of trees that pose a potential danger to the conductors or structures. Preservation of both the environmental and natural resource conservation factors designed and built into transmission system siting requires a

thoughtful, comprehensive program for maintaining the facility. The following factors are incorporated into CPS Energy's program for this project.

1. Native vegetation, particularly that of value to fish and wildlife, which has been saved through the construction process and that does not have the potential to grow close enough to the transmission line that the vegetation poses a hazard to the safe operation and maintenance of the transmission line, will be allowed to grow in selected parts of the ROW. Likewise, if ecologically appropriate, native grass cover and low-growing shrubs will be left in the areas immediately adjacent to transmission structures. Where grading is necessary, access roads will be graded to the proper slope to prevent soil erosion.
2. If used, U.S. Environmental Protection Agency (EPA)-approved herbicides will be carefully selected to have a minimal effect on desirable indigenous plant life, and selective application will be used whenever appropriate.
3. Maintenance inspection intervals will be established by CPS Energy, and routine maintenance will be encouraged when access roads are firm or dry.
4. Aerial and ground maintenance inspection activities of the transmission line facility will include observation of soil erosion problems, fallen timber, and conditions of the vegetation that require attention. Where necessary, based on erosion control, native shrubs or grasses may be planted.
5. Public acceptance of ROW is generally broadened when compatible multiple use of the ROW is allowed. Transmission line ROW can be made available for appropriate types of multiple-use concepts, such as farming and cattle grazing, if the activity does not impact public safety or inhibit the safe operation and maintenance of the electrical system. Landowners should coordinate with the utility if another use of the ROW is being considered.
6. The results of natural resources and cultural resources assessments will be followed as necessary during maintenance of the ROW unless these assessments create an unsafe condition.

1.7 Agency Actions

Numerous Federal, State, and local regulatory agencies and organizations have promulgated rules and regulations regarding the routing and potential impacts associated with the proposed transmission line Project. This section lists the major regulatory agencies that are involved in project planning and permitting of transmission lines in Texas, and describes the permits or approvals required. Burns & McDonnell solicited comments from various regulatory agencies and officials during the development of

this document. A summary of agency responses is provided in Section 5.1 (Correspondence with Agencies and Officials) and copies of the responses received are included in Appendix A (Agency Correspondence).

Construction documents and specifications will indicate special construction measures needed to comply with the regulatory requirements listed below. In addition, depending upon the location of the transmission line structures, floodplain development permits and road crossing permits may be required by Collin County.

1.7.1 Public Utility Commission

The Public Utility Commission of Texas (PUC) regulates the routing of transmission lines in Texas under Section 37.056 of the Texas Utilities Code. Because the Project is located entirely within the city limits of San Antonio, CPS Energy will not require a Certificate of Convenience and Necessity (CCN). This EA has been prepared by Burns & McDonnell in support of any local, State, or Federal permitting requirements, if necessary.

1.7.2 Federal Aviation Administration

According to Federal Aviation Administration (FAA) regulations (FAR), Part 77, the construction of a transmission line requires FAA notification if structure heights exceed 200 feet or the height of an imaginary surface extending outward and upward at one of the following slopes (FAA, 2011):

- A 100:1 slope for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of a public or military airport having at least one runway longer than 3,200 feet
- A 50:1 slope for a horizontal distance of 10,000 feet from the nearest runway of a public or military airport where no runway is longer than 3,200 feet in length
- A 25:1 slope for a horizontal distance of 5,000 feet for heliports

Based on these guidelines, CPS Energy will make a final determination of the need for FAA notification based on the alignment of the approved route, structure locations, and structure designs. If necessary, CPS Energy will file a “Notice of Proposed Construction or Alteration” (Form 7460-1) with the FAA at least 30 days prior to construction. The result of this notification and the subsequent coordination with the FAA could include changes in the design or potential requirements to mark or illuminate portions of the line.

1.7.3 U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act (CWA), activities in waters of the U.S., including wetlands, are regulated by the U.S. Army Corps of Engineers (USACE), in conjunction with the EPA. Certain construction activities that potentially impact waters of the U.S. may be authorized by one of the USACE's Nationwide Permits (NWPs). Permits that may apply to placement of support structures and associated activities are NWP 25 (Structural Discharges) and NWP 12 (Utility Line Activities). NWP 25 generally authorizes the discharge of concrete, sand, rock, etc., into tightly sealed forms or cells where the material is used as a structural member for standard pile-supported structures (linear projects, not buildings or other structures).

NWP 12 generally authorizes discharges associated with the construction of utility lines and substations within waters of the U.S. and additional activities affecting waters of the U.S., such as those associated with the construction and maintenance of utility line substations; foundations for overhead utility line towers, poles, and anchors; and access roads for the construction and maintenance of utility lines. Construction of this transmission line Project will likely meet the criteria of NWP 12. However, if the impacts of the Project exceed the criteria established under General Condition 13 or other regional conditions listed under the NWP 12, then a Regional General Permit may be required. An Individual Permit, however, is not anticipated for this Project. If necessary, CPS Energy will coordinate with the USACE prior to clearing and construction to ensure compliance with the appropriate regulations associated with construction-related impacts to waterbodies and wetland features.

Under Section 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. § 403, the USACE is directed by Congress to regulate all work and structures in, or affecting the course, condition, or capacity of navigable waters of the U.S., including tidal waters. No navigable waters occur within the Study Area that would require permitting under this Act (USACE, 2011).

1.7.4 U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) enforces Federal wildlife laws and provides comments on proposed projects under the jurisdiction of the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Bald and Golden Eagle Protection Act (BGEPA). Additionally, USFWS oversight includes review of projects with a Federal nexus under the National Environmental Policy Act (NEPA).

Upon approval of the proposed Project, a survey may be necessary to identify any potential suitable habitat for federally protected species, including a karst survey. If suitable habitat is noted, then

informal consultation with the USFWS may be conducted to determine if permitting or other requirements associated with possible impacts to protected species under the ESA, MBTA, or BGEPA is necessary.

1.7.5 Federal Emergency Management Agency

Burns & McDonnell reviewed the Flood Insurance Rate Maps (FIRMs), published by the Federal Emergency Management Agency (FEMA), for the Study Area. Floodplains are not extensive in the Study Area and are associated with three unnamed streams; the Project should have no significant impact on their function. Coordination with the local Floodplain Administrator will be completed as necessary once the route is approved and final structure locations are identified.

1.7.6 U.S. Department of Defense Siting Clearinghouse

The U.S. Department of Defense (DoD) Siting Clearinghouse works with industry to overcome risks to national security while promoting compatible domestic energy development. Energy production facilities and transmission projects involving tall structures, such as electric transmission towers, may degrade military testing and training operations. The electromagnetic interference from electric transmission lines can impact critical DoD testing activities. 16 Texas Administrative Code (TAC) § 22.52 states that the “Applicant shall, upon filing of the application, also mail notification of it’s [sic] application to... and the Department of Defense Siting Clearinghouse.” An affidavit attesting to the notification to the DoD is also required. Furthermore, the utility is required to provide written notice of the public meeting or, if no public meeting is held, to provide written notice to the DoD of the planned filing of an application prior to completion of the routing study. While this Project will not require filing of an application with the PUC for a CCN, CPS Energy will coordinate with the DoD as necessary.

1.7.7 U.S. Department of Defense Siting Clearinghouse

The U.S. Department of Defense (DoD) Siting Clearinghouse works with industry to overcome risks to national security while promoting compatible domestic energy development. Energy production facilities and transmission projects involving tall structures, such as electric transmission towers, may degrade military testing and training operations. The electromagnetic interference from electric transmission lines can impact critical DoD testing activities. PUC Procedural Rule § 22.52 states that the “[A]pplicant shall, upon filing of the application, also mail notification of [its] application to... and the Department of Defense Siting Clearinghouse.” An affidavit attesting to the notification to the DoD is also required. Furthermore, the utility is required to provide written notice of the public meeting or, if no public meeting is held, to provide written notice to the DoD of the planned filing of an application prior to completion of the routing study. While this Project will not require filing of an application with the PUC for a CCN,

CPS Energy sent a letter to the DoD Siting Clearinghouse on February 28, 2020 notifying it of the Project and that CPS Energy was preparing an EA. In response, the DoD stated that the transmission line Project will have minimal impact on military operations conducted in the area.

1.7.8 Texas Parks and Wildlife Department

The Texas Parks and Wildlife Department (TPWD) is the State agency with the primary responsibility of protecting the State's fish and wildlife resources in accordance with the Texas Parks and Wildlife Code Section 12.0011(b). Burns & McDonnell solicited comments from the TPWD during the Project scoping phase. Once a substation site and route are approved, additional coordination with TPWD may be necessary to determine the need for additional surveys, and to avoid or minimize any potential adverse impacts to sensitive habitats, threatened or endangered species, and other fish and wildlife resources.

1.7.9 Texas Commission on Environmental Quality

The Project may require a Texas Pollution Discharge Elimination System (TPDES) General Construction Permit (TX150000) as implemented by the Texas Commission on Environmental Quality (TCEQ) under the provisions of Section 402 of the CWA and Chapter 26 of the Texas Water Code. The TCEQ has developed a three-tiered approach for implementing this permit that is dependent on the acreage of disturbance. No permitting is required for land disturbances of less than 1 acre (Tier I). Disturbance of more than 1 acre, but less than 5 acres, would require implementation of a Storm Water Pollution Prevention Plan (SWPPP) (Tier II). If more than 5 acres of land are disturbed, the requirements mentioned above for Tier II are necessary and the submittal of a Notice of Intent (NOI) and Notice of Termination (NOT) to the TCEQ is also required (Tier III). Once a site and route are approved, CPS Energy will determine the amount of ground disturbance and the appropriate tier and conditions of the TX150000 permit.

1.7.10 Texas Department of Transportation

Permits and approvals are required from the Texas Department of Transportation (TxDOT) if a proposed transmission line requires the crossing of, or access from, a State-maintained roadway. The proposed transmission line, however, will not cross or require access from a State-maintained roadway, and therefore, no permits or approvals from TxDOT are anticipated to be needed for the Project.

1.7.11 Texas Historical Commission

Cultural resources are protected by Federal and State laws if they have some level of significance under the criteria of the National Register of Historic Places (NRHP) (36 Code of Federal Regulations [CFR] Part 60) or under State guidance TAC, Title 13, Part 2, Chapter 26.7–8). CPS Energy will obtain

clearance as necessary from the Texas Historical Commission (THC) regarding requirements concerning historic and prehistoric cultural resources, prior to initiating any ground disturbance.

1.7.12 Texas General Land Office

The Texas General Land Office (GLO) requires a Miscellaneous Easement (ME) for any ROW crossing a State-owned riverbed, navigable stream, or tidally influenced waters. Following approval of a route for this Project, if any such waters are crossed, CPS Energy will obtain the necessary ME. However, an ME is not expected to be required for this Project, since the approved route will likely not cross any State-owned riverbed, navigable stream, tidally influenced water, or Permanent School Fund (PSF) Lands.

1.7.13 Bexar County

Floodplain permits and county road crossing permits or approvals will be obtained from Bexar County as required. As noted above, the Project should not adversely affect floodplain management. Coordination with the Floodplain Administrator will be completed as necessary once the route is approved and final structure locations are identified.

1.7.14 City of San Antonio

The Project is located entirely within the jurisdiction of the City of San Antonio. CPS Energy will comply with all the necessary ordinances and regulations and will pursue the necessary legal agreements to construct the proposed Project. Input from the city has been solicited during the development of the proposed Project.

1.7.15 San Antonio Water Systems

Since more than 1 acre will be cleared or disturbed during construction, an SWPPP will be prepared and a construction notice will be submitted by CPS Energy to the San Antonio Water Systems (SAWS). The controls specified in each SWPPP will be monitored in the field.

1.8 Summary of Agency Actions

If the proposed transmission line is located within, or across, the ROW of any city- or State-maintained road or highway, CPS Energy will obtain the appropriate permit(s) from the controlling governing entity. Since more than 1 acre will be cleared or disturbed during construction, an SWPPP will be prepared and a construction notice will be submitted by CPS Energy to SAWS. Permits or regulatory approvals may also be required from the TCEQ, THC, USACE, and USFWS. Following the identification of environmental and ROW concerns, appropriate measures will be taken during engineering to incorporate special provisions in construction documents, specifications, or other instructions. Following completion of the

design, a preconstruction conference will be held, which will include a review of these provisions. Physical inspections of the Project will be performed to assure all appropriate measures have been taken during construction.

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2.0 DEVELOPMENT AND EVALUATION OF ALTERNATIVE SITES/TRANSMISSION LINE ROUTES

2.1 Objective of Study

The objective of this study was to develop and evaluate several alternative substation sites and transmission line routes, and ultimately to recommend a preferred site/transmission line route for CPS Energy's proposed Tezel Substation and Transmission Line Project, that is feasible from economic, engineering, system planning, and environmental standpoints. CPS Energy followed its previously established general procedures and methodology in the siting/routing of substations and transmission lines. CPS Energy utilizes a multiphase approach for completing a project: define the study area; obtain environmental information; map environmental and land use constraints; identify potential substation sites; develop preliminary alternative route segments; conduct public involvement; identify and evaluate primary substation sites and alternative routes; conduct environmental, engineering, and cost analyses; select a preferred site/transmission line route; acquire CPS Energy Board approval; and design and construct the substation and transmission facilities.

2.2 Identification of Potential Sites and Development of Alternative Routes

2.2.1 Study Area Delineation

To locate potential sites for the substation, CPS Energy first identified a Study Area large enough to capture several sites that might satisfy the needs described above. Burns & McDonnell and CPS Energy identified potential sites within the Study Area based on the following criteria:

Size of the site based on needed capacity. To relieve the growing demand on existing substations and to provide a reliable electric supply in the Tezel Road/Guilbeau Road area, approximately 1.5 to 2.5 acres will be needed to construct the new substation.

Location of the site based on available electric supply. The existing Bandera to Helotes 138-kV transmission line is the only convenient electric supply that is available to feed the new substation. Thus, the Study Area must be large enough to encompass the substation and transmission line endpoints.

Location of the site based on the distribution system. To create the best mix of more and shorter distribution lines, the new substation should be located near existing distribution lines (while being relatively close to the existing Bandera to Helotes transmission line).

The Study Area also must include a large enough area within which enough alternative routes could be developed between the potential substation sites and the existing Bandera to Helotes 138-kV transmission line. The Study Area is approximately 1 mile long by 0.75 mile wide and encompasses approximately 0.76 square mile (488 acres) in Bexar County (Figure 2-1).

2.2.2 Constraints Mapping

To minimize potential impacts to sensitive environmental and land use features, a constraints mapping process was used in identifying/developing/refining potential substation sites and possible alternative routes. The geographic location of environmentally sensitive and other restrictive areas within the Study Area were located and considered during substation siting and alternative route delineation. These constraints were mapped onto an aerial base map (Figure 2-2, map pocket) created using 2019 Google Earth and 2020 ESRI imagery. The overall impact of the alternative routes presented in this report has been greatly reduced by avoiding, to the greatest extent practical, such constraints as congested urban areas, subdivisions, individual residences, community facilities, parks/recreation areas, cemeteries, historic sites, archeological sites, wetlands, churches, schools, and endangered or threatened species habitat, and by utilizing or paralleling existing compatible ROW and property lines, where practical.

2.2.3 Potential Substation Sites and Preliminary Route Segments

Utilizing the information described above, Burns & McDonnell identified seven potential substation site locations. After a field visit by Burns & McDonnell and CPS Energy, two of the sites were combined into one, leaving six potential substation sites. Burns & McDonnell developed preliminary route segments between the existing Bandera to Helotes 138-kV transmission line and these six potential sites, which were presented to CPS Energy for review and comment. The route segments were refined by the Project team as more information became available. Community values, existing and proposed land use, and areas of environmental concern were taken into consideration when identifying the potential substation sites and developing the preliminary route segments.

CPS Energy continually reviewed the preliminary route segments throughout their development, taking into consideration the additional factors of engineering/system planning issues, and proposed several revisions by adding, deleting, or modifying individual segments. The resulting preliminary route segment network and six potential substation sites, shown on Figure 2-3, were presented to the public via a pre-recorded broadcast video on July 15, 2020.

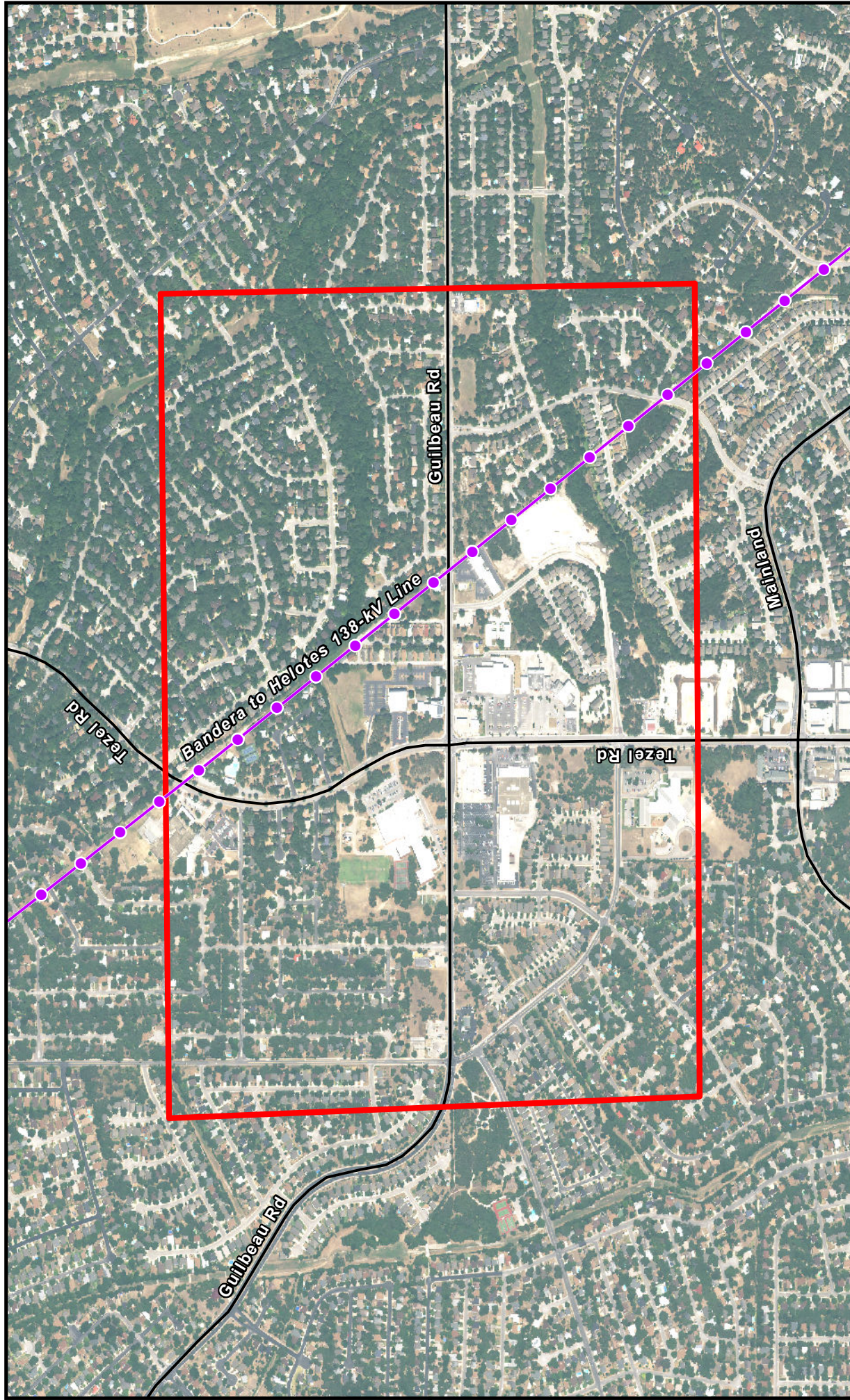



Figure 2-1
Study Area
Tezel Substation and
Transmission Line Project
CPS Energy
Bexar County, Texas

**BURNS
MCDONNELL**

 NORTH

0 500 1,000 2,000
Scale in Feet

— Existing Transmission Line
▭ Study Area Boundary

Figure 2-2: Primary Alternatives in Relation to Environmental and Land Use Constraints

This oversized map is located in a map pocket in the back of this document.

2.2.4 Primary Substation Sites and Routes (Primary Alternatives)

Following the public pre-recorded broadcast video, CPS Energy held several conference calls with Burns & McDonnell and the rest of the Project Team to evaluate public input and to consider revisions to the network of preliminary sites/route segments as presented in the July 2020 video broadcast. The Project Team deleted four segments (Segments 1, 3, 8, and 9) because they didn't meet COSA's Utility Excavation Criteria Manual requirements and procedures. The resulting primary route segment network and six potential substation sites are shown on Figure 2-4. As a result of these efforts, the Project Team selected 15 alternatives from these primary segments for a detailed in-depth environmental analysis. Two of these alternatives, Sites 4 and 5, are adjacent to the existing Bandera- Helotes 138-kV Transmission Line and therefore have no transmission line associated with them. The remaining 13 alternatives involve a substation site plus a transmission line. Table 2-1 presents the composition of these 13 alternatives by segment, as well as their approximate length.

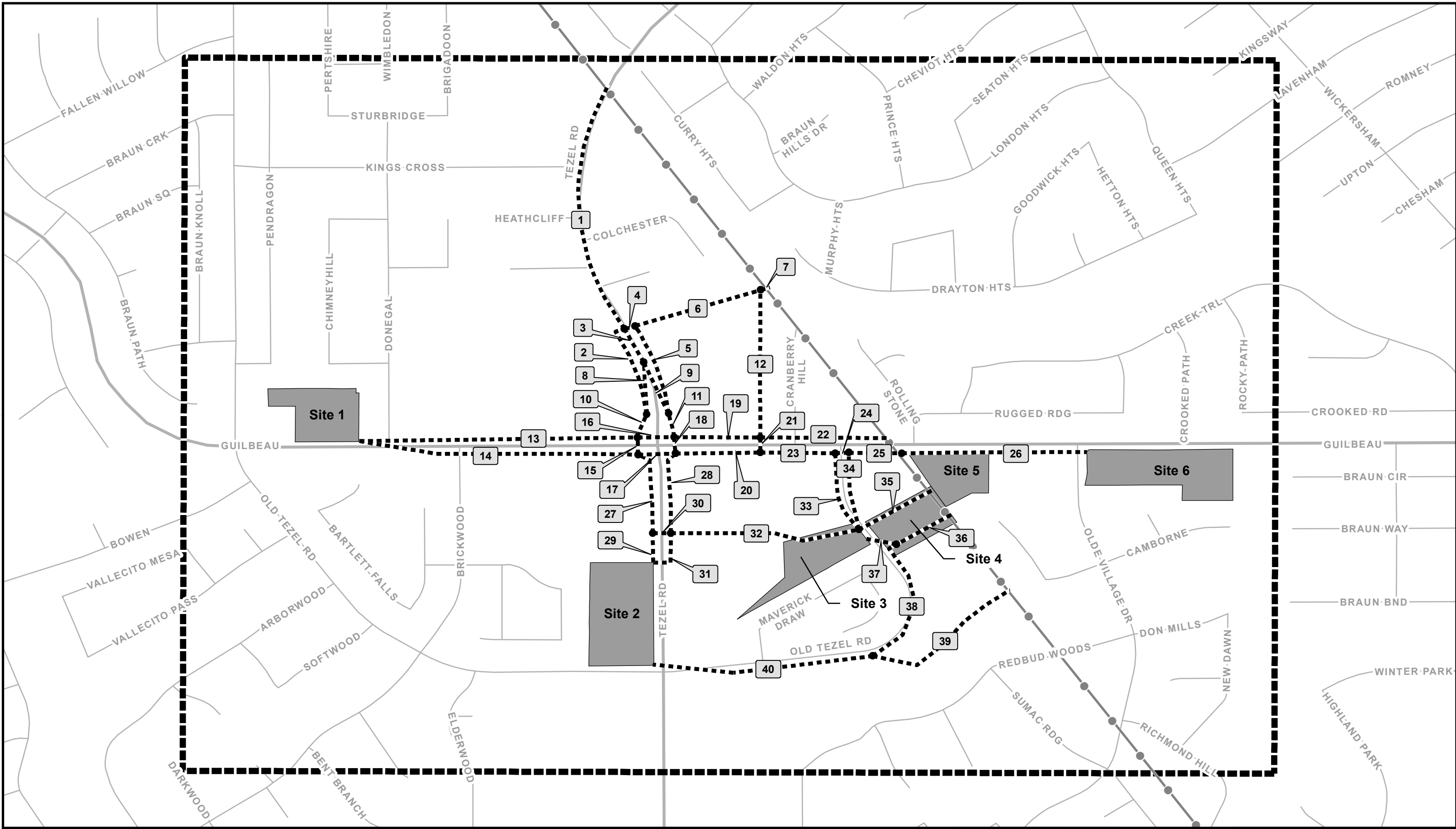
2.3 Primary Alternatives Evaluation

The evaluation of the 15 alternatives for the Project involved studying a variety of environmental factors. The number or quantity of each environmental criterion (e.g., number of habitable structures within 300 feet, amount of woodland/brushland within site or crossed by route, etc.) was inventoried and tabulated.

The number or amount of each factor was determined by reviewing recent aerial imagery (2019 Google Earth; 2019 United States Department of Agriculture [USDA] National Agriculture Imagery Program [NAIP]; 2020 ESRI MAXAR WorldView-2 satellite imagery); 7.5-minute and 1:24,000 U.S. Geological Survey (USGS) topographic maps, USFWS National Wetlands Inventory (NWI) maps, USFWS' Information, Planning, and Conservation (IPaC) system, TPWD's Natural Diversity Database (NDD), TPWD's Ecological Mapping Systems of Texas (EMST), TxDOT county highway maps, FEMA maps, and by field verification from public access points. The environmental advantages and disadvantages of each potential alternative were then evaluated. Ground reconnaissance of the Study Area and computer-based evaluation of digital aerial imagery were utilized for both refinement and evaluation of alternatives. Forty-three environmental criteria were inventoried for each of the 15 alternatives for the Project. These criteria are shown in Table 2-2. Potential environmental impacts of the primary alternatives are addressed in Section 4.0 of this document. Comparative environmental data for the primary alternatives are provided in Table 4-1.

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- Preliminary Segment and ID
- Segment Node
- Existing Transmission Line
- Proposed Substation Site
- ▭ Study Area Boundary
- Local Road

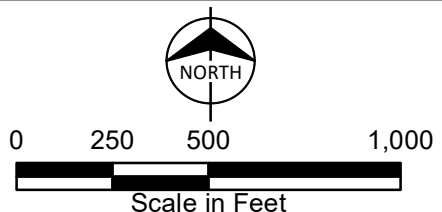
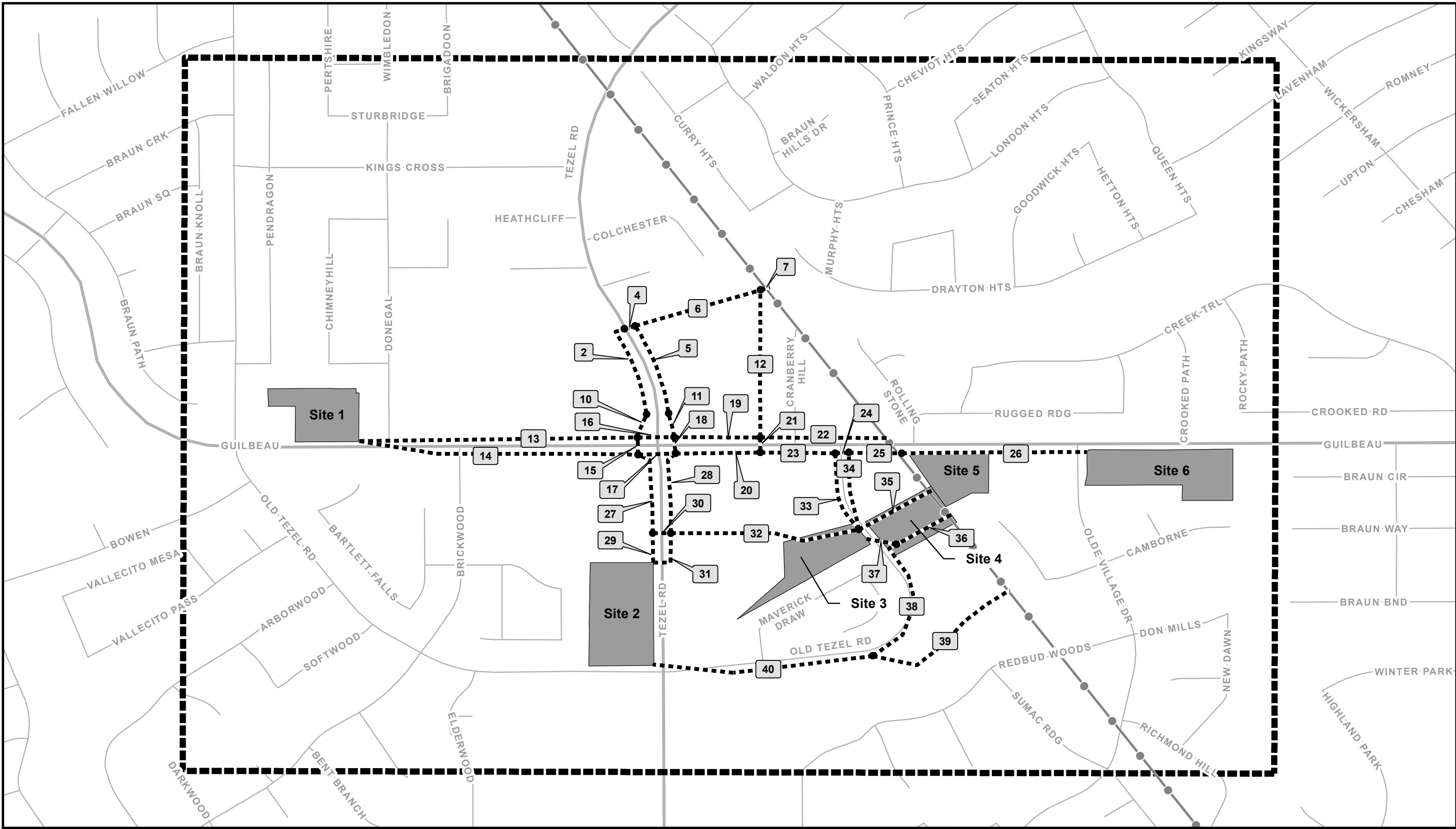


Figure 2-3
 Preliminary Sites/Route Segments
 Tezel Substation and Transmission Line Project
 CPS Energy
 Bexar County, Texas

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- Primary Segment and ID
- Segment Node
- Existing Transmission Line
- Proposed Substation Site
- Study Area Boundary
- Local Road

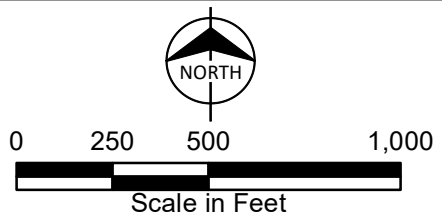


Figure 2-4
 Primary Sites/Route Segments
 Tezel Substation and Transmission Line Project
 CPS Energy
 Bexar County, Texas

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Table 2-1: Primary Alternative Route Composition and Length Tezel Substation and 138-kV Transmission Line Project

Substation Site	Route^a	Component Segments	Length (Feet)
Site #1	1-A	7-12-21-20-17-14	2,922
Site #1	1-B	22-19-16-13	2,591
Site #1	1-C	25-24-23-20-17-14	2,659
Site #2	2-D	7-6-2-15-27-29	2,154
Site #2	2-E	7-6-5-18-28-31	2,150
Site #2	2-F	35-32-30-29	1,601
Site #2	2-G	36-38-40	2,150
Site #2	2-H	39-40	1,925
Site #3	3-I	25-24-33	783
Site #3	3-J	25-34	694
Site #3	3-K	35	415
Site #3	3-L	36-37	464
Site #4	None	None	N/A
Site #5	None	None	N/A
Site #6	6-M	26	904

(a) For primary site/route locations, see Figure 2-2 (map pocket)

Table 2-2: Environmental Criteria for Route/Site Evaluation for the Tezel Substation and 138-kV Transmission Line Project

No.	Environmental Criterion
Land Use	
1	Length of alternative route
2	Number of habitable structures ^a within 300 feet ^b of route centerline/site
3	Number of schools within 300 feet ^b of route centerline/site
4	Number of day care centers within 300 feet ^b of route centerline/site
5	Number of churches within 300 feet ^b of route centerline/site
6	Length of route across parks/recreational areas ^c
7	Number of additional parks/recreational areas ^c within 1,000 feet of route centerline
8	Length of route/site across a conservation easement or mitigation bank
9	Length utilizing existing transmission line ROW
10	Length of route parallel to existing transmission line ROW
11	Length of route parallel to other existing compatible ROW (roads, highways, etc. – excluding oil and gas pipelines)
12	Length of route parallel to property lines (not following existing ROW) ^d
13	Length of route parallel to pipelines ^e
14	Is site adjacent to an existing transmission line?
15	Number of oil and gas pipeline crossings ^e
16	Number of oil and gas wells/pipelines within 200 ft of route centerline/site (including dry or plugged wells)
17	Number of existing water wells within 200 ft of route centerline/site
18	Number of road crossings
19	Number of FAA-registered public/military airfields ^f within 20,000 ft of route centerline/site (with runway >3,200 ft)
20	Number of FAA-registered public/military airfields ^f within 10,000 ft of route centerline/site (with runway <3,200 ft)
21	Number of private airstrips within 10,000 ft of route centerline/site
22	Number of heliports within 5,000 ft of route centerline/site
23	Number of commercial AM radio transmitters within 10,000 ft of route centerline/site
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of ROW centerline/site
Aesthetics	
25	Estimated length of route within foreground visual zone ^g of parks/recreational areas ^c
Ecology	
26	Length of route across upland woodland/brushland and within site
27	Length of route across bottomland/riparian woodland/brushland and within site
28	Length of route across NWI mapped wetlands ^h and within site

No.	Environmental Criterion
29	Length of route across known occupied habitat of federally endangered or threatened species and within site
30	Is route/site in an area known to contain endangered karst invertebrate species (Zone 1)?
31	Is route/site in an area having a high probability of containing endangered karst invertebrate species (Zone 2)?
32	Is route/site within 500 ft of a known karst feature?
33	Number of streams crossed by route/within site
34	Length of route paralleling (within 100 ft) streams
35	Length of route across open water (ponds, lakes, etc.)
36	Length of route across FEMA-mapped 100-year floodplains
37	Length of route across Edwards Aquifer Recharge Zone ⁱ
38	Length of route across Edwards Aquifer Contributing Zone ^j
Cultural Resources	
39	Number of recorded historic or prehistoric sites crossed by route/within site
40	Number of additional recorded historic or prehistoric sites within 1,000 ft of route/site
41	Number of NRHP-listed or determined-eligible sites crossed by route/within site
42	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of route/site
43	Length of route crossing areas of high archeological/historical site potential

(a) Single-family and multifamily dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis

(b) Due to the potential inaccuracies of the aerial photography and data utilized, all habitable structures within 310 ft have been identified

(c) Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church

(d) Property lines created by existing road, highway, or railroad ROW are not double-counted in the “Length of ROW parallel to property lines” criterion

(e) According to information provided by the Railroad Commission of Texas (RRC)

(f) As listed in the Chart Supplement South Central U.S. (FAA, 2020a, formerly known as the Airport/Facility Directory South Central U.S.) and FAA (2020b)

(g) One-half mile, unobstructed

(h) As mapped by the USFWS NWI

(i) Water Pollution Abatement Plan (WPAP) required

(j) Contributing Zone Plan required if more than 5 acres of disturbance (including access roads)

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3.0 EXISTING ENVIRONMENT

3.1 Physiography

As shown on Figure 3-1, Bexar County falls within a portion of three physiographic provinces of Texas: the Edwards Plateau, the Blackland Prairies, and the Interior Coastal Plains. However, the Study Area itself only lies within the Blackland Prairies Physiographic Province of Texas (Bureau of Economic Geology [BEG], 1996). The Blackland Prairies, which represent the innermost subdivision of the Gulf Coastal Plains, form a narrow belt that extends from the Red River in northeast Texas to the Rio Grande. Gently rolling to level terrain and black clay soils weathered from chinks and marls characterize the province, which is bound on the west by the Grand Prairie and the east by the Interior Coastal Plains Physiographic Provinces of Texas. Located just northwest of the Study Area, the Edwards Plateau physiographic province, the region known locally as the Hill Country, is characterized by plateaus, hills and rolling plains that are highly dissected by numerous, steep-walled, spring-fed streams and rivers. This type of topography, a limestone plateau marked with fractures, sinkholes, and honeycombed rock formations underlain with caves and underground streams/aquifers, is known as karst. Study Area elevations range from a high of approximately 996 feet above mean sea level (msl) located along the northern border in the central portion of the Study Area to a low of 865 feet above msl along the southeast border of the Study Area where an unnamed stream exits the Study Area.

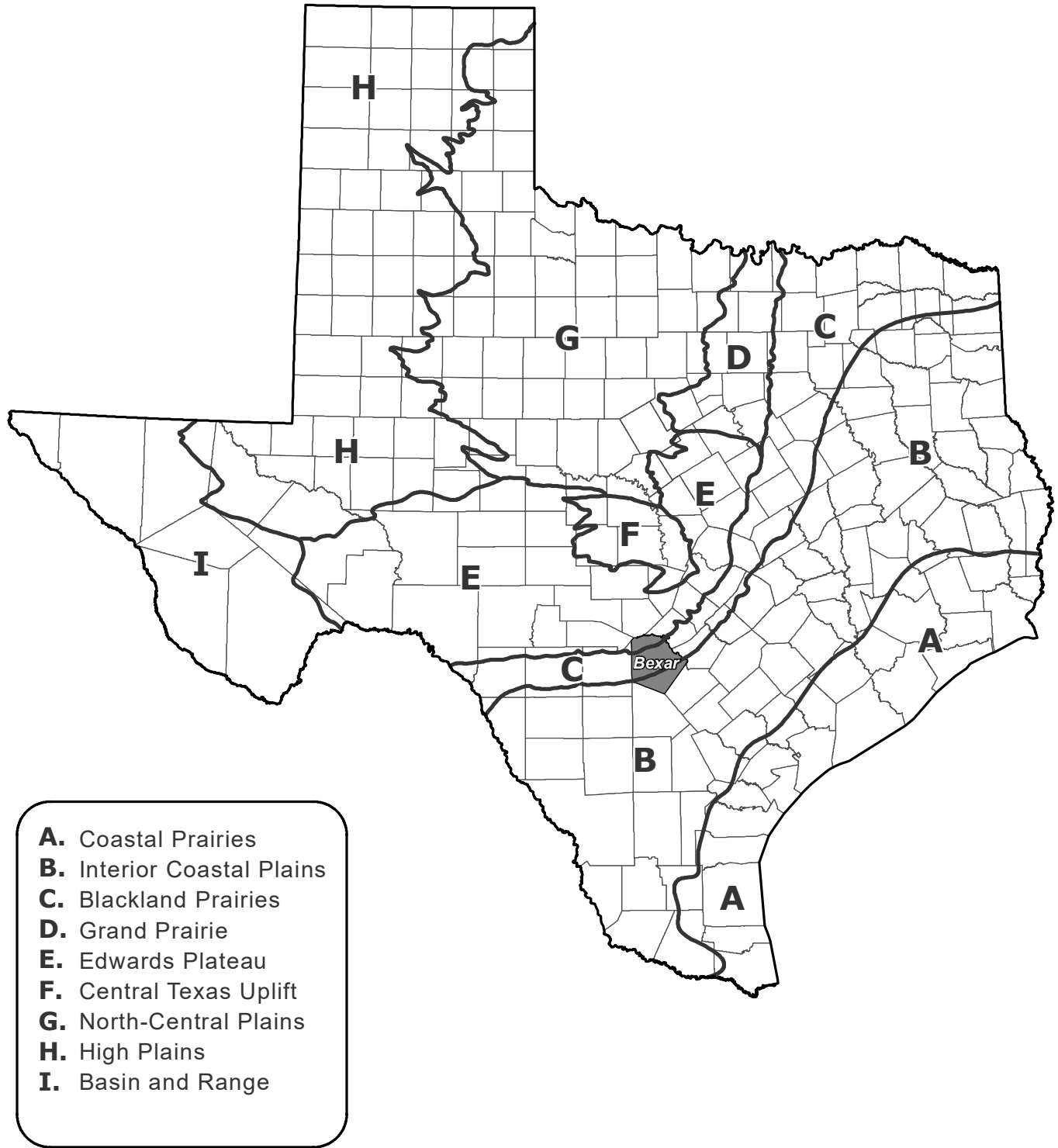
3.2 Geology

According to BEG (1974), the geologic unit within the Study Area is Quaternary-aged Austin Chalk (Kau). Austin Chalk consists of chalk and marl, with a thickness of 325 to 420 feet. The chalk is mostly microgranular calcite with minor foraminifera tests and Inoceramus prisms, and averages approximately 85 percent calcium carbonate. It is ledge forming, grayish white to white. The chalk alternates with marl, which contains bentonitic seams that are locally recessive, medium gray, with pyrite nodules common and weathers to limonite.

No reported geologic faults occur in the Study Area.

3.3 Soils

The Study Area occurs within central Collin County. The general soil map of Collin County, published by the Soil Conservation Service (SCS) in 1969, which was renamed Natural Resources Conservation Service (NRCS), was referenced for the following descriptions of the soil associations within the Study Area.



- A.** Coastal Prairies
- B.** Interior Coastal Plains
- C.** Blackland Prairies
- D.** Grand Prairie
- E.** Edwards Plateau
- F.** Central Texas Uplift
- G.** North-Central Plains
- H.** High Plains
- I.** Basin and Range

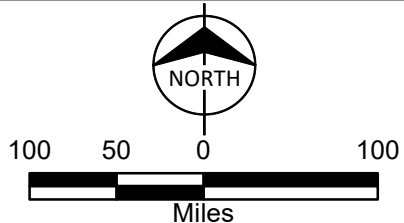


Figure 3-1
Location of Bexar County
in Relation to the
Physiographic Provinces of Texas
Tezel Substation and
Transmission Line Project

3.3.1 Soil Associations

The soil association, as defined by SCS, “consists of two or more soils that may differ from each other but are geographically associated in a consistent pattern and proportion too intricate for separate mapping” (SCS, 1965). According to the county soil maps, one soil association, the Crawford-Bexar association, occurs within the Study Area.

The Crawford-Bexar association is characterized by moderately deep, stony soils over limestone. This association occupies a broad, nearly level to gently sloping area in the northern third of the county. The Crawford soils, which make up approximately 44 percent of the association, are moderately deep, with a very dark grayish-brown to dark reddish-brown, noncalcareous surface layer that is 12 to 16 inches thick. The subsurface layer is a blocky, reddish-brown clay that developed over broken limestone. Bexar soils, which make up approximately 41 percent of the association, are also moderately deep, with a dark-brown to reddish-brown, noncalcareous surface layer that ranges from 6 to 14 inches thick. This layer is underlain by blocky, reddish-brown to red cherty clay (SCS, 1965).

3.3.2 Prime Farmland Soils

The Secretary of Agriculture, in 7 USC 4201(c)(1)(A), defines prime farmland soils as those soils that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. They have the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. Additional potential prime farmlands are those soils that meet most of the requirements of prime farmland but fail because they lack sufficient natural moisture, or they lack the installation of water management facilities. Such soils would be considered prime farmland if these practices were installed.

According to the NRCS (2019), prime farmland soils comprise approximately 22.9 percent (11 acres) of the Study Area (48 acres), while Bexar County encompasses approximately 804,390 acres, of which approximately 29.1 percent (234,061 acres) meets the soil requirements to be considered prime farmland soils. Additionally, approximately 9.9 percent (79,941 acres) of Bexar County is considered farmland of Statewide importance, approximately 0.4 percent (3,084 acres) is farmland of Statewide importance, if irrigated, and approximately 13.2 percent (106,463 acres) is considered prime farmland if irrigated.

3.4 Mineral and Energy Resources

The only mineral resource mapped as occurring in the Study Area is cement material, which is relatively soft limestone suitable for cement manufacturing, that is associated with the Austin Chalk within the

Study Area (BEG, 1979). According to the USGS Mineral Data Resource System reports (USGS, 2011), no quarries are mapped within the Study Area.

No energy resources are mapped within the Study Area (BEG, 1976). According to Railroad Commission of Texas (RRC) records, no active oil or plugged oil wells are documented in the Study Area (RRC, 2020).

3.5 Water Resources

3.5.1 Surface Water

For surface water planning purposes, Bexar County lies in the upper portion of the San Antonio River Basin (Texas Water Development Board [TWDB], 2012). A river basin consists of the entire land area drained by a stream and its tributaries.

The San Antonio River basin, which has a total drainage area of 4,180 square miles, is bounded on the north and east by the Guadalupe River Basin, and on the west and south by the Nueces River Basin and the San Antonio-Nueces Coastal Basin (TWDB, 2007). Surface water runoff in the Study Area drains into three unnamed creeks, which exit the southeastern corner of the Study Area into French Creek, which flows into Leon Creek, then into the San Antonio River, and then the Guadalupe River which ultimately runs into the Gulf of Mexico.

To assist regional water planning groups in identifying sensitive stream segments under TAC Title 31 357.8, TPWD has identified ecologically significant stream segments throughout the State based on criteria pertaining to biological function, hydrological function, riparian conservation areas, water quality, aquatic life, aesthetic value, and the presence of threatened or endangered species or unique communities. No stream segments within the Study Area are designated as ecologically significant streams (TPWD, 2020a).

3.5.2 Floodplains

FEMA has conducted detailed floodplain analyses for Bexar County (FEMA, 2019). The resulting FIRMs indicate the limits of the 100-year floodplain (areas with a 1 percent annual chance of flooding) within the Study Area. Based on FEMA mapping, 100-year floodplains are associated with the three unnamed streams within the Study Area (see Figure 2-2, map pocket).

3.5.3 Groundwater

According to the TWDB, 9 major aquifers (aquifers that produce large amounts of water over large areas) and 21 minor aquifers (aquifers that produce minor amounts of water over large areas or large amounts of water over small areas) are recognized within Texas. These major and minor aquifers produce groundwater for household, municipal, industrial, and agricultural uses and supply over 59 percent of the water used in Texas (TWDB, 2007).

The Study Area lies above two major aquifers. According to the TWDB (2012), the principal groundwater-bearing units in the area are the Trinity Aquifer and the Edwards Aquifer (Balcones Fault Zone).

The Cretaceous-age Trinity Aquifer is a collection of individual aquifers, including the Antlers, Glen Rose, Paluxy, Twin Mountains, Travis Peak, Hensell, and Hosston Aquifers. These individual aquifers, when combined as the Trinity Aquifer, cover an area of 61 counties in Texas. Discharge from the aquifer occurs from water well withdrawals and springs located within streams. Groundwater yields in the Trinity Aquifer vary significantly depending on the porosity and permeability of the strata, with most springs discharging less than 10 cubic feet per second (TWDB, 2007).

The Cretaceous-age Edwards Aquifer (Balcones Fault Zone [BFZ], as opposed to the Edwards-Trinity [Plateau] and Edwards-Trinity [High Plains] Aquifers) covers an area of 4,350 square miles in parts of 11 different Texas counties, forming a narrow belt from Kinney County to Bell County. The aquifer is composed predominately of limestone, with thickness from 200 to 600 feet, with highly permeable solution zones and channels because of its extensive honeycombed and cavernous character. Water in the aquifer moves from the recharge zone toward natural discharge points in the artesian zone, such as Comal, San Marcos, Barton, and Salado Springs. As opposed to the Trinity Aquifer, which has slow groundwater yields, some wells and springs discharge up to 24,000 gallons per minute (TWDB, 1995).

3.6 Vegetation

3.6.1 Regional Vegetation

As shown on Figure 3-2, the Study Area lies near the border of two vegetational areas, the Edwards Plateau, and the Blackland Prairies, as delineated by Gould et al. (1960) and characterized by Hatch et al. (1990). The Edwards Plateau vegetational area correlates to the area known as the Texas Hill Country. The climax vegetation of the Edwards Plateau is largely grassland or open savannah, although many brush and invader species have colonized the area. Average annual precipitation in the Edwards Plateau

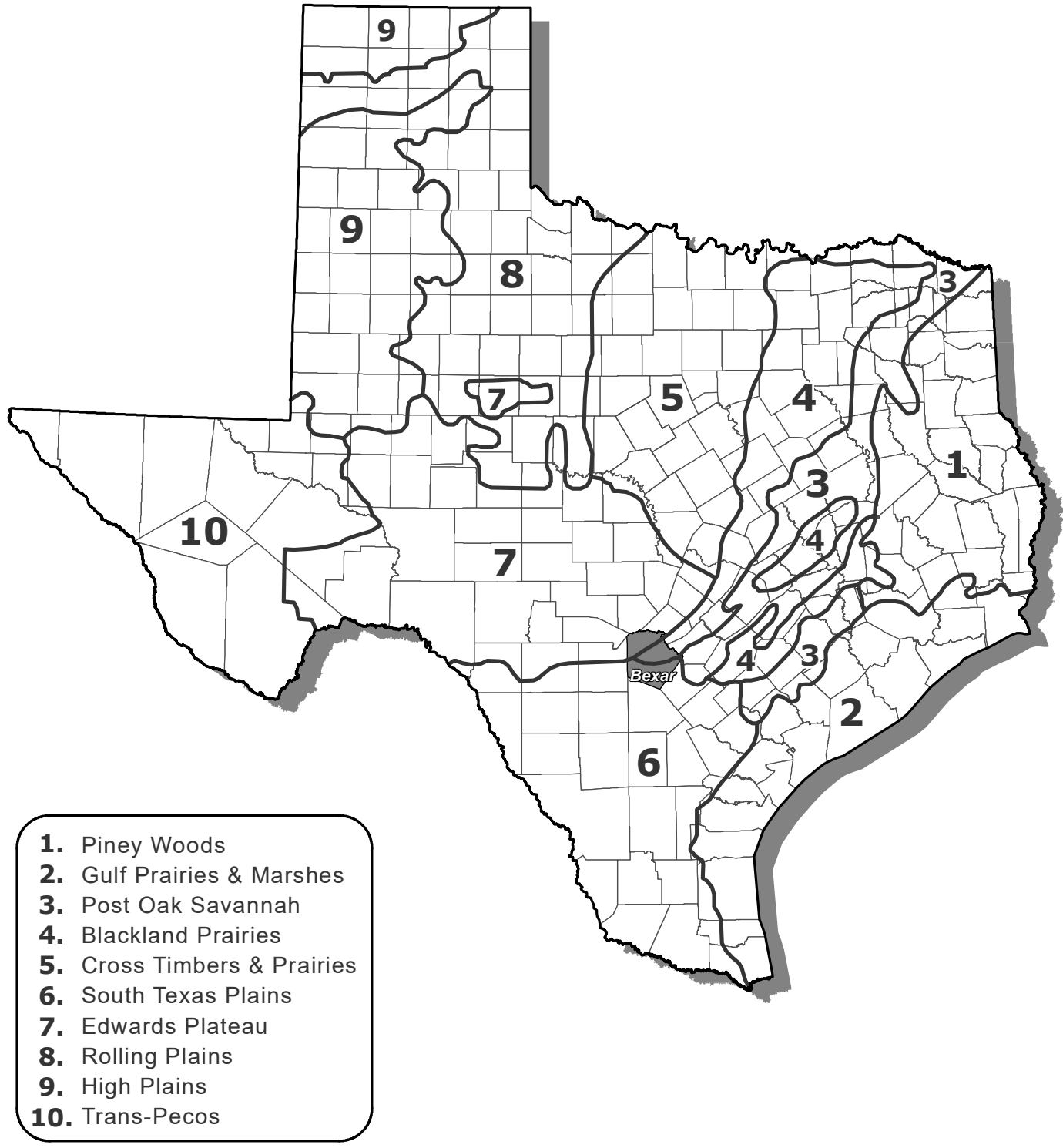


Figure 3-2
Location of Bexar County
in Relation to the
Vegetational Areas of Texas
Tezel Substation and
Transmission Line Project



area ranges from 15 to 33 inches. Much of the region is in use as rangeland, with agricultural usage confined to deeper soils along floodplains and some divides (Hatch et al., 1990).

The Blackland Prairies represent the southern extension of the true prairie that occurs from Texas to Canada. Characteristics include nearly level to rolling, well-dissected terrain. Prairie grasses, interspersed with scattered tree species, dominated the natural vegetation community of the Blackland Prairies. Dominant species included little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii*), yellow Indiangrass (*Sorghastrum nutans*), and tall dropseed (*Sporobolus compositus* var. *compositus*), with sideoats grama (*Bouteloua curtipendula*), hairy grama (*Bouteloua hirsuta*), and buffalograss (*Buchloe dactyloides*) as minor constituents. Almost the entire region is now cropland and pastureland (Hatch et al., 1990).

3.6.2 Vegetation Community Types in the Study Area

According to TPWD's EMST vegetation cover types, approximately 86.3 percent of the Study Area consists of Urban Low Intensity; 7.9 percent as Urban High Intensity; 2.7 percent as Edwards Plateau: Deciduous Oak – Evergreen Motte and Woodland; and 0.6 percent as Barren. The remaining 2.5 percent consists of six other vegetation cover types (TPWD, 2020b).

The Urban Low Intensity mapped type includes areas that are built-up but not entirely covered by impervious cover and includes most of the nonindustrial areas within cities and towns. The Urban High Intensity mapped type consists of built-up areas and wide transportation corridors that are dominated by impervious cover.

The Edwards Plateau: Live Oak Motte and vegetation cover type are assumed to primarily consist of an evergreen woodland dominated by Texas (Plateau) live oak (*Quercus fusiformis*), with Ashe juniper (*Juniperus ashei*) being the most frequent understory species. Ashe juniper may also appear in the overstory, along with Texas red oak (*Quercus buckleyi*), bastard oak (*Quercus sinuata* var. *breviloba*), Lacey oak (*Quercus laceyi*), and post oak (*Quercus stellata*). Frequent shrubs include Texas persimmon (*Diospyros texana*), and algerita (*Mahonia trifoliolata*).

The Barren vegetation cover type includes areas where little or no vegetation cover existed at the time of image data collection. Large areas cleared for development are included, as well as rural roads and buildings and associated clearings in primarily rural areas. Stream beds with exposed gravel or bedrock, rock outcrops, quarries, and year-round fallow fields are also included.

3.6.3 Waters of the U.S., Including Wetlands

Waters of the U.S. include, but are not limited to, territorial seas, lakes, rivers, streams, oceans, bays, ponds, and other special aquatic features, including wetlands. The USACE regulates waters of the U.S., including wetlands, under Section 404 of the CWA. The USACE and EPA jointly define wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include bogs, seeps, marshes, swamps, forested bottomland wetlands, and other similar areas (40 CFR 230.3[t]). Wetlands are defined in a broad sense as transitional areas (ecotones) between terrestrial and aquatic systems where the water table is usually at or near the ground surface, or where shallow water covers the land (Cowardin et al., 1979).

The USFWS NWI maps encompassing the Study Area indicate the presence of wetland habitat features within the Study Area associated with the three unnamed streams in the Study Area. These features are classified as riverine. Riverine systems include all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens; and (2) habitats with water containing ocean-derived salts in excess of 0.5 percent (Cowardin et al., 1979). No palustrine features, which include lakes, freshwater ponds, freshwater emergent wetlands, freshwater forested wetlands, and freshwater shrub wetlands, are mapped within the Study Area.

Hydric and aquatic habitats may be considered regulatory wetlands by the USACE. Construction activities resulting in the discharge of dredged or fill materials within waters of the U.S. are subject to the regulations and restrictions outlined in Section 404 of the CWA and may require coordination with the USACE to ensure compliance.

3.7 Fish and Wildlife

3.7.1 Fish and Wildlife Habitats and Species

Blair (1950) delineated seven biotic provinces within Texas. Bexar County (including the Study Area), as shown on Figure 3-3, is situated along the junction of the Balconian Biotic Province and the Tamaulipan Biotic Province. The Balconian Biotic Province, in the western-central portion of the State, is a transitional zone between the moister woodland and forest regions to the east and the desert regions to the west and south. The vertebrate fauna of the Balconian Biotic Province is usually widespread and consists of a mixture of Austroriparian, Tamaulipan, Chihuahuan, and Kansan species (Blair, 1950, 1952).

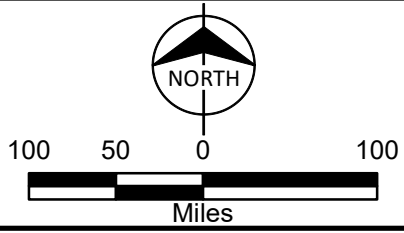
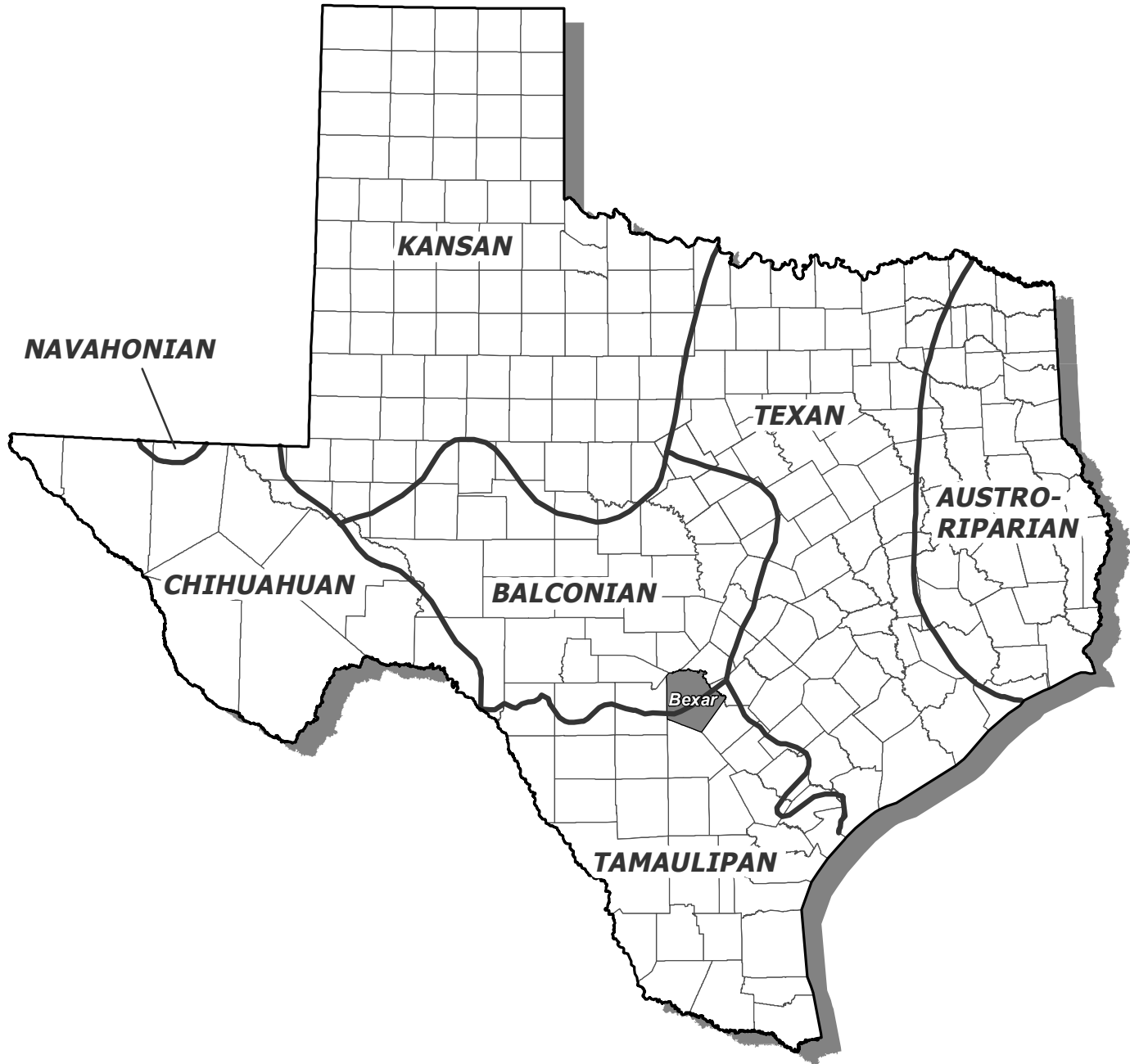


Figure 3-3
Location of Bexar County
in Relation to the
Biotic Provinces of Texas
Tezel Substation and
Transmission Line Project

The subtropical, semi-arid Tamaulipan Biotic Province includes two subdivisions, the Matamorán District of the Lower Rio Grande Valley and the Nuecían District to the north, which are distinct based on drainage, floral, and to some extent, faunal differences (Blair, 1950, 1952). Bexar County lies within the Nuecían District. Thorny brush is the predominant vegetation type of the Tamaulipan Biotic Province. The vertebrate fauna of this province includes a considerable number of neotropical avian species, a considerable number of primarily grassland species that range northward into the Texan and Kansan Biotic Provinces, some Austroriparian species, and some species in common with the Chihuahuan Biotic Province. The regional fauna contains coastal as well as inland species (Blair, 1950, 1952). Numerous neotropical invertebrates and vertebrates reach their northernmost range limits in the Tamaulipan Biotic Province, some of which occur nowhere else in the U.S.

Characteristic faunal species of the area are discussed below. Because of residential development in the area, however, native habitat has been severely reduced. Wildlife species that occur include species that have historically occurred in the area, as well as others that are particularly adapted to the extensive development in the vicinity of the Study Area.

Aquatic habitats within the Study Area are largely ephemeral, which provide very little habitat for fish, water birds, and aquatic herpetofauna. No stream features or streams designated by the TPWD as ecologically significant occur within the Study Area (TPWD, 2020a).

3.7.2 Fish

Fish species that may occur in the vicinity of the Study Area include the American gizzard shad (*Dorosoma cepedianum*), common carp (*Cyprinus carpio*), black bullhead (*Ameiurus melas*), redbreast sunfish (*Lepomis auritus*), green sunfish (*Lepomis cyanellus*), orangespotted sunfish (*Lepomis humilis*), bluegill (*Lepomis macrochirus*), white crappie (*Pomoxis annularis*), channel catfish (*Ictalurus punctatus*), flathead catfish (*Pylodictis olivaris*), and largemouth bass (*Micropterus salmoides*) (Thomas et al., 2007).

3.7.3 Amphibians and Reptiles

A representative list of amphibian and reptile species of potential occurrence in the Study Area is included as Table 3-1.

Table 3-1: Representative List of Reptile and Amphibian Species of Potential Occurrence^a in the Study Area

Common Name ^b	Scientific Name ^b
Frogs and Toads	
American bullfrog	<i>Lithobates catesbeianus</i>

Common Name^b	Scientific Name^b
Blanchard's cricket frog	<i>Acris blanchardi</i>
Gulf Coast toad	<i>Incilius nebulifer</i>
Rio Grande leopard frog	<i>Lithobates berlandieri</i>
Southern leopard frog	<i>Lithobates sphenoccephalus</i>
Spotted chorus frog	<i>Pseudacris clarkii</i>
Western narrow-mouthed toad	<i>Gastrophryne olivacea</i>
Woodhouse's toad	<i>Anaxyrus woodhousii</i>
Salamanders	
Small-mouthed salamander	<i>Ambystoma texanum</i>
Lizards	
Common spotted whiptail	<i>Aspidoscelis gularis</i>
Eastern six-lined racerunner	<i>Aspidoscelis sexlineata sexlineata</i>
Green anole	<i>Anolis carolinensis</i>
Little brown skink	<i>Scincella lateralis</i>
Prairie lizard	<i>Sceloporus consobrinus</i>
Texas spiny lizard	<i>Sceloporus olivaceus</i>
Snakes	
Checkered gartersnake	<i>Thamnophis marcianus</i>
Diamond-backed watersnake	<i>Nerodia rhombifer</i>
Eastern yellow-bellied racer	<i>Coluber constrictor flaviventris</i>
Northern cottonmouth	<i>Agkistrodon piscivorus</i>
Plain-bellied watersnake	<i>Nerodia erythrogaster</i>
Prairie kingsnake	<i>Lampropeltis calligaster</i>
Rough earthsnake	<i>Haldea striatula</i>
Rough greensnake	<i>Opheodrys aestivus</i>
Texas threadsnake	<i>Rena dulcis</i>
Western ratsnake	<i>Pantherophis obsoletus</i>
Western coachwhip	<i>Coluber flagellum testaceus</i>
Turtles	
Eastern mud turtle	<i>Kinosternon subrubrum</i>
Plains box turtle	<i>Terrapene ornata ornata</i>
Red-eared slider	<i>Trachemys scripta elegans</i>
Snapping turtle	<i>Chelydra serpentina</i>

(a) According to Dixon (2013) and Werler and Dixon (2000)

(b) Nomenclature follows Crother et al. (2017)

3.7.4 Birds

Avian species of potential occurrence in the Study Area include many year-round residents, migrants, migrants/summer residents, and migrants/winter residents. A representative list of bird species of potential occurrence in the Study Area is included as Table 3-2.

Table 3-2: Representative List of Avian Species of Potential Occurrence^a in the Study Area

Common Name	Scientific Name ^b	Likely Seasonal Occurrence ^{a,c}
Acadian flycatcher	<i>Empidonax vireescens</i>	M, SR
American coot	<i>Fulica americana</i>	R
American crow	<i>Corvus brachyrhynchos</i>	R
American robin	<i>Turdus migratorius</i>	R
American wigeon	<i>Anas americana</i>	M, WR
Barn swallow	<i>Hirundo rustica</i>	M, SR
Barred owl	<i>Strix varia</i>	R
Black-chinned hummingbird	<i>Archilochus alexandri</i>	M, SR
Black-crested titmouse	<i>Baeolophus atricristatus</i>	R
Blue jay	<i>Cyanocitta cristata</i>	R
Brown-headed cowbird	<i>Molothrus ater</i>	R
Carolina chickadee	<i>Poecile carolinensis</i>	R
Carolina wren	<i>Thryothorus ludovicianus</i>	R
Cattle egret	<i>Bubulcus ibis</i>	M, SR
Cedar waxwing	<i>Bombycilla cedrorum</i>	M, WR
Common nighthawk	<i>Chordeiles minor</i>	M, SR
Cooper's hawk	<i>Accipiter cooperii</i>	R
Curve-billed thrasher	<i>Toxostoma curvirostre</i>	R
Dickcissel	<i>Spiza americana</i>	M, SR
Downy woodpecker	<i>Dryobates pubescens</i>	R
Eastern bluebird	<i>Sialia sialis</i>	R
Eastern meadowlark	<i>Sturnella magna</i>	R
Eastern phoebe	<i>Sayornis phoebe</i>	R
European starling ^d	<i>Sturnus vulgaris</i>	R
Gadwall	<i>Anas strepera</i>	M, WR
Great blue heron	<i>Ardea herodias</i>	R
Greater roadrunner	<i>Geococcyx californianus</i>	R
Great-tailed grackle	<i>Quiscalus mexicanus</i>	R
Green-winged teal	<i>Anas crecca</i>	M, WR
House finch	<i>Carpodacus mexicanus</i>	R
House sparrow ^d	<i>Passer domesticus</i>	R

Common Name	Scientific Name ^b	Likely Seasonal Occurrence ^{a,c}
Indigo bunting	<i>Passerina cyanea</i>	M, SR
Killdeer	<i>Charadrius vociferus</i>	R
Ladder-backed woodpecker	<i>Dryobates scalaris</i>	R
Least sandpiper	<i>Calidris minutilla</i>	M
Lesser yellowlegs	<i>Tringa flavipes</i>	M
Mississippi kite	<i>Ictinia mississippiensis</i>	M
Mourning dove	<i>Zenaida macroura</i>	R
Northern bobwhite	<i>Colinus virginianus</i>	R
Northern cardinal	<i>Cardinalis cardinalis</i>	R
Northern harrier	<i>Circus cyaneus</i>	M, WR
Northern mockingbird	<i>Mimus polyglottos</i>	R
Northern shoveler	<i>Anas clypeata</i>	M, WR
Pied-billed grebe	<i>Podilymbus podiceps</i>	R
Purple martin	<i>Progne subis</i>	M, SR
Red-eyed vireo	<i>Vireo olivaceus</i>	M, SR
Red-tailed hawk	<i>Buteo jamaicensis</i>	R
Red-winged blackbird	<i>Agelaius phoeniceus</i>	R
Ring-billed gull	<i>Larus delawarensis</i>	M, WR
Ring-necked duck	<i>Aythya collaris</i>	M, WR
Rock pigeon ^d	<i>Columbia livia</i>	R
Ruby-crowned kinglet	<i>Regulus calendula</i>	M, WR
Rufous-crowned sparrow	<i>Aimophila ruficeps</i>	R
Savannah sparrow	<i>Passerculus sandwichensis</i>	M, WR
Scissor-tailed flycatcher	<i>Tyrannus forficatus</i>	M, SR
Summer tanager	<i>Piranga olivacea</i>	M, SR
Turkey vulture	<i>Cathartes aura</i>	M, R
Yellow-bellied sapsucker	<i>Sphyrapicus varius</i>	M, WR
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	M, SR
Yellow-rumped warbler	<i>Setophaga coronata</i>	M, WR

(a) According to Lockwood and Freeman (2014)

(b) Nomenclature using Chesser et al. (2019)

(c) R – Resident: Occurring regularly in the same general area throughout the year – implies breeding

SR – Summer Resident: Implies breeding but may include non-breeders

WR – Winter Resident: Occurring during winter season

M – Migrant: Occurs as a transient passing through the area either in spring or fall or both

(d) Species that are not protected under the MBTA

3.7.5 Mammals

A representative list of common mammals that may occur in the Study Area is included as Table 3-3.

Table 3-3: Representative List of Mammalian Species of Potential Occurrence^a in the Study Area

Common Name ^b	Scientific Name ^b
Xenarthrans	
Nine-banded armadillo	<i>Dasypus novemcinctus</i>
Chiroptera	
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>
Hoary bat	<i>Aeorestes cinereus</i>
Eastern red bat	<i>Lasiurus borealis</i>
Carnivores	
Bobcat	<i>Lynx rufus</i>
Common gray fox	<i>Urocyon cinereoargenteus</i>
Coyote	<i>Canis latrans</i>
Northern raccoon	<i>Procyon lotor</i>
Red fox	<i>Vulpus vulpus</i>
Ringtail	<i>Bassariscus astutus</i>
Striped skunk	<i>Mephitis mephitis</i>
Artiodactyls	
White-tailed deer	<i>Odocoileus virginianus</i>
Rodents	
Attwater's pocket gopher	<i>Geomys attwateri</i>
Eastern fox squirrel	<i>Sciurus niger</i>
Eastern woodrat	<i>Neotoma floridana</i>
Fulvous harvest mouse	<i>Reithrodontomys fulvescens</i>
Hispid cotton rat	<i>Sigmodon hispidus</i>
Hispid pocket mouse	<i>Chaetodipus hispidus</i>
North American deermouse	<i>Peromyscus maniculatus</i>
Northern pygmy mouse	<i>Baiomys taylori</i>
Rock squirrel	<i>Otospermophilus variegatus</i>
White-footed deermouse	<i>Peromyscus leucopus</i>
Lagomorphs	
Eastern cottontail	<i>Sylvilagus floridanus</i>
Swamp rabbit	<i>Sylvilagus aquaticus</i>

(a) According to Schmidly and Bradley (2016)

(b) Nomenclature follows Bradley et al. (2014)

3.8 Recreationally and Commercially Important Species

A species is considered important if one or more of the following criteria applies:

- a. the species is recreationally or commercially valuable
- b. the species is endangered or threatened
- c. the species affects the well-being of some important species within criterion (a) or (b)
- d. the species is critical to the structure and function of the ecological system
- e. the species is a biological indicator

Wildlife resources within the Study Area provide human benefits resulting from both consumptive and nonconsumptive uses. Nonconsumptive uses include observing and photographing wildlife, birdwatching, and other similar activities. These uses, although difficult to quantify, deserve consideration in the evaluation of the wildlife resources of the Study Area. Consumptive uses, such as hunting and trapping, are more easily quantifiable. Consumptive and nonconsumptive uses of wildlife are often enjoyed contemporaneously and are generally compatible. Although no species occurring in the Study Area provide consumptive uses, all provide the potential for nonconsumptive benefits.

The white-tailed deer (*Odocoileus virginianus*) is the most economically important big game mammal in Texas (Schmidly and Bradley, 2016). The TPWD divides the State into ecological regions for white-tailed deer management. Bexar County falls within the Edwards Plateau Ecological Region and during the 2017–2018 hunting season, an estimated 279,816 deer were harvested within this ecological region (Purvis, 2018a).

Waterfowl hunting on lakes and upland bird hunting on agricultural lands is of some economic importance in the region. Although no hunting occurs in the Study Area, waterfowl species that are hunted in the region include gadwall (*Anas strepera*), green-winged teal (*Anas crecca*), American wigeon (*Anas americana*), and ring-necked duck (*Aythya collaris*). Primary upland game species include the mourning dove (*Zenaida macroura*), and northern bobwhite (*Colinus virginianus*) (Purvis, 2018b).

No commercial fishing occurs within the Study Area. Also, recreational fishing in the Study Area is limited by the ephemeral nature of the streams located within the Study Area. Recreational fish species in the general area may include largemouth bass, white crappie, channel catfish, flathead catfish, and sunfish (*Lepomis* spp.) (Thomas et al., 2007).

3.9 Endangered and Threatened Species

An endangered species is one that is in danger of extinction throughout all or a significant portion of its natural range, while a threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

3.9.1 Endangered and Threatened Plant Species

Available information from the USFWS (2020a), TPWD (2020c), and TPWD's NDD (2020d) was reviewed to identify endangered or threatened plant species of potential occurrence within the Study Area. Currently, 31 plant species are listed by the USFWS as endangered or threatened species in Texas (USFWS, 2020b). However, no Federal or State-listed plants have been recorded from Bexar County (USFWS, 2020a; TPWD 2020c, 2020d), although, the bracted twistflower (*Streptanthus bracteatus*) is a candidate for Federal listing. Additionally, USFWS includes the federally listed endangered Texas wild-rice (*Zizania texana*) on its Bexar County list only because activities within the southern segment of the Edwards Aquifer, which includes Bexar County, may affect it. Texas wild-rice does not occur in the Study Area and no further discussion of the species is included in this EA.

The bracted twistflower, an herbaceous annual of the mustard family, is known from eight counties in south-central Texas. It is distinguished from other members of the genus by the leaves of the flower stalk lacking stems. The species is most often reported under a canopy of Ashe juniper or Texas live oak and is frequently found within a dense understory to protect it from browsing (USFWS, 2012). No documented occurrences of this species occur within the Study Area (TPWD, 2020d), and it is unlikely to occur due to the extensive development within the Study Area. Additionally, no sensitive plant communities have been specifically identified by either the USFWS or TPWD as occurring within the Study Area (USFWS, 2020a; TPWD 2020c, 2020d).

3.9.2 Federally Listed Fish and Wildlife Species

The USFWS (2020a) and TPWD (2020c) county lists of endangered and threatened species indicate that 22 federally listed endangered, threatened, or candidate fish and wildlife species may occur in Bexar County (Table 3-4). Protection under the ESA can also include protection of habitat designated as critical habitat for supporting a listed species. It should be noted that inclusion in this table does not necessarily mean that a species is known to occur in the Study Area, but only acknowledges the potential for its occurrence, based on historic records, known ranges, and presence of potential habitat. Only those species that USFWS lists as endangered or threatened have Federal protection under the ESA. Most avian species are protected under the MBTA and bald and golden eagles are protected under the BGEPA.

The USFWS considers 17 of the taxa in Table 3-4 as endangered; 3 of these are also State-listed as endangered—the golden-cheeked warbler (*Setophaga chrysoparia*), interior least tern (*Sterna antillarum athalassos*), and whooping crane (*Grus americana*). The other 14 federally endangered species are the Texas blind salamander (*Eurycea* (= *Typhlomolge*) *rathbuni*), fountain darter (*Etheostoma fonticola*), and 12 invertebrates. The USFWS lists the San Marcos blind salamander (*Eurycea nana*), piping plover (*Charadrius melodus*) (also State-listed) and red knot (*Calidris canutus rufa*) as threatened, and the Texas fatmucket (*Lampsilis bracteata*) and Texas pimpleback (*Quadrula petrina*) as a candidate for listing.

Table 3-4: Federal Endangered and Threatened Wildlife Species for Bexar County^a

Common Name	Scientific Name ^b	Status	Potential for Occurrence in the Study Area
		USFWS	
Amphibians			
Texas blind salamander	<i>Eurycea</i> (= <i>Typhlomolge</i>) <i>rathbuni</i>	Endangered	Not Likely
San Marcos salamander	<i>Eurycea nana</i>	Threatened	Not Likely
Birds			
Golden-cheeked warbler	<i>Setophaga chrysoparia</i>	Endangered	Not Likely ^d
Least tern (Interior) ^c	<i>Sterna antillarum athalassos</i>	Endangered	Not Likely ^d
Whooping crane	<i>Grus americana</i>	Endangered	Not Likely ^d
Piping plover ^c	<i>Charadrius melodus</i>	Threatened	Not Likely ^d
Red knot ^c	<i>Calidris canutus rufa</i>	Threatened	Not Likely ^d
Fishes			
Fountain darter	<i>Etheostoma fonticola</i>	Endangered	Not Likely
Invertebrates			
A ground beetle	<i>Rhadine exilis</i>	Endangered	Not Likely
A ground beetle	<i>Rhadine infernalis</i>	Endangered	Not Likely
Braken Bat Cave meshweaver	<i>Cicurina venii</i>	Endangered	Not Likely
Cokendolpher Cave harvestman	<i>Texella cokendolpheri</i>	Endangered	Not Likely
Comal Springs dryopid beetle	<i>Stygoparnus comalensis</i>	Endangered	Not Likely
Comal Springs riffle beetle	<i>Heterelmis comalensis</i>	Endangered	Not Likely
Government Canyon Bat Cave meshweaver	<i>Cicurina vespera</i>	Endangered	Not Likely
Government Canyon Bat Cave spider	<i>Neoleptoneta microps</i>	Endangered	Not Likely
Helotes mold beetle	<i>Batrisodes venyivi</i>	Endangered	Not Likely
Madla Cave meshweaver	<i>Cicurina madla</i>	Endangered	Not Likely
Peck's cave amphipod	<i>Stygobromus</i> (= <i>Stygonectes</i>) <i>pecki</i>	Endangered	Not Likely

Common Name	Scientific Name ^b	Status	Potential for Occurrence in the Study Area
		USFWS	
Robber Baron Cave meshweaver	<i>Cicurina baronia</i>	Endangered	Not Likely
Mollusks			
Texas fatmucket	<i>Lampsilis bracteata</i>	Candidate	Not Likely
Texas pimpleback	<i>Quadrula petrina</i>	Candidate	Not Likely

(a) According to USFWS (2020a) and TPWD (2020c, 2020d)

(b) Nomenclature follows Hubbs et al. (2008), Crother et al. (2017), Chesser et al. (2019), USFWS (2020a), and TPWD (2020c)

(c) Only needs to be considered for wind energy projects

(d) Only expected to occur as a migrant/transient or rare vagrant within the Study Area

3.9.2.1 Texas Blind Salamander

The Texas blind salamander is a strictly aquatic species containing very little skin pigment and lacking eyes. It occurs only in the subterranean waters of the Edwards Aquifer near San Marcos in Hays County, Texas. The salamander requires clean water with a relatively constant temperature for suitable habitat (TPWD, 2020e). The entire known range of this species lies outside of the Study Area and it is unlikely to occur in the Study Area.

3.9.2.2 San Marcos Salamander

The San Marcos salamander is a small and slender aquatic salamander endemic to Spring Lake and an adjacent downstream portion of the upper San Marcos River. These salamanders inhabit algal mats in spring areas with a substrate of sand and gravel, interspersed with larger rocks and limestone boulders. The species requires clean, clear, flowing water of constant temperature for suitable habitat (TPWD, 2020e). The entire known range of this species lies outside of the Study Area and it is unlikely to occur in the Study Area.

3.9.2.3 Golden-cheeked Warbler

The golden-cheeked warbler is currently a rare to locally common summer resident in about 28 central Texas counties, which comprise the species' entire breeding range. The species is a habitat specialist, occurring only in oak-juniper woodlands that contain a dense deciduous canopy and mature Ashe juniper, Texas live oak, Texas red oak, post oak, cedar elm (*Ulmus crassifolia*), hackberries (*Celtis* spp.), Texas ash (*Fraxinus texensis*), and occasionally, escarpment black cherry (*Prunus serotina*) and American sycamore (*Plantanus occidentalis*) (Ladd and Gass, 1999). According to TPWD (2020d) and eBird (2020), no documented records of the golden-cheeked warbler occur within the Study Area. This species

may traverse the Study Area during migration or as a vagrant; however, it is unlikely that the species regularly occurs within the Study Area due to a lack of suitable habitat.

3.9.2.4 Interior Least Tern

In Texas, the interior least tern historically nested on sandbars of the Colorado River, Red River, and Rio Grande. At the present time, its winter range includes the entire Texas Gulf Coast. The interior least tern's preferred nesting habitat is unvegetated, frequently flooded sand flats, salt flats, sand and gravel bars, and sand, shell, and gravel beaches (Thompson et al., 1997; Campbell, 2003). Least terns are uncommon to rare migrants in the eastern two-thirds of the State and become increasingly rare westward (Lockwood and Freeman, 2014). This species may traverse the Study Area during migration or as a vagrant; however, it is unlikely that the species regularly occurs within the Study Area due to a lack of suitable habitat.

3.9.2.5 Whooping Crane

The whooping crane is North America's tallest wading bird. Only four wild populations of whooping crane exist. The only self-sustaining and largest wild population is the Aransas–Wood Buffalo population (AWBP). The AWBP breeds in Wood Buffalo National Park in northern Canada and migrates annually to wintering grounds in the Aransas National Wildlife Refuge (NWR) and adjacent areas of the central Texas Coast in Aransas, Calhoun, and Refugio counties (USFWS, 1995, 2009a; Lewis, 1995; Canadian Wildlife Service and USFWS, 2007). Individuals have wintered a considerable distance from these three counties, including as far away as the Panhandle and south to Willacy County (Lockwood and Freeman, 2014). The three smaller wild populations include the nonmigratory Florida and Louisiana populations and one population that migrates between Wisconsin and Florida. These are not self-sustaining populations, and each is designated as an “experimental population, nonessential.”

During migration, whooping cranes travel during daylight hours and stop over at wetlands, fallow cropland, and pastures to roost and feed. Whooping cranes have an unpredictable pattern of stopover use and may not use the same stopover sites annually. They spend a short period of time at any one location ranging from overnight to several days during inclement weather. Federal and State efforts to record information on whooping cranes sighted in migration began in 1975 and have continued to the present day through the Cooperative Whooping Crane Tracking Project (CWCTP) in the U.S. and Canada (USFWS, 2009a; Tacha et al., 2010). The database incorporates records for the period of 1943 through 2009. Between the fall of 1965 and the fall of 2009, 140 confirmed sightings of migrating whooping cranes were recorded in Texas (USFWS, 2009b). None of these recorded occurrences are within the Study Area or Bexar County. The Study Area lies just outside of the zone that encompasses 95 percent of known sightings, and it is highly unlikely that the species will occur within the Study Area.

3.9.2.6 Piping Plover

The piping plover is a small shorebird that inhabits sandy beaches and alkali flats (Cornell Lab of Ornithology, 2020). Approximately 35 percent of the known global population of piping plovers winters along the Texas Gulf Coast, where they spend 60 to 70 percent of the year (Campbell, 2003). The piping plover population that winters in Texas breeds on the northern Great Plains and around the Great Lakes. Piping plovers are not often observed during migration at inland locations, and they are very rare to casual migrants in the western two-thirds of the State, with most appearing to pass east of the Balcones Escarpment. (Lockwood and Freeman, 2014). According to TPWD (2020d) and eBird (2020), no documented records of the piping plover occur within the Study Area. This species may traverse the Study Area during migration or as a vagrant; however, it is unlikely that the species regularly occurs within the Study Area due to a lack of suitable habitat.

3.9.2.7 Red Knot

The red knot is a medium-sized, stocky, short-necked sandpiper with a rather short straight bill. The *rufa* subspecies, one of three subspecies occurring in North America, has one of the longest migration distances known, travelling between its breeding grounds in the central Canadian Arctic to wintering areas that are primarily in South America (USFWS, 2011a). During migration and winter in Texas, red knots may be found feeding in small groups, on sandy, shell-lined beaches, and to a lesser degree, on flats of bays and lagoons (Oberholser, 1974). It is an uncommon migrant along the coast, especially the Upper Texas coast, and very rare to casual inland, primarily in the eastern half of the State. Red knots are very rare summer visitors, and are rare, local, winter residents on the coast (Lockwood and Freeman, 2014). According to TPWD (2020d) and eBird (2020), no documented records of the red knot occur within the Study Area. This species may traverse the Study Area during migration or as a vagrant; however, it is very unlikely that the species regularly occurs within the Study Area due to a lack of suitable habitat.

3.9.2.8 Fountain Darter

The fountain darter is small fish that is known to occur only in the San Marcos and Comal River headwaters. The species prefers mats of filamentous green algae, and a constant temperature for suitable habitat (TPWD, 2020e). The entire known range of this species is outside of the Study Area, and no documented occurrences of this species occur within the Study Area (TPWD, 2020d). The species would not be expected to occur in the Study Area.

3.9.2.9 Karst Invertebrates

Nine endangered obligate troglobites (cave-dwelling species) are of local distribution in caves in northern Bexar County. They are two ground beetles (no common names – *Rhadine exilis* and *Rhadine infernalis*),

Braken Bat Cave meshweaver (*Cicurina venii*), Cokendolpher Cave harvestman (*Texella cokendolpheri*), Government Canyon Bat Cave meshweaver (*Cicurina vespera*), Government Canyon Bat Cave spider (*Neoleptoneta microps*), Helotes mold beetle (*Batrisodes venyivi*), Madla Cave meshweaver (*Cicurina madla*), and Robber Baron Cave meshweaver (*Cicurina baronia*). These species are typically small and eyeless. As of November 2016, 605 caves are known to occur in Bexar County (Texas Speleological Society [TSS], 2016), at least 87 of which contain known populations of at least one of the nine listed Bexar County karst invertebrates (USFWS, 2011b); none of these 87 caves is located in the Study Area. One karst zone, Zone 3 which occurs throughout the entire Study Area, consists of areas that probably do not contain endangered karst invertebrate species. No known records of endangered karst invertebrates exist in the Study Area (TPWD, 2020d) and they are not expected to occur in the Study Area.

3.9.2.10 Comal Springs Dryopid Beetle

The Comal Springs dryopid beetle, a small slender insect, is highly dependent on the consistent, narrow range of habitat conditions associated with the spring-flows of the Edwards Aquifer. It is known only from Comal Springs in Landa Park in New Braunfels, Texas, with a single specimen collected from the impounded San Marcos Springs (TPWD, 2020e). The entire known range of this species is outside of the Study Area, and no documented occurrences of this species exist within the Study Area (TPWD, 2020d). Its occurrence in the Study Area is unlikely.

3.9.2.11 Comal Springs Riffle Beetle

The Comal Springs riffle beetle, a slender aquatic insect, is known only from collected specimens from the Edwards Aquifer and associated habitats at Comal Springs in New Braunfels and Fern Bank Springs near Wimberly, Texas (TPWD, 2020e). The entire known range of this species is outside of the Study Area, and no documented records of this species exist within the Study Area (TPWD, 2020d). Its occurrence in the Study Area is unlikely.

3.9.2.12 Peck's cave amphipod

Peck's cave amphipod, a small crustacean known only to occur in the Edwards Aquifer, is similar to other subterranean amphipods in lacking eyes and pigment. It is known only from Comal Springs in Landa Park, New Braunfels with a single specimen collected at Hueco Springs, Texas, in 1992 (TPWD, 2020e). The entire known range of this species is outside of the Study Area, and no documented occurrences of this species exist within the Study Area (TPWD, 2020d). Its occurrence in the Study Area is unlikely.

3.9.2.13 Texas Fatmucket

The Texas fatmucket, a freshwater mussel found in substrates of sand, mud, and gravel, occurs in streams and smaller rivers with water depths of less than 1 meter. This central Texas endemic historically occurred in the Colorado, Guadalupe, and San Antonio river basins of Texas, but is now known to occur in only nine streams within these basins in very limited numbers. The existing populations are represented by only one or two individuals and are not likely to be stable or recruiting (USFWS, 2015). Due to its current known range and a lack of suitable habitat, the species would not be expected to occur in the Study Area.

3.9.2.14 Texas Pimpleback

The Texas pimpleback, a freshwater mussel endemic to central Texas, is known to inhabit rivers with low flow rates with mud, gravel, and sand substrates. Although it historically occurred throughout the Colorado and Guadalupe-San Antonio river basins, it currently is known from four streams. Only two remaining populations, the Concho River and San Saba River, appear large enough to be stable with recruitment (USFWS, 2015). Due to its current known range and a lack of suitable habitat, the species would not be expected to occur in the Study Area.

3.9.3 Critical Habitat

The USFWS, in Section 3(5)(A) of the ESA, defines critical habitat as:

“(i) the specific areas within the geographical area occupied by the species, at the time that it is listed in accordance with the ESA, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination by the Secretary of the Interior that such areas are essential for the conservation of the species.” (USFWS, 1973)

No critical habitat has been designated in the Study Area for any species included under the ESA.

3.9.4 State-Listed Fish and Wildlife Species

In addition to the federally protected species listed in Table 3-4, 15 additional species are protected at the State level and designated as threatened within Bexar County (TPWD, 2020c). The State-protected species listed in Table 3-5 receive protection under State laws, such as Chapters 67, 68, and 88 of the Texas Parks and Wildlife Code, and sections 65.171–65.184 and 69.01–69.14 of Title 31 of the TAC.

Table 3-5: State Endangered and Threatened Wildlife Species for Bexar County^a

Common Name	Scientific Name ^b	Status	Potential for Occurrence in the Study Area
		TPWD	
Amphibians			
Cascade Caverns salamander	<i>Eurycea latitans</i>	Threatened	Not Likely
Mexican treefrog	<i>Smilisca baudinii</i>	Threatened	Not Likely
Texas salamander	<i>Eurycea neotenes</i>	Threatened	Not Likely
Birds			
Reddish egret	<i>Egretta rufescens</i>	Threatened	Not Likely ^c
Tropical parula	<i>Tropical parula</i>	Threatened	Not Likely ^c
White-faced ibis	<i>Plegadis chihi</i>	Threatened	Not Likely ^c
Wood stork	<i>Mycteria americana</i>	Threatened	Not Likely ^c
Zone-tailed hawk	<i>Buteo albonotatus</i>	Threatened	Not Likely ^c
Fishes			
Toothless blindcat	<i>Trogloglanis pattersoni</i>	Threatened	Not Likely
Widemouth blindcat	<i>Satan eurystomus</i>	Threatened	Not Likely
Mammals			
Black bear	<i>Ursus americanus</i>	Threatened	Not Likely ^c
White-nosed coati	<i>Nasua narica</i>	Threatened	Not Likely ^c
Reptiles			
Cagle's map turtle	<i>Graptemys caglei</i>	Threatened	Not Likely
Texas horned lizard	<i>Phrynosoma cornutum</i>	Threatened	Not Likely
Texas tortoise	<i>Gopherus berlandieri</i>	Threatened	Not Likely

(a) According to TPWD (2020c, 2020d)

(b) Nomenclature follows Hubbs et al. (2008), Crother et al. (2017), Chesser et al. (2019), and TPWD (2020c)

(c) Only expected to occur as a migrant/transient or rare vagrant within the Study Area

3.9.4.1 Cascade Caverns Salamander

The Cascade Caverns salamander is a subaquatic salamander endemic to caves and springs associated with the Edwards Aquifer in Comal, Kendall, and Kerr counties (Chippindale et al., 2000). Smith and Potter (1946) first described the species from the Cascade Caverns system near Boerne, Texas, where they assumed it endemic; however, additional specimens from other localities may represent this species. According to Dixon (2013), the species currently has been documented in Kerr, Kendall, and Comal Counties, but not Bexar County. Due to its restricted range and a lack of suitable habitat, the species would not be expected to occur in the Study Area.

3.9.4.2 Mexican Treefrog

The Mexican treefrog occurs in Texas along the subtropical Rio Grande embayment around Brownsville (TPWD, 2020c). Dixon (2013) states that the Bexar and Refugio County records are correct

identifications, but probably represent accidental introductions via tropical plants transported from the Rio Grande Valley. No documented records of the species exist from the Study Area (TPWD, 2020d), and the species would not be expected due its current range lying outside of the Study Area.

3.9.4.3 Texas Salamander

The Texas salamander is an aquatic salamander endemic to springs, streams and caves with rocky or cobble beds (TPWD, 2020c). The species is restricted to populations in Helotes Creek Spring and Leon Springs (Bexar County) and Mueller's Spring (Kendall County) in central Texas (Chippindale et al., 1994, 2000). Due to its restricted range and a lack of suitable habitat, the species would not be expected to occur in the Study Area.

3.9.4.4 Reddish Egret

The reddish egret is a resident of brackish marshes, tidal flats, and shallow salt lakes along the Texas Gulf Coast, where it nests in brushy yucca and pricklypear thickets on dry coastal islands (Oberholser, 1974; Lockwood and Freeman, 2014). The western Gulf of Mexico supports the largest concentration of reddish egrets in the world (Tunnell and Judd, 2002). It is unlikely that this species occurs within the Study Area due to a lack of suitable habitat.

3.9.4.5 Tropical Parula

The tropical parula is a small passerine that is a rare to uncommon resident of the live oak woodlands of the Coastal Sand Plain in Kenedy and Brooks Counties (Lockwood and Freeman, 2014). No documented records exist of the tropical parula within the Study Area (TPWD, 2020d; eBird, 2020), and this species would not be expected within the Study Area due to the general absence of appropriate habitat.

3.9.4.6 White-faced Ibis

The white-faced ibis is a medium-sized wading bird that inhabits freshwater marshes, sloughs, and irrigated rice fields, but also frequents brackish and saltwater habitats (Ryder and Manry, 1994). White-faced ibis are permanent residents along the Texas Gulf Coast with nesting records existing from areas away from the coast as far north as the Panhandle (Lockwood and Freeman, 2014). The species is a rare to uncommon migrant throughout the State and occasionally occurs as a post-breeding visitor north and west of its typical range. According to TPWD (2020d) and eBird (2020), no documented records of the white-faced ibis occur within the Study Area. Although the Study Area is within the species' range, it is unlikely that the white-faced ibis regularly occurs within the Study Area due to a lack of suitable habitat.

3.9.4.7 Wood Stork

The wood stork is an uncommon to locally common post-breeding visitor to coastal Texas and inland waters in the eastern third of the State (Lockwood and Freeman, 2014). In Texas, wood storks typically occur near freshwater or saltwater wetlands, lakes, rivers, and streams. The USFWS lists the wood stork as threatened in Florida, Alabama, Georgia, Mississippi, North Carolina, and South Carolina, but not in Texas. According to TPWD (2020d) and eBird (2020), no documented records of the wood stork occur within the Study Area. Although the Study Area is within the species' range, it is unlikely that the wood stork regularly occurs within the Study Area due to a lack of suitable habitat.

3.9.4.8 Zone-tailed Hawk

The zone-tailed hawk is an uncommon and local summer resident in the mountains of the central Trans-Pecos, east through the southern Edwards Plateau regions of Texas and is a rare migrant and winter resident in the Lower Rio Grande Valley (Lockwood and Freeman, 2014). Zone-tailed hawks may occur in the Study Area during migration or as a rare vagrant; however, it is unlikely that this species would reside or nest within the Study Area.

3.9.4.9 Toothless Blindcat

The toothless blindcat, a troglobitic catfish, only occurs in the deep portions of the San Antonio pool of the Edwards Aquifer (over 300 meters below the surface) in Bexar County (USFWS, 1998). According to TPWD (2020d), no documented records exist from the Study Area, and the toothless blindcat would not be expected within the Study Area due to the species' known current range.

3.9.4.10 Widemouth Blindcat

The widemouth blindcat, a troglobitic catfish, only occurs in the deep portions of the San Antonio pool of the Edwards Aquifer (over 300 meters below the surface) in Bexar County (USFWS, 1998). According to TPWD (2020d), no documented records exist from the Study Area, and the widemouth blindcat would not be expected within the Study Area due to the species' known current range.

3.9.4.11 Black bear

Formerly widespread throughout the State, the black bear is now restricted to mountainous areas of the Trans-Pecos region, east Texas, and the far southwestern edge of the Edwards Plateau (Schmidly and Bradley, 2016). The USFWS delisted the threatened Louisiana black bear (*Ursus americanus luteolus*) on March 10, 2016, which included the American black bear (*Ursus americanus*) as threatened because of its similarity in appearance to the Louisiana black bear. However, the TPWD retains the status of the black

bear as threatened in the region. While the black bear may occasionally occur in the region, the species is unlikely to occur in the Study Area due to a lack of suitable habitat.

3.9.4.12 White-nosed Coati

The white-nosed coati is a raccoon-like carnivore that inhabits woodlands from Central America and Mexico north to south Texas. In Texas, white-nosed coatis are rare inhabitants from extreme south Texas to the Big Bend region, with records from Aransas, Brewster, Hidalgo, Kerr, Maverick, Real, Starr, Uvalde, Victoria, and Webb Counties (Schmidly and Bradley, 2016). No records of the species occur within Bexar County (Schmidly and Bradley, 2016) and while the white-nosed coati may occasionally occur in the region, the species is unlikely to occur within the Study Area due to lack of suitable habitat.

3.9.4.13 Cagle's Map Turtle

Cagle's map turtle is restricted to the waters of the Guadalupe River basin where it is closely tied to riffles within relatively shallow depths (Dixon, 2103). Dixon (2013) indicates the species being documented in Bexar County; however, Cagle's map turtle would not be expected to occur within the Study Area due to a lack of suitable habitat.

3.9.4.14 Texas Horned Lizard

The Texas horned lizard occurs throughout the western half of the State in a variety of habitats but prefers arid and semi-arid environments in sandy loam or loamy sand soils that support patchy bunch-grasses, cacti, yucca, and various shrubs (Henke and Fair, 1998). Although the species has almost vanished from the eastern half of the State over the past 30 years, it still maintains relatively stable numbers in west Texas. TPWD (2020d) shows no documented records within the Study Area for this species, and it would not be expected to occur within the Study Area.

3.9.4.15 Texas Tortoise

The Texas tortoise is a terrestrial turtle that inhabits sandy soils in areas of low, sparse vegetation throughout the southern portion of the state (Garrett and Barker, 1987). Texas tortoises may burrow in the sand or enter animal burrows, but typically seek cover in a shallow scrape under shrubs or cacti. TPWD (2020d) does not show any documented records within the Study Area; however, the species has been documented in Bexar County (Dixon, 2013). Texas tortoises would not be expected in the Study Area due to a lack of suitable habitat.

3.10 Socioeconomics

This section presents a summary of the economic and demographic characteristics of the City of San Antonio, Bexar County, and provides a comparison with the socioeconomic environment of the region and the State of Texas.

3.10.1 Population Trends

According to recent U.S. Census Bureau data, Texas and the Study Area region are experiencing some of the largest population growth in the nation. The population in Texas increased by 379,128 between 2017 and 2018, which led the nation in numeric growth during that period. Likewise, Bexar County ranked seventh in numeric growth from 2010 to 2018 compared to all counties in the U.S., with an increase of 271,277. San Antonio was the second-fastest growing large city (50,000 or more) in the nation between July 1, 2017, and July 1, 2018, adding 20,824 to reach 1,532,233 (U.S. Census Bureau, 2018, 2019a, 2019b).

As shown in Table 3-6, the City of San Antonio's population has increased significantly since 1980, when it was recorded at 785,861; San Antonio's population increased approximately 95 percent from 1980 to 2018, when the city reached an estimated population of 1,532,233. Bexar County's population increased approximately 101 percent from 1980 to 2018, from 988,800 in 1980 to 1,986,049 in 2018. By comparison, the State's population increased approximately 102 percent between 1980 and 2018, from 14.3 million persons to 28.7 million persons (U.S. Census Bureau, 1983, 1990, 2000, 2010, 2020).

The TWDB publishes population projections for Texas, cities above a certain size, as well as the State's counties for the purpose of estimating future water demand. As shown in Table 3-6, population projections were available for the City of San Antonio, Bexar County, and the State. The TWDB projects the population of San Antonio to increase approximately 64 percent between 2018 and 2050. The population of Bexar County is also projected to increase nearly 36 percent during the same period to reach 2,695,668 in 2050. For comparison, the population of the State of Texas is projected to grow by approximately 13.6 million during the same period, which is an increase of more than 47 percent (TWDB, 2015, 2020).

Table 3-6: Population Trends and Projections

Place	Population							
	1980	1990	2000	2010	2018	2030	2040	2050
City of San Antonio	785,861	935,933	1,144,646	1,327,407	1,532,233	1,727,491*	1,910,744*	2,086,803*
Bexar County	988,800	1,185,394	1,392,931	1,714,773	1,986,049	2,231,550	2,468,254	2,695,668
Texas (in 1000s)	14,229	16,987	20,852	25,146	28,702	33,913	38,063	42,294

Source: U.S. Census Bureau (1983, 1990, 2000, 2010, 2020); TWDB (2015, 2019). *Using TWDB 2015 data as 2019 population projections for the city of San Antonio were not available.

3.10.2 Employment

Table 3-7 presents the labor force and unemployment data for the Study Area region and the State of Texas. San Antonio's labor force grew over 68 percent between 1990 and October 2019 overall; the city's labor force increased approximately 22 percent during the 1990s, 15 percent between 2000 and 2010, and 19 percent between 2010 and October 2019 to reach 748,592. For comparison, the labor force within Bexar County grew approximately 72 percent between 1990 and October 2019, increasing by approximately 18 percent in the 1990s, 23 percent in the 2000s, and 19 percent between 2010 and October 2019, to reach 970,187. The State's labor force increased approximately 20 percent during the 1990s, 18 percent between 2000 and 2010, and 16 percent between 2010 and August 2019 (U.S. Bureau of Labor Statistics [BLS], 2020).

Table 3-7 also shows that unemployment across all geographies has fluctuated over the past few decades. In 1990, the unemployment rate of San Antonio and Bexar County was higher than that of the State; the city and county recorded unemployment rates of 7.9 percent and 7.3 percent, respectively, compared to 6.3 percent for the State. Conversely, in 2000, 2010, and October 2019 (the most recent data available), the unemployment rates of the city and county were lower than that of the State. In 2000, San Antonio recorded an unemployment rate of 4.2 percent and the county recorded a rate of 4.0 percent, compared to 4.3 percent for the State. Similarly, in 2010 the city, county, and State recorded unemployment rates of 7.0 percent, 7.3 percent, and 8.1 percent, respectively. In October 2019, the city and county both recorded unemployment rates of 2.9 percent, whereas the State recorded a 3.3 percent unemployment rate (BLS, 2020).

Table 3-7: Labor Force and Unemployment

Place	Labor Force				Unemployment Rate (percent)			
	1990	2000	2010	Oct 2019	1990	2000	2010	Oct 2019
City of San Antonio	444,782	544,441	627,598	748,592	7.9	4.2	7.0	2.9
Bexar County	563,648	662,639	812,516	970,187	7.3	4.0	7.3	2.9
Texas (in 1,000s)	8,619	10,374	12,242	14,191	6.3	4.3	8.1	3.3

Source: BLS (2020)

3.10.3 Leading Economic Sectors

Employment data studied and discussed below incorporates jobs that are located within the county and State. These data include workers who are covered by State unemployment insurance and most agricultural employees. Also included are all corporation officials, executives, supervisory personnel, clerical workers, wage earners, piece workers, and part-time workers. The data exclude employment covered by the Railroad Retirement Act, self-employed persons, and unpaid family workers. A comparison of second quarter Texas Workforce Commission (TWC) employment data between 2014 and 2019 shows that the total number of jobs in Bexar County increased by 79,848 (approximately 10 percent). Similarly, the number of jobs within the State also increased approximately 10 percent during the same 5-year period (TWC, 2020).

As shown in Table 3-8, second quarter 2019 leading employment sectors, which collectively account for approximately 72 percent of all employment in Bexar County, include the Education & Health Services sector; the Trade, Transportation, and Utilities sector; the Professional & Business Services sector; and the Leisure & Hospitality sector. Similarly, the same four leading employment sectors for the State of Texas in the second quarter of 2019 comprise approximately 69 percent of all employment in the State (TWC, 2020).

**Table 3-8: Covered Employment and Major Employment Sectors,
Second Quarter 2014 and 2019**

Employment Sector	Employment		Percent Change
	2014	2019	2014–2019
Bexar County			
Natural Resources & Mining	5,984	6,576	9.89%
Construction	36,048	41,615	15.44%
Manufacturing	34,022	36,594	7.56%

Employment Sector	Employment		Percent Change
	2014	2019	2014–2019
Trade, Transportation & Utilities	143,102	153,210	7.06%
Information	20,755	19,385	-6.60%
Financial Activities	70,580	74,956	6.20%
Professional & Business Services	108,905	122,533	12.51%
Education & Health Services	206,833	234,558	13.40%
Leisure & Hospitality	107,837	120,920	12.13%
Other Services	22,797	25,258	10.80%
Unclassified	101	455	350.50%
Public Administration	37,046	37,798	2.03%
Total Employment	794,010	873,858	10.06%
State of Texas			
Natural Resources & Mining	360,983	311,516	-13.70%
Construction	680,404	804,559	18.25%
Manufacturing	886,573	908,311	2.45%
Trade, Transportation & Utilities	2,366,819	2,568,953	8.54%
Information	210,645	217,365	3.19%
Financial Activities	688,295	777,710	12.99%
Professional & Business Services	1,553,114	1,791,615	15.36%
Education & Health Services	2,621,298	2,917,556	11.30%
Leisure & Hospitality	1,233,968	1,434,871	16.28%
Other Services	319,137	346,502	8.57%
Unclassified	3,386	9,961	194.18%
Public Administration	440,184	461,723	4.89%
Total Employment	11,364,806	12,550,642	10.43%

Source: TWC (2020)

3.10.4 Community Values

Burns & McDonnell evaluated the proposed Project for community resources that may be important to the community, such as parks or recreational areas, historical and archeological sites, or scenic vistas within the Study Area. Additionally, Burns & McDonnell and CPS Energy solicited input from community leaders and members of the public to gain a better understanding of values of the community. Burns & McDonnell mailed consultation letters to Federal, State, and local officials (Appendix A) and CPS Energy broadcasted a pre-recorded video to the public on July 15, 2020 to identify and collect

information regarding community values and community resources. Input received from the public and community leaders was used in the evaluation and siting/routing of the Project. Community values and community resources are discussed in the following sections as well as in Section 5.2.

3.11 Human Resources

3.11.1 Land Use

3.11.1.1 Land Jurisdiction

The Study Area is located entirely within the northwestern portion of the city of San Antonio, which serves as the Bexar County seat. Bexar County is a member of the Alamo Area Council of Governments (AACOG). Established in 1967, the AACOG is a voluntary regional organization that spans 13 contiguous counties in the south-central portion of the State, created to provide general technical assistance to member governments in planning functions, applications, and the administration of area-wide programs. Its members include cities and counties, public utilities, school districts and special districts, chambers of commerce, and other various organizations (Texas Association of Regional Councils [TARC], 2020).

The Study Area is served by one independent school district (ISD), Northside ISD, which operates three school facilities within the Study Area (Texas Education Agency [TEA], 2020):

- Braun Station Elementary School – located on the west side of Tezel Road, along the Study Area’s northern boundary
- Coke R. Stevenson Middle School – located in the northwest corner of the intersection of Tezel Road and Guilbeau Road, near the center of the Study Area
- James L. Carson Elementary School – located on the west side of Tezel Road, along the Study Area’s southern boundary

Additionally, multiple private preschools and day care centers are located within the Study Area:

- La Petite Academy – located in the western portion of the Study Area, in the northwest corner of the intersection of Guilbeau Road and Donegal Street
- Kids Garden – located along the Study Area’s eastern boundary, on the south side of Guilbeau Road

- Giant Steps Early Learning School – on the south side of Old Tezel Road, east of Tezel Road in the southern portion of the Study Area
- Kinder Care Learning Center – west of Old Tezel Road on the south side of Guilbeau Road in the center of the Study Area

3.11.1.2 Existing Land Use

The Study Area is located within a densely developed portion of San Antonio with limited open land tracts remaining. Historically, ranching was the predominant land use in Bexar County; however, the acreage dedicated to farming and ranching operations continues to decrease as farms and ranches were subdivided for residential and commercial development. USDA National Agricultural Statistics Service (NASS) geospatial data and interactive maps were referenced to estimate land use coverage for Bexar County as a whole, and specifically within the Study Area. Bexar County is composed of approximately 39 percent developed space, 23 percent shrubland, 19 percent forest, and 8 percent crops. By comparison, the Study Area is composed of approximately 96 percent developed/urban space, 3 percent forest, and less than 1 percent shrubland (USDA, 2019a).

The vast majority of the Study Area contains residential development, but also includes a mixture of commercial, institutional (educational and religious), and recreational land uses. Commercial uses are generally concentrated at the intersection of the Guilbeau Road and Tezel Road, where commercial centers include shopping, businesses, and restaurants. As previously mentioned, three large school campuses are located on the west side of Tezel Road within the Study Area. Additionally, four churches are located within the Study Area:

- Crossroads Baptist Church complex – located at the northeast corner of the Guilbeau Road and Tezel Road intersection
- Northwest Community Church – located southeast of the Guilbeau Road and Old Tezel Road intersection
- Community Bible Church Northwest – located in the strip mall on the east side of Tezel Road, north of Old Tezel Road
- Kingdom Hall of Jehovah’s Witness – located on the northeast corner of the Tezel Road and Old Tezel Road intersection

3.11.1.3 Future Development

The City of San Antonio's Development Services Department offers a One Stop mapping application (City of San Antonio, 2020a) to represent future development plats to the public for informational and planning purposes. A review of this application identified several projects planned, currently under construction, or recently completed within the Study Area:

- Oakridge Village Subdivision – small residential subdivision southeast of the intersection of Tezel Road and Old Tezel Road, along the Study Area's southern boundary (completed)
- The Bristol Apartments – apartment complex southeast of the intersection of Old Tezel Road and Guilbeau Road (completed)
- Guilbeau Acres (a separate segment of Oakridge Village Subdivision) – two single-family residential plots on the south side of Guilbeau Road, just south of Rolling Stone Street (Alternative Site 5)

These ongoing and proposed developments were taken into consideration during the substation location and route development phases.

3.11.1.4 Utilities

No large oil and natural gas transmission pipelines are known to cross the Study Area (RRC, 2020). Electric utilities in the Study Area are operated and maintained by CPS Energy. CPS Energy operates the Bandera to Helotes 138-kV transmission line, which crosses the Study Area from its southeast corner to north-central border, crossing both Guilbeau Road and Tezel Road. CPS Energy also manages the electric distribution system throughout the Study Area.

3.11.2 Recreation

A review of the San Antonio Parks System Plan, the Bexar County Parks & Open Space Master Plan, various Federal, State, and local maps, an internet search, and field reconnaissance were used to identify parks and recreation areas in the Study Area, as well as proposed locations for future parks and recreation areas. No National or State parks, forests/grasslands, wildlife refuges, wildlife management areas, or preserves were identified within the Study Area (National Park Service [NPS], 2020; TPWD, 2020f). The following recreation facilities were identified within the Study Area:

- New Territories Park – 9023 Bowen Drive; this 12-acre, city-administered park includes two basketball courts, two tennis courts, paved bicycle trail, 0.25-acre dog park, grill, picnic area, playgrounds, swimming pool, and walking trail
- Braun Station West – 8630 Tezel Road; this 1,154-property neighborhood operates a members-only clubhouse, two tennis courts, a soccer field, swimming pool, basketball half-court, and a playground for its residents in the northern portion of the Study Area along the east side of Tezel Road

Additionally, ball fields, tennis courts, and other small recreational facilities are located at the public school campuses within the Study Area. A review of the San Antonio and Bexar County master plans did not reveal any future park or recreation area potential sites within the Study Area.

3.11.3 Agriculture

Urban development dominates the Study Area, with dense commercial and residential development throughout. No current agricultural practices are known to occur within the Study Area boundaries, including livestock production.

3.11.4 Transportation/Aviation

According to TxDOT (2020a), no U.S. or State highways are located within the Study Area. The major transportation corridors within the Study area are Tezel Road and Guilbeau Road.

- Guilbeau Road crosses the entire Study Area in an east-west orientation, approximately across the Study Area's midsection. It connects State Loop (SL) 1604, approximately 1.1 miles to the west, to State Highway (SH) 16, approximately 1 mile to the east.
- Tezel Road crosses the entire Study Area in a north-south orientation. It connects Bandera Road, approximately 1.3 miles to the north, to Culebra Road, approximately 2 miles to the south.

The transportation network within the Study Area is completed by many city and residential streets.

A review of TxDOT's San Antonio District Planned Mobility Projects and current Design Projects (both funded and unfunded); Bexar County's current Road and Bridge Capital Projects for Precinct 1; and San Antonio's Transportation & Capital Improvements Plan identified no roadway projects to be upgraded or studied for future expansion in the near term within the Study Area (TxDOT, 2020c; Bexar County, 2020, City of San Antonio, 2020).

No railway facilities are located within the Study Area.

A review of the Chart Supplement South Central U.S. (formerly known as the Airport/Facility Directory South Central U.S.) (FAA, 2020a), the San Antonio Sectional Aeronautical Chart (FAA, 2020b), the TxDOT Airport Directory (TxDOT, 2020b), aerial photography, USGS maps, field reconnaissance, and internet sources (AirNav, 2020) identified no FAA-registered airports, private airstrips, or heliports within the Study Area boundaries nor within the immediate vicinity.

3.11.5 Communication Towers

A search of the Federal Communications Commission (FCC) website, online cell tower search engines, and field reconnaissance identified three AM radio towers and three cellular or other electronic communication towers within or in close proximity to the Study Area (FCC, 2020; AntennaSearch, 2020; Cell Reception, 2020). Table 3-9 summarizes the towers' owner and location.

Table 3-9: Communication Towers

Tower Owner/Type			Location
Crown Castle/Cellular Tower			South of Guilbeau Rd and east of Tezel Rd (29°-31'-02"N, 98°-39'38"W)
AT&T/Cellular Tower			South of Study Area boundary, south of Olde Village Dr (29°-30'-48"N, 98°-39'-22"W)
Unidentified/Cellular Tower			South of Study Area boundary, east of Tezel Rd (29°-30'-47"N, 98°-39'-39"W)
KDRY Radio, Inc./AM Radio Towers (Three-Tower Array)			Northwest of Study Area, south of Braun Rd at Leslie Rd (29°-32'-11"N, 98°-41'-11"W)

3.11.6 Aesthetic Values

Aesthetics is included as a factor for consideration in the evaluation of transmission facilities in the Public Utility Regulatory Act (PURA) § 37.056(c)(4). Although CPS Energy is exempt from this code, the utility's model for transmission line evaluation and substation location analysis closely mirrors the PUC guidelines. The term aesthetics refers to the subjective perception of natural beauty in the landscape, and

this section of the document attempts to define and measure the Study Area's scenic qualities. Consideration of the visual environment includes a determination of aesthetic values where the major potential effect of the Project on the resource is considered aesthetic, or where the location of a transmission line could affect the scenic enjoyment of a recreation area.

Burns & McDonnell's aesthetic analysis primarily considers potential visual impacts to the public. Areas visible from major roads and highways, or publicly owned or accessible lands (for example, parks or privately owned recreation areas open to the public) were analyzed. Several factors are taken into consideration when attempting to define the potential impact to a scenic resource that would result from the construction of the proposed transmission line. Among these are:

- Topographical variation (hills, valleys, etc.)
- Prominence of water in the landscape
- Vegetation variety (forests, pasture, etc.)
- Diversity of scenic elements
- Degree of human development or alteration
- Overall uniqueness of the scenic environment compared to the larger region

Based on these criteria, Burns & McDonnell is of the opinion that the Study Area exhibits a generally moderate degree of aesthetic quality with respect to the region. The area is characterized by a relatively flat to rolling topography with elevations ranging from approximately 865 feet above msl to 996 feet above msl. No significant water bodies or features occur within the Study Area.

Residential and commercial development occurs throughout the Study Area; however, it is most heavily concentrated in each respective corner of the Study Area in the neighborhoods of Braun Willow, Tezel Trails, Tezel Heights, Village in the Woods, and Braun Station. The central portion of the Study Area near the intersection of Guilbeau Road and Tezel Road is largely commercialized, and the corridors adjacent to both Guilbeau Road and Tezel Road are composed of a mixture of commercial and residential development, as well as three school facilities. Overall, the landscape has experienced a high degree of alteration due to residential and commercial development, transportation corridors, and existing electrical transmission and distribution facilities. This alteration of the landscape lessens the overall aesthetic quality. However, pockets of native trees remain, particularly around tributaries, and the neighborhoods host many oaks and ornamental, landscaped trees.

The THC operates the Texas Heritage Trails Program, a Statewide heritage tourism program based on 10 scenic driving trails originally created by TxDOT. This program operates throughout 10 regions of Texas

and enables people to learn about and be surrounded by local customs, traditions, history, and culture of the different regions. The Study Area is located within the Hill Country Trail Region, a 19-county area in central Texas that features spring-fed rivers, canyons, hills, as well as a variety of historic and cultural resources. The City of San Antonio contains many of these recommended sites; none of these sites, however, are located within the Study Area (THC, 2020a).

In 1998, TxDOT published a list of some of the best “Scenic Overlooks and Rest Areas” in Texas, each of which presented particularly strong aesthetic views or settings. A review of this list revealed that none of these locations are located within the Study Area (TxDOT, 1998).

3.12 Cultural Resources

3.12.1 Cultural Overview

As shown on Figure 3-4, Bexar County is in the southern portion of the Central Texas Archeological Region of the Central and Southern Planning Region as defined by the Texas Historical Commission (Mercado- Allinger et al., 1996). The cultural developments in the Central and Southern Planning Region are classified by archeologists according to four primary chronological and developmental stages: Paleoindian, Archaic, Late Prehistoric, and Historic. These classifications have been defined primarily by changes in material culture over time, as evidenced through information and artifacts recovered from archeological sites. Each of these periods is briefly summarized below.

3.12.2 Paleoindian Period

The Paleoindian period, representing the earliest occupations in the region, began before 10,000 B.C. and continued to about 6500 B.C. The Paleoindian people were hunters and gatherers who hunted now-extinct species of Pleistocene megafauna such as the mammoth, mastodon, camel, and bison. In most areas, however, big-game hunting was probably augmented by the utilization of wild plants and smaller animals (Black, 1989). Data collected during excavations at the St. Mary’s Hall site (41BX229) have contributed to this view of a more-varied diet for Paleoindian groups (Hester, 1978).

Few intact Paleoindian sites have been recorded in this region, partly because Paleoindian deposits can be deeply buried in various alluvial settings, making them difficult to locate and study. When Paleoindian sites are found they are usually poorly preserved or stratigraphically mixed (Mercado-Allinger et al., 1996). Sites occur more commonly as small, surface lithic scatters, usually located in upland areas along divides of major and minor watersheds. These are thought to represent transient camps, resource procurement loci, or retooling stations by loosely structured, highly mobile social groups composed of

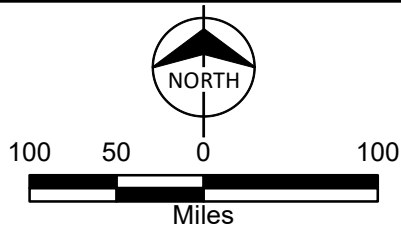
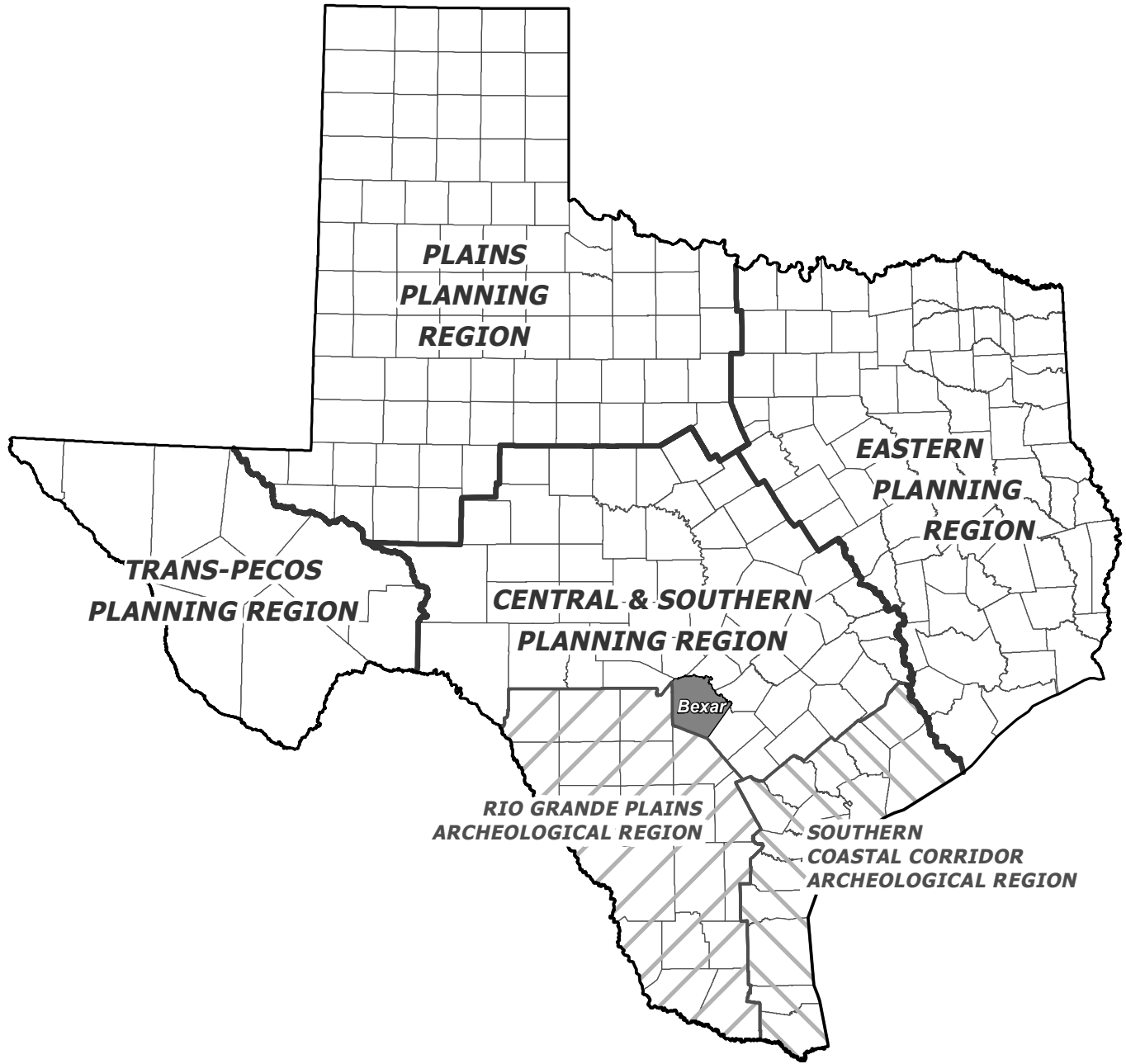


Figure 3-4
Location of Bexar County
in Relation to the Cultural Resources
Planning Regions of Texas
Tezel Substation and
Transmission Line Project

several nuclear families referred to as bands. However, Paleoindian sites with buried components have been excavated in the Central Texas region. These include the Kincaid Rockshelter site (41UV2) in Uvalde County (Collins et al., 1988), the Levi site (41TV49) in Travis County (Alexander, 1963), the Wilson-Leonard site (41WM235) in Williamson County (Collins, 1993), and the Pavo Real site (41BX52) (Henderson, 1980), which yielded one of the few known Paleoindian burials. Late Paleoindian components have also been found during excavations at site 41BX47 on Leon Creek (Tennis, 1996) as well as the Richard Beene site (41BX831) (Thoms et al., 2005). Temporally diagnostic toolkits associated with the Paleoindian period consist of a variety of finely chipped, sometimes fluted, lanceolate projectile points, such as the Clovis, Folsom, and Plainview types (Willey, 1966).

3.12.2.1 Archaic Period

At the end of the Paleoindian period, the archeological record exhibits evidence of a diversification in subsistence patterns that marked the beginning of the complex chronological period referred to as the Archaic. Indications suggest that prehistoric inhabitants began hunting a variety of small game animals, including deer and rabbit, and gathered edible roots, nuts, and fruits (Black, 1989). Site types include rock shelter, camp sites, lookout sites, and quarry sites that are usually located near a reliable water source. The Archaic period is divided into three subperiods: Early, Middle, and Late.

The Early Archaic groups continued to exhibit many of the characteristics of the preceding Paleoindian period, and the early part of this period is sometimes referred to as transitional. Most projectile points from this period are well made, and many exhibit characteristics typical of Paleoindian technologies, such as lateral-edge grinding. In addition, Early Archaic artifact forms have been recovered beyond the boundaries of central Texas. The variety of projectile point types distributed over such a large area has prompted Prewitt (1981) to suggest that these people were organized in small, dispersed bands that roamed broad territories. In Bexar County, Early Archaic components have been identified at the Housman Road site (41BX47), the Richard Beene site (Nickels, 2011), and the Panther Springs site (41BX228) (McNatt et al., 2000).

The Middle Archaic period can be subdivided into early (Clear Fork) and late (Round Rock) intervals. Nolan and Travis projectile points are indicative of the Clear Fork interval, while the Round Rock interval is marked by the Pedernales and Langtry points. It was during the Middle Archaic period that burned rock middens became a specialized site type (Black, 1989). Middens became common during this period, suggesting an intense and perhaps rather specialized plant-processing economy. Weir (1976) has even suggested a population increase during this period and possible developments in social organization. Projectile points from this period are quite numerous, occurring in large frequencies at some sites. They

tend to be large, straight-stemmed, and often not as well made as the points from earlier or later periods. Middle Archaic sites in Bexar County include the Granberg II site (41BX271) and Elm Waterhole site (41BX300) (McNatt et al., 2000).

The beginning of the Late Archaic period was characterized by another proliferation of projectile point types, and the frequency of burned rock middens appears to have decreased. Prewitt has suggested that proliferation of projectile points during the earliest phase of this subperiod may represent a return to the Early Archaic pattern of small, dispersed bands with wide-ranging territorial areas. The latter part of this period appears to be marked by an emphasis on the utilization of a wide variety of food resources, perhaps indicative of population or climatic stress at this time. Projectile points diagnostic of the early part of the Late Archaic include Bulverde and Pedernales types. Later in the period Ensor, Frio, and Mahomet point types became prominent. Cemeteries, especially associated with rockshelters, also become common in Central Texas during the Late Archaic (Dockall et al., 2006).

3.12.2.2 Late Prehistoric Period

The Late Prehistoric period (A.D. 800–1600) is much shorter in duration than the Archaic period and is divided into two phases based upon radiocarbon dates and changes in arrowhead types and subsistence pursuits. The first phase of this period, the Austin Phase, dates to between A.D. 800 and 1300, and is characterized by Scallorn points and burned rock middens. During the second phase identified for the Late Prehistoric, the Toyah phase, indications exist of major population movements, changes in settlement patterns, and perhaps lower population densities (Black, 1989). The first evidence of emerging agriculture appears at this time, as do ceramics.

Bison hunting appears to have become a very important subsistence strategy during the Toyah phase. The Toyah phase has very distinctive traits that separate it from the earlier Austin phase. Temporal indicators of the Toyah phase include ceramics, both locally made and imported, Perdiz arrow points, end scrapers, large thin bifaces, beveled knives, and prismatic blades (Rogers and Russell, 2007). While the hunting of bison was an important subsistence endeavor, deer, antelope, and other smaller mammals were also exploited. The use of burned rock middens was not prolific during this time; rather, large hearths were used for cooking (Johnson, 1994).

The Late Prehistoric period also is marked by the introduction of several technological advances, most notably the bow and arrow and, later, pottery. The bow and arrow quickly became the standard weapon, replacing the throwing stick, or atlatl, and small thin arrow points became a key indicator among the material remains of the period. Sometime after the adoption of the bow and arrow, plainware ceramics

were introduced into the area. This development probably came from agricultural groups to the east or northeast. Possible indications exist of major population movements, changes in settlement patterns, and, perhaps, lower population densities during the Late Prehistoric period (Black, 1989).

3.12.2.3 Historic

Historic Indian groups in the area include the Tonkawa, Karankawa, Lipan Apache, and Comanche, who entered the area from the plains in pursuit of food and stopped at the area's springs. The Spanish were likely the first Europeans in the vicinity of the Study Area, perhaps as early as 1690, when Alonso De León reputedly passed through on his way to East Texas (Handbook of Texas Online, 2017). In 1691, the first Spanish Provincial Governor of Coahuila, Domingo Terán de los Ríos, traveled through portions of Bexar County, laying the path for El Camino Real de los Tejas (The King's Highway, also known as the Old San Antonio Road in portions), which extended for over 2,500 miles (Long, 2017).

El Camino Real de los Tejas was, at the time, the principal road connecting Coahuila, Mexico, with the former Spanish capital of the Texas province, Los Adaes (now Robelene, Louisiana). Spanish military forces used the route to counter French expeditions into what is now Texas as early as the mid-1680s. The Frenchman Louis Juchereau de St. Denis may have also traveled through Bexar County in 1714 as he traveled from Natchitoches to San Juan Bautista on the Rio Grande (Pool, 1975). Other colonial-era expeditions to Bexar County include the Espinosa, Olivares and Aguirre expedition (1709 and 1716), the Ramón expedition (1716), the Alarcón expedition (1718), the Aguayo expedition (1721), and the Rivera expedition (1727) (Long, 2017; Nickels, 2011). The El Camino Real de los Tejas continued to see use through the nineteenth century, serving as an important transportation corridor for soldiers, merchants, and settlers alike. The former alignment currently forms portions of major roadways comprising modern transportation networks.

The first authorized nonreligious settlement by Europeans in Bexar County occurred in 1731, when immigrants from the Canary Island founded the Villa de San Fernando de Béxar, which became the first municipality in the Spanish province of Texas. During the period of European exploration and settlement, epidemic diseases devastated large numbers of the region's indigenous populations, and Apache raids were reportedly responsible for a number of Spanish deaths (Long, 2017).

After the arrival of the first authorized Anglo-American colonists to Texas in 1821, San Antonio (San Fernando de Béxar) became the westernmost settlement in Texas. In 1824, Texas and Coahuila were united into a single state (Coahuila y Tejas) with the capital at Saltillo. A Department of Béxar was

formed with a political chief who had authority over the Texas portion of the State. It extended from the Rio Grande to the Texas Panhandle and west to El Paso, including the current Study Area.

In 1835, Texian rebels laid siege to San Antonio, which was garrisoned by the Mexican army under the command of Martín Perfecto de Cos. Texian forces occupied the city following fierce fighting on December 10, 1835. San Antonio was retaken by Mexican forces commanded by Antonio López de Santa Anna during the battle of the Alamo on March 6. Following the defeat of Santa Anna's army at the battle of San Jacinto, the city was reoccupied by Texas forces; however, clashes between Texas and Mexican forces continued in the region through the next decade.

Due to frequent invasions, San Antonio and the surrounding area were largely depopulated during this period. In 1844, fewer than 1,000 inhabitants resided in San Antonio, most of whom were of Mexican descent (Long, 2017). Despite the large number of settlers abandoning the area, the Texas Republic established Bexar County in 1836, and the county's population increased significantly after Texas became a part of the United States in 1847. Despite the population growth following Texas statehood, Bexar County remained sparsely populated. In 1850, the county had 5,633 residents, with 3,488 residing in the city of San Antonio (Long, 2017).

Though Texas was founded as a slave republic and entered the United States allowing and depending on a plantation-based economy, the large proportion of German immigrants in Bexar County during the mid-nineteenth century limited the prevalence of enslaved labor in the region. In 1850, the census recorded only 389 enslaved laborers in the county; however, over the course of the decade, the number grew to 1,395 (Long, 2017). Despite the limited use of enslaved labor, local sentiments aligned with the Confederacy, and residents voted for secession from the Union barely a decade after joining it (Long, 2017).

Following the conclusion of the Civil War, political violence consumed much of Texas. While rural portions of Bexar County experienced serious economic impacts causing land prices to fall, farms to become idle, and populations to decrease, San Antonio, which was occupied by Union soldiers, remained a commercial and military center. Economic recovery began immediately during the postbellum period, but the decline was only truly mitigated by the arrival of the first railroad, the Galveston, Harrisburg, and San Antonio Railway, which reached San Antonio in 1877. While the population between 1860 and 1870 had only grown by 2,000 residents, it doubled over the next decade from approximately 16,000 in 1870 to over 30,000 by 1880 (Long, 2017). Growth in the San Antonio metropolitan area also sparked growth in

the rest of the county, including the Study Area and nearby community of Helotes. During this period, the town became the center for cattle drives between San Antonio and Bandera (Massey, 2012).

Outside of San Antonio, Bexar County's economy remained dependent upon agriculture well into the twentieth century. Farm growth served the growing metropolis of San Antonio, with over 3,000 farms reported by 1920 (Long, 2017). Over the same period, county farmland increased from approximately 400,000 acres to over 800,000 acres, with major crops including corn, milo, sorghum, oats, and truck crops (Long, 2017). In the late 1940s, the cattle industry became a significant source of revenue with over half of all agricultural receipts for the county coming from livestock and livestock products. Oil was first discovered in the county in 1889 and remains an important part of the Bexar County economy, with over 32 million barrels of oil produced in 1991 (Long, 2017).

3.12.3 Previous Investigations and Records Review

A Burns & McDonnell archeologist performed an initial desktop review, including an examination of the Texas Archeological Sites Atlas (TASA) to identify previously recorded archeological sites and other previously identified historic-period resources located within the Study Area. This review included identification of NRHP-listed properties and districts, SALs, historic-age cemeteries, and Official State of Texas Historical Markers (OTHMs), such as Recorded Texas Historic Landmarks (RTHLs) within the Study Area. The archeologist also used the TASA to identify previous cultural resources surveys performed within the Study Area.

Based on the review of TASA, two cultural resources surveys have been conducted within the current Study Area. In 1976, a large cultural resources survey was conducted on behalf of the EPA; however, no additional information regarding this survey is available on TASA (THC, 2020b). This survey intersects a small portion of the eastern boundary of the current Study Area. In 2011, Atkins conducted a linear cultural resources survey for the Grissom-Helotes-Bandera Transmission Line Rebuild project on behalf of the PUC (THC, 2020b). This survey bisects the central portion of the Study Area. Neither survey identified cultural resources within the Study Area.

No previously recorded archeological sites, NRHP-listed properties, or districts, State Antiquities Landmarks (SALs), OTHMs, RTHLs, or historic-age cemeteries were identified within the Study Area during the background review.

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4.0 ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES

The evaluation and comparison of potential impacts for each primary alternative route was based upon the consideration of the requirements of Section 37.056(c)(4)(A)-(D) of the Texas Utilities Code, the PUC's Substantive Rule 25.101, including the PUC's policy of prudent avoidance, public comments received from a pre-recorded video broadcasted on July 15, 2020, field reconnaissance, and the information received from Federal and State agencies and local officials. Measurements of the environmental criteria were primarily taken from recent aerial imagery (2019 Google Earth; 2019 USDA NAIP; 2020 ESRI MAXAR WorldView-2 satellite imagery) and from available digital resource layers using GIS and programs.

4.1 Impact on Natural Resources

4.1.1 Impact on Physiography/Geology

Construction of the proposed transmission line will have no significant effect on the physiographic or geologic features of the area. Erection of the structures would require the removal or minor disturbance of small amounts of near-surface materials but would have no measurable impact on the geologic or mineral resources or features in the Study Area. Substation sites on slopes, however, may require cut and fill, thereby having more of an impact.

4.1.2 Impact on Soils

The construction and operation of a substation/transmission line normally create very few long-term adverse impacts on soils. The major potential impact upon soils from any substation/transmission line construction would be erosion and soil compaction. The potential for soil erosion is generally greatest during the initial clearing of the site/ROW; however, CPS Energy employs erosion control measures during the clearing and construction process. Where existing land cover includes woody vegetation within the site or ROW, much of this vegetation will be removed to provide adequate space for construction activities and to minimize maintenance and operational problems. In these areas within the ROW, only the leaf litter and a small amount of herbaceous vegetation would remain, and both may be temporarily disturbed by the necessary movement of heavy equipment. However, many of the transmission line alternatives are along existing roads, thereby minimizing impacts to soils.

The time and method of substation site and ROW preparation for the transmission line will take into account soil stability, the prevention of silt deposition in water courses, and practical measures for the protection of natural vegetation and the protection of adjacent resources, such as natural habitat for

wildlife. Vegetation removal will not be performed until an SWPPP has been prepared and a NOI has been submitted to the TCEQ for the project. Erosion control devices will be constructed where necessary to prevent soil erosion at the substation site and in the ROW, in accordance with the SWPPP. Erosion control devices will be maintained, and inspections conducted until the ROW is sufficiently revegetated, as required by the SWPPP. Natural succession would revegetate most of the ROW. Where site factors make it unusually difficult to establish a protective vegetative cover, other restoration procedures may be advisable to prevent erosion, such as the use of gravel, rocks, or concrete.

The topography of the region could potentially create moderate slope stability in some areas. To reduce potential impact to slopes and to protect slope stability in these areas, CPS Energy could modify construction activities during periods of increased precipitation. Where practical, the grading of temporary roads, construction areas, staging areas, or other areas where vegetation is removed will be minimized.

Prime farmland soils, as defined by the NRCS, are soils that are best suited for producing food, feed, forage, or fiber crops. The USDA recognizes the importance and vulnerability of prime farmlands throughout the nation and encourages the wise use and conservation of these soils where possible. While prime farmland soils occur in the Study Area, no agricultural production occurs within any of the proposed substation sites/transmission line ROW. The Project should have no significant impact on prime farmland soils.

4.1.3 Impact on Water Resources

4.1.3.1 Surface Water

Construction and operation of the substation/transmission line would have minimal adverse impact on the surface water resources of the area. Potential impacts from any major construction project include short-term disturbances resulting from construction activities, which would result primarily from increased siltation from erosion and decreased water quality from accidental spillage of petroleum and other chemical products. Additionally, activities such as clearing of vegetation may temporarily increase local stormwater runoff volumes and sediment loading. Potential impacts would be avoided whenever possible by spanning surface waters if present, diverting construction traffic around water resources via existing roads, and eliminating unnecessary clearing of vegetation.

Although impacts would be avoided to the extent possible, some unavoidable impacts would occur. Paralleling existing ROW would minimize these impacts, as would reducing vegetation removal around surface water features and minimizing ground disturbance. The use of erosion control measures, such as

silt fencing and selective clearing, and best management practices (BMPs) regarding the use of chemicals, would also minimize potential impacts. As such, impacts occurring from construction of the proposed substation/transmission line would be short term and minor because of the relatively small area that would be disturbed at any given time, the short duration of the construction activities, the preservation of vegetation adjacent to surface water features, and the implementation by CPS Energy of BMPs designated in the SWPPP.

Measurement of the various criteria used in the environmental analysis of the primary alternatives for this Project is tabulated in Table 4-1 at the end of this section. No alternative contains or is crossed by a named river or creek. Nine of the alternatives do not contain or cross any streams (1-A, 1-B, 1-C, 2-D, 2-E, 2-F, Site 4, and Site 5). The remaining six alternatives contain or cross only one stream (2-G, 2-H, 3-I, 3-J, 3-K, and 3-L); a stream crosses the southwest corner of Site 3. Only one alternative, Alternative 2-H, has a portion of its length of ROW paralleling (within 100 feet) streams with distance a of 135 feet. The substation/structures would be designed and constructed so as not to impede the flow of any waterway or create any hazard during flooding. Some scour could occur around the substation site/structures if flood-flow depths and velocities become great enough. Careful siting of structures should eliminate the possibility of significant scour.

4.1.3.2 Floodplains

FEMA has conducted detailed floodplain analyses for Bexar County. None of the alternatives are located within floodplains. Thus, the Project should have no significant impact on the function of the floodplain, nor adversely affect adjacent property or downstream property.

4.1.3.3 Groundwater

No adverse impacts to groundwater are expected to occur from the construction and operation of the proposed substation/transmission line. The amount of recharge area that would be disturbed by construction is minimal when compared with the total amount of recharge area available for the aquifer systems in the region. The most effective method to avoid groundwater impacts is the implementation of proper spill-response plans. It is unlikely that polluted surface water runoff will contaminate any groundwater supplies; however, such control measures will be in place as additional precautionary measures during the construction phase of the Project. In addition, the proposed Project will require an SWPPP and the filing of an NOI with the TCEQ. Additionally, if accidental spillage of fuel, lubricants, or other petroleum products from normal operation of heavy equipment occurred during construction activities, it would be unlikely to result in any groundwater contamination. Any accidental spills would be

promptly handled in accordance with State and Federal regulations. CPS Energy will take necessary precautions to avoid and minimize the occurrence of such spills.

None of the alternatives lie within the Edwards Aquifer Contributing Zone. This zone, 5,400 square miles in size, is a catchment area that collects rainwater into streams, which then flow into the recharge zone. Additionally, none of the alternatives lie within the Edwards Aquifer Recharge Zone. The Project should have no significant impact on the Edwards Aquifer Recharge Zone or Contributing Zone.

4.1.4 Impact on Ecosystem

4.1.4.1 Vegetation

Impacts to vegetation resulting from the construction and operation of the substation/transmission line are primarily associated with the removal of existing woody vegetation within the substation site/transmission line ROW. The amount of vegetation cleared from these areas would be dependent upon the type of vegetation present and whether the site/ROW will be completely new or involve widening existing ROW. For example, the greatest amount of vegetation clearing would occur in wooded areas, whereas cropland and grassland would require little to no removal of vegetation.

CPS Energy will minimize the amount of flora and fauna disturbed during construction of the substation/transmission line when possible, except to the extent necessary to establish appropriate ROW clearance for the transmission line if necessary. Soil conservation practices will benefit native vegetation and assist in the successful restoration of disturbed areas. Sensitive plant communities, such as those found along riparian corridors and in wetlands, can often be spanned without the need for clearing.

The linear extent of plant communities within the proposed substation/transmission line ROW was determined using digital aerial photography and verified in the field where possible; the length across potential wetlands was determined by USFWS NWI maps (see Table 4-1 at the end of this section).

Regarding woody vegetation communities, all 15 alternatives involve upland woodland/brushland that would require removal. Alternatives 1-B and 1-C, with approximately 0.78 acre of upland woodland/brushland in the substation site, would require the least amount of clearing, while Alternative 2-H, which would require 2.25 acres of clearing at the substation site and would cross approximately 543 feet of upland woodland/brushland that may require removal, would require the most. None of the alternatives cross or contain bottomland/riparian woodland/brushland that would require removal.

Removal of vegetation in wetlands increases the potential for erosion and sedimentation, which can be detrimental to downstream aquatic life and plant communities. Any placement of fill material within waters of the U.S. would represent a permit action that may require notification to the USACE. More detailed field studies would be required to verify the location and amount of jurisdictional wetland that may be within the substation site/transmission line ROW of the approved alternative. Precautions would be taken throughout the construction process to avoid and minimize impacts to wetlands. Depending on the size and vegetation type (shrub/scrub, or herbaceous), these areas can be spanned in many instances, although they cannot always be avoided by construction equipment. Placement of approved BMPs for construction and minimization of erosion in disturbed areas would help dissipate the flow of runoff. Placement of silt fences or hay-bale dikes between streams and disturbed areas would also help prevent siltation into the waterway. After construction is complete, impacted herbaceous wetlands are likely to recover relatively quickly.

Nine alternatives (1-A, 1-B, 1-C, 2-D, 2-E, 2-F, Site 4, Site 5, and 6-M) do not cross/contain any mapped wetlands. For the other six alternatives, 2-G and 2-H have the least amount of potential wetlands with 24 feet, while Alternatives 3-I, 3-J, 3-K, and 3-L have the greatest amount of mapped potential wetlands, with a total length of 62 feet.

Construction of the substation/transmission line would be performed to minimize adverse impacts to vegetation and to retain existing ground cover whenever practicable. Additionally, CPS Energy will minimize damage to local vegetation and retain native ground cover wherever practicable. Where necessary, soil conservation practices will be undertaken to protect local vegetation and ensure successful revegetation for areas disturbed during construction. Activities associated with electrical transmission facilities in jurisdictional wetlands are regulated by the USACE under the CWA. If necessary, CPS Energy will coordinate with the USACE prior to clearing and construction to ensure compliance with Section 404 of the CWA to avoid, minimize, or mitigate for unavoidable impacts to waters of the U.S., including wetlands.

4.1.4.2 Aquatic Resources

Impacts to aquatic ecosystems from substation and transmission line construction are generally minor. No alternative involves any open water such as lakes and ponds. The implementation of sedimentation controls, as prescribed in a Project-specific SWPPP, during construction will help to minimize erosion and sedimentation of area streams. Potential impacts include physical habitat loss or modification, increased runoff, erosion and sedimentation, turbidity, and spillage of petroleum or other chemical

products. However, all of these tend to be short-term effects and will vary with the intensity and timing of the construction and location of the approved alternative.

Physical habitat loss or modification could result whenever access road crossings intercept a drainage system, through sedimentation due to erosion, increased suspended solids loading, or accidental petroleum spills directly into a creek, lake, or other aquatic feature. Erosion results in siltation and increased suspended solids entering streams, creeks, or lakes, which in turn may negatively affect many aquatic organisms at many trophic levels. Since aquatic features of the area typically exhibit relatively high turbidities during and following runoff events, small increases in suspended solids during the construction phase are unlikely to have any discernible adverse impact.

The main considerations regarding potential impacts to aquatic systems include the length across open water and wetlands, and length of ROW paralleling (within 100 feet) streams. Six of the alternatives cross or contain one or more types of aquatic habitat, as previously discussed in Section 4.1.3.1 (Surface Water) and Section 4.1.4.1 (Vegetation).

4.1.4.3 Wildlife

The impacts of a substation/transmission line on wildlife include short-term effects resulting from physical disturbance during construction, as well as long-term effects resulting from habitat modification, fragmentation, or loss. The net effect from substation/transmission line construction on local wildlife is typically minor. The following section provides a general discussion of the effects of substation/transmission line construction and operation on terrestrial wildlife, followed by a discussion of the possible impact of the alternatives.

Any required clearing or other construction-related activities would directly or indirectly affect most animals that reside within or traverse the substation site or transmission line ROW. Heavy machinery may adversely affect smaller, low-mobility species, particularly amphibians, reptiles, and small mammals.

If construction occurs during the breeding season (generally spring to fall), construction activities may adversely affect the young of some species. Heavy machinery may cause soil compaction, which may adversely affect fossorial animals (i.e., those that live underground). Mobile species, such as birds and larger mammals, may avoid initial clearing and construction activities and move into adjacent areas outside the construction area. Construction activities may temporarily deprive some animals of cover and, therefore, potentially subject them to increased natural predation. Wildlife in the immediate area may experience a slight loss of browse or forage material during construction. However, the prevalence of

similar habitats in adjacent areas and vegetation succession in the transmission line ROW following construction would minimize the effects of these losses.

The increased noise and activity levels during construction could potentially disturb the daily activities (e.g., breeding, foraging) of species inhabiting the areas adjacent to the substation site/transmission line ROW. Dust and gaseous emissions should have only minimal effects on wildlife. Although construction activities may disrupt the normal behavior of many wildlife species, little, if any, permanent damage to these populations should result. If a transmission line is needed, periodic clearing along the ROW can produce temporary negative impacts to wildlife; however, it can improve the habitat for ecotonal or edge species through the increased production of small shrubs, perennial forbs, and grasses.

Transmission line structures will be designed in compliance with the Avian Power Line Interaction Committee (APLIC) standards, as defined in *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC, 2012). As such, the danger of electrocution to birds from this Project is anticipated to be insignificant. Some avian species may use transmission line structures or wires for perching and roosting; however, this is not the designed intent of those facilities. Additionally, edge-adapted species (e.g., blue jay [*Cyanocitta cristata*], some flycatchers, northern cardinal [*Cardinalis cardinalis*], northern bobwhite [*Colinus virginianus*], Cooper's hawk [*Accipiter cooperii*], brown-headed cowbird [*Molothrus ater*], and northern mockingbird [*Mimus polyglottos*]) may select the edge habitat created along the changed vegetation areas adjacent to the transmission ROW (Rochelle et al., 1999).

The transmission line (both structures and wires) could present a hazard to flying birds, particularly migrants. Collision may result in disorientation, crippling, or mortality (New York Power Authority, 2005). Mortality is directly related to an increase in structure height; number of guy wires, conductors, and ground wires; and use of solid or pulsating red lights (an FAA requirement on some structures or structures over 200 feet in height) (Erickson et al., 2005). Collision hazards are greatest near habitat "magnets" (e.g., wetlands, open water, edges, and riparian zones) and during the fall when flight altitudes of dense migrating flocks are lower in association with cold air masses, fog, and inclement weather. The greatest danger of mortality exists during periods of low ceiling, poor visibility, and drizzle when birds are flying low, perhaps commencing, or terminating a flight, and when they may have difficulty seeing obstructions (Electric Power Research Institute, 1993). Most migrant species known to occur in the Study Area, including passerines, should be minimally affected during migration, since their normal flying altitudes are much greater than the heights of the proposed transmission structures (Willard, 1978; Gauthreaux, 1978).

The species most prone to collision are often the largest and most common for resident birds or for birds during periods of non-migration in a given area (Rusz et al., 1986; APLIC, 1994); however, over time, these birds learn the location of substations and transmission lines and become less susceptible to wire strikes (Avery, 1978). Raptors, typically, are uncommon victims of transmission line collisions, because of their great visual acuity (Thompson, 1978). In addition, many raptors only become active after sufficient thermal currents develop, which is usually late in the morning when poor light is not a factor (Avery, 1978).

Waterfowl species are particularly vulnerable to collisions with power lines because of their low-altitude flight and high speed. Additionally, species that travel in large flocks, such as blackbirds and many shorebirds, are also vulnerable, because dense flocking makes movement around obstacles more difficult for individuals in the flock (APLIC, 1994).

Utility companies can employ several means to minimize transmission line impacts on birds in flight. The initial placement of a transmission line is the most important consideration (Avery, 1978; APLIC, 1994, 2006). The proximity of a transmission line to areas of frequent bird use (e.g., communal foraging or roosting areas, rookeries, wetlands) is crucial. This is especially true for daily use areas, such as feeding areas or other areas where birds may be taking off or landing regularly (APLIC, 1994, 2006). The position of the individual structures can also help reduce collisions. Faanes (1987), in an in-depth study in North Dakota, found that birds in flight tend to avoid the transmission line structures, presumably because such structures are visible from a distance. Instead, most appear to fly over the lines in the mid-span region. In areas where the transmission line passes between roosting and foraging areas, the structures can be placed in the center of the flyway (i.e., where the birds are more likely to fly) to increase their visibility, in addition to marking the wires.

Faanes (1987) reported that 97 percent of birds observed colliding with a power line did so with the ground (static) wire, largely because of attempts to avoid the conductors. Beaulaurier (1981) found that removal of the ground wire at two study sites in Oregon resulted in a reduction in collisions of 35 percent and 69 percent. However, since overhead static wires are installed on transmission lines for safety and reliability reasons, increasing the visibility of the static wire would be a better alternative, when necessary. Increasing the visibility of the wires by using markers such as orange aviation balls, black-and-white ribbons, or spiral vibration dampers, particularly at mid-span, can reduce the number of collisions. Beaulaurier (1981) reviewed 17 studies involving marking ground wires or conductors and found an average reduction in collisions of 45 percent when compared to unmarked lines.

Negative edge effects can be reduced through native revegetation of disturbed construction areas where necessary and appropriate for safe and reliable operation. Additionally, nest management through platform design (if required), equipment protection, and other physical disincentives to bird use and nesting can avoid negative impacts to birds and power reliability (APLIC, 2006).

In general, the greatest potential impact to wildlife typically results from the loss and fragmentation of woodland and wetland habitats. Woodlands, particularly, are relatively static environments that require greater regenerative time compared with cropland or emergent wetlands. In most cases, wetlands and small waterbodies can be spanned with little or no resulting impact to wildlife. The routing constraints for the Project attempted to minimize impacts to woody and riparian vegetation, to the extent practicable, and subsequently also minimizing impacts to wildlife habitat.

4.1.4.4 Recreationally and Commercially Important Species

Construction of the proposed substation/transmission line is not expected to have significant impacts on terrestrial recreationally and commercially important species in the Study Area. Game species such as the white-tailed deer, eastern cottontail (*Sylvilagus floridanus*), mourning dove, and northern bobwhite are very mobile and will leave the immediate vicinity during the initial construction phase. Wildlife in the immediate area may experience a temporary loss of browse or forage vegetation during construction; however, the prevalence of similar habitats in adjacent areas will minimize the effect of the loss. The proposed Project would have no impact on game fish. Additionally, the proposed Project would have no impact on waterfowl hunting or recreational fishing because no hunting or commercial fishing occurs in the Study Area.

4.1.4.5 Endangered and Threatened Species

No endangered or threatened plant species have been recorded from Bexar County; however, the candidate bracted twistflower is included on the USFWS (2020a) for Bexar County. The bracted twistflower is not expected to occur due to the extensive development within the Study Area; therefore, no listed plant species will be adversely affected by the proposed Project.

According to USFWS (2020a) and TPWD (2020d), three Federal or State-listed endangered or threatened fish species are of potential occurrence in Bexar County. These are the federally listed endangered fountain darter and State-listed threatened toothless blindcat and widemouth blindcat. These species have restricted ranges that lie outside of the Study Area or require habitat that doesn't occur within the Study Area. Additional aquatic species of potential occurrence in Bexar County include the federally listed endangered Texas blind salamander, threatened San Marcos salamander, and candidate Texas fatmucket

and Texas pimpleback. Three State-listed species, the threatened Cascade Caverns salamander, Texas salamander, and Cagle's map turtle are also of potential occurrence in Bexar County. These species also have restricted ranges that lie outside of the Study Area or require habitat that doesn't occur within the Study Area. One additional State-listed amphibian, the Mexican treefrog, is listed as potentially occurring in Bexar County; however, Bexar County records probably represent accidental introductions via tropical plants from the Rio Grande Valley. Overall, the proposed Project should not adversely affect these species, or any other endangered or threatened aquatic species.

The golden-cheeked warbler, least tern, whooping crane, piping plover, red knot, reddish egret, tropical parula, white-faced ibis, wood stork, and zone-tailed hawk are not expected to occur in the Study Area except as migrants or vagrants and would not be expected to stay for extended periods. Additionally, the normal flying altitudes of most migrant species are greater than the heights of the proposed transmission structures (Gauthreaux, 1978; Willard, 1978). Birds with keen eyesight, such as the bald eagle, are likely to see obstructions such as transmission lines and avoid collisions (Thompson, 1978). Avian species listed as potentially occurring within the Study Area would not be expected to be adversely affected by the Project.

The black bear and white-nosed coati would only occur in the region as a rare vagrant and would not be expected within the Study Area. None of the mammal species listed as potentially occurring in the Study Area would be adversely affected by the Project.

The Study Area lies in karst Zone 3 which consists of areas that probably do not contain endangered karst invertebrate species. None of the nine endangered obligate troglobites listed as potentially occurring in Bexar County are expected to occur in the Study Area and the Project should not adversely affect any of these species. A karst survey will be performed once an alternative has been approved.

Although not expected in the Study Area, the State-listed (threatened) Texas horned lizard and Texas tortoise may occur where potential habitat is present. If present within the proposed substation site/transmission line ROW, these species could experience minor temporary disturbance during construction efforts, particularly the Texas tortoise, which has less mobility than the Texas horned lizard. In many instances, however, potential habitat may be completely avoided, or otherwise spanned to avoid impacts. Overall, the proposed Project should not adversely affect these two reptile species.

4.1.4.6 Critical Habitat

No federally determined critical habitat has been designated in the Study Area for endangered or threatened species. Therefore, no impact to critical habitat will occur because of the proposed Project.

4.1.4.7 Summary of Impact on Natural Resources

The greatest potential impacts to ecological resources within the Study Area would primarily be the clearing of woodland/brushland and avian wire strikes because of the associated transmission line. The best alternative from an ecological standpoint would be the shortest, would require the least amount of woodland/brushland clearing, and would have the least impact on wetlands/streams. Of the 15 alternatives considered, Site 4 does not have an associated transmission line, crosses no open water, streams, potential wetlands, or 100-year floodplain; and requires the third-least amount of woodland/brushland clearing at approximately 0.95 acre. Alternative Site 4, therefore, represents the best alternative from an ecological standpoint. Site 5 would be the second best from an ecological standpoint because it is like Site 4; however, it would require a greater amount of woodland/brushland clearing at approximately 1.39 acres. The third- and fourth-recommended alternatives would be Alternatives 3-J and 3-I. They have the third-shortest and fourth-shortest associated transmission lines and require the sixth amount of woodland/brushland clearing (1.84 acres each). Conversely, Alternative 2-H is the least favorable from an ecological perspective and requires the most woodland/brushland clearing (543 feet plus 2.25 acres).

4.2 Socioeconomic Impact

4.2.1 Impact on Social and Economic Factors

CPS Energy will use its own employees or contractors for the clearing and construction of the Project, but some short-term local employment would be generated. A portion of the Project wages would find its way into the local economy through purchases such as fuel, food, lodging, and possibly construction materials. The cost of permitting, designing, and constructing the facilities will be paid for through revenue generated by the sale of electrical service.

Potential long-term economic benefits to the area resulting from construction of this Project are based on the requirement that electric utilities provide an adequate and reliable level of power throughout their service areas. Economic growth and development rely heavily on adequate public utilities, including a reliable electrical power supply. Without this basic infrastructure, an area's potential for economic growth is constrained.

4.2.2 Impact on Community Values

Adverse effects upon community values are defined as aspects of the proposed Project that would significantly and negatively alter the use, enjoyment, or intrinsic value attached to an important area or resource by a community. This definition assumes that community concerns are identified with the

location and specific characteristics of the proposed Project and do not include possible objections to electric facilities per se.

Impacts on community values can be classified into two areas: (1) direct effects, or those effects that would occur if the location and construction of electric facilities result in the removal or loss of public access to a valued resource; and (2) indirect effects, or those effects that would result from a loss in the enjoyment or use of a resource due to the characteristics (primarily aesthetic) of the proposed substation, line, structures, or ROW. Impacts on community values, whether direct or indirect, can be more accurately gauged as they affect recreational areas or resources and the visual environment of an area (aesthetics). Impacts in these areas are discussed in more detail in sections 4.3.2 and 4.3.6 of this report.

4.3 Impact on Human Resources

4.3.1 Impact on Land Use

Land-use impacts from the construction of electric facilities are determined by the amount of land (of varying use) displaced by the actual substation and ROW, and by the compatibility of electric facilities with adjacent land uses. During construction, temporary impacts to land uses within the Project footprint (substation site and transmission line ROW) could occur due to the movement of workers and materials through the area. Construction noise and dust, as well as temporary disruption of traffic flow, may also temporarily affect residents and businesses in the area immediately adjacent to the Project. Coordination among CPS Energy, its contractors, and landowners regarding access and construction scheduling should minimize these disruptions. The subsections below outline the primary criteria considered when comparing land use impacts of the Project's alternatives, including proximity to habitable structures, length of the alternative route paralleling existing compatible ROW or property lines, and the overall length of ROW.

4.3.1.1 Habitable Structures

One of the most important measures of potential land use impact is the number of habitable structures located within a specified distance of a route centerline, and for this Project the number of habitable structures located within a specified distance of a substation perimeter. Habitable structures are defined by 16 TAC § 25.101(a)(3) as:

Structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis. Habitable structures include, but are not limited to, single-family and multifamily dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, and schools. (PUC, 2015)

Burns & McDonnell staff determined the number and distance of habitable structures located within 300 feet of the Project alternatives through the interpretation of aerial imagery and field reconnaissance where possible. To account for the margin of error in horizontal accuracy of aerial imagery, Burns & McDonnell identified habitable structures located within 310 feet of a route's centerline and the boundary of each substation site.

Each of the 15 alternatives being evaluated have habitable structures located within 300 feet. Site 4 has the fewest total number of habitable structures located within 300 feet (28), followed by Site 5 (29). By comparison, Alternative 1-A has the greatest total number of habitable structures located within 300 feet (104), followed by Alternative 6-M (96).

When comparing habitable structures by type, Alternative 6-M has the greatest number of single-family residences located within 300 feet (93), while Alternative 3-K has the fewest (2).

Alternative 3-I has the greatest number of multifamily residences (duplexes, fourplexes, apartment buildings, etc.) located within 300 feet (48), while Alternative 6-M has no multifamily residences within 300 feet.

When considering commercial buildings, Site 4, Site 5, and Alternative 6-M each have just one commercial building within 300 feet, while Alternatives 1-B and 1-C have the greatest number within 300 feet (10 each).

Alternatives 3-I, 3-J, 3-K, 3-L, Site 4, Site 5, and 6-M have no school located within 300 feet. By comparison, Alternatives 1-A, 1-B, 1-C, 2-E, 2-F, 2-G, and 2-H each have one school located within 300 feet, and Alternative 2-D has two schools located within 300 feet.

Seven alternatives do not have a day care center located within 300 feet (2-D, 2-E, 2-F, 3-K, 3-L, Site 4, and Site 5), while five alternatives (2-G, 2-H, 3-I, 3-J, and 6-M) have one day care center located within 300 feet, and three alternatives (1-A, 1-B, and 1-C) each have two day care centers located within 300 feet.

Finally, the number of churches located within 300 feet of an alternative ranges from one to three. Four alternatives (1-A, Site 4, Site 5, and 6-M) have just one church located within 300 feet, while Alternatives 1-B, 1-C, and 2-H each have two churches within 3000 feet, and Alternatives 2-D, 2-E, 2-F, 2-G, 3-I, 3-J, 3-K, and 3-L each have three churches located within 300 feet.

Table 4-1 (at the end of this section) presents the number and type of habitable structures located within 300 feet of each Alternative. Table 6-2 through Table 6-16 provide the distance and direction of each habitable structure identified within 300 feet of the alternatives. The locations of habitable structures listed in Table 6-2 through Table 6-16 are shown on Figure 6-1.

4.3.1.2 Utilizing/Paralleling Existing Transmission Line ROW

When considering new electric transmission lines, the least impact to land use generally results from building within existing transmission line ROW, followed by building parallel to existing transmission line ROW. Utilizing existing transmission line ROW of sufficient width usually eliminates the need for additional clearing. Additionally, building parallel to existing transmission line ROW, when compared to establishing a new ROW corridor, can also minimize the amount of ROW to be cleared, which generally results in the least amount of impact to landowners, the environment, and the overall aesthetic quality of that particular area. The factors listed by 16 TAC § 25.101(b)(3)(B) to be considered in routing transmission lines include:

- Whether the routes parallel or utilize existing compatible ROW for electric facilities, including the use of vacant positions on existing multiple-circuit transmission lines
- Whether the routes parallel or utilize other existing compatible ROW, including roads, highways, railroads, or telephone utility ROW
- Whether the routes parallel property lines or other natural or cultural features

For this Project, Alternatives Site 4 and Site 5 are located adjacent to the existing Bandera to Helotes 138-kV transmission line and do not require any new transmission line ROW. None of the remaining 13 alternatives utilize or parallel existing transmission line ROW.

4.3.1.3 Paralleling Other Existing Compatible ROW

Paralleling other existing compatible ROW (roads, highways, etc.) is also considered to be a positive routing criterion, one that usually results in fewer impacts than establishing a new ROW corridor within an area, and is included in the PUC's transmission line certification criteria. In accordance with the PUC Substantive Rule § 25.101(b)(3)(B), Burns & McDonnell identified existing compatible ROW for potential paralleling opportunities. In this respect, considering the 13 alternatives that include new transmission line ROW, Alternatives 1-B, 1-C, 3-I, 3-J, and 6-M parallel other existing compatible ROW for 100 percent of their total route lengths. By comparison, Alternatives 3-K and 3-L do not parallel any other existing compatible ROW. The length of each alternative parallel to other existing compatible ROW is presented in Table 4-1.

4.3.1.4 Paralleling Property Lines

Another important land use and favorable routing criterion under PUC Substantive Rule § 25.101(b)(3)(B) is the length of property lines paralleled. In the absence of existing compatible ROW to follow, paralleling property or fence lines minimizes disruption and creates less of a constraint to the future development of a tract of land. Alternatives that include new transmission line ROW were developed to parallel property lines where feasible, while avoiding other known constraints. For this project, Alternatives 1-A, 2-D, 2-E, 2-F, and 3-K parallel property boundaries where other existing compatible ROW was not available. The length of each alternative parallel to property lines are presented in Table 4-1.

4.3.1.5 Overall Length of Routes

Finally, the overall length of new transmission line ROW can be an indicator of the relative level of land use impacts. Generally, all other things being approximately equal, the shorter the route, the less land required for ROW is crossed, which would usually result in fewer potential impacts. In this regard, Alternatives Site 4 and Site 5 are located adjacent to the existing Bandera to Helotes 138-kV transmission line, and do not include new transmission line ROW. Considering the 13 alternatives that include new transmission line ROW, Alternatives 3-K and 3-L are the shortest alternatives (approximately 415 feet and 464 feet, respectively). By comparison, Alternatives 1-A and 1-C require the greatest length of new transmission line ROW (approximately 2,922 feet and 2,659 feet, respectively). Table 4-1 presents the length of new transmission line ROW for each alternative.

4.3.2 Impact on Recreation

Potential impacts to recreational land would include the disruption or preemption of recreational activities. As previously mentioned, several recreational facilities were identified within the Study Area. Recreational lands were avoided when developing the primary alternatives, thereby minimizing the amount of such land crossed. No alternative is located on park or recreational lands. Additionally, Alternatives Site 4, Site 5, and 6-M are not located within 1,000 feet of any park or recreational area. Seven alternatives (2-F, 2-G, 2-H, 3-I, 3-J, 3-K, and 3-L) are located within 1,000 feet of one park or recreational area. Alternatives 1-B and 1-C each have two parks or recreational areas located within 1,000 feet, and Alternatives 1-A, 2-D, and 2-E each have three parks or recreational areas located within 1,000 feet. The distance of each park or recreation area within 1,000 feet of an alternative is provided in Tables 6-2 through 6-15. No significant impacts to the use of the parks and recreation facilities located within the Study Area are anticipated regardless of which alternative is built. Any potential impacts to these parks or recreational areas would be indirect and more likely to be visual in nature.

4.3.3 Impact on Agriculture

The urban setting of the Study Area contains dense commercial and residential development. No agricultural uses occur in the Study Area; therefore, no impacts to agriculture will result from this Project.

4.3.4 Impact on Transportation/Aviation

Potential impacts to transportation could include temporary disruption of traffic and conflicts with proposed roadway/utility improvements and may include increased traffic during construction of the proposed Project. The Project would generate minor construction traffic at any given time or location. This traffic would consist of construction employees' personal vehicles, truck traffic for material deliveries, trucks for structure foundation work, and mobile cranes for structure erection. Such impacts, however, are usually temporary and short term. Alternatives Site 4 and Site 5 do not include new transmission line ROW, and therefore would not cross a road. The number of road crossings per alternative ranges from a low of one (Alternatives 3-I, 3-J, 3-K, 3-L, and 6-M) to a high of four (Alternatives 1-A and 1-C).

The proposed Project should have no significant effect on aviation operations within the Study Area. According to FAA Part 77 regulations, Title 14 CFR § 77.9, notification of the construction of a proposed transmission line will be required if structure heights exceed the height of an imaginary surface extending outward and upward at a slope of 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of a public or military airport having at least one runway longer than 3,200 feet (FAA, 2011). If a public or military airport runway is less than 3,200 feet, notification would be required if structure heights exceed the height of an imaginary surface extending at a slope of 50 to 1 for a horizontal distance of 10,000 feet. Notification is also required for structure heights exceeding the height of an imaginary surface extending outward and upward at a slope of 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area for heliports. Typical structure heights for this Project will range from approximately 90 to 125 feet, depending on location and design.

No FAA-registered public/military airport having at least one runway longer than 3,200 feet is located within 20,000 feet of any primary alternative and no FAA-registered public/military airport having a runway longer than 3,200 feet was identified within 10,000 feet of any primary alternative. Furthermore, no heliport was identified within 5,000 feet of any primary alternative and no private landing strip was identified within 10,000 feet of any primary alternative.

Following approval of a substation site/transmission line route for the proposed Project, CPS Energy will make a final determination of the need for FAA notification, based on specific route location and

structure design. If required, a Notice of Proposed Construction or Alteration, FAA Form 7460-1, will need to be completed and submitted to the FAA Southwest Regional Office located in Fort Worth, Texas. The result of this notification and any subsequent coordination with the FAA could include changes in the line design or potential requirements to mark or light some structures.

4.3.5 Impact on Communication Towers

The proposed Project would not be expected to have a significant impact on electronic communications in the Study Area. AM and FM radio transmitters, cellular towers, microwave towers, and other electronic installations located within the Study Area were researched and verified via field reconnaissance for proximity to the alternatives.

An array of three AM radio towers is located within 10,000 feet of Alternatives 1-A, 1-B, 1-C, 2-D, and 2-E. Additionally, eight of the alternatives (Alternatives 2-F, 2-G, 2-H, 3-1, 3-J, 3-K, 3-L, and Site 4) are located within 2,000 feet of three electronic communication towers. Alternatives 2-D, 2-E, Site 5, and 6-M are located within 2,00 feet of two additional communication towers, and Alternatives 1-A, 1-B, and 1-C are located within 2,000 feet of one additional communication tower. Figures 2-2 and 6-1 (map pockets) show the locations of these communication towers, and Table 6-2 through Table 6-15 present more detailed information for each tower.

4.3.6 Aesthetic Impacts

Aesthetic impacts, or impacts upon visual resources, exist when a substation, ROW, lines, or structures of a transmission line system create an intrusion into, or substantially alter the character of, an existing scenic view, or potentially create a new additional impact to potential viewers. The significance of the impact is directly related to the quality of the view, in the case of natural scenic areas, or to the importance of the existing setting in the use or enjoyment of an area, in the case of valued community resources and recreational areas.

To evaluate aesthetic impacts, field surveys were conducted to determine the general aesthetic character of the area and the degree to which the proposed substation/transmission line would be visible from selected areas. These areas generally include those of potential community value, parks and recreational areas, or scenic vistas that were encountered during the field survey. Measurements were made to estimate the amount of each alternative (including substations and routes) that would fall within the foreground visual zone (FVZ) of parks and recreation areas within the Study Area. Electric facilities (including substations, support structures, and wires) are considered to be within the FVZ if they are visible (i.e., not obstructed by terrain, trees, buildings, etc.) within 0.5 mile of an observer. The

determination of the visibility of the Alternatives from various points was calculated from USGS maps and aerial digital photography.

Except for Alternatives Site 4 and Site 5, which do not include new ROW, each of the remaining 13 alternatives would have new transmission ROW located within the FVZ of parks or recreational areas identified within the Study Area. Alternative 3-K would have the least amount of ROW located within the FVZ with approximately 415 feet, followed by Alternative 3-L with 464 feet. By comparison, Alternative 1-A would have the greatest length of ROW located within the FVZ of parks or recreational areas, with an estimated 2,922 feet, followed by Route 1-C with 2,659 feet.

As discussed in Section 3.11.6 of this document, the landscape within the Study Area has experienced a high degree of alteration from residential and commercial development, transportation corridors, and existing electrical transmission and distribution facilities. Potential aesthetic impacts associated with this Project would likely not be significant due to the developed nature of the area. Furthermore, the Site 4 and Site 5 alternatives may be less intrusive, as these two alternatives would be located adjacent to the existing Bandera to Helotes 138-kV transmission line, and do not include any new ROW. The visual impact of a substation site can be mitigated by incorporating buffers such as walls, vegetative screens, or fencing.

4.3.7 Summary of Impact on Human Resources

Land use criteria primarily considered for this Project included the number of habitable structures located within 300 feet of each alternative, length of new transmission ROW parallel to linear features (existing transmission line ROW, other existing compatible ROW, and property lines), and the overall length of new transmission line ROW.

Alternative Sites 4 and 5 would be preferred from a land use perspective as they do not require any new transmission line ROW. An alternative that requires any length of new transmission line ROW could potentially cause land use impacts or disruption. Additionally, Alternative Sites 4 and 5 are located adjacent to existing electric transmission facilities (the Bandera to Helotes 138-kV transmission line), which would cause less of an intrusion or perception of potential aesthetic impacts. Of the alternatives that include new transmission line ROW, Alternative 3-K has the least amount of new transmission line ROW at approximately 415 feet, followed by Alternative 3-L, at 464 feet, and Alternative 3-J at 694 feet. By comparison, Alternative 1-A includes the greatest amount of new transmission line ROW with approximately 2,922 feet.

Alternative Site 4 (28 habitable structures), Alternative Site 5 (29 habitable structures), and Alternative 3-K (47 habitable structures) have the fewest habitable structures located within 300 feet. By comparison, Alternative 1-A has the most habitable structures located within 300 feet, with 104 habitable structures. Although Alternative Site 4 has one fewer habitable structure within 300 feet than Alternative Site 5 (28 and 29, respectively), 17 of these are multifamily residences compared to only 1 multifamily residence for Site 5. Furthermore, Alternative Site 4 is located on a parcel directly adjacent to a church and an apartment complex. Alternative Site 5 has better access from Guilbeau Road, is located further away from the apartment complex, and is separated from the church by the Bandera to Helotes 138-kV transmission line.

Finally, considering alternatives that include new transmission ROW, Alternatives 1-B, 1-C, 3-I, 3-J, and 6-M parallel other existing compatible ROW for 100 percent of their total route lengths. However, Alternatives 3-I, 3-J, and 6-M would be preferred in this category as they have shorter overall lengths.

4.4 Impact on Cultural Resources

Any construction activity has the potential for adversely impacting cultural resource sites. Cultural resources located on land owned or controlled by the State of Texas or its political subdivisions are protected by the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191). CPS Energy is owned by the City of San Antonio, a political subdivision of the State of Texas. Therefore, Project impacts within CPS Energy-owned property and easements are subject to review by the THC under the Antiquities Code of Texas. The Project may also require review by the San Antonio Office of Historic Preservation. The City's Office of Historic Preservation regulates compliance with the City's Unified Development Code (Article VI 35-360 to 35-364).

Although this Project is currently being conducted without the need for Federal funding, permitting, or assistance, Federal guidelines established under Section 106 of the National Historic Preservation Act of 1966, as amended, provide useful standards for considering the severity of possible direct and indirect impacts. According to the Secretary of the Interior's Guidelines for protection of historical and archeological resources (36 CFR 800), adverse impacts may occur directly or indirectly when a project causes changes in archeological, architectural, or cultural qualities that contribute to a resource's historical or archeological significance.

4.4.1 Direct Impacts

Direct impacts include actions that physically damage or alter an archeological site, historically significant building, structure, object, district, or other cultural resource. Typically, these impacts occur

during the construction phase of a substation/transmission line project and can result from actual placement of tower locations and lines as well as from activities associated with construction, including clearing vegetation and vehicular and heavy machinery traffic. Archeological sites, which can be surficial or shallowly buried, are particularly sensitive to these impacts.

Additionally, historically significant buildings, structures, objects, and districts and other landscape-related resources within the Study Area or adjacent to the Study Area can be directly affected by construction activities. These effects can include direct impacts to the resources themselves via physical destruction or damage, or impacts to their character-defining features, including changes to the overall character of the property's use or alteration of physical features within the property's setting that contribute to its historical significance.

Finally, direct impacts to cemeteries require compliance with the Texas Health and Safety Code, as amended. These rules and regulations are available in Title 13, Part 2, Chapter 22, Rule § 22.5 of the TAC. The marked boundaries of historic-age cemeteries are notorious for shifting over time because of several factors including abandonment, the removal or disintegration of headstones or other markers, and the encroachment of new developments. This boundary ambiguity can result in unmarked burials being unintentionally or intentionally excluded from current cemetery boundaries. In order to limit the potential for a project to impact unmarked burials, the THC recommends all construction projects including ground disturbance within 25 feet of a known cemetery boundary be surveyed in advance by an archeologist for evidence of possible burials within proposed construction areas.

4.4.2 Indirect Impacts

Indirect impacts can include the introduction of visual, atmospheric, or audible elements that diminish the integrity of a property's significant historic features. Often, indirect impacts affect cultural resources located outside a study area and frequently relate to a resource's overall integrity of setting, feeling, or association. Such impacts may include landscape alteration or changes in land use patterns, the introduction of air pollution, increased traffic, or changes in population density. Historic landscapes, buildings, structures, objects, and districts are common resources affected by indirect impacts.

4.4.3 Mitigation

The preferred form of mitigation for impacts to cultural resources is avoidance. Alternative forms of mitigation for direct impacts can be developed for archeological and historical sites and properties through the implementation of an appropriate data recovery program. Indirect impacts to historically significant properties and landscapes can be lessened through careful design choices and landscaping

considerations. In some situations, the relocation of historic structures may be another possible form of mitigation.

4.4.4 Summary of Impact on Cultural Resources

The Study Area contains areas with potential to contain cultural resource sites; therefore, the proposed substation/transmission line construction does have the potential to impact previously unrecorded cultural resource sites. One method utilized by archeologists to assess an area for the potential occurrence of cultural resources is to identify high probability areas (HPAs). HPAs are areas that are considered to have potential for containing previously unrecorded archeological sites. Topography and the availability of raw material, water, and subsistence resources are all taken into consideration. Also examined are the geological processes in the immediate action area. These may be considered important because geologic events may protect the integrity of an archeological site by burying it within deep sediments, or alternatively, destroying it through erosional processes. Locations that are usually identified as HPAs for the occurrence of prehistoric sites include water crossings, stream confluences, drainages, alluvial terraces, wide floodplains, playa lakes, upland knolls, and areas where lithic or other subsistence resources could be found. Historic sites would be expected adjacent to historic roadways or railways and in areas where buildings appear on historic-age maps or aerial photographs.

The identification of HPAs was based on the TxDOT San Antonio Hybrid Potential Archaeological Liability Map (PALM). The PALM scores an area with “a value ranging from 0 to 9, representing the potential for the preservation of archeological sites with reasonable integrity as follows: 0 = Negligible Potential; 1 = Low Potential; 2 = Low Shallow Potential, Moderate Potential at Depth (>1m); 3 = Low Shallow Potential, High Potential at Depth; 4 = Moderate Shallow Potential, Low Potential at Depth 5 = Moderate Potential; 6 = Moderate Shallow Potential, High Potential at Depth; 7 = High Shallow Potential, Low Potential at Depth; 8 = High Shallow Potential, Moderate Potential at Depth; 9 = High Potential” (Abbott and Pletka, 2016). Scores 2 or higher were considered HPAs for the purpose of this study. Approximate length of HPA crossed by each alternative route and acreage within each alternative site are included in Table 4-1.

The designation of HPAs and the evaluation of the alternatives for their potential to contain previously unrecorded archeological sites were made solely based on the PALM. No archeologist or historian has conducted cultural resource investigations within the Study Area for this Project. Therefore, some of the designated HPAs (as well as direct and indirect impacts) may change when a visual reconnaissance or survey is conducted. The results of the literature and records review did not identify any previously recorded cultural resources within the Study Area. No alternatives cross or contain any recorded historic-

age or prehistoric sites or any NRHP-listed or determined-eligible sites or are within 1,000 feet of such sites. Other unrecorded cultural resources in proximity to the primary alternatives or those recorded after the literature/records review was completed are not accounted for.

All 15 primary alternatives were individually examined for the approximate amount of HPA (Table 4-1). The length of HPA crossed by routes ranges from 0 feet for Alternatives 3-J and 6-M to 1,338 feet for Alternative 2-G. The area of HPA within each substation site ranges from 0.025 acre for Site 1 to 5.532 acres for Site 6. Combining the impact of the substation site and associated transmission line, the best alternatives from a cultural resources' perspective are Alternatives 1-C, 1-B, and 1-A, respectively. Site 1 has the least amount of HPA of the six sites evaluated and the associated routes cross relatively little HPA compared to the next-best substation site. Alternative Site 5 ranks 4th, with only 0.759 acre of HPA and no associated transmission line routes. Alternatives 2-F, 2-D, 2-E, 2-H, and 2-G rank 5th through 9th, respectively. Alternatives 3-J, 3-I, 3-K, and 3-L rank 10th through 13th. Finally, Alternatives Site 4 and 6-M rank 14th and 15th, with 1.438 acres and 2.532 acres of HPA, respectively. The rankings are provided in Table 6-1.

Table 4-1: Environmental Data for Alternatives Evaluation, Tezel Substation and 138-kV Transmission Line Project

		Alternative 1-A	Alternative 1-B	Alternative 1-C	Alternative 2-D	Alternative 2-E	Alternative 2-F	Alternative 2-G	Alternative 2-H	Alternative 3-I	Alternative 3-J	Alternative 3-K	Alternative 3-L
Land Use													
1	Length of Alternative Route	2,922	2,591	2,659	2,154	2,150	1,601	2,150	1,925	783	694	415	464
2	Number of habitable structures ^a within 300 ft ^b of ROW centerline/site	104	90	86	55	57	50	85	92	62	58	47	51
	Single Family Residence	62	58	58	40	40	25	34	54	7	7	2	5
	Multifamily Residence	27	14	11	4	4	15	41	29	48	44	40	41
	Commercial	8	10	10	6	7	7	4	4	4	4	3	3
3	Number of schools within 300 feet ^b of route centerline/site	1	1	1	2	1	1	1	1	0	0	0	0
4	Number of day care centers within 300 feet ^b of route centerline/site	2	2	2	0	0	0	1	1	1	1	0	0
5	Number of churches within 300 feet ^b of route centerline/site	1	2	2	3	3	3	3	2	3	3	3	3
6	Length of route across parks/recreational areas ^c	0	0	0	0	0	0	0	0	0	0	0	0
7	Number of additional parks/recreational areas ^c within 1,000 ft of route centerline	3	2	2	3	3	1	1	1	1	1	1	1
8	Length of route/site across conservation easements or mitigation banks	0	0	0	0	0	0	0	0	0	0	0	0
9	Length utilizing existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0
10	Length of route parallel to existing transmission line ROW	0	0	0	0	0	0	0	0	0	0	0	0
11	Length of route parallel to other existing compatible ROW (roads, highways, railways, etc. - excluding oil and gas pipelines)	1,967	2,591	2,659	1,060	1,319	164	1,794	1,083	783	694	0	0
12	Length of route parallel to property lines (not following existing ROW) ^d	823	0	0	597	597	923	0	0	0	0	415	0
13	Length of route parallel to pipelines ^e	0	0	0	0	0	0	0	0	0	0	0	0
14	Is site adjacent to an existing transmission line?	No	No	No	No	No	No	No	No	No	No	No	No
15	Number of oil and gas pipeline crossings ^e	0	0	0	0	0	0	0	0	0	0	0	0
16	Number of oil and gas wells/pipelines within 200 ft of route centerline/site (including dry or plugged wells)	0	0	0	0	0	0	0	0	0	0	0	0
17	Number of existing water wells within 200 ft of route centerline/site	0	0	0	0	0	0	0	0	0	0	0	0
18	Number of road crossings	4	3	4	2	2	2	2	2	1	1	1	1
19	Number of FAA-registered public/military airfields ^f within 20,000 ft of route centerline/site (with runway >3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0
20	Number of FAA-registered public/military airfields ^f within 10,000 ft of route centerline/site (with runway <3,200 ft)	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of private airstrips within 10,000 ft of route centerline/site	0	0	0	0	0	0	0	0	0	0	0	0
22	Number of heliports within 5,000 ft of route centerline/site	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of route centerline/site	3	3	3	3	3	0	0	0	0	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of route centerline/site	1	1	1	2	2	3	3	3	3	3	3	3
Aesthetics													
25	Estimated length of route within foreground visual zone ^g of parks/recreational areas ^c	2,922	2,591	2,659	2,154	2,150	1,601	2,150	1,925	783	694	415	464
Ecology													
26	Length of route across upland woodland/brushland and acreage within site	309 ft + 0.778 acre	0 ft + 0.778 acre	0 ft + 0.778 acre	229 ft + 2.249 acres	232 ft + 2.249 acres	490 ft + 2.249 acres	479 ft + 2.249 acres	543 ft + 2.249 acres	0 ft + 1.843 acres	0 ft + 1.843 acres	161 ft + 1.843 acres	239 ft + 1.843 acres
27	Length of route across bottomland/riparian woodland/brushland and acreage within site	0	0	0	0	0	0	0	0	0	0	0	0
28	Length of route across potential wetlands ^h and within site	0	0	0	0	0	0	24	24	62	62	62	62
29	Length of route across known occupied habitat of federally listed endangered or threatened species and within site	0	0	0	0	0	0	0	0	0	0	0	0
30	Is route/site in an area known to contain endangered karst invertebrate species (Zone 1)?	No	No	No	No	No	No	No	No	No	No	No	No
31	Is route/site in an area having a high probability of containing endangered karst invertebrate species (Zone 2)?	No	No	No	No	No	No	No	No	No	No	No	No
32	Is route/site within 500 ft of a known karst feature?	No	No	No	No	No	No	No	No	No	No	No	No
33	Number of streams crossed by route/within site	0	0	0	0	0	0	1	1	1	1	1	1
34	Length of route paralleling (within 100 ft) streams	0	0	0	0	0	0	0	135	0	0	0	0
35	Length of route across open water (ponds, lakes, etc.)	0	0	0	0	0	0	0	0	0	0	0	0
36	Length of route across FEMA-mapped 100-year floodplains	0	0	0	0	0	0	0	0	0	0	0	0
37	Length of route across Edwards Aquifer Recharge Zone ⁱ	0	0	0	0	0	0	0	0	0	0	0	0
38	Length of route across Edwards Aquifer Contributing Zone ^j	0	0	0	0	0	0	0	0	0	0	0	0
Cultural Resources													
39	Number of recorded historic or prehistoric sites crossed by route/within site	0	0	0	0	0	0	0	0	0	0	0	0
40	Number of additional recorded historic or prehistoric sites within 1,000 ft of route/site	0	0	0	0	0	0	0	0	0	0	0	0
41	Number of NRHP-listed or determined-eligible sites crossed by route/within site	0	0	0	0	0	0	0	0	0	0	0	0
42	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of route/site	0	0	0	0	0	0	0	0	0	0	0	0
43	Length of route crossing areas of high archeological/historical site potential	608 ft + 0.025 acre	525 ft + 0.025 acre	366 ft + 0.025 acre	701 ft + 0.702 acre	759 ft + 0.702 acre	511 ft + 0.702 acre	1,338 ft + 0.702 acre	1,232 ft + 0.702 acre	16 ft + 1.319 acres	0 ft + 1.319 acres	77 ft + 1.319 acres	344 ft + 1.319 acres

- (a) Single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis. Alternative 1-A 7-12-21-20-17-14-13
- (b) Due to the potential inaccuracies of the aerial photography and data utilized, all habitable structures within 310 ft have been identified. Alternative 1-B 22-19-16-13
- (c) Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church. Alternative 1-C 25-24-23-20-17-14
- (d) Property lines created by existing road, highway, or railroad ROW are not double-counted in the "Length of route parallel to property lines" criterion. Alternative 2-D 7-6-2-15-27-29
- (e) According to information provided by the Railroad Commission of Texas (RRC) Alternative 2-E 7-6-5-18-28-31
- (f) As listed in the Chart Supplement South Central U.S. (FAA, 2020a, formerly known as the Airport/Facility Directory South Central U.S.) and FAA (2020b). Alternative 2-F 35-32-30-29
- (g) One-half mile, unobstructed. Alternative 2-G 36-38-40
- (h) As mapped by the USFWS NWL. Alternative 2-H 39-40
- (i) Water Pollution Abatement Plan (WPAP) required Alternative 3-I 25-24-33
- (j) Contributing Zone Plan required if more than 5 acres of disturbance (including access roads) Alternative 3-J 25-34
- Alternative 3-K 35
- Alternative 3-L 36-37
- Site 4 None
- Site 5 None
- 6-M 26

Note: all length measurements in feet.

Table 4-1: Environmental Data for Alternatives Evaluation, Tezel Substation and 138-kV Transmission Line Project

		Site 4	Site 5	Alternative 6-M
Land Use				
1	Length of Alternative Route	N/A	N/A	904
2	Number of habitable structures ^a within 300 ft ^b of ROW centerline/site	28	29	96
	Single Family Residence	9	26	93
	Multifamily Residence	17	1	0
	Commercial	1	1	1
3	Number of schools within 300 feet ^b of route centerline/site	0	0	0
4	Number of day care centers within 300 feet ^b of route centerline/site	0	0	1
5	Number of churches within 300 feet ^b of route centerline/site	1	1	1
6	Length of route across parks/recreational areas ^c	0	0	0
7	Number of additional parks/recreational areas ^c within 1,000 ft of route centerline	0	0	0
8	Length of route/site across conservation easements or mitigation banks	0	0	0
9	Length utilizing existing transmission line ROW	0	0	0
10	Length of route parallel to existing transmission line ROW	0	0	0
11	Length of route parallel to other existing compatible ROW (roads, highways, railways, etc. - excluding oil and gas pipelines)	N/A	N/A	904
12	Length of route parallel to property lines (not following existing ROW) ^d	N/A	N/A	0
13	Length of route parallel to pipelines ^e	0	0	0
14	Is site adjacent to an existing transmission line?	Yes	Yes	No
15	Number of oil and gas pipeline crossings ^e	0	0	0
16	Number of oil and gas wells/pipelines within 200 ft of route centerline/site (including dry or plugged wells)	0	0	0
17	Number of existing water wells within 200 ft of route centerline/site	0	0	0
18	Number of road crossings	0	0	1
19	Number of FAA-registered public/military airfields ^f within 20,000 ft of route centerline/site (with runway >3,200 ft)	0	0	0
20	Number of FAA-registered public/military airfields ^f within 10,000 ft of route centerline/site (with runway <3,200 ft)	0	0	0
21	Number of private airstrips within 10,000 ft of route centerline/site	0	0	0
22	Number of heliports within 5,000 ft of route centerline/site	0	0	0
23	Number of commercial AM radio transmitters within 10,000 ft of route centerline/site	0	0	0
24	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 ft of route centerline/site	3	2	2
Aesthetics				
25	Estimated length of route within foreground visual zone ^g of parks/recreational areas ^c	N/A	N/A	904
Ecology				
26	Length of route across upland woodland/brushland and acreage within site	N/A + 0.946 acre	N/A + 1.391 acres	0 ft + 1.751 acres
27	Length of route across bottomland/riparian woodland/brushland and acreage within site	0	0	0
28	Length of route across potential wetlands ^h and within site	0	0	0
29	Length of route across known occupied habitat of federally listed endangered or threatened species and within site	0	0	0
30	Is route/site in an area known to contain endangered karst invertebrate species (Zone 1)?	No	No	No
31	Is route/site in an area having a high probability of containing endangered karst invertebrate species (Zone 2)?	No	No	No
32	Is route/site within 500 ft of a known karst feature?	No	No	No
33	Number of streams crossed by route/within site	0	0	0
34	Length of route paralleling (within 100 ft) streams	0	0	0
35	Length of route across open water (ponds, lakes, etc.)	0	0	0
36	Length of route across FEMA-mapped 100-year floodplains	0	0	0
37	Length of route across Edwards Aquifer Recharge Zone ⁱ	0	0	0
38	Length of route across Edwards Aquifer Contributing Zone ^j	0	0	0
Cultural Resources				
39	Number of recorded historic or prehistoric sites crossed by route/within site	0	0	0
40	Number of additional recorded historic or prehistoric sites within 1,000 ft of route/site	0	0	0
41	Number of NRHP-listed or determined-eligible sites crossed by route/within site	0	0	0
42	Number of additional NRHP-listed or determined-eligible sites within 1,000 ft of route/site	0	0	0
43	Length of route crossing areas of high archeological/historical site potential	N/A + 1.438 acres	N/A + 0.759 acre	0 ft + 2.532 acres

- | | | |
|---|-------------|---------------------|
| (a) Single-family and multi-family dwellings and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis. | Alternative | Segments |
| (b) Due to the potential inaccuracies of the aerial photography and data utilized, all habitable structures within 310 ft have been identified. | 1-A | 7-12-21-20-17-14-13 |
| (c) Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church. | 1-B | 22-19-16-13 |
| (d) Property lines created by existing road, highway, or railroad ROW are not double-counted in the "Length of route parallel to property lines" criterion. | 1-C | 25-24-23-20-17-14 |
| (e) According to information provided by the Railroad Commission of Texas (RRC) | 2-D | 7-6-2-15-27-29 |
| (f) As listed in the Chart Supplement South Central U.S. (FAA, 2020a, formerly known as the Airport/Facility Directory South Central U.S.) and FAA (2020b). | 2-E | 7-6-5-18-28-31 |
| (g) One-half mile, unobstructed. | 2-F | 35-32-30-29 |
| (h) As mapped by the USFWS NWL. | 2-G | 36-38-40 |
| (i) Water Pollution Abatement Plan (WPAP) required | 2-H | 39-40 |
| (j) Contributing Zone Plan required if more than 5 acres of disturbance (including access roads) | 3-I | 25-24-33 |
| | 3-J | 25-34 |
| | 3-K | 35 |
| | 3-L | 36-37 |
| | Site 4 | None |
| | Site 5 | None |
| | 6-M | 26 |
- Note: all length measurements in feet.

5.0 PUBLIC INVOLVEMENT ACTIVITIES

5.1 Correspondence with Agencies and Officials

Burns & McDonnell contacted the following Federal, State, and local agencies and officials by letter dated February 28, 2020, to solicit comments, concerns, and information regarding potential environmental impacts, permits, or approvals for the construction of the proposed Tezel Substation and Transmission Project within the Study Area. A map of the Study Area was included with each letter. An example of the letter mailed to the agencies and officials and copies of the responses received are included in Appendix A (Agency Correspondence).

Federal

- Federal Emergency Management Agency (FEMA)
- Natural Resources Conservation Service (NRCS)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Army Corps of Engineers (USACE), Fort Worth District
- Environmental Protection Agency (EPA)
- Federal Aviation Administration (FAA)
- Department of Defense (DoD)Siting Clearinghouse
- U.S. Representative, District 20

State

- Texas Parks and Wildlife Department (TPWD)
- Texas Public Utility Commission (PUC)
- Texas General Land Office (GLO)
- Texas Commission on Environmental Quality (TCEQ)
- Texas Historical Commission (THC)
- Railroad Commission of Texas (RRC)
- Texas Water Development Board (TWDB)
- Texas Department of Transportation (TxDOT), San Antonio District
- TxDOT, Aviation Division
- TxDOT, Environmental Affairs Division
- Texas House Representative, District 124
- Texas House Representative, District 125
- Texas State Senator, District 25

County

- Bexar County Judge
- Bexar County Precinct 2 Commissioner
- Bexar County Manager
- Bexar County Farm Bureau
- Bexar County Farm Service Agency

Local

- City of San Antonio – Mayor
- City of San Antonio – City Manager
- City of San Antonio – Director of Public Works
- City of San Antonio – Economic Development
- City of San Antonio – Department of Planning & Community Development
- City of San Antonio – Transportation & Capital Improvements
- City of San Antonio – Office of Historic Preservation
- City of San Antonio – Councilwoman District 6
- City of San Antonio – Councilwoman District 7
- Northside ISD Superintendent
- Alamo Area Council of Governments (AACOG)
- Alamo Soil & Water Conservation District
- Edwards Aquifer Authority (EAA)
- San Antonio River Authority (SARA)
- San Antonio Water System (SAWS)
- Bexar County Flood Control
- Bexar County Economic Development
- Bexar County Historical Commission
- San Antonio World Heritage Office
- Texas Nature Conservancy

As of the date of this document, written responses to the letters sent on February 28, 2020, have been received from the following: DoD, USACE Fort Worth District, FAA, FEMA, NRCS, GLO, THC, TPWD, City of San Antonio – Councilwoman District 7, and City of San Antonio – Public Works Department. Copies of all responses are included in Appendix A.

In addition to letters sent to the agencies on February 28, 2020, Burns & McDonnell reviewed the NDD Element Occurrence Records from the TPWD, the Information, Planning, and Conservation (IPaC) System from the USFWS, Texas Archeological Research Laboratory (TARL) records, and the THC Restricted Archeological Sites Atlas to verify or update cultural and natural resource records for the Study Area. All agency comments, concerns, and information received were taken into consideration by Burns & McDonnell and CPS Energy in the preparation of this EA and in the evaluation of the alternative routes. Additionally, the information received from the agencies will be taken into consideration by CPS Energy before and during construction of the Project. The following is a summary of the comments provided by Federal, State, and local officials that have responded as of this writing.

- Burns & McDonnell received an email from the DoD on March 2, 2020, requesting the structure heights for the proposed Project, which Burns & McDonnell provided via email on March 4, 2020. This was followed by a letter dated April 13, 2020, stating that the transmission line Project will have minimal impact on military operations conducted in the area.
- The USACE Fort Worth District responded via email on March 3, 2020, stating that the project had been assigned a regulatory project manager and Project Number SWF-2020-00123. This response was followed by a second letter dated March 26, 2020, where the agency noted that the Project may be authorized under a general permit such as NWP 12 but if the Project did not meet the conditions of a general permit, an individual permit would be required. The agency also noted that important cultural resources are known to occur in the Project vicinity and that endangered and threatened species may be affected.
- The FAA responded via email on March 10, 2020, providing instructions for electronic filing of items such as Form 7460-1 (Notice of Proposed Construction or Alteration). CPS Energy will coordinate with the FAA as necessary once a route is approved for construction.
- The FEMA responded with a letter dated March 10, 2020, requesting that the community floodplain administrator be contacted for the review and possible permit requirements for the Project, and if federally funded, the agency requested the Project be in compliance with EO11988 and EO11990.
- The NRCS responded with a letter dated May 22, 2020, stating that the major concern within the study area is soil depth. To reduce erosion during construction, NRCS strongly recommended the use of approved erosion control methods, including the use of erosion control equipment near

heavily disturbed soil and reducing the amount of bare ground. The agency also provided a Custom Soil Resources Report for Bexar County.

- The GLO responded with a letter dated March 5, 2020, that the agency does not appear to have any environmental issues or land use constraints associated with the project and asked to be provided the final route so that the agency can assess the route and determine if the project will cross any streambeds or Permanent School Fund land that would require a GLO easement.
- The THC responded via email on March 19, 2020, requesting more information, which was provided by Burns and McDonnell via email on March 20, 2020. This was followed by a second email on March 20, 2020, acknowledging receipt of the additional information.
- The TPWD responded with a letter dated April 14, 2020, providing a list of species that could be impacted by proposed project activities if suitable habitat is present. The agency provided a list of regulations pertaining to the Project and recommendations on how to comply with these regulations.
- Burns and McDonnell received a phone call on March 9, 2020, from Frank A. Ramirez IV, Neighborhood & Zoning Liaison for Councilwoman Ana Sandoval, District 7, to discuss the project. This was followed up via email later that day expressing his eagerness to learn more about the process and how his office can assist with informing the public about the project.
- The City of San Antonio Public Works Department responded via email on March 16, 2020, requesting more information, which was provided by Burns and McDonnell via email on March 17, 2020.

Although a letter was sent to the USFWS on February 28, 2020, this agency often no longer responds to such letters but instead requests that the applicant use the IPaC System on its website. Burns & McDonnell accessed the IPaC system on June 29, 2020, to request an Official Species List, which also generates an official consultation response letter and tracking number. IPaC identified 21 federally listed and 3 Federal candidate species of potential occurrence in the Study Area: the endangered golden-cheeked warbler (*Setophaga chrysoparia*), least tern (*Sterna antillarum*), whooping crane (*Grus americana*), Texas blind salamander (*Eurycea (=Typhlomolge) rathbuni*), fountain darter (*Etheostoma fonticola*), 12 invertebrates, and Texas wild-rice (*Zizania texana*), and the threatened piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), San Marcos blind salamander (*Eurycea nana*). The three Federal candidate species were the Texas fatmucket (*Lampsilis bracteata*), Texas pimpleback

(*Quadrula petrina*), and bracted twistflower (*Streptanthus bracteatus*). No critical habitat was identified within the Study Area.

The IPaC response letter recommended verifying the accuracy of the species after 90 days and at regular intervals during the Project planning and implementation phases for updates to the species list and information. Burns & McDonnell accessed the IPaC system again for this Project on October 22, 2020. No changes to species status occurred. A copy of the response letters generated by the IPaC system are included in Appendix A.

5.2 Public Video Broadcast

Because of the COVID-19 pandemic, CPS Energy was unable to hold a public open-house meeting for its proposed Tezel Substation and 138-kV transmission line project. Instead, CPS Energy broadcasted a pre-recorded video to the public on July 15, 2020. An informational packet was mailed out on July 8, 2020, to people who reside or conduct business within 300 feet of each substation site and the identified preliminary transmission line segments. This involved 495 people being notified, including five neighborhood associations and one apartment complex. Local city officials and Northside ISD were also sent an informational packet. Apart from the informational packet, CPS Energy also publicized the pre-recorded video broadcast through local newspaper advertisements and through its website—a newspaper ad ran twice prior to the video broadcast on July 10 and July 12.

The video broadcast was intended to solicit comments from citizens, landowners, and public officials concerning the proposed Project. The broadcast had the following objectives:

- Promote a better understanding of the proposed Project, including the purpose, need, potential benefits and impacts
- Inform the public regarding the routing procedure, schedule, and decision-making process
- Ensure that the decision-making process accurately identifies and considers the values and concerns of the public and community leaders

Information on public involvement is located in Appendix B.

The broadcast presentation had maps, illustrations, photographs, text explaining each particular topic, questionnaire, and a Frequently Asked Questions (FAQ) sheet.

The questionnaire solicited comments on landowner and citizen concerns as well as an evaluation of the information presented during the broadcast. A blank questionnaire is included in Appendix B. Completed

questionnaires were received by CPS Energy through September 30, 2020, following the broadcast. However, not all respondents answered every question, nor did all persons who viewed the broadcast complete a questionnaire. The following is a summary of questionnaire responses received by CPS Energy.

Questionnaire Results

Overall, 495 Tezel Substation & Transmission Line Project informational packets were mailed out to citizens and landowners prior to the Tezel Substation & Transmission Line Project Open House Video Broadcast on July 15, 2020. As of October 21, 2020, the CPS Energy video broadcast had been viewed 321 times. CPS Energy received 83 questionnaires through September 30, 2020. An additional questionnaire, received November 2, 2020, has also been included in the analysis.

Fifteen questions were asked on the questionnaire. Question 1 asked if respondents had reviewed the Tezel Substation & Transmission Line Project informational packet. Eighty-one respondents (96.4 percent) indicated they had reviewed the packet, while three individuals (3.6 percent) responded that they had not reviewed the packet.

Question 2 asked if the respondent found the informational packet to be helpful. Eleven respondents (13.1 percent) answered Strongly Agree, 53 (63.1 percent) answered Agree, 15 (17.9 percent) answered Neutral, nobody answered Disagree, and one (1.2 percent) answered Strongly Disagree. Four individuals (4.8 percent) did not provide a response.

Question 3 asked respondents if they had viewed the Tezel Substation & Transmission Line Project Open House Video Broadcast (available July 15, 2020). Fifty respondents (59.5 percent) answered that they had viewed the broadcast and 32 (38.1 percent) answered that they had not viewed the broadcast. Two individuals (2.4 percent) did not provide a response.

Question 4 asked respondents if the information presented in the video broadcast was helpful. Thirteen respondents (15.5 percent) answered Strongly Agree, 29 (34.5 percent) answered Agree, 14 (16.7 percent) answered Neutral, nobody answered Disagree, and two (2.4 percent) answered Strongly Disagree. Twenty-six individuals (31.0 percent) did not provide a response.

Question 5 asked respondents if they understood the need for the Project. Fourteen respondents (16.7 percent) answered Strongly Agree, 47 (56.0 percent) answered Agree, 12 (14.3 percent) answered Neutral, three (3.6 percent) answered Disagree, and five (6.0 percent) answered Strongly Disagree. Three individuals (3.6 percent) did not provide a response.

Question 6 asked respondents if after reviewing the informational packet and watching the video broadcast, did they still have questions about the Project? Twenty-eight respondents (33.3 percent) indicated they still had questions. Fifty-four individuals (64.3 percent) responded they no longer had any questions about the Project and two individuals (2.4 percent) did not provide a response.

Question 7 asked respondents if they answered yes to the previous question, would they like someone from the Project team to contact them and discuss the Project? Twenty respondents (23.8 percent) indicated they would like to be contacted to discuss the Project, while 35 individuals (41.7 percent) responded they would not like to be contacted to discuss the Project. Twenty-nine individuals (34.5 percent) did not provide a response. One respondent who answered yes to the previous question did not provide a response and several respondents who answered no to the previous question still provided a response.

Question 8 presented respondents with 14 factors that CPS Energy and its consultants consider when identifying and evaluating alternative transmission line route segments and substation sites and asked them to rank their top five factors from most important (1) to least important (5). Some of the respondents, however, did not evaluate any factors and several respondents did not evaluate every factor or evaluated every factor. The average rating for each factor (in descending order of importance) and the percentage of respondents who ranked the factor in their top five (in parentheses) is as follows:

- Proximity to residences – 1.80 (85.7 percent)
- Proximity to schools, churches, cemeteries, and day care centers – 1.96 (71.4 percent)
- Visibility of structures – 2.98 (64.3 percent)
- Proximity to archaeological/historical site – 3.00 (10.7 percent)
- Impact to streams/floodplains – 3.20 (22.6 percent)
- Impact to woodland, grasslands/wetlands – 3.31 (24.1 percent)
- Impact to trees and other vegetation – 3.46 (54.8 percent)
- Proximity to businesses – 3.53 (29.8 percent)
- Proximity to parks/recreational areas – 3.56 (38.1 percent)
- Parallel existing roadways – 3.54 (19.1 percent)
- Impact to endangered species and their habitat – 3.73 (25.0 percent)
- Parallel property lines – 3.73 (15.5 percent)
- Parallel existing transmission lines – 3.91 (17.9 percent)
- Total line length– 3.94 (22.6 percent)

For Question 9, respondents were asked what other factors they feel should be considered when identifying and evaluating alternative transmission line segments and substation sites. Sixty (71.4 percent) of the respondents answered this question, with the following responses (because some respondents had more than one response, the number of responses exceeds the number of respondents):

- Aesthetics (15 respondents)
- Impact to the owner of the substation site chosen (11 respondents)
- Health/safety (10 respondents)
- Impact to the existing residential areas (9 respondents)
- Property/house values (9 respondents)
- Impacts to churches (4 respondents)
- Impacts to schools (3 respondents)
- Traffic/construction concerns (3 respondents)
- Cost of the Project (2 respondents)
- Need for the Project (2 respondents)
- Proximity to existing transmission lines (1 respondent)

Question 10 asked that after a respondent's review of the informational packet or the Project website, to indicate any features that should be added that were not identified or included on the Land Use and Environmental Constraints map. Thirty respondents (35.7 percent) provided additional features, with the following responses:

- Provide a graphic of what the towers and the substation would look like (4 respondents)
- Health concerns (3 respondents)
- Aesthetics (2 respondents)
- Additional substation sites provided by respondent (2 respondents)
- Impact to residents (2 respondents)
- Environmental concerns (2 respondents)
- Provide timeline/length of construction (1 respondent)
- Provide location of existing pipelines (1 respondent)
- Provide voltage of existing and proposed lines (1 respondent)
- Provide potential impacts to landowners (1 respondent)
- Provide information on compensation to landowners (1 respondent)
- Provide information of effects to property values (1 respondent)

- Provide information on historic sites (1 respondent)
- Traffic information (1 respondent)

For Question 11, respondents were asked to identify any alternative transmission line segments or substation sites that are the most preferable to them and to describe why. Fifty (59.5 percent) of the respondents identified at least one site and/or at least one segment. All six substation sites were mentioned and the following three route Segments: 35, 39, and 40. Reasons given for the preferences include:

- Shorter lines and less impacts to homes (Sites 3, 4 and 5)
- Not as visible and away from development (Sites 3 and 4; Segments 35, 39, and 40)
- Fewer trees needing to be removed (Sites 1, 4, and 6)
- Less encroachment (Sites 5 and 6)
- Not on a major street (Sites 3, 4, 5, and 6)
- Less impact to property values (Site 1)
- Least usable for development (Site 3)
- Most usable land available to work with (Site 2)
- Distance from church (Site 1)
- Farthest from my home (Sites 1, 2, and 3)
- Most cost effective (Sites 3, 4, 5, and 6)
- Less populated area (Sites 1 and 2)
- Less disturbance (Sites 1, 3, and 4)
- Least visual and least construction impact (Sites 3, 4 and 5)

Question 12 asked respondents to identify any alternative transmission line segments or substation sites that are the least preferable to them and to describe why. Fifty-eight (69.0 percent) of the respondents identified at least one or more sites; however, no transmission line segments were identified. Respondents expressed concerns with all six sites. Issues that were mentioned by respondents include:

- Proximity to church (Site 4)
- Proximity to day care (Site 6)
- Proximity to homes (Sites 1, 2, 3, 5 and 6)
- Affects property values (Site 1)
- Proximity to schools (Sites 1 and 2)
- Potential effects to wildlife (Sites 5 and 6)

- Disrupts neighborhoods and aesthetics (All sites)
- Potential health concerns (Site 3)
- No good (Sites 1, 3, 4, 5, and 6)

Question 13 asked respondents to check all situations that apply to them. Several respondents did not check any and several respondents checked more than one situation. Additionally, several respondents provided substation sites in the transmission segment categories. The average response for each situation was as follows (in descending order):

- A potential transmission line segment or segments is/are near my home/business (43 responded) – 51.2 percent (Segments 1, 2, 3, 8, 9, 10, 13, 14, 15, 26, and 40)
- A potential transmission line segment or segments crosses my property (17 responded) – 20.2 percent (Segments 1, 2, 3, 8, 9, 10, 13, 25, 34, 35, 36, 37, and 40)
- A potential substation site is on or near my property (43 responded) – 51.2 percent (Sites 1, 2, 3, 4, 5, and 6)
- Other. Please specify (11 responded) – 13.1 percent

All eleven of the respondents who answered “Other” to the question provided comments. The majority of responses were as follows:

- Substation site could impact church and future development of church property
- Substation site would be visually unappealing/provided better visual design ideas
- Provided an alternative location for substation
- Substation site was too close to property

Question 14 asked respondents if they own a 2-acre property or larger near the current alternative substation sites that they would be willing to sell to CPS Energy for construction and operation of an electric substation. Seventy-six respondents (90.5 percent) answered “No” and three (3.6 percent) answered “Yes,” while three (3.6 percent) provided no answer.

Question 15, the final question, asked respondents if they had any other information that they would like the Project team to know, or take into consideration, when evaluating the project. Forty-six respondents (54.8 percent) provided additional information, while 38 (45.2 percent) provided no answer. Most of the responses consisted of the following:

- Keeping substation away from churches and residential areas

- Visual issues with the substation site and ways to make it less visible
- Health concerns surrounding substation site
- Concerns with construction and road damage
- Devaluation of property values
- Keeping substation away from schools

Copies of the letter/information packet (July 8, 2020) are included in Appendix B.

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6.0 ALTERNATIVES EVALUATION

The purpose of this study was to identify and evaluate the most viable substation site/route for the proposed Tezel Substation and 138-kV transmission line between CPS Energy's existing Bandera to Helotes 138-kV transmission the proposed substation. Burns & McDonnell, with review and assistance from CPS Energy, evaluated numerous preliminary substation sites and alternative route segments for the proposed Project based on environmental and land use criteria. Normally, the resulting potential substation sites and route segments are presented to the public at open-house meetings. Because of the danger associated with COVID-19, however, this information was presented via a pre-recorded video that CPS Energy broadcasted to the public on July 15, 2020. An informational packet was mailed out on July 8, 2020, to people who reside or conduct business within 300 feet of each substation site and the identified preliminary transmission line segments.

Following the video broadcast and following a review of completed questionnaires, CPS Energy and Burns & McDonnell ultimately selected 15 primary alternatives for an in-depth environmental analysis by Burns & McDonnell and to an engineering, cost, and future needs analysis by CPS Energy. A recommended preferred alternative was selected from these 15 primary alternatives.

6.1 Burns & McDonnell's Environmental Evaluation of the Primary Alternatives

The environmental evaluation consisted of a comparison of alternatives strictly from an environmental viewpoint, based upon the measurement of 43 separate environmental criteria. Burns & McDonnell used a consensus approach to evaluate the potential impact of the 15 alternatives. Burns & McDonnell professionals with expertise in different environmental disciplines (terrestrial and aquatic ecology, land use and planning, cultural resources, and GIS) evaluated the alternatives using the general routing criteria developed by CPS Energy and Burns & McDonnell. Each Burns & McDonnell evaluator independently analyzed the alternatives using the environmental and land use data presented in Table 4-1 for their technical discipline. The evaluators then discussed their independent results. The relationship and relative sensitivity among the major environmental factors were determined by the group. The group then selected an alternative that best satisfies a balance between the major environmental factors, as well as ranking the remaining alternatives, all based strictly upon the environmental data. These rankings are shown in Table 6-1 and reflect the order of their potential environmental impact. Although all 15 alternatives were considered by the group to be environmentally acceptable, it is the consensus of Burns & McDonnell evaluators that Alternative Site 5 is the most favorable after evaluating the objective environmental criteria.

Table 6-1: Burns & McDonnell's Environmental Ranking of Primary Alternatives, Tezel Substation and Transmission Line Project

Ranking	Alternatives			
	Land Use	Ecology	Cultural Resources	Consensus
1st	Site 5	Site 4	1-C	Site 5
2nd	Site 4	Site 5	1-B	Site 4
3rd	3-K	3-J	1-A	3-K
4th	3-L	3-I	Site 5	3-L
5th	3-J	6-M	2-F	3-J
6th	3-I	3-K	2-D	3-I
7th	2-F	3-L	2-E	2-F
8th	2-D	1-B	2-H	2-D
9th	2-E	1-C	2-G	2-E
10th	6-M	1-A	3-J	6-M
11th	2-G	2-E	3-I	2-G
12th	2-H	2-G	3-K	2-H
13th	1-B	2-D	3-L	1-B
14th	1-C	2-F	Site 4	1-C
15th	1-A	2-H	6-M	1-A

Land use criteria primarily considered for this Project included the number of habitable structures located within 300 feet of each alternative, length of new transmission ROW parallel to linear features (existing transmission line ROW, other existing compatible ROW, and property lines), and the overall length of new transmission line ROW.

Alternative Sites 4 and 5 would be preferred from a land use perspective as they do not require any new transmission line ROW. An alternative that requires any length of new transmission line ROW could potentially cause land use impacts or disruption. Additionally, Alternative Sites 4 and 5 are located adjacent to existing electric transmission facilities (the Bandera to Helotes 138-kV transmission line), which would cause less of an intrusion or perception of potential aesthetic impacts. Alternative Site 5 was ranked first, followed by Alternative Site 4. Although Site 5 has one more habitable structure located within 300 feet than Site 4 (29 versus 28, respectively), only 1 of these are multifamily residences compared to 17 multifamily residences for Site 4. Also, Alternative Site 4 is located on a parcel directly adjacent to a church and an apartment complex. Alternative Site 5 has better access from Guilbeau Road, is located further away from the apartment complex, and is separated from the church by the Bandera to Helotes 138-kV transmission line.

Of the alternatives that include new transmission line ROW, Alternative 3-K has the least amount of new transmission line ROW at approximately 415 feet, followed by Alternative 3-L at 464 feet. Also, Alternative 3-K and Alternative 3-L have the third- and fourth-fewest habitable structures located within

300 feet (47 and 51, respectively). Thus, Alternatives 3-K and 3-L are ranked third and fourth, respectively, from a land use perspective. By comparison, Alternative 1-A includes the greatest amount of new transmission line ROW with approximately 2,922 feet and has the most habitable structures located within 300 feet, with 104 habitable structures. Thus, Alternative 1-A is the least preferable from a land use perspective.

The greatest potential impacts to ecological resources within the Study Area would primarily be the clearing of woodland/brushland and avian wire strikes because of the associated transmission line. The best alternative from an ecological standpoint would be the shortest, would require the least amount of woodland/brushland clearing, and would have the least impact on wetlands/streams. Of the 15 alternatives considered, Site 4 does not have an associated transmission line, crosses no open water, streams, potential wetlands, or 100-year floodplain; and requires the third-least amount of woodland/brushland clearing at approximately 0.95 acre. Alternative Site 4, therefore, represents the best alternative from an ecological standpoint. Site 5 would be the second best from an ecological standpoint because it is like Site 4; however, it would require a greater amount of woodland/brushland clearing at approximately 1.39 acres. The third- and fourth-recommended alternatives are Alternatives 3-J and 3-I. They have the third-shortest and fourth-shortest associated transmission lines and require the sixth amount of woodland/brushland clearing (1.84 acres each). Conversely, Alternative 2-H is the least favorable from an ecological perspective and requires the most woodland/brushland clearing (543 feet plus 2.25 acres).

Because no cultural resource sites have been recorded from the Study Area, the cultural resources evaluation focused on the amount of predicted high probability for the occurrence of cultural resources. The designation of HPAs and the evaluation of the alternatives for their potential to contain previously unrecorded archeological sites were made solely based on the PALM. Combining the impact of the substation site and associated transmission line, the best alternatives from a cultural resources' perspective are Alternatives 1-C, 1-B, and 1-A, respectively. Site 1 has the least amount of HPA of the six sites evaluated and the associated routes cross relatively little HPA compared to the next-best substation site. Alternative Site 5 ranks 4th, with only 0.759 acre of HPA and no associated transmission line routes. Alternatives 2-F, 2-D, 2-E, 2-H, and 2-G rank 5th through 9th, respectively. Alternatives 3-J, 3-I, 3-K, and 3-L rank 10th through 13th. Finally, Alternatives Site 4 and 6-M rank 14th and 15th, with 1.438 acres and 2.532 acres of HPA, respectively.

Following the evaluation by discipline, the group of evaluators discussed the relative importance and sensitivity of each set of criteria (land use, cultural, and natural resources) as applied to the 15 primary alternatives. It was the opinion of the group of evaluators that based on the relative lack of ecological

resources and significant cultural resources present, and the amount of land use constraints present within the Study Area, the land use criteria should be the primary alternative selection factors for this Project. Following this decision, the group selected Alternative Site 5 as the recommended preferred alternative and then agreed on a consensus ranking for the remaining alternatives.

As discussed above in the land use evaluation, because Alternative Sites 4 and 5 had no impacts associated with a transmission line, they were ranked highest by the group. Alternative Site 5 was preferred over Alternative Site 4 because although Site 4 had one fewer habitable structure within 300 feet, more of these habitable structures were multifamily units (17 versus 1). Furthermore, according to the completed questionnaires, many of the respondents were concerned what impact the use of Site 4 (owned by Northwest Community Church) would have on the Northwest Community Church community. Finally, Site 5 contains only 0.759 acre of HPA as opposed to 1.438 acres for Site 4.

Figure 6-1 (map pocket) shows the approximate locations of habitable structures and other land use features in the vicinity of the primary alternatives. Habitable structures and other land use features, such as airports, parks and recreation areas, electronic communications towers, etc. are listed and described with respect to their distance and direction from each primary alternative in Table 6-2 through Table 6-16.

Table 6-2: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 1-A

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
7	Single-family residence	299	W
8	Single-family residence	217	W
9	Single-family residence	242	NW
10	Single-family residence	300	N
11	Single-family residence	208	N
12	Single-family residence	128	N
13	Single-family residence	117	NE
14	Single-family residence	152	E
15	Single-family residence	198	E
16	Single-family residence	286	E
17	Single-family residence	278	NE
18	Single-family residence	290	NW
19	Single-family residence	238	W
20	Single-family residence	227	W

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
21	Single-family residence	233	W
22	Single-family residence	298	W
23	Single-family residence	285	N
24	Single-family residence	187	N
25	Single-family residence	70	NW
26	Single-family residence	28	N
27	Commercial (In & Out Express)	39	SW
28	Single-family residence	253	N
29	Single-family residence	175	N
30	Single-family residence	95	N
31	Single-family residence	33	N
32	Commercial (Church's Chicken)	48	W
33	Single-family residence	290	N
34	Single-family residence	217	N
35	Single-family residence	146	N
36	Single-family residence	70	N
37	Single-family residence	17	N
38	Single-family residence	23	N
39	Single-family residence	244	N
40	Single-family residence	177	N
41	Single-family residence	38	N
42	Single-family residence	48	N
43	Single-family residence	250	N
44	Single-family residence	187	N
45	Single-family residence	86	NE
46	Day care (La Petite Academy)	12	E
47	Single-family residence	309	NE
48	Single-family residence	261	NE
49	Single-family residence	210	E
50	Single-family residence	203	E
51	Single-family residence	199	E
52	Single-family residence	203	E
53	Single-family residence	171	N
54	Single-family residence	114	N
55	Single-family residence	52	N

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
56	School (Coke Stevenson Middle School)	140	N
57	Church (Crossroads Baptist Church - Sanctuary)	138	W
58	Church (Crossroads Baptist Church - Education Bld.)	165	W
59	Church (Crossroads Baptist Church - Family Life Center)	95	N
60	Church (Crossroads Baptist Church - Faith Building)	47	W
61	Multi-family residence (4 units)	48	E
62	Multi-family residence (duplex)	47	E
63	Multi-family residence (duplex)	47	E
64	Multi-family residence (duplex)	45	E
65	Multi-family residence (duplex)	47	E
66	Multi-family residence (duplex)	47	E
67	Multi-family residence (duplex)	48	E
68	Multi-family residence (duplex)	48	E
69	Multi-family residence (duplex)	48	E
70	Multi-family residence (duplex)	48	E
71	Multi-family residence (duplex)	48	E
72	Multi-family residence (duplex)	48	E
73	Multi-family residence (duplex)	47	E
74	Multi-family residence (duplex)	46	E
75	Multi-family residence (duplex)	48	E
76	Multi-family residence (duplex)	204	E
77	Multi-family residence (duplex)	213	E
78	Multi-family residence (duplex)	212	E
79	Multi-family residence (duplex)	211	E
80	Multi-family residence (duplex)	211	E
81	Multi-family residence (duplex)	209	E
82	Multi-family residence (duplex)	210	E
83	Multi-family residence (duplex)	210	E
84	Multi-family residence (duplex)	209	E
85	Multi-family residence (duplex)	210	E
86	Multi-family residence (duplex)	213	E
139	Commercial (Alamo Osteopathic Office)	118	SW
140	Single-family residence	282	S
141	Single-family residence	254	S

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
142	Single-family residence	251	S
143	Single-family residence	235	S
144	Single-family residence	174	S
145	Single-family residence	123	S
146	Single-family residence	127	S
147	Single-family residence	120	S
148	Single-family residence	172	S
149	Single-family residence	242	S
150	Single-family residence	285	S
151	Single-family residence	258	S
152	Single-family residence	208	S
153	Single-family residence	197	S
154	Single-family residence	194	S
155	Single-family residence	264	S
156	Commercial (Lifetime Family Eye Care)	55	S
157	Commercial (CVS Pharmacy)	77	S
183	Commercial (Shell Service Station)	112	S
184	Commercial (Jalisco Taqueria)	36	S
185	Commercial (Walmart)	155	S
186	Day care (Guibeau KinderCare)	104	SE
188	Multi-family residence (Seasons Memory Care)	276	S
400	Park/Recreational Area (Braun Station West)	734	NW
401	Park/Recreational Area (Middle School Athletics)	321	N
402	Park/Recreational Area (New Territories Park)	324	W
404	Communication tower (Crown Castle)	624	S
407	AM tower (KRDY #1)	8,277	NW
408	AM tower (KRDY #2)	8,454	NW
409	AM tower (KRDY #3)	8,616	NW

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-3: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 1-B

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
18	Single-family residence	290	NW
19	Single-family residence	238	W
20	Single-family residence	227	W
21	Single-family residence	233	W
22	Single-family residence	298	W
23	Single-family residence	285	N
24	Single-family residence	187	N
25	Single-family residence	70	NW
26	Single-family residence	28	N
27	Commercial (In & Out Express)	39	SW
28	Single-family residence	253	N
29	Single-family residence	175	N
30	Single-family residence	95	N
31	Single-family residence	33	N
32	Commercial (Church's Chicken)	48	W
33	Single-family residence	290	N
34	Single-family residence	217	N
35	Single-family residence	146	N
36	Single-family residence	70	N
37	Single-family residence	17	N
38	Single-family residence	23	N
39	Single-family residence	244	N
40	Single-family residence	177	N
41	Single-family residence	38	N
42	Single-family residence	48	N
43	Single-family residence	250	N
44	Single-family residence	187	N
45	Single-family residence	86	NE
46	Day care (La Petite Academy)	12	E
47	Single-family residence	309	NE
48	Single-family residence	261	NE
49	Single-family residence	210	E
50	Single-family residence	203	E

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
51	Single-family residence	199	E
52	Single-family residence	184	N
53	Single-family residence	132	N
54	Single-family residence	72	N
55	Single-family residence	7	N
56	School (Coke Stevenson Middle School)	59	N
57	Church (Crossroads Baptist Church - Sanctuary)	273	N
58	Church (Crossroads Baptist Church - Education Bld.)	131	N
59	Church (Crossroads Baptist Church - Family Life Center)	7	N
60	Church (Crossroads Baptist Church - Faith Building)	10	N
69	Multi-family residence (duplex)	277	N
70	Multi-family residence (duplex)	236	N
71	Multi-family residence (duplex)	194	N
72	Multi-family residence (duplex)	152	N
73	Multi-family residence (duplex)	110	N
74	Multi-family residence (duplex)	68	N
75	Multi-family residence (duplex)	26	N
80	Multi-family residence (duplex)	280	N
81	Multi-family residence (duplex)	237	N
82	Multi-family residence (duplex)	195	N
83	Multi-family residence (duplex)	153	N
84	Multi-family residence (duplex)	111	N
85	Multi-family residence (duplex)	69	N
86	Multi-family residence (duplex)	28	N
87	Commercial (Guilbeau Station Animal Hospital)	26	N
88	Single-family residence	289	N
89	Single-family residence	207	N
90	Single-family residence	138	N
91	Single-family residence	80	N
92	Single-family residence	268	N
93	Single-family residence	221	NE
105	Single-family residence	163	E
106	Single-family residence	252	E
139	Commercial (Alamo Osteopathic Office)	118	SW

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
140	Single-family residence	282	S
141	Single-family residence	254	S
142	Single-family residence	251	S
143	Single-family residence	235	S
144	Single-family residence	174	S
145	Single-family residence	123	S
146	Single-family residence	128	S
147	Single-family residence	134	S
148	Single-family residence	197	S
149	Single-family residence	262	S
150	Single-family residence	300	S
151	Single-family residence	306	S
152	Single-family residence	268	S
153	Single-family residence	264	S
154	Single-family residence	271	S
156	Commercial (Lifetime Family Eye Care)	132	S
157	Commercial (CVS Pharmacy)	170	S
183	Commercial (Shell Service Station)	204	S
184	Commercial (Jalisco Taqueria)	125	S
185	Commercial (Walmart)	242	S
186	Day care (Guibeau KinderCare)	142	S
187	Commercial (Express Car Lot)	212	S
264	Church (Northwest Community Church)	199	S
401	Park/Recreational Area (Middle School Athletics)	242	N
402	Park/Recreational Area (New Territories Park)	324	W
404	Communication tower (Crown Castle)	708	S
407	AM tower (KRDY #1)	8,277	NW
408	AM tower (KRDY #2)	8,454	NW
409	AM tower (KRDY #3)	8,616	NW

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-4: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 1-C

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
18	Single-family residence	290	NW
19	Single-family residence	238	W
20	Single-family residence	227	W
21	Single-family residence	233	W
22	Single-family residence	298	W
23	Single-family residence	285	N
24	Single-family residence	187	N
25	Single-family residence	70	NW
26	Single-family residence	28	N
27	Commercial (In & Out Express)	39	SW
28	Single-family residence	253	N
29	Single-family residence	175	N
30	Single-family residence	95	N
31	Single-family residence	33	N
32	Commercial (Church's Chicken)	48	W
33	Single-family residence	290	N
34	Single-family residence	217	N
35	Single-family residence	146	N
36	Single-family residence	70	N
37	Single-family residence	17	N
38	Single-family residence	23	N
39	Single-family residence	244	N
40	Single-family residence	177	N
41	Single-family residence	38	N
42	Single-family residence	48	N
43	Single-family residence	250	N
44	Single-family residence	187	N
45	Single-family residence	86	NE
46	Day care (La Petite Academy)	12	E
47	Single-family residence	309	NE
48	Single-family residence	261	NE
49	Single-family residence	210	E
50	Single-family residence	203	E

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
51	Single-family residence	199	E
52	Single-family residence	203	E
53	Single-family residence	171	N
54	Single-family residence	114	N
55	Single-family residence	52	N
56	School (Coke Stevenson Middle School)	140	N
58	Church (Crossroads Baptist Church - Sanctuary)	219	N
59	Church (Crossroads Baptist Church - Education Bld.)	95	N
60	Church (Crossroads Baptist Church - Faith Building)	97	N
71	Multi-family residence (duplex)	277	N
72	Multi-family residence (duplex)	236	N
73	Multi-family residence (duplex)	193	N
74	Multi-family residence (duplex)	152	N
75	Multi-family residence (duplex)	110	N
82	Multi-family residence (duplex)	280	N
83	Multi-family residence (duplex)	238	N
84	Multi-family residence (duplex)	196	N
85	Multi-family residence (duplex)	154	N
86	Multi-family residence (duplex)	113	N
87	Commercial (Guilbeau Station Animal Hospital)	109	N
89	Single-family residence	291	N
90	Single-family residence	223	N
91	Single-family residence	161	N
93	Single-family residence	270	N
105	Single-family residence	154	NE
106	Single-family residence	227	NE
107	Single-family residence	276	E
139	Commercial (Alamo Osteopathic Office)	118	SW
140	Single-family residence	282	S
141	Single-family residence	254	S
142	Single-family residence	251	S
143	Single-family residence	235	S
144	Single-family residence	174	S
145	Single-family residence	123	S
146	Single-family residence	127	S

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
147	Single-family residence	120	S
148	Single-family residence	172	S
149	Single-family residence	242	S
150	Single-family residence	285	S
151	Single-family residence	258	S
152	Single-family residence	208	S
153	Single-family residence	197	S
154	Single-family residence	194	S
155	Single-family residence	264	S
156	Commercial (Lifetime Family Eye Care)	55	S
157	Commercial (CVS Pharmacy)	77	S
183	Commercial (Shell Service Station)	112	S
184	Commercial (Jalisco Taqueria)	36	S
185	Commercial (Walmart)	155	S
186	Day care (Guibeau KinderCare)	57	S
187	Commercial (Express Car Lot)	126	S
188	Multi-family residence (Seasons Memory Care)	230	S
264	Church (Northwest Community Church)	99	S
401	Park/Recreational Area (Middle School Athletics)	321	N
402	Park/Recreational Area (New Territories Park)	324	W
404	Communication tower (Crown Castle)	624	S
407	AM tower (KRDY #1)	8,277	NW
408	AM tower (KRDY #2)	8,454	NW
409	AM tower (KRDY #3)	8,616	NW

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-5: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 2-D

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
1	Single-family residence	145	N
2	Single-family residence	174	N
3	Single-family residence	146	N
4	Single-family residence	195	N
5	Single-family residence	300	N
6	Single-family residence	260	N
7	Single-family residence	161	N
8	Single-family residence	143	N
9	Single-family residence	224	N
10	Single-family residence	300	N
11	Single-family residence	208	N
12	Single-family residence	128	N
13	Single-family residence	117	NE
14	Single-family residence	152	E
15	Single-family residence	198	E
16	Single-family residence	286	E
17	Single-family residence	278	NE
56	School (Coke Stevenson Middle School)	266	W
57	Church (Crossroads Baptist Church - Sanctuary)	296	E
59	Church (Crossroads Baptist Church - Family Life Center)	236	E
61	Multi-family residence (4 units)	118	S
62	Multi-family residence (duplex)	220	S
63	Multi-family residence (duplex)	261	S
64	Multi-family residence (duplex)	302	S
157	Commercial (CVS Pharmacy)	92	SW
158	Commercial (center - 9 businesses)	65	N
159	Single-family residence	273	W
160	Single-family residence	231	W
161	Single-family residence	189	W
162	Single-family residence	157	W
163	Single-family residence	86	W
164	Single-family residence	26	W

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
165	Single-family residence	21	W
166	Single-family residence	53	W
167	Single-family residence	52	W
168	Single-family residence	42	W
169	Single-family residence	21	W
170	Single-family residence	23	W
171	Single-family residence	32	W
172	Single-family residence	84	W
173	Single-family residence	137	W
174	Single-family residence	188	W
175	Single-family residence	235	W
176	Single-family residence	279	W
177	Single-family residence	188	W
178	Single-family residence	187	W
179	Single-family residence	190	W
180	Single-family residence	186	W
181	Single-family residence	187	W
182	School (James Carson Elementary School)	189	S
183	Commercial (Shell Service Station)	150	E
184	Commercial (Jalisco Taqueria)	303	E
190	Commercial (center - 12 businesses)	115	E
191	Church (Kingdom Hall of Jehovah's Witnesses)	226	E
234	Commercial (Bert's Motor Works)	275	S
400	Park/Recreational Area (Braun Station West Recreation)	666	N
401	Park/Recreational Area (Middle School Athletics)	508	W
403	Park/Recreational Area (Carson Elementary Athletic Fields)	549	S
404	Communication tower (Crown Castle)	553	E
406	Communication tower (unknown)	1,050	S
407	AM tower (KRDY #1)	9,332	NW
408	AM tower (KRDY #2)	9,507	NW
409	AM tower (KRDY #3)	9,668	NW

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-6: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 2-E

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
1	Single-family residence	146	N
2	Single-family residence	174	N
3	Single-family residence	146	N
4	Single-family residence	195	N
5	Single-family residence	300	N
6	Single-family residence	260	N
7	Single-family residence	161	N
8	Single-family residence	143	N
9	Single-family residence	224	N
10	Single-family residence	300	N
11	Single-family residence	208	N
12	Single-family residence	128	N
13	Single-family residence	117	NE
14	Single-family residence	152	E
15	Single-family residence	198	E
16	Single-family residence	286	E
17	Single-family residence	278	NE
57	Church (Crossroads Baptist Church - Sanctuary)	188	E
58	Church (Crossroads Baptist Church - Education Bld.)	231	E
59	Church (Crossroads Baptist Church - Family Life Center)	100	E
60	Church (Crossroads Baptist Church - Faith Building)	239	E
61	Multi-family residence (4 units)	118	S
62	Multi-family residence (duplex)	220	S
63	Multi-family residence (duplex)	261	S
64	Multi-family residence (duplex)	302	S
157	Commercial (CVS Pharmacy)	199	W
158	Commercial (9 businesses)	65	N
159	Single-family residence	273	W
160	Single-family residence	231	W
161	Single-family residence	189	W
162	Single-family residence	157	W
163	Single-family residence	86	W
164	Single-family residence	26	W

Feature ID Number ^a	Structure/Feature	Distance from Centerline/Site Boundary (feet) ^b	Direction
165	Single-family residence	21	W
166	Single-family residence	53	W
167	Single-family residence	52	W
168	Single-family residence	42	W
169	Single-family residence	21	W
170	Single-family residence	23	W
171	Single-family residence	32	W
172	Single-family residence	84	W
173	Single-family residence	137	W
174	Single-family residence	188	W
175	Single-family residence	235	W
176	Single-family residence	279	W
177	Single-family residence	188	W
178	Single-family residence	187	W
179	Single-family residence	190	W
180	Single-family residence	186	W
181	Single-family residence	187	W
182	School (James Carson Elementary School)	189	S
183	Commercial (Shell Service Station)	59	E
184	Commercial (Jalisco Taqueria)	182	E
185	Commercial (Walmart)	276	E
190	Commercial (center - 12 businesses)	115	E
191	Church (Kingdom Hall of Jehovah's Witnesses)	226	E
234	Commercial (Bert's Motor Works)	275	S
400	Park/Recreational Area (Braun Station West Recreation)	666	N
401	Park/Recreational Area (Middle School Athletics)	602	W
403	Park/Recreational Area (Carson Elementary Athletic Fields)	549	S
404	Communication tower (Crown Castle)	468	E
406	Communication tower (unknown)	1,050	S
407	AM tower (KRDY #1)	9,389	NW
408	AM tower (KRDY #2)	9,564	NW
409	AM tower (KRDY #3)	9,724	NW

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-7: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 2-F

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
157	Commercial (CVS Pharmacy)	291	NW
158	Commercial (center - 9 businesses)	65	N
159	Single-family residence	273	W
160	Single-family residence	231	W
161	Single-family residence	189	W
162	Single-family residence	157	W
163	Single-family residence	86	W
164	Single-family residence	26	W
165	Single-family residence	21	W
166	Single-family residence	53	W
167	Single-family residence	52	W
168	Single-family residence	42	W
169	Single-family residence	21	W
170	Single-family residence	23	W
171	Single-family residence	32	W
172	Single-family residence	84	W
173	Single-family residence	137	W
174	Single-family residence	188	W
175	Single-family residence	235	W
176	Single-family residence	279	W
177	Single-family residence	188	W
178	Single-family residence	187	W
179	Single-family residence	190	W
180	Single-family residence	186	W
181	Single-family residence	187	W
182	School (James Carson Elementary School)	189	S
183	Commercial (Shell Service Station)	274	N
185	Commercial (Walmart)	49	N
187	Commercial (Express Car Lot)	292	N
188	Multi-family residence (Seasons Memory Care)	174	N
189	Multi-family residence (Seasons Memory Care)	66	N
190	Commercial (center – 12 businesses)	39	S
191	Church (Kingdom Hall of Jehovah’s Witnesses)	226	E

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
199	Multi-family residence (duplex)	267	S
200	Multi-family residence (duplex)	242	S
201	Multi-family residence (duplex)	224	S
202	Multi-family residence (duplex)	205	S
203	Multi-family residence (duplex)	188	S
204	Multi-family residence (duplex)	173	S
205	Multi-family residence (duplex)	157	S
206	Multi-family residence (duplex)	142	S
207	Multi-family residence (duplex)	129	S
217	Multi-family residence (duplex)	307	S
218	Multi-family residence (duplex)	288	S
233	Multi-family residence (duplex)	258	S
234	Commercial (Bert's Motor Works)	275	S
263	Multi-family residence (The Bristol Apartments – 24 units)	294	S
264	Church (Northwest Community Church)	63	N
265	Single-family residence	215	SE
266	Single-family residence	302	SE
403	Park/Recreational Area (Carson Elementary Athletic Fields)	549	S
404	Communication tower (Crown Castle)	171	S
405	Communication tower (AT&T)	1,882	S
406	Communication tower (unknown)	1,050	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-8: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 2-G

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
158	Commercial (center – 9 businesses)	65	N
159	Single-family residence	273	W
160	Single-family residence	231	W
161	Single-family residence	189	W
162	Single-family residence	157	W
163	Single-family residence	86	W
164	Single-family residence	26	W
165	Single-family residence	21	W
166	Single-family residence	53	W
167	Single-family residence	52	W
168	Single-family residence	42	W
169	Single-family residence	21	W
170	Single-family residence	23	W
171	Single-family residence	32	W
172	Single-family residence	84	W
173	Single-family residence	137	W
174	Single-family residence	188	W
175	Single-family residence	235	W
176	Single-family residence	279	W
177	Single-family residence	188	W
178	Single-family residence	187	W
179	Single-family residence	190	W
180	Single-family residence	186	W
181	Single-family residence	187	W
182	School (James Carson Elementary School)	189	S
190	Commercial (center – 12 businesses)	115	E
191	Church (Kingdom Hall of Jehovah’s Witnesses)	106	N
192	Multi-family residence (duplex)	86	N
193	Multi-family residence (duplex)	133	N
194	Multi-family residence (duplex)	185	N
195	Multi-family residence (duplex)	241	N
196	Multi-family residence (duplex)	276	N
197	Multi-family residence (duplex)	292	N

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
203	Multi-family residence (duplex)	290	W
204	Multi-family residence (duplex)	241	W
205	Multi-family residence (duplex)	192	W
206	Multi-family residence (duplex)	142	W
207	Multi-family residence (duplex)	84	W
208	Multi-family residence (duplex)	86	N
209	Multi-family residence (duplex)	159	N
210	Multi-family residence (duplex)	170	N
211	Multi-family residence (duplex)	190	N
212	Multi-family residence (duplex)	235	N
213	Multi-family residence (duplex)	253	N
214	Multi-family residence (duplex)	274	N
215	Multi-family residence (duplex)	293	N
216	Multi-family residence (duplex)	305	W
217	Multi-family residence (duplex)	263	W
218	Multi-family residence (duplex)	210	W
219	Multi-family residence (duplex)	132	N
220	Multi-family residence (duplex)	178	N
221	Multi-family residence (duplex)	214	N
222	Multi-family residence (duplex)	208	N
223	Multi-family residence (duplex)	207	NW
224	Multi-family residence (duplex)	193	W
225	Multi-family residence (duplex)	86	N
226	Multi-family residence (duplex)	75	NW
227	Multi-family residence (duplex)	70	NW
228	Multi-family residence (duplex)	69	W
229	Multi-family residence (duplex)	61	W
230	Multi-family residence (duplex)	71	W
231	Multi-family residence (duplex)	67	W
232	Multi-family residence (duplex)	78	W
233	Multi-family residence (duplex)	86	W
234	Commercial (Bert's Motor Works)	222	S
235	Day care (Giant Steps Early Learning)	64	S
236	Day care (Giant Steps Early Learning)	43	S
237	Day care (Giant Steps Early Learning)	51	S

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
238	Single-family residence	303	S
239	Single-family residence	291	S
240	Single-family residence	265	S
241	Single-family residence	274	S
242	Single-family residence	275	S
243	Single-family residence	289	S
259	Multi-family (The Bristol Apartments – 24 units)	64	SE
260	Commercial (The Bristol Apartments office)	127	E
261	Multi-family (The Bristol Apartments – 24 units)	168	E
262	Multi-family (The Bristol Apartments – 24 units)	103	E
263	Multi-family (The Bristol Apartments – 24 units)	94	E
264	Church (Northwest Community Church)	230	N
265	Single-family residence	86	E
266	Single-family residence	146	SE
267	Single-family residence	237	SE
274	Single-family residence	216	E
280	Single-family residence	291	NE
403	Park/Recreational Area (Carson Elementary Athletic Fields)	549	S
404	Communication tower (Crown Castle)	553	E
405	Communication tower (AT&T)	1,276	S
405	Communication tower (unknown)	884	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-9: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 2-H

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
158	Commercial (center – 9 businesses)	65	N
159	Single-family residence	273	W
160	Single-family residence	231	W
161	Single-family residence	189	W
162	Single-family residence	157	W
163	Single-family residence	86	W
164	Single-family residence	26	W
165	Single-family residence	21	W
166	Single-family residence	53	W
167	Single-family residence	52	W
168	Single-family residence	42	W
169	Single-family residence	21	W
170	Single-family residence	23	W
171	Single-family residence	32	W
172	Single-family residence	84	W
173	Single-family residence	137	W
174	Single-family residence	188	W
175	Single-family residence	235	W
176	Single-family residence	279	W
177	Single-family residence	188	W
178	Single-family residence	187	W
179	Single-family residence	190	W
180	Single-family residence	186	W
181	Single-family residence	187	W
182	School (James Carson Elementary School)	189	S
190	Commercial (center – 12 businesses)	115	E
191	Church (Kingdom Hall of Jehovah’s Witnesses)	106	N
192	Multi-family residence (duplex)	86	N
193	Multi-family residence (duplex)	133	N
194	Multi-family residence (duplex)	185	N
195	Multi-family residence (duplex)	241	N
196	Multi-family residence (duplex)	276	N
197	Multi-family residence (duplex)	292	N

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
208	Multi-family residence (duplex)	86	N
209	Multi-family residence (duplex)	159	N
210	Multi-family residence (duplex)	170	N
211	Multi-family residence (duplex)	190	N
212	Multi-family residence (duplex)	235	N
213	Multi-family residence (duplex)	253	N
214	Multi-family residence (duplex)	274	N
215	Multi-family residence (duplex)	293	N
219	Multi-family residence (duplex)	132	N
220	Multi-family residence (duplex)	178	N
221	Multi-family residence (duplex)	214	N
222	Multi-family residence (duplex)	208	N
223	Multi-family residence (duplex)	224	N
224	Multi-family residence (duplex)	270	N
225	Multi-family residence (duplex)	86	N
226	Multi-family residence (duplex)	97	N
227	Multi-family residence (duplex)	134	N
228	Multi-family residence (duplex)	189	N
229	Multi-family residence (duplex)	247	N
230	Multi-family residence (duplex)	293	N
234	Commercial (Bert's Motor Works)	222	S
235	Day care (Giant Steps Early Learning)	64	S
236	Day care (Giant Steps Early Learning)	43	S
237	Day care (Giant Steps Early Learning)	51	S
238	Single-family residence	303	S
239	Single-family residence	291	S
240	Single-family residence	251	S
241	Single-family residence	241	S
242	Single-family residence	213	S
243	Single-family residence	180	S
244	Single-family residence	193	S
245	Single-family residence	161	S
246	Single-family residence	170	S
247	Single-family residence	171	SE
248	Single-family residence	157	SE

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
249	Single-family residence	152	SE
250	Single-family residence	148	SE
251	Single-family residence	164	SE
252	Single-family residence	179	SE
253	Single-family residence	220	SE
254	Single-family residence	246	SE
255	Single-family residence	265	S
256	Single-family residence	292	S
257	Single-family residence	304	S
258	Single-family residence	302	SE
259	Multi-family (The Bristol Apartments- 24 units)	37	N
260	Commercial (The Bristol Apartments office)	27	NW
261	Multi-family (The Bristol Apartments – 24 units)	63	NW
262	Multi-family (The Bristol Apartments – 24 units)	232	NW
267	Single-family residence	246	N
268	Single-family residence	178	N
269	Single-family residence	114	N
270	Single-family residence	72	NE
271	Single-family residence	100	E
272	Single-family residence	203	E
273	Single-family residence	309	E
277	Single-family residence	284	N
278	Single-family residence	248	NE
279	Single-family residence	236	NE
403	Park/Recreational Area (Carson Elementary Athletic Fields)	549	S
404	Communication tower (Crown Castle)	553	E
405	Communication tower (AT&T)	1,101	S
406	Communication tower (unknown)	884	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-10: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 3-I

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
73	Multi-family residence (duplex)	309	NW
74	Multi-family residence (duplex)	287	NW
75	Multi-family residence (duplex)	265	W
82	Multi-family residence (duplex)	292	N
83	Multi-family residence (duplex)	252	N
84	Multi-family residence (duplex)	212	N
85	Multi-family residence (duplex)	174	NW
86	Multi-family residence (duplex)	138	NW
87	Commercial (Guilbeau Station Animal Hospital)	109	N
89	Single-family residence	291	N
90	Single-family residence	223	N
91	Single-family residence	161	N
93	Single-family residence	270	N
105	Single-family residence	154	NE
106	Single-family residence	227	NE
107	Single-family residence	276	E
185	Commercial (Walmart)	140	NW
186	Day care (Guilbeau KinderCare)	205	W
187	Commercial (Express Car Lot)	29	W
188	Multi-family residence (Seasons Memory Care)	88	W
189	Multi-family residence (Seasons Memory Care)	39	N
190	Commercial (center – 12 businesses)	30	NW
191	Church (Kingdom Hall of Jehovah's Witnesses)	143	SW
192	Multi-family residence (duplex)	170	S
193	Multi-family residence (duplex)	118	S
194	Multi-family residence (duplex)	60	S
195	Multi-family residence (duplex)	10	S
196	Multi-family residence (duplex)	11	S
197	Multi-family residence (duplex)	12	S
198	Multi-family residence (duplex)	13	S
199	Multi-family residence (duplex)	18	S
200	Multi-family residence (duplex)	19	S
201	Multi-family residence (duplex)	19	S

Feature ID Number ^a	Structure/Feature	Distance from Centerline/Site Boundary (feet) ^b	Direction
202	Multi-family residence (duplex)	17	S
203	Multi-family residence (duplex)	18	S
204	Multi-family residence (duplex)	20	S
205	Multi-family residence (duplex)	21	S
206	Multi-family residence (duplex)	24	S
207	Multi-family residence (duplex)	27	S
208	Multi-family residence (duplex)	212	S
209	Multi-family residence (duplex)	144	S
210	Multi-family residence (duplex)	152	S
211	Multi-family residence (duplex)	146	S
212	Multi-family residence (duplex)	148	S
213	Multi-family residence (duplex)	149	S
214	Multi-family residence (duplex)	150	S
215	Multi-family residence (duplex)	151	S
216	Multi-family residence (duplex)	152	S
217	Multi-family residence (duplex)	154	S
218	Multi-family residence (duplex)	154	S
219	Multi-family residence (duplex)	242	S
220	Multi-family residence (duplex)	230	S
221	Multi-family residence (duplex)	233	S
222	Multi-family residence (duplex)	236	S
223	Multi-family residence (duplex)	239	S
224	Multi-family residence (duplex)	238	S
230	Multi-family residence (duplex)	298	S
231	Multi-family residence (duplex)	256	S
232	Multi-family residence (duplex)	209	S
233	Multi-family residence (duplex)	157	S
263	Multi-family residence (The Bristol Apartments – 24 units)	254	E
264	Church (Northwest Community Church)	70	NE
403	Park/Recreational Area (Carson Elementary Athletic Fields)	963	S
404	Communication tower (Crown Castle)	65	W
405	Communication tower (AT&T)	1,784	S
406	Communication tower (unknown)	1,182	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket). (b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-11: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 3-J

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
83	Multi-family residence (duplex)	277	NW
84	Multi-family residence (duplex)	242	NW
85	Multi-family residence (duplex)	210	NW
86	Multi-family residence (duplex)	182	NW
87	Commercial (Guibeau Station Animal Hospital)	109	N
89	Single-family residence	291	N
90	Single-family residence	223	N
91	Single-family residence	161	N
93	Single-family residence	270	N
105	Single-family residence	154	NE
106	Single-family residence	227	NE
107	Single-family residence	276	E
185	Commercial (Walmart)	140	NW
186	Day care (Guilbeau KinderCare)	270	W
187	Commercial (Express Car Lot)	92	W
188	Multi-family residence (Seasons Memory Care)	147	W
189	Multi-family residence (Seasons Memory Care)	39	N
190	Commercial (center – 12 businesses)	30	NW
191	Church (Kingdom Hall of Jehovah’s Witnesses)	143	SW
192	Multi-family residence (duplex)	170	S
193	Multi-family residence (duplex)	118	S
194	Multi-family residence (duplex)	60	S
195	Multi-family residence (duplex)	10	S
196	Multi-family residence (duplex)	11	S
197	Multi-family residence (duplex)	12	S
198	Multi-family residence (duplex)	13	S
199	Multi-family residence (duplex)	18	S
200	Multi-family residence (duplex)	19	S
201	Multi-family residence (duplex)	19	S
202	Multi-family residence (duplex)	17	S
203	Multi-family residence (duplex)	18	S
204	Multi-family residence (duplex)	20	S
205	Multi-family residence (duplex)	21	S

Feature ID Number ^a	Structure/Feature	Distance from Centerline/Site Boundary (feet) ^b	Direction
206	Multi-family residence (duplex)	24	S
207	Multi-family residence (duplex)	27	S
208	Multi-family residence (duplex)	212	S
209	Multi-family residence (duplex)	144	S
210	Multi-family residence (duplex)	152	S
211	Multi-family residence (duplex)	146	S
212	Multi-family residence (duplex)	148	S
213	Multi-family residence (duplex)	149	S
214	Multi-family residence (duplex)	150	S
215	Multi-family residence (duplex)	151	S
216	Multi-family residence (duplex)	152	S
217	Multi-family residence (duplex)	154	S
218	Multi-family residence (duplex)	154	S
219	Multi-family residence (duplex)	242	S
220	Multi-family residence (duplex)	230	S
221	Multi-family residence (duplex)	233	S
222	Multi-family residence (duplex)	236	S
223	Multi-family residence (duplex)	239	S
224	Multi-family residence (duplex)	238	S
230	Multi-family residence (duplex)	298	S
231	Multi-family residence (duplex)	256	S
232	Multi-family residence (duplex)	209	S
233	Multi-family residence (duplex)	157	S
263	Multi-family residence (The Bristol Apartments – 24 units)	254	E
264	Church (Northwest Community Church)	18	E
403	Park/Recreational Area (Carson Elementary Athletic Fields)	963	S
404	Communication tower (Crown Castle)	65	W
405	Communication tower (AT&T)	1,784	S
406	Communication tower (unknown)	1,182	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-12: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 3-K

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
185	Commercial (Walmart)	140	NW
187	Commercial (Express Car Lot)	257	N
188	Multi-family residence (Seasons Memory Care)	148	N
189	Multi-family residence (Seasons Memory Care)	39	N
190	Commercial (center – 12 businesses)	30	NW
191	Church (Kingdom Hall of Jehovah’s Witnesses)	143	SW
192	Multi-family residence (duplex)	170	S
193	Multi-family residence (duplex)	118	S
194	Multi-family residence (duplex)	60	S
195	Multi-family residence (duplex)	10	S
196	Multi-family residence (duplex)	11	S
197	Multi-family residence (duplex)	12	S
198	Multi-family residence (duplex)	13	S
199	Multi-family residence (duplex)	18	S
200	Multi-family residence (duplex)	19	S
201	Multi-family residence (duplex)	19	S
202	Multi-family residence (duplex)	17	S
203	Multi-family residence (duplex)	18	S
204	Multi-family residence (duplex)	20	S
205	Multi-family residence (duplex)	21	S
206	Multi-family residence (duplex)	24	S
207	Multi-family residence (duplex)	27	S
208	Multi-family residence (duplex)	212	S
209	Multi-family residence (duplex)	144	S
210	Multi-family residence (duplex)	152	S
211	Multi-family residence (duplex)	146	S
212	Multi-family residence (duplex)	148	S
213	Multi-family residence (duplex)	149	S
214	Multi-family residence (duplex)	150	S
215	Multi-family residence (duplex)	151	S
216	Multi-family residence (duplex)	152	S
217	Multi-family residence (duplex)	154	S
218	Multi-family residence (duplex)	154	S

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
219	Multi-family residence (duplex)	242	S
220	Multi-family residence (duplex)	230	S
221	Multi-family residence (duplex)	233	S
222	Multi-family residence (duplex)	236	S
223	Multi-family residence (duplex)	239	S
224	Multi-family residence (duplex)	238	S
230	Multi-family residence (duplex)	298	S
231	Multi-family residence (duplex)	256	S
232	Multi-family residence (duplex)	209	S
233	Multi-family residence (duplex)	157	S
263	Multi-family residence (The Bristol Apartments – 24 units)	254	E
264	Church (Northwest Community Church)	63	N
265	Single-family residence	215	SE
266	Single-family residence	302	SE
403	Park/Recreational Area (Carson Elementary Athletic Fields)	963	S
404	Communication tower (Crown Castle)	65	W
405	Communication tower (AT&T)	1,784	S
406	Communication tower (unknown)	1,182	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-13: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 3-L

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
185	Commercial (Walmart)	140	NW
187	Commercial (Express Car Lot)	257	N
188	Multi-family residence (Seasons Memory Care)	148	N
189	Multi-family residence (Seasons Memory Care)	39	N
190	Commercial (center – 12 businesses)	30	NW
191	Church (Kingdom Hall of Jehovah’s Witnesses)	143	SW
192	Multi-family residence (duplex)	170	S
193	Multi-family residence (duplex)	118	S
194	Multi-family residence (duplex)	60	S
195	Multi-family residence (duplex)	10	S
196	Multi-family residence (duplex)	11	S
197	Multi-family residence (duplex)	12	S
198	Multi-family residence (duplex)	13	S
199	Multi-family residence (duplex)	18	S
200	Multi-family residence (duplex)	19	S
201	Multi-family residence (duplex)	19	S
202	Multi-family residence (duplex)	17	S
203	Multi-family residence (duplex)	18	S
204	Multi-family residence (duplex)	20	S
205	Multi-family residence (duplex)	21	S
206	Multi-family residence (duplex)	24	S
207	Multi-family residence (duplex)	27	S
208	Multi-family residence (duplex)	212	S
209	Multi-family residence (duplex)	144	S
210	Multi-family residence (duplex)	152	S
211	Multi-family residence (duplex)	146	S
212	Multi-family residence (duplex)	148	S
213	Multi-family residence (duplex)	149	S
214	Multi-family residence (duplex)	150	S
215	Multi-family residence (duplex)	151	S
216	Multi-family residence (duplex)	152	S
217	Multi-family residence (duplex)	154	S
218	Multi-family residence (duplex)	154	S

Feature ID Number ^a	Structure/Feature	Distance from Centerline/Site Boundary (feet) ^b	Direction
219	Multi-family residence (duplex)	242	S
220	Multi-family residence (duplex)	230	S
221	Multi-family residence (duplex)	233	S
222	Multi-family residence (duplex)	236	S
223	Multi-family residence (duplex)	239	S
224	Multi-family residence (duplex)	238	S
230	Multi-family residence (duplex)	298	S
231	Multi-family residence (duplex)	240	S
232	Multi-family residence (duplex)	191	S
233	Multi-family residence (duplex)	155	S
262	Multi-family residence (The Bristol Apartments – 24 units)	221	S
263	Multi-family residence (The Bristol Apartments – 24 units)	129	S
264	Church (Northwest Community Church)	71	N
265	Single-family residence	86	E
266	Single-family residence	146	SE
267	Single-family residence	237	SE
274	Single-family residence	216	E
280	Single-family residence	291	NE
403	Park/Recreational Area (Carson Elementary Athletic Fields)	963	S
404	Communication tower (Crown Castle)	65	W
405	Communication tower (AT&T)	1,719	S
405	Communication tower (unknown)	1,182	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-14: Habitable Structures and Other Land Use Features in the Vicinity of Alternative Site 4

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
105	Single-family residence	305	N
187	Commercial (Express Car Lot)	281	NW
188	Multi-family residence (Seasons Memory Care)	250	W
189	Multi-family residence (Seasons Memory Care)	222	W
203	Multi-family residence (duplex)	277	SW
204	Multi-family residence (duplex)	229	SW
205	Multi-family residence (duplex)	180	SW
206	Multi-family residence (duplex)	130	SW
207	Multi-family residence (duplex)	72	SW
217	Multi-family residence (duplex)	266	SW
218	Multi-family residence (duplex)	213	SW
224	Multi-family residence (duplex)	263	SW
229	Multi-family residence (duplex)	282	S
230	Multi-family residence (duplex)	233	S
231	Multi-family residence (duplex)	174	S
232	Multi-family residence (duplex)	125	S
233	Multi-family residence (duplex)	94	SW
262	Multi-family residence (The Bristol Apartments – 24 units)	171	S
263	Multi-family residence (The Bristol Apartments – 24 units)	79	S
264	Church (Northwest Community Church)	42	N
265	Single-family residence	69	E
266	Single-family residence	106	E
267	Single-family residence	189	SE
268	Single-family residence	272	SE
274	Single-family residence	203	E
275	Single-family residence	296	E
276	Single-family residence	290	E
280	Single-family residence	282	E
404	Communication tower (Crown Castle)	519	W
405	Communication tower (AT&T)	1,667	S
406	Unknown communication tower	1,659	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket); (b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-15: Habitable Structures and Other Land Use Features in the Vicinity of Alternative Site 5

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
87	Commercial (Guilbeau Station Animal Hospital)	214	NW
90	Single-family residence	243	N
91	Single-family residence	173	N
93	Single-family residence	258	N
94	Single-family residence	264	N
95	Single-family residence	281	N
96	Single-family residence	282	N
97	Single-family residence	291	N
105	Single-family residence	118	N
106	Single-family residence	127	N
107	Single-family residence	121	N
108	Single-family residence	119	N
109	Single-family residence	117	N
110	Single-family residence	120	N
111	Single-family residence	151	NE
112	Single-family residence	206	NE
113	Single-family residence	268	E
263	Multi-family residence (The Bristol Apartments – 24 units)	203	S
264	Church (Northwest Community Church)	58	W
265	Single-family residence	44	S
266	Single-family residence	173	S
267	Single-family residence	236	S
274	Single-family residence	54	S
275	Single-family residence	161	SE
276	Single-family residence	216	SE
280	Single-family residence	23	E
281	Single-family residence	114	E
282	Single-family residence	206	E
283	Single-family residence	293	E
404	Communication tower (Crown Castle)	895	SW
405	Communication tower (AT&T)	1,818	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket); (b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

Table 6-16: Habitable Structures and Other Land Use Features in the Vicinity of Alternative 6-M

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
87	Commercial (Guilbeau Station Animal Hospital)	190	NW
89	Single-family residence	309	N
90	Single-family residence	233	N
91	Single-family residence	165	N
93	Single-family residence	258	N
94	Single-family residence	264	N
95	Single-family residence	282	N
96	Single-family residence	284	N
97	Single-family residence	283	N
98	Single-family residence	284	N
99	Single-family residence	280	N
100	Single-family residence	272	N
101	Single-family residence	288	N
102	Single-family residence	273	N
103	Single-family residence	274	N
104	Single-family residence	279	N
105	Single-family residence	118	N
106	Single-family residence	128	N
107	Single-family residence	122	N
108	Single-family residence	121	N
109	Single-family residence	119	N
110	Single-family residence	119	N
111	Single-family residence	119	N
112	Single-family residence	123	N
113	Single-family residence	126	N
114	Single-family residence	121	N
115	Single-family residence	120	N
116	Single-family residence	98	N
117	Single-family residence	104	N
118	Single-family residence	90	N
119	Single-family residence	90	N
120	Single-family residence	168	N
121	Single-family residence	240	N

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
122	Single-family residence	302	N
123	Single-family residence	228	N
124	Single-family residence	160	N
125	Single-family residence	70	N
126	Single-family residence	308	N
127	Single-family residence	228	N
128	Single-family residence	161	N
129	Single-family residence	71	N
130	Single-family residence	272	N
131	Single-family residence	193	N
132	Single-family residence	111	N
133	Single-family residence	73	N
134	Single-family residence	143	NE
135	Single-family residence	205	NE
136	Single-family residence	255	E
137	Single-family residence	273	N
138	Single-family residence	310	NE
264	Church (Northwest Community Church)	98	S
265	Single-family residence	272	S
274	Single-family residence	248	S
275	Single-family residence	295	S
280	Single-family residence	109	S
281	Single-family residence	103	S
282	Single-family residence	109	S
283	Single-family residence	113	W
284	Single-family residence	125	SW
285	Single-family residence	163	SW
286	Single-family residence	193	S
287	Single-family residence	249	S
288	Single-family residence	300	S
289	Single-family residence	31	S
290	Single-family residence	92	S
291	Single-family residence	170	S
292	Single-family residence	219	S
293	Single-family residence	273	S

Feature ID Number^a	Structure/Feature	Distance from Centerline/Site Boundary (feet)^b	Direction
294	Single-family residence	308	S
295	Single-family residence	245	S
296	Single-family residence	184	S
297	Single-family residence	100	S
298	Single-family residence	46	S
299	Single-family residence	37	S
300	Single-family residence	67	W
301	Single-family residence	89	S
302	Single-family residence	52	S
303	Single-family residence	40	S
304	Single-family residence	93	S
305	Single-family residence	264	S
306	Single-family residence	236	S
307	Single-family residence	201	S
308	Single-family residence	219	S
309	Single-family residence	219	S
310	Single-family residence	172	S
311	Day care (Kids Garden)	15	E
312	Single-family residence	287	E
313	Single-family residence	214	E
314	Single-family residence	166	E
315	Single-family residence	155	E
316	Single-family residence	216	E
317	Single-family residence	290	E
318	Single-family residence	296	E
319	Single-family residence	221	E
320	Single-family residence	218	SE
321	Single-family residence	252	SE
404	Communication tower (Crown Castle)	891	SW
405	Communication tower (AT&T)	1,849	S

(a) Note: All habitable structures and other land-use features are located on Figure 6-1 (map pocket).

(b) Due to margin of error in horizontal accuracy of aerial imagery, all habitable structures within 310 feet have been identified.

6.2 CPS Energy's Evaluation and Recommendation

CPS Energy evaluated 6 potential substation sites and 15 potential combinations of substation sites and transmission line routes for the proposed Tezel Road Substation project. CPS Energy utilized several factors in determining the recommended substation site/route. Upon evaluating the project based on engineering, cost, environmental impact, and public/agency input, the CPS Energy project team has determined that Substation Sites 4 and 5 were the two highest ranking substation sites. In addition, Substation Sites 4 and 5 are adjacent to the existing Helotes to Bandera 138-kV transmission line, which will be looped into the new Tezel Road Substation. Due to their proximity to the transmission line, these two sites had the lowest costs, the least overall impact to the community, and do not require a new transmission line extension. The lowest ranking site was Substation Site 1. The potential combinations of Substation Site 1 and its transmission line routes had the three lowest rankings.

Based on all the environmental and engineering factors used in the analysis of the six substation sites, the CPS Energy project team recommends Site 5. Substation Site 5 was preferred over substation Site 4 for four major factors, one being that although Site 4 had one fewer habitable structure, more of these habitable structures were multifamily units (17 versus 1). Second, according to multiple completed questionnaires, many of the respondents were concerned with the impact the use of Site 4 would have on future expansion plans. Third, the substation Site 5 landowner was willing to sell their property and the owner of substation Site 4 was not. Lastly, substation site 5's adjacent access to Guilbeau Road was preferred by Distribution Planning for best access to existing distribution lines.

Refer to Table 6-17 for CPS Energy's Alternatives Evaluation.

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Table 6-17: CPS Energy's Alternatives Evaluation, Tezel Substation and 138-kV Transmission Line Project

Substation Site	Route #	Transmission Segments	Route Length (Feet)	Sub. Civil \$	Sub. Civil Construction \$	Sub Elec \$	Sub. Elec Construction \$	Trans \$	ROW \$	Total Cost	Env Rank
Site #1	1-A	7-12-21-20-17-14	2,922	\$3,493,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$3,196,000.00	\$1,377,170.00	\$13,741,524.00	15
Site #1	1-B	22-19-16-13	2,591	\$3,493,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$2,716,000.00	\$1,638,970.00	\$13,523,324.00	13
Site #1	1-C	25-24-23-20-17-14	2,659	\$3,493,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$2,768,000.00	\$1,459,770.00	\$13,396,124.00	14
Site #2	2-D	7-6-2-15-27-29	2,154	\$3,493,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$2,593,000.00	\$1,938,580.00	\$13,699,934.00	8
Site #2	2-E	7-6-5-18-28-31	2,150	\$3,493,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$3,097,000.00	\$1,863,680.00	\$14,129,034.00	9
Site #2	2-F	35-32-30-29	1,601	\$3,493,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$2,227,000.00	\$1,352,330.00	\$12,747,684.00	7
Site #2	2-G	36-38-40	2,150	\$3,493,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$2,780,000.00	\$1,378,930.00	\$13,327,284.00	11
Site #2	2-H	39-40	1,925	\$3,493,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$2,931,000.00	\$1,339,380.00	\$13,438,734.00	12
Site #3	3-I	25-24-33	783	\$3,618,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$1,877,000.00	\$569,900.00	\$11,740,254.00	6
Site #3	3-J	25-34	694	\$3,618,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$1,866,000.00	\$497,800.00	\$11,657,154.00	5
Site #3	3-K	35	415	\$3,618,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$1,073,000.00	\$331,900.00	\$10,698,254.00	3
Site #3	3-L	36-37	464	\$3,618,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$1,085,000.00	\$329,100.00	\$10,707,454.00	4
Site #4	NA	None	0	\$3,493,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$820,000.00	\$182,950.00	\$10,171,304.00	2
Site #5	NA	None	0	\$3,868,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$697,000.00	*\$343,364.00	\$10,583,718.00	1
Site #6	6-M	26	904	\$3,618,750.00	\$761,774.00	\$3,800,000.00	\$1,112,830.00	\$1,374,000.00	\$857,760.00	\$11,525,114.00	10

Footnotes:

Sub Civil \$: Civil engineering consulting, contracted sitework/inspection and foundation materials.

Sub Civil Construction \$: Internal labor for substation civil below grade and foundations construction.

Sub Elec \$: Substation engineering and electrical materials/equipments.

Sub Elec Construction \$: Internal labor for substation electrical construction.

Trans \$: Transmission line design, materials, and construction.

ROW \$: Transmission line easements, substation properties, and ROW acquisition misc. costs.

* Site 5 ROW cost is a fixed sunk cost. All other ROW amounts are estimated costs based on Bexar Appraisal values.

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Figure 6-1: Habitable Structures and Other Land Use Features in the Vicinity of the Primary Alternatives

This oversized map is located in a map pocket in the back of this document

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7.0 LIST OF PREPARERS

This Environmental Assessment was prepared for CPS Energy by Burns & McDonnell. Below is a list of Burns & McDonnell employees with primary responsibilities for the preparation of this document.

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APPENDIX A - AGENCY CORRESPONDENCE



February 28, 2020

Attn:
Title:
Agency:
Street Address:
City, State, Zip Code:

Re: Tezel Substation & Tie-In 138-kV Transmission Line Project

Dear _____:

CPS Energy is proposing to construct a new electric substation and transmission line in the northwestern area of San Antonio near the intersection of Tezel Road and Guilbeau Road in Bexar County, Texas. The proposed Tezel Substation will provide additional electric capacity to support community growth and to improve the reliability of electric services to homes and businesses in the area. The new substation will cover an area of approximately 1.5 to 2.5 acres and will be connected to the existing CPS Energy Bandera to Helotes 138-kilovolt (kV) transmission line. Please refer to the attached map for the location of the Study Area. We would like your assistance in obtaining any information that would be useful in planning the Project.

Burns & McDonnell is preparing an Environmental Assessment and Alternative Siting and Routing Analysis (EA). Burns & McDonnell is in the process of collecting and evaluating environmental data for the Study Area. As part of this effort, we are asking that your agency/office relate any environmental or land use concerns that you may have regarding the siting and potential environmental effects from the construction of the proposed substation/transmission line in the designated Study Area.

Additionally, if any permits, easements, or other approvals by your agency/office are required, or if you are aware of any major proposed development or construction in the Study Area, we would also appreciate receiving this information as well.

Your input on any of the following resources as they relate to your agency or office will assist the Project team in evaluating the proposed Project:

- Land use (current or proposed land development projects, park/recreation areas, etc.)
- Aesthetics
- Water quality and wetlands
- Soils and geology
- Wildlife, vegetation, and fisheries (including threatened and endangered species)
- Socioeconomics (population, employment, growth, current/future development)
- Cultural resources (historic and archeological)



- Transportation and roads (airport and roadway expansions, construction, operations, and maintenance)

Burns & McDonnell would like to thank you in advance for your comments, which will be an important consideration in our assessment of potential environmental and land use impacts of the proposed Project. If you have any questions concerning this Project or our request for information, please contact me at djgreen@burnsmcd.com or 512-975-7860. Your earliest reply will be appreciated.

Sincerely,

Derek Green

Derek Green
Senior Environmental Scientist

DG/dg

Attachment

cc: Antonio Demendonca, CPS Energy
Juan Sandoval, CPS Energy

OFFICIALS/AGENCIES CONTACTED
CPS TEZEL SUBSTATION & TIE-IN 138-KV TRANSMISSION LINE PROJECT

FEDERAL

Tony Robinson
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Region VI
Federal Emergency Management Agency
FRC 800 North Loop 288
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Salvador Salinas
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Natural Resources Conservation Service
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Assistant State Conservationist
Administrative Zone 3 – Corpus Christi Office
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Stephen Brooks
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Fort Worth District
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819 Taylor Street
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Ken McQueen
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Obstruction Evaluation Group
Federal Aviation Administration
Southwest Region
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Department of Defense Siting Clearinghouse
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The Honorable Joaquin Castro
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727 E. Cesar E. Chavez Blvd Suite B-128
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CPS TEZEL SUBSTATION & TIE-IN 138-KV TRANSMISSION LINE PROJECT

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Wei Wang
Executive Director
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Deputy Executive Administrator
Water Supply and Infrastructure
Texas Water Development Board
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San Antonio District
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Environmental Affairs Division
Texas Department of Transportation
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The Honorable Ray Lopez
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5309 Wurzbach Road, Suite 200-9
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The Honorable Ina Minjarez
Texas House District 124
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San Antonio, TX 78227

The Honorable José Menéndez
Texas Senate District 26
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Bexar County Farm Service Agency
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The Honorable Nelson W. Wolff
Bexar County Judge
101 W. Nueva, 10th Floor
San Antonio, TX 78205

David L. Smith
Bexar County Manager
101 W. Nueva, 10th Floor
San Antonio, TX 78205

Justin Rodriguez
Bexar County Precinct 2 Commissioner
Commissioners Court
101 W. Nueva, 10th Floor
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OFFICIALS/AGENCIES CONTACTED
CPS TEZEL SUBSTATION & TIE-IN 138-kV TRANSMISSION LINE PROJECT

LOCAL

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City of San Antonio
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Director of Public Works
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Ms. Bridgett White
City of San Antonio Department of Planning &
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City of San Antonio Office of Historic
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Ms. Ana Sandoval
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Northside ISD Central Office
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Alamo Area Council of Governments
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Vice Chairman
Bexar County – District 4
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OFFICIALS/AGENCIES CONTACTED
CPS TEZEL SUBSTATION & TIE-IN 138-kV TRANSMISSION LINE PROJECT

Donovan Burton
VP Water Resources & Governmental Relations
San Antonio Water System
2800 U.S. Highway 281 North
San Antonio, TX 78212

Mr. Todd Putnam, P.E., CFM
Bexar County Flood Control
1948 Probandt St
San Antonio, TX 78214

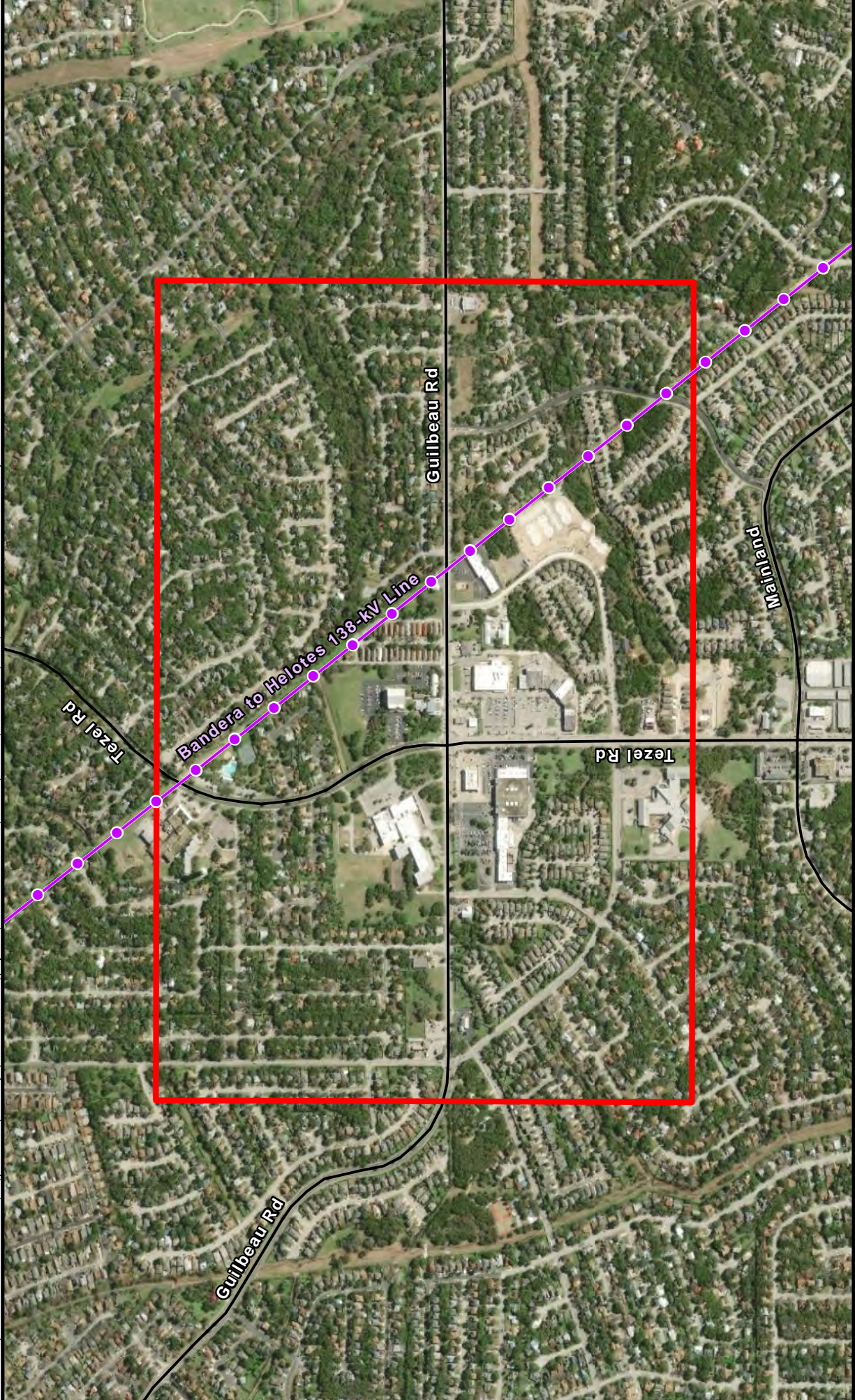
Mr. David E. Marquez
Executive Director
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San Antonio, TX 78205

Bexar County Historical Commission
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Colleen Swain
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Texas Nature Conservancy
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San Antonio, TX 78215

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<p>Existing Transmission Line Study Area Boundary</p>		<p>BURNS MCDONNELL</p> <p>Tezel Substation & Tie-In 138-kV Transmission Line Project CPS Energy Bexar County, Texas</p>
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Green, Derek J

From: Green, Derek J
Sent: Wednesday, March 4, 2020 8:35 AM
To: OSD Pentagon OUSD A-S Mailbox ASDS Inf SitingClearinghouse
Subject: RE: [Non-DoD Source] New substation and transmission line for CPS Energy

Mr. Owens,

Thank you for your reply. The structure heights will be 125 feet above the ground.

Derek Green

From: OSD Pentagon OUSD A-S Mailbox ASDS Inf SitingClearinghouse <osd.pentagon.ousd-a-s.mbx.asds-inf-sitingclearinghouse@mail.mil>
Sent: Monday, March 2, 2020 1:39 PM
To: Green, Derek J <djgreen@burnsmcd.com>
Subject: RE: [Non-DoD Source] New substation and transmission line for CPS Energy

Mr. Green,

Thank you for submitting the Tezel 138kV transmission line/substation project for an informal review. We have mapped the project and will be sending it to the Services for review in the near future. To expedite their review, are you able to provide the structure heights above ground level for the transmission infrastructure?

Very Respectfully,

Nathan Owens
Military Aviation & Installation Assurance Siting Clearinghouse
Office of the Assistant Secretary of Defense (Sustainment)
Mark Center 16F18
Office# 703-571-9057
nathan.d.owens12.ctr@mail.mil

From: Green, Derek J <djgreen@burnsmcd.com>
Sent: Friday, February 28, 2020 2:51 PM
To: OSD Pentagon OUSD A-S Mailbox ASDS Inf SitingClearinghouse <osd.pentagon.ousd-a-s.mbx.asds-inf-sitingclearinghouse@mail.mil>; Miller, Brin A CTR (USA) <brin.a.miller.ctr@mail.mil>
Subject: [Non-DoD Source] New substation and transmission line for CPS Energy

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

CPS Energy is proposing to construct a new electric substation and 138-kilovolt (kV) transmission line in the northwestern area of San Antonio near the intersection of Tezel Road and Guilbeau Road in Bexar County, Texas. The

proposed transmission line will be approximately 0.5 mile long and will tie into the Bandera to Helotes 138-kV line. Attachments to this email include:

- letter request for information
- map of the study area
- kmz file containing the study area boundary for your reference

Burns & McDonnell is preparing an Environmental Assessment (EA) and Alternative Siting/ Routing Study for the proposed project. Burns & McDonnell is in the process of collecting and evaluating environmental and land use data for the study area. As part of this effort, we are asking that you review the information and relate any concerns that you may have regarding the siting and potential effects from the construction of the proposed electric transmission line in the designated study area.

Please contact me if you have any questions or require additional information.

Thank you,

Derek Green

Senior Environmental Scientist, Environmental Studies and Permitting
Burns & McDonnell
8911 Capital of Texas Highway
Building 3, Suite 3100
Austin, TX 78759
Direct: 512-975-7860
Cell: 512-663-5542
djgreen@burnsmcd.com < Caution-mailto:djgreen@burnsmcd.com >
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SUSTAINMENT

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3500 DEFENSE PENTAGON
WASHINGTON, DC 20301-3500

April 13, 2020

Derek Green
Burns & McDonnell
8911 Capital of Texas Highway
Building 3, Suite 3100
Austin, TX 78759

Dear Mr. Green,

As requested, the Military Aviation and Installation Assurance Siting Clearinghouse coordinated within DoD an informal review of the Tezel Transmission Line Project. The results of our review indicated that the transmission line project, located in Bexar County, Texas, as proposed, will have minimal impact on military operations conducted in the area.

Please note that this informal review by the DoD Military Aviation and Installation Assurance Siting Clearinghouse does not constitute an action under 49 United States Code Section 44718 and that the DoD is not bound by the conclusion arrived at under this informal review. To expedite our review in the Obstruction Evaluation Airport Airspace Analysis (OE/AAA) process, please add the project number 2020-02-T-ERC-14 in the comments section of the filing. If you have any questions, please contact me at steven.j.sample4.civ@mail.mil or at 703-571-0076.

Sincerely,

A handwritten signature in blue ink, reading "Steven J. Sample", is positioned above the typed name.

Steven J. Sample
Deputy Director
Military Aviation and Installation
Assurance Siting Clearinghouse

From: [Gray, Natasha A CIV USARMY CESWF \(USA\)](#)
To: [Green, Derek J](#)
Cc: [Dephouse, Eric J CIV USARMY CESWF \(USA\)](#)
Subject: Permit Application Acknowledgement Letter (UNCLASSIFIED)
Date: Tuesday, March 3, 2020 2:18:05 PM
Attachments: [image003.emz](#)
[image004.png](#)

CLASSIFICATION: UNCLASSIFIED

March 3, 2020

Regulatory Division

SUBJECT: Project Number SWF-2020-00123, Tezel Substation & Tie-In 138kV Transmission Line

Mr. Derek Green
Burns & McDonnell
8911 North Capital of Texas Highway
Building 3, Suite 3100
Austin, Texas 78759

Dear Mr. Green:

Thank you for your letter received March 2, 2020, concerning a proposal by CPS Energy to construct a new electric substation and transmission line located in San Antonio, Bexar County, Texas. The project has been assigned Project Number SWF-2020-00123, please include this number in all future correspondence concerning this project.

Mr. Eric Dephouse has been assigned as the regulatory project manager for your request and will be evaluating it as expeditiously as possible.

You may be contacted for additional information about your request. For your information, please refer to the Fort Worth District Regulatory Division homepage at <http://www.swf.usace.army.mil/Missions/regulatory> and particularly guidance on submittals at <https://swf-apps.usace.army.mil/pubdata/enviro/regulatory/introduction/submital.pdf> and mitigation at <https://www.swf.usace.army.mil/Missions/Regulatory/Permitting/Mitigation> that may help you supplement your current request or prepare future requests.

If you have any questions about the evaluation of your submittal or would like to request a copy

of one of the documents referenced above, please refer to our website at <http://www.swf.usace.army.mil/Missions/Regulatory> or contact Mr. Eric Dephouse at the address above, by telephone (817) 886-1820, or by email Eric.J.Dephouse@usace.army.mil, and refer to your assigned project number. Please note that it is unlawful to start work without a Department of the Army permit if one is required.

Please help the regulatory program improve its service by completing the survey on the following website: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

Brandon W. Mobley
Chief, Regulatory Division

Natasha Gray
Legal Instruments Examiner
Regulatory Division
U.S. Army Corps of Engineers
819 Taylor Street, Rm 3A37
Fort Worth, Texas 76102
Phone: 817-886-1461
Email: natasha.a.gray@usace.army.mil

CLASSIFICATION: UNCLASSIFIED

Green, Derek J

From: Dephouse, Eric J CIV USARMY CESWF (USA) <Eric.J.Dephouse@usace.army.mil>
Sent: Thursday, March 26, 2020 3:34 PM
To: Green, Derek J
Subject: SWF-2020-00123 Tezel Substation & Tie-In 138kV Transmission Line
Attachments: ORM_Upload_Sheet_AqResources_Rapanos_20190428.xlsm; SWF_NWP_12_Application_Form.doc

Derek:

I've been assigned USACE Project No. SWF-2020-00123 Tezel Substation & Tie-In 138kV Transmission Line, received March 2, 2020, which appears incomplete. We are unable to determine from the information that you provided in your letter whether Department of the Army authorization will be required, and if so, in what form. The proposed construction activities may be authorized by general permit, such as Nationwide Permit 12 for Utility Line Activities. If the project does not meet the terms and conditions of a general permit, an individual permit would be required for authorization.

In order for us to continue our review of this project, please address the following:

1. Please submit a professional delineation of wetlands, other special aquatic sites and other waters for the 1.5 acre to 2.5 acre site for the substation and associated ROW's for new transmission lines. A qualified specialist (biologist, ecologist or other specialist qualified in delineations and jurisdictional determinations) who is familiar with the Great Plains Region Regional Supplement to the 1987 Corps of Engineers Wetlands Delineation Manual and the USACE Regulatory Program (33 CFR Parts 320-331) should complete the delineation.
2. The delineation report should be updated to include site inspection photos and photo key showing where the photos were taken throughout the project site and the direction in which each photo was taken.
3. Please provide an impact exhibit (plan views only) of wetlands, other special aquatic sites and other waters, for the project area which depicts all permanent and/or temporary impacts (acres for lakes/wetlands, acres and linear feet for streams/rivers) overlaid on the most recent aerial imagery possible.
4. Please complete an ORM Upload Sheet (attached).
5. Please contact the Fort Worth District's Regulatory Archeology Section (Mr. Jimmy Barrera at james.e.barrera@usace.army.mil or 817-886-1838) to determine what, if any, additional Section 106 (National Historic Preservation Act) requirements apply to this project. I need verification from Jimmy that Sec 106 issues have been addressed before finalizing the permit verification document.
6. If you believe a Nationwide Permit 12 can be used for this project, please submit a completed Fort Worth District NWP 12 application form (attached).
7. Please provide additional exhibits showing the proposed route of the project on 8 ½ by 11-inch copies of 7.5-minute United States Geological Survey (USGS) quadrangle maps, national wetland inventory maps, published soil survey maps, scaled aerial photographs, and/or other suitable maps. Identify all base maps, (e.g. "Fort Worth, Texas" 7.5-minute USGS quadrangle, Natural Resources Conservation Service Tarrant County Soil Survey sheet 10). Clearly mark (such as by circling) and number the location of each proposed utility line crossing of a water of the United States and any appurtenant structure(s) in waters of the United States on the map. Waters of the United States include streams and

rivers and most lakes, ponds, mudflats, sandflats, wetlands, sloughs, wet meadows, abandoned sand and gravel mining and construction pits, and similar areas.

We encourage you to consult with a qualified specialist (biologist, ecologist or other specialist qualified in preliminary jurisdictional determinations) who is familiar with the Great Plains Regional Supplement to the 1987 Corps of Engineers Wetlands Delineation Manual and the USACE Regulatory Program (33 CFR Parts 320-331).

Important cultural resources are known to occur in the vicinity of the proposed project. Threatened and endangered and threatened species may also be affected. Please consider the potential effects of your proposed action on cultural resources and threatened/endangered species in your planning efforts. For additional information about threatened and endangered species, please contact the U. S. Fish and Wildlife Service.


We encourage you to avoid and minimize adverse impacts to streams, wetlands, and other waters of the United States in planning this project. Please forward your response to us as soon as possible so that we may continue our evaluation of your request. If we do not receive the requested information within 30 days of the date of this correspondence, we will consider your application administratively withdrawn. If withdrawn, you may re-open your application at a later date by submitting the requested information.

Please note that it is unlawful to start work without a Department of the Army permit when one is required.

Based on the responses to the items above, additional completeness items may be required to continue our review of the submittal. Please email me responses that are small (15 MB or less) with attachments in pdf format. Large responses (greater than 15 MB) can be with multiple emails & the attachments split up, or with pdf's burned to a CD and sent to our office (no physical hardcopy is needed). If you have any further questions or concerns, please feel free to contact me at (817) 886-1820 or eric.j.dephouse@usace.army.mil

Respectfully,

Eric Dephouse

Eric Dephouse
Project Manager
US Army Corps of Engineers
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USACE Fort Worth District Regulatory Division Website

<https://nam05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.swf.usace.army.mil%2Fmissions%2Fregulatory.aspx&data=02%7C01%7Cdjgreen%40burnsmcd.com%7C2072d125a789451f04bd08d7d1c57446%7Cbfb9a2b6d994e78b3c795005d555c8b%7C0%7C1%7C637208519718280471&sd=JTyn8gRrArOJWVHNR9F9KYNDgk8quwY7ZRpo1%2BPCpSA%3D&reserved=0>

NEW: USACE Fort Worth District Regulatory Division Electronic Submittal Process

<https://nam05.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.swf.usace.army.mil%2Fmissions%2Fregulatory%2Felectronic-submittal-instructions%2F&data=02%7C01%7Cdjgreen%40burnsmcd.com%7C2072d125a789451f04bd08d7d1c57446%7Cbfb>

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Please help the Regulatory Program improve its service by completing the survey on the following website:

https://nam05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fcorpsmapu.usace.army.mil%2Fcm_apex%2Ff%3Fp%3Dregulatory_survey&data=02%7C01%7Cdjgreen%40burnsmcd.com%7C2072d125a789451f04bd08d7d1c57446%7Cbfb9a2b6d994e78b3c795005d555c8b%7C0%7C1%7C637208519718280471&data=fqxJArm8gk7xZ%2By1SgVZDq3AeRJGST4b9JKb91Xb4%3D&reserved=0



OMBIL Regulatory Module (ORM) Project Upload Template

Version Date: 28-Apr-2019

Please be aware: if older versions of Microsoft Office or Excel are utilized with this template, the user *may* experience issues with the functionality and features of this template.

Reminder: when using copy/paste to transfer data from one template to another, you must *not* use the regular paste functionality. This will cause formatting issues. Instead, use the "paste values" functionality.

Change Log

28-Apr-2019 Current Version

- AqResources Worksheet - If Aquatic Resources shapefile specified, Latitude / Longitude not required
- Request Details Worksheet - Added validation: a DA# must be provided

10-Dec-2018 Version

- NWP and RGP_PGP Worksheets - Replaced EVALCKLST_Historic_Properties column with EVALCKLST_S106_NHPA
- VBA Code - Added validation of new EVALCKLST_S106_NHPA list selections
- Finalize Worksheet - Replaced tab with new 'Request Details'. Made requisite VBA code changes to enforce entry of Load and Finalize columns
- Mitigation Worksheet - Added validation to ensure that the Proposed and Required amounts are entered.

19-Sep-2018 Current Version

- VBA Code - Corrected Validation VBA code throwing "Object variable or With block variable not set"
- AqResources worksheet - Removed Waters Type 'TNWRPW' from the Waters_Type dropdown menu.

22-May-18

- NWP worksheet - Added 'CD_Date_App_First_Received'
- PGP/RGP worksheet - Added 'CD_Date_App_First_Received'

11-Jan-2018 Version

- NWP worksheet - Updated Closure_Method column values
- RGP_PGP worksheet - Updated Closure_Method column values and removed cascading dependency upon the Permit Type column
- Format worksheet - Consolidated the Closure_Method_NWP, Closure_Method_RGP, and Closure_Method_PGP columns into a single Closure_Method_GP column and updated the list of values
- Format worksheet - Updated the Closure_Method_ID column values
- VBA - Updated VerifyValues calls in ValidateNWP() and ValidateRGP_PGP() to reference the new Closure_Method_GP list of values

30-OCT-2017 Version

- Mitigation worksheet - Added check to allow "0"s in Proposed_Amount and Required_Amount

20-APR-2017 Version

- AqResources worksheet - Limited list of Cowardin Code options to second and third tiers only
- Impacts worksheet - Added Length and Width columns for Initially Proposed, Proposed and Authorized
- Impacts worksheet - Removed Linear columns
- Impacts worksheet - Changed "Area" labels to "Amount"
- Impacts worksheet - Updated Amount_Type to include Fill Volume and Removal Volume
- Impacts worksheet - Updated Amount_Units to include Cubic Yards (volume)
- Impacts worksheet - Added check to ensure Amount_Units is specified if Amount is provided
- Impacts worksheet - Added check to ensure either Length/Width are provided OR Amount is provided but not both
- Impacts worksheet - Added check to ensure that if Length is provided, Width must also be provided (and vice versa)
- Impacts worksheet - Added check to ensure that if Amount_Type is Volume, then Amount must be entered, not Length and Width
- Impacts worksheet - Added check to ensure that if a value is provided for any Stage (I/P/A), then a value must be provided for all Stages
- Mit-PermitteeResp worksheet - Added Length and Width columns for Proposed and Required
- Mit-PermitteeResp worksheet - Removed linear columns
- Mit-PermitteeResp worksheet - Changed "Area" labels to "Amount"
- Mit-PermitteeResp worksheet - Added check to ensure Amount_Units is specified if Amount is provided
- Mit-PermitteeResp worksheet - Added check to ensure either Length/Width are provided OR Amount is provided but not both
- Mit-PermitteeResp worksheet - Added check to ensure that if Length is provided, Width must also be provided (and vice versa)
- Mit-PermitteeResp worksheet - Added check to ensure that if a value is provided for either Proposed or Required, then a value must be provided for both Stages
- NWP worksheet - Updated NWP_ID list and associated Permit_Authority list with the 2017 data
- NWP worksheet - Moved the Permit_Authority column to the left of the NWP_ID column
- NWP worksheet - The NWP_ID values displayed are now dependent upon the selected Permit_Authority value

02-JUN-2016 Version

- Mit-PermitteeResp worksheet - waters that exist on the Mit-PermitteeResp worksheet must also appear on either the NWP worksheet or on the PGP/RGP worksheet
- MitBank_ILF worksheet - waters that exist on the MitBank_ILF worksheet must also appear on either the NWP worksheet or on the PGP/RGP worksheet
- added a validation to check for garbage characters in the Waters Name column values of all worksheets

21-APR-2016 Version

- removed 100K blank rows of data from the Aquatic Resources worksheet of the Consolidated Rapanos template, reducing its size from 9M to 180K.

31-MAR-2016 Version

- added a Version worksheet
- General - removed the dropdowns from the header cells on all user input worksheets
- General - standardized user functionality across all user input worksheets
- AqResources worksheet - changed the format of columns I (Latitude) and J (Longitude) to be decimal formatted numbers with 8 significant digits of precision
- AqResources worksheet - added a Validation check to ensure Amount > zero
- AqResources worksheet - add validation check requiring Water Type of Upland (Rapanos)/Dry Land (CWR) when Cowardin Code = U
- NWP worksheet - the Validation process will now verify whether Mitigations are present in the Mit-PermitteeResp or MitBank_ILF worksheets if cells in column S (Compensatory_Mitigation_Reqd) of the NWP worksheet are set to a value of YES
- RGP_PGP worksheet - the Validation process will now verify whether Mitigations are present in the Mit-PermitteeResp or MitBank_ILF worksheets if cells in columns U (Compensatory_Mitigation_Reqd) of the RGP_PGP worksheet are set to a value of YES

U.S. Army Corps of Engineers (USACE) Fort Worth District



Nationwide Permit (NWP) Pre-Construction Notification (PCN) Form

This form integrates requirements of the Nationwide Permit Program within the Fort Worth District, including General and Regional Conditions. Please consult instructions included at the end prior to completing this form.

Contents

- **Description of NWP 12**
- **Part I:** NWP Conditions and Requirements Checklist
 - General Conditions Checklist
 - NWP 12-Specific Requirements Checklist
 - Regional Conditions Checklist
- **Part II:** Project Information Form
- **Part III:** Project Impacts and Mitigation Form
- **Part IV:** Attachments Form
- **Instructions**

DESCRIPTION OF NWP 12 – UTILITY LINE ACTIVITIES

Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States (U.S.), provided the activity does not result in the loss of greater than 1/2-acre of waters of the U.S for each single and complete project.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, into waters of the U.S., provided there is no change in pre-construction contours. A “utility line” is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio and television communication. The term “utility line” does not include activities that drain a water of the U.S., such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the U.S. for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the U.S. (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the U.S., provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the U.S. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the U.S. to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and

anchors in all waters of the U.S., provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the U.S., provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the U.S. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary. Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the U.S. and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the U.S. must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the U.S. even if there is no associated discharge of dredged or fill material (See 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 32.) (Authorities: Sections 10 and 404)

Part I: NWP Conditions and Requirements Checklist

To ensure compliance with the General Conditions (GC), in order for an authorization by a NWP to be valid, please answer the following questions:

1. Navigation (Applies to Section 10 waters [i.e. navigable waters of the U.S.], see instruction 4 for link to list):

- a. Does the project cause more than a minimal adverse effect on navigation?
 Yes No N/A
- b. Does the project require the installation and maintenance of any safety lights and signals prescribed by the U.S. Coast Guard on authorized facilities in navigable waters of the U.S.?
 Yes No N/A
- c. Does the Applicant understand and agree that if future operations by the U.S. require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Applicant will be required, upon due notice from the USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S.; and no claim shall be made against the U.S. on account of any such removal or alteration?
 Yes No N/A

If you answered yes to question a. or b. above, or if you answered no to question c. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

2. Aquatic Life Movements:

- a. Does the project substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area? Yes No
- b. Is the project's primary purpose to impound water? Yes No
- c. Will culverts placed in streams be installed to maintain low flow conditions to sustain the movement of those aquatic species? Yes No N/A

If you answered yes to question a. or b. above, or if you answered no to question c. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

3. Spawning Areas:

- a. Does the project avoid spawning areas during the spawning season to the maximum extent practicable? Yes No N/A
- b. Does the project result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area?
 Yes No N/A

If you answered no to question a. above, or if you answered yes to question b. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

4. Migratory Bird Breeding Areas:

- a. Does the project avoid waters of the U.S. that serve as breeding areas for migratory birds to the maximum extent practicable? Yes No N/A

If you answered no to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

5. Shellfish Beds:

a. Does the project occur in areas of concentrated shellfish populations? Yes No

If you answered yes to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

6. Suitable Material:

a. Does the project use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.)?
 Yes No

b. Is the material used for construction or discharged in a water of the U.S. free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act)? Yes No

If you answered yes to question a. above, or if you answered no to question b. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

7. Water Supply Intakes:

a. Does the project occur in the proximity of a public water supply intake? Yes No

If you answered yes to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

8. Adverse Effects From Impoundments:

a. Does the project create an impoundment of water? Yes No

b. If you answered yes to question a. above, are the adverse effects (to the aquatic system due to accelerating the passage of water, and/or restricting its flow) minimized to the maximum extent practicable? Yes No N/A

If you answered no to question b. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

9. Management of Water Flows:

a. Does the project maintain the pre-construction course, condition, capacity, and location of open waters to the maximum extent practicable, for each activity, including stream channelization and storm water management activities? Yes No

b. Will the project be constructed to withstand expected high flows? Yes No

c. Will the project restrict or impede the passage of normal or high flows? Yes No

If you answered no to question a. or b. above, or if you answered yes to question c. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

10. Fills Within 100-Year Floodplains:

a. Does the project comply with applicable FEMA-approved state or local floodplain management requirements? Yes No N/A

If you answered no to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

11. Equipment:

- a. Will heavy equipment working in wetlands or mudflats be placed on mats, or other measures be taken to minimize soil disturbance? Yes No N/A

If you answered no to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

12. Soil Erosion and Sediment Controls:

- a. Will the project use appropriate soil erosion and sediment controls and maintain them in effective operating condition throughout construction? Yes No
- b. Will all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, be permanently stabilized at the earliest practicable date? Yes No
- c. Be aware that if work will be conducted within waters of the U.S., Applicants are encouraged to perform that work during periods of low-flow or no-flow.

If you answered no to question a. or b. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

13. Removal of Temporary Fills:

- a. Will temporary fills be removed in their entirety and the affected areas returned to pre-construction elevations? Yes No N/A
- b. Will the affected areas be revegetated, as appropriate? Yes No N/A

If you answered no to question a. or b. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

14. Proper Maintenance:

- a. Will any authorized structure or fill be properly maintained, including maintenance to ensure public safety? Yes No

If you answered no to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

15. Single and Complete Project:

- a. Does the Applicant certify that the project is a "single and complete project" as defined below? Yes No

Single and complete project:

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Independent utility: Defined as a test to determine what constitutes a single and complete non-linear project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

16. Wild and Scenic River:

There are no Wild and Scenic Rivers within the geographic boundaries of the Fort Worth District. Therefore, this GC does not apply.

17. Tribal Rights:

a. Will the project or its operation impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights? Yes No N/A

If you answered yes to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

18. Endangered Species (see also Box 8 in Part III):

a. Is the project likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or will the project directly or indirectly destroy or adversely modify the critical habitat of such species? Yes No

b. Might the project affect any listed species or designated critical habitat? Yes No

c. Is any listed species or designated critical habitat in the vicinity of the project?
 Yes No

d. If the project "may affect" a listed species or critical habitat, has Section 7 consultation addressing the effects of the proposed activity been completed? Yes No N/A

If you answered yes to question a. or b. or c. above, or if you answered no to question d. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

19. Migratory Birds and Bald and Golden Eagles:

a. Does the project have the potential to impact nests, nesting sites, or rookeries of migratory birds, bald or golden eagles? Yes No N/A

If you answered yes to question a. above, you are responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to obtain any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act.

20. Historic Properties (see also Box 9 in Part III):

a. Does the project have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties?

Yes No N/A

If you answered yes to question a. above, please explain how the project would be in compliance with this GC or be aware that the project would require an individual permit application:

21. Discovery of Previously Unknown Remains and Artifacts:

If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, *you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed.* The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters:

a. Will the project impact critical resource waters, which include NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment? Yes No

If you answered yes to question a. above, be aware that discharges of dredged or fill material into waters of the U.S. are not authorized by NWP 12 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

23. Mitigation (see also Box 10 in Part III):

a. Will the project include appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal? Yes No

If you answered no to question a. above, please include an explanation in Box 10 of why no mitigation would be necessary in order to be in compliance with this GC or be aware that the project would require an individual permit application.

24. Safety of Impoundment Structures:

a. Has the impoundment structure been safely designed to comply with established state dam safety criteria or has it been designed by qualified persons? Yes No N/A

If you answered yes to question a. above, non-federal applicants may be required to provide documentation that the design has been independently reviewed by similarly qualified persons with appropriate modifications to ensure safety. If you answered no, please include an explanation in Box 10 of why the structure is exempt from state dam safety criteria or be aware that the project may require an individual permit application.

25. Water Quality (see also Box 11 in Part III):

a. If in Texas, does the project comply with the conditions of the TCEQ water quality certification for NWP 12? Yes No N/A

b. If in "Indian Country," does the project comply with the conditions of the EPA water quality certification for NWPs? Yes No N/A

c. If in Louisiana, does the project comply with the conditions of the LADEQ water quality certification for NWP 12? Yes No N/A

If you answered no to question a. or b. above, please be aware that the project would require an individual permit application.

26. Coastal Zone Management:

The Fort Worth District does not cover any Coastal Zone; therefore, this GC does not apply.

27. Regional and Case-By-Case Conditions:

See the Regional Conditions checklist to ensure compliance with this GC.

28. Use of Multiple Nationwide Permits:

- a. Does the project use more than one NWP for a single and complete project? Yes No
- b. If you answered yes to question a. above, be aware that unless the project's acreage loss of waters of the U.S. authorized by the NWPs is below the acreage limit of the NWP with the highest specified acreage limit, no NWP can be issued and the project would require an individual permit application.

If you answered yes to question a. above, please explain how the project would be in compliance with this GC and what additional NWP number you intend to use:

29. Transfer of Nationwide Permit Verifications:

- a. Does the Applicant agree that if he or she sells the property associated with the nationwide permit verification, the Applicant may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate USACE district office to validate the transfer?
 Yes No

30. Compliance Certification:

- a. Does the Applicant agree that if he or she receives the NWP verification from the USACE, they must submit a signed certification regarding the completed work and any required mitigation (the certification form will be sent by the USACE with the NWP verification letter)?
 Yes No

31. Activities Affecting Structure or Works Built by the United States

- a. Does the project temporarily or permanently alter and/or occupy a USACE federally authorized Civil Works project? Yes No

If you answered yes to question a. above, notification is required in accordance with general condition 32, for any activity that requires permission from the Corps. The district engineer may authorize activities under these NWPs only after a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

32. Pre-Construction Notification:

- a. Reason for notification:
 - Mechanized land clearing in a forested wetland.
 - Require a Section 10 permit.
 - Utility line exceeds 500 feet in waters of the U.S., excluding overhead lines.
 - Utility line is within a jurisdictional area (i.e., water of the U.S.), and the utility line runs parallel to or along a stream bed that is within that jurisdictional area.
 - The loss of waters of the U.S. exceeds 1/10 acre.
 - Permanent access roads are constructed above grade in waters of the U.S. for a distance of more than 500 feet.
 - Permanent access roads are constructed in waters of the U.S. with impervious materials.
 - Potential endangered species.
 - Potential historic properties.
 - Discharge into pitcher plant bog or bald cypress-tupelo swamp.
 - Discharge into the area of Caddo Lake within Texas that is designated as a "Wetland of International Importance" under the Ramsar Convention.

Work that would result in the modification or alteration of any completed Corps of Engineers projects that are either locally or federally maintained or if work would occur within the conservation pool or flowage easement of any Corps of Engineers lake project.

Required by Louisiana Regional Conditions.

Other:

b. Does the Applicant agree that he or she will not begin the project until either:

1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Yes No

c. Does the Applicant agree that if the district or division engineer notifies the Applicant in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the Applicant cannot begin the activity until an individual permit has been obtained?

Yes No

To ensure compliance with the NWP 12-specific requirements please answer the first question regarding all utility line activities and then answer the other questions as they apply to your project.

All utility line activities:

1. Does the project cause the loss of greater than 1/2-acre non-tidal waters of the U.S. at any crossing considered a single and complete project? Yes No

If you answered yes to question 1. above, be aware that the project would not be authorized by a NWP 12 and would require an individual permit application or the use of regional general permit CESWF-05-RGP-2 (see USACE Fort Worth District website for information on conditions and requirements).

2. Does each activity/crossing considered a single and complete project have independent utility? Yes No N/A

If you answered no to question 2. above, be aware that the project may require an individual permit application.

3. a. Will any temporary structures, fills, and work necessary to construct the project meet the criteria for maintaining flows, minimizing flooding, and withstanding high flows?

Yes No N/A

b. Will temporary structures and fills be removed in their entirety and the affected areas be returned to pre-construction elevations and revegetated, as appropriate?

Yes No N/A

If you answered no to question a. or b. above, be aware that the project would not be authorized by a NWP 12 and would require an individual permit application.

Utility lines:

4. Does the project involve a change in pre-construction contours? Yes No

If you answered yes to question 4. above, be aware that the project would not be authorized by a NWP 12 and may require an individual permit application.

5. Does the project include activities that drain a water of the U.S., such as drainage tile or french drains? Yes No

If you answered yes to question 5. above, be aware that the project is not considered a "utility line" and would not be authorized by a NWP 12 and may require an individual permit application. Note: Pipes that convey drainage from another area are considered a "utility line."

6. a. Does the project involve leaving sidecasts from trench excavation in waters of the U.S. for more than three months? Yes No

b. Does the project involve placing sidecasts from trench excavation in waters of the U.S. in such a manner that the sidecasts are dispersed by current or other forces? Yes No

If you answered yes to question a. above, be aware that the district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate, and otherwise an individual permit application may be required. If you answered yes to question b. above, be aware that the project would not be authorized by a NWP 12 and may require an individual permit application.

7. In wetlands, does the project involve backfilling the top 6 to 12 inches of the trench with topsoil from the trench? Yes No N/A

If you answered no to question 7. above, please explain how the project would be in compliance with this requirement and be aware that the project may not be authorized by a NWP 12 and may require an individual permit application:

- 8.** Does the project involve constructing or backfilling a trench in such a manner as to drain waters of the U.S. (e.g., backfilling with extensive gravel layers, creating a french drain effect)?
 Yes No

If you answered yes to question 8. above, be aware that the project would not be authorized by a NWP 12 and may require an individual permit application.

- 9.** Will the project, upon completion of the utility line crossing of each waterbody, immediately stabilize exposed slopes and stream banks? Yes No N/A

If you answered no to question 9. above, be aware that the project would not be authorized by a NWP 12 and may require an individual permit application.

- 10.** Does the project involve pipes or pipelines that will be used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the U.S.? Yes No N/A

If you answered yes to question 10. above, be aware that these pipes or pipelines are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the U.S. associated with such pipes or pipelines will require a Section 404 permit (see NWP 15).

Utility line substations:

- 11.** Does the project involve discharges into non-tidal wetlands adjacent to tidal waters of the U.S.?
 Yes No

If you answered yes to question 11. above, be aware that the project would not be authorized by a NWP 12 and may require an individual permit application.

Foundations for overhead utility line towers, poles, and anchors:

- 12.** If the project includes construction or maintenance of foundations for overhead utility line towers, poles, and/or anchors in waters of the U.S., are these the minimum size necessary and are separate footings for each tower leg (rather than a larger single pad) used where feasible?
 Yes No N/A

If you answered no to question 12. above, be aware that the project would not be authorized by a NWP 12 and may require an individual permit application.

Access Road(s):

- 13.** Will the access road(s) be used for the construction and maintenance of utility lines, including overhead power lines and utility line substations, and, for a single and complete project, cause the loss of no greater than 1/2-acre of non-tidal waters of the U.S.? Yes No N/A

If you answered no to question 13. above, be aware that the project would not be authorized by a NWP 12 and may require an individual permit application.

- 14.** Does the project involve discharges into non-tidal wetlands adjacent to tidal waters of the U.S.?
 Yes No

If you answered yes to question 14. above, be aware that the project would not be authorized by a NWP 12 and may require an individual permit application.

- 15. a.** Will the access road(s) in waters of the U.S. be the minimum width necessary? Yes No
b. Will the access road be constructed so that the length of the road minimizes any adverse effects on waters of the U.S.? Yes No

If you answered no to question a. or b. above, be aware that the project would not be authorized by a NWP 12 and may require an individual permit application.

- 16. a.** Will the access road(s) be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy road or geotextile/gravel road) so as to minimize any adverse effects on waters of the U.S.? Yes No
b. Will access roads constructed above pre-construction contours and elevations in waters of the U.S. be properly bridged or culverted to maintain surface flows? Yes No

If you answered no to question a. or b. above, be aware that the project may not be authorized by a NWP 12 and may require an individual permit application.

- 17.** Will access roads used solely for construction of the utility line be removed upon completion of the work, in accordance with the requirement for temporary fills? Yes No

If you answered no to question 17. above, be aware that the project may not be authorized by a NWP 12 and may require an individual permit application.

REGIONAL CONDITIONS CHECKLIST

To ensure compliance with the Regional Conditions within the Fort Worth District, in the State of Texas, in order for an authorization by a NWP to be valid, please answer the following questions (for projects in Texas only):

1. Does the project involve a discharge into habitat types that are wetlands (typically referred to as pitcher plant bogs) that are characterized by an organic surface soil layer and include vegetation such as pitcher plants (*Sarracenia* sp.), sundews (*Drosera* sp.), and sphagnum moss (*Sphagnum* sp.) or wetlands (typically referred to as bald cypress-tupelo swamps) comprised predominantly of bald cypress trees (*Taxodium distichum*), and/or water tupelo (*Nyssa aquatica*)? Yes No

If you answered yes to question 1. above, notification of the District Engineer is required in accordance with NWP GC 32, and the USACE will coordinate with other resource agencies as specified in NWP GC 32(d).

2. Will the project include required compensatory mitigation at a minimum one-for-one ratio for all special aquatic sites that exceed 1/10 acre and require pre-construction notification, and for all losses to streams that exceed 300 linear feet and require pre-construction notification (unless the appropriate District Engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement)? Yes No N/A

If you answered no to question 2. above, be aware that the project would not be authorized by a NWP and would require an individual permit application.

3. Is the project in the area of Caddo Lake within Texas that is designated as a "Wetland of International Importance" under the Ramsar Convention? Yes No

If you answered yes to question 3. above, notification of the District Engineer is required in accordance with NWP GC 32(d).

4. Would the proposed work involve a discharge of fill material associated with mechanized land clearing of wetlands dominated by native woody shrubs? Yes No

If you answered yes to question 4. above, notification of the District Engineer is required in accordance with NWP GC 32(d).

Note: For the purpose of this regional condition, a shrub dominated wetland is characterized by woody vegetation less than 3.0 inches in diameter at breast height but greater than 3.2 feet in height, which covers 20% or more of the area. Woody vines are not included.

5. Would the proposed work result in the modification or alteration of any completed Corps of Engineers projects that are either locally or federally maintained or if work would occur within the conservation pool or flowage easement of any Corps of Engineers lake project? Yes No

If you answered yes to question 5. above, the applicant shall notify the Fort Worth District Engineer in accordance with NWP GC 32. PCNs are not deemed complete until such a time as the Corps has made a determination relative to 33 USC Section 408, 33 CFR Part 208, Section 208.10, 33 CFR Part 320, Section 320.4.

6. Is there is the risk of transferring invasive plants to or from your project site? Yes No

If you answered yes to question 6. above, information concerning state specific lists of invasive species and threats can be found at: <http://www.invasivespeciesinfo.gov/unitedstates/tx.shtml>. Best management practices can be found at Information concerning state specific lists and

threats can be found at: <http://www.invasivespeciesinfo.gov/unitedstates/tx.shtml>. Known zebra mussel waters within can be found at: <http://nas.er.usgs.gov/queries/zmbyst.asp>.

7. Will the proposed activity involve a temporary discharge of fill material into 1/2 acre or more of emergent wetland OR 1/10 acre or more of scrub/shrub/forested wetland? Yes No

If you answered yes to question 7. above, notification of the District Engineer is required in accordance with NWP GC 32(d).

8. Would your project meet the scope of work and conditions of NWPs 51 or 52? Yes No

If you answered yes to question 8. above, the Corps will provide the PCN to the US Fish and Wildlife Service as specified in NWP General Condition 32(d)(2) for its review and comments.

To ensure compliance with the Regional Conditions within the Fort Worth District, in the State of Louisiana, in order for an authorization by a NWP to be valid, please answer the following questions (for projects in Louisiana only):

1. Does the activity cause the permanent loss of greater than 1/2 acre of seasonally inundated cypress swamp and/or cypress-tupelo swamp? Yes No

If you answered yes to question 1. above, be aware that the project would not be authorized by a NWP 12 and would require an individual permit application.

2. Does the activity cause the permanent loss of greater than 1/2 acre of pine savanna, pine flatwoods, and/or pitcher plant bogs? Yes No

If you answered yes to question 2. above, be aware that the project would not be authorized by a NWP 12 and would require an individual permit application.

3. Has the activity been determined to have an adverse impact upon a federal or state designated rookery and/or bird sanctuary? Yes No

If you answered yes to question 3. above, be aware that the project would not be authorized by a NWP 12 and would require an individual permit application.

4. While Endangered Species Act Section 7 consultation is no longer required for the Louisiana black bear (which has been delisted due to recovery), permittees are advised that the Louisiana black bear is still protected under State of Louisiana law, and the Louisiana Department of Wildlife and Fisheries (LDWF) will continue to actively manage this subspecies. To learn more about State law requirements for Louisiana black bear protection and habitat conservation, permittees shall contact Maria Davidson (Louisiana Department of Wildlife and Fisheries - Large Carnivore Program Manager) at (337) 948-0255.

5. Does the project involve instream activities in the following waterways: Abita River and tributaries; Amite River (LA Highway 37 at Grangeville to Port Vincent); Bayou Bartholomew in Morehouse Parish; Bayou Boeuf and Bayou Rapides Tributaries in Rapides Parish: (Bayou Clear, Brown Creek, Burney Branch, Castor Creek, Clear Creek, Haikey's Creek, Little Bayou Clear, Little Brushy Creek, Loving Creek, Little Loving Creek, Long Branch, Mack Branch, Patterson Branch, Valentine Creek, and Williamson Branch), Bayou Rigolette tributaries in Grant Parish (Beaver Creek, Black Creek, Chandler Creek, Clear Branch, Coleman Branch, Cress Creek, Cypress Creek, Glady Hollow, Gray Creek, Hudson Creek, James Branch, Jordon Creek, Moccasin Branch, and Swafford Creek); Bogue Falaya River and Tributaries, Bogue Chitto River and Tributaries, Lake Borgne, Lake Pontchartrain and its tributaries, Lake Saint Catherine, Little Lake, Tchefuncta River, Little Tchefuncta River, the Rigolets and West Pearl River? Yes No

If you answered yes to question 5. above, notification of the District Engineer is required in accordance with NWP GC 32 due to the occurrence of threatened or endangered species.

6. To the best of the applicant's knowledge, is any excavated and/or fill material to be placed within wetlands free of contaminants? Yes No N/A

If you answered no to question 6. above, be aware that the project would not be authorized by a NWP 12 and would require an individual permit application.

7. Regional Condition 7 applies to work within the Louisiana Coastal Zone and/or the Outer Continental Shelf off Louisiana, and therefore does not apply in the USACE Fort Worth District. Work in these areas may require coordination with the USACE Galveston or New Orleans districts.

8. Does the activity adversely affect greater than 1/10 acre of wetlands, and/or adversely impact a designated Natural and Scenic River, a state or federal wildlife management area, and/or refuge? Yes No

If you answered yes to question 8. above, notification of the District Engineer is required in accordance with NWP GC 32.

9. For activities involving the installation of a culvert, is twenty percent (20%) of the culvert diameter (20 percent of the height of elliptical culverts) installed below the natural grade of the stream. Yes No

If you answered no to question 9. above, be aware that the project would not be authorized by a NWP 13 and would require an individual permit application.

10. Pre-Construction Notification, as defined under nationwide general condition 32, is required for regulated utility line activities regardless of impact acreage for all projects located in Louisiana. The U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency and, if applicable, National Marine Fisheries Service will be forwarded a copy of the Pre-Construction Notification for all NWP #12 activities.

11. A 50-foot gap shall be required for every 500 linear feet of sidecast material resulting from trench excavation activities associated with utility line construction. Under certain circumstances the gap intervals may be modified. Additionally, no fill shall be placed in a manner which would impede natural watercourses.

12. This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered denied without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.

Note: This specific regional condition for NWP 12 applies to work within the Louisiana Coastal Zone and/or the Outer Continental Shelf off Louisiana, and therefore does not apply in the USACE Fort Worth District. Work in these areas may require coordination with the USACE Galveston or New Orleans districts.

Additional Discussion:

Part II: Project Information (*Project No. SWF-*)

Box 1 Project Name:		Applicant Name	
Applicant Title		Applicant Company, Agency, etc.	
Mailing Address		Applicant's internal tracking number (if any)	
Work Phone with area code	Home Phone with area code	Fax #	E-mail Address
Relationship of applicant to property: <input type="checkbox"/> Owner <input type="checkbox"/> Purchaser <input type="checkbox"/> Lessee <input type="checkbox"/> Other:			
Application is hereby made for verification that subject regulated activities associated with subject project qualify for authorization under a USACE nationwide permit or permits as described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. I hereby grant to the agency to which this application is made the right to enter the above-described location to inspect the proposed, in-progress, or completed work. I agree to start work <u>only</u> after all necessary permits have been received.			
Signature of applicant			Date (mm/dd/yyyy)

Box 2 Authorized Agent/Operator Name and Signature: <i>(If an agent is acting for the applicant during the permit process)</i>			
Agent/Operator Title		Agent/Operator Company, Agency, etc.	
Mailing Address			
E-mail Address			
Work Phone with area code	Home Phone with area code	Fax #	Cell Phone #
I hereby authorize the above-named agent to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application. I understand that I am bound by the actions of my agent, and I understand that if a federal or state permit is issued, I, or my agent, must sign the permit.			
Signature of applicant			Date (mm/dd/yyyy)
I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete, and accurate.			
Signature of authorized agent			Date (mm/dd/yyyy)

Box 3 Name of property owner, if other than applicant:	
<input type="checkbox"/> Multiple Current Owners <i>(If multiple current property owners, check here and include a list as an attachment)</i>	
Owner Title	Owner Company, Agency, etc.
Mailing Address	

Work Phone with area code	Home Phone with area code
---------------------------	---------------------------

Box 4 Project location, including street address, city, county, state, and zip code where proposed activity will occur:

Nature of Activity (Description of project; include all features; see instructions):

Project Purpose (Description of the reason or purpose of the project; see instructions):

Has a delineation of waters of the U.S., including wetlands, been completed? (see instructions)

Yes, Attached No

If a delineation has been completed, has it been verified in writing by the USACE?

Yes, Date of approved or preliminary jurisdictional determination (mm/dd/yyyy): USACE project:

No

Are color photographs of the existing conditions available? Yes, Attached No

Are aerial photographs available? Yes, Attached No

Multiple Single and Complete Crossings (If multiple single and complete crossings, check here and complete the table in Attachment D)

Waterbody(ies) (if known; otherwise enter "an unnamed tributary to"):

Tributary(ies) to what known, downstream waterbody(ies):

Latitude & longitude (Decimal Degrees):

USGS Quad map name(s):

Watershed(s) and other location descriptions, if known:

Directions to the project location:

Part III: Project Impacts and Mitigation

Box 5 Reason(s) for Discharge into waters of the U.S.:

Type(s) of material being discharged and the amount of each type in cubic yards:

Total surface area (in acres) of wetlands or other waters of the U.S. to be filled:

Indicate the proposed impacts to **waters of the U.S.** in ACRES (for wetlands and impoundments) and LINEAR FEET (for rivers and streams), and identify the impact(s) as permanent and/or temporary for each waterbody type listed below. For projects with multiple single and complete crossings, the table below should indicate the cumulative totals of those single and complete crossings that require notification as outlined in Part I, GC question 32, and would not determine the threshold for whether a project qualifies for a NWP. The table below is intended as a tool to summarize impacts by resource type for planning compensatory mitigation and does not replace the summary table of single and complete crossings in Attachment D for those projects with multiple single and complete crossings.

Waterbody Type	Permanent		Temporary	
	Acres	Linear feet	Acres	Linear feet
Emergent wetland				
Scrub-shrub wetland				
Forested wetland				
Perennial stream				
Intermittent stream				
Ephemeral stream				
Impoundment				
Other:				
Total:				

Potential indirect and/or cumulative impacts of proposed discharge (if any):

Required drawings (see instructions):

Vicinity map: Attached

To-scale plan view drawing(s): Attached

To-scale elevation and/or cross section drawing(s): Attached

Is any portion of the work already complete? Yes No

If yes, describe the work:

Box 6 Authority: (see instructions)

Is Section 10 of the Rivers and Harbors Act for projects affecting navigable waters applicable?

Yes No (see Fort Worth District Navigable Waters list)

Is Section 404 of the Clean Water Act applicable? Yes No

Box 7 Larger Plan of Development:

Is the discharge of fill or dredged material for which Section 10/404 authorization is sought intended for a utility line project which is part of a larger plan of development?

Yes No (If yes, please provide the information in the remainder of Box 7)

Does the utility line project have independent utility in addition to the larger plan of development (e.g., major transmission line, main water line, etc.)? Yes No

If yes, explain:

If discharge of fill or dredged material is part of development, name and proposed schedule for that larger development (start-up, duration, and completion dates):

Location of larger development (If discharge of fill or dredged material is part of a plan of development, a map of suitable quality and detail for the entire project site should be included):

Total area in acres of entire project area (including larger plan of development, where applicable):

Box 8 Federally Threatened or Endangered Species (see instructions)

Please list any federally-listed (or proposed) threatened or endangered species or critical habitat potentially affected by the project (use scientific names (i.e., genus species), if known):

Have surveys, using U.S. Fish and Wildlife Service (USFWS) protocols, been conducted?

Yes, Report attached No (explain):

If a federally-listed species would potentially be affected, please provide a description and a biological evaluation.

Yes, Report attached Not attached

Has Section 7 consultation been initiated by another federal agency?

Yes, Initiation letter attached No

Has Section 10 consultation been initiated for the proposed project?

Yes, Initiation letter attached No

Has the USFWS issued a Biological Opinion?

Yes, Report attached No

If yes, list date Opinion was issued (mm/dd/yyyy):

Box 9 Historic properties and cultural resources

Please list any historic properties listed (or eligible to be listed) on the National Register of Historic Places which the project has the potential to affect:

Has an archaeological records search been conducted?

Yes, Report attached No (explain):

Are any cultural resources of any type known to exist on-site?

Yes No

Has an archaeological pedestrian survey been conducted for the site?

Yes, Report attached No (explain):

Has Section 106 or SHPO consultation been initiated by another federal or state agency?

Yes, Initiation letter attached No

Has a Section 106 MOA been signed by another federal agency and the SHPO?

Yes, Attached No

If yes, list date MOA was signed (mm/dd/yyyy):

Box 10 Proposed Conceptual Mitigation Plan Summary (see instructions)

Measures taken to avoid and minimize impacts to waters of the U.S. (if any):

Applicant proposes combination of one or more of the following mitigation types:

Mitigation Bank On-site Off-site (Number of sites:) None

Applicant proposes to purchase mitigation bank credits: Yes No

Mitigation Bank Name:

Number of Credits:

Indicate in ACRES (for wetlands and impoundments) and LINEAR FEET (for rivers and streams) the total quantity of waters of the U.S. proposed to be created, restored, enhanced, and/or preserved for purposes of providing compensatory mitigation. Indicate mitigation site type (on- or off-site) and number. Indicate waterbody type (non-forested wetland, forested wetland, perennial stream, intermittent stream, ephemeral stream, impoundment, other) or non-jurisdictional (uplands¹).

Mitigation Site Type and Number	Waterbody Type	Created	Restored	Enhanced	Preserved
<i>e.g., On-site 1</i>	<i>Non-forested wetland</i>	<i>0.5 acre</i>			
<i>e.g., Off-site 1</i>	<i>Intermittent stream</i>		<i>500 LF</i>	<i>1000 LF</i>	
	Totals:				

¹ For uplands, please indicate if designed as an upland buffer.

Summary of Mitigation Work Plan (Describe the mitigation activities listed in the table above):

If no mitigation is proposed, provide a detailed explanation of why no mitigation would be necessary to ensure that adverse effects on the aquatic environment are minimal:

Has a conceptual mitigation plan been prepared in accordance with the USACE regulations and guidelines?

Yes, Attached No (explain):

Mitigation site(s) latitude & longitude (Decimal Degrees): USGS Quad map name(s):

Other location descriptions, if known:

Directions to the mitigation location(s):

Box 11 Water Quality Certification (see instructions):

For Texas:

Does the project meet the conditions of the Texas Commission on Environmental Quality (TCEQ) Clean Water Act Section 401 certification for NWP 12? Yes No

Does the project include soil erosion control and sediment control Best Management Practices (BMPs)? Yes No

Does the project include BMPs for post-construction total suspended solids control? Yes No

For Louisiana:

LDEQ has issued water quality certification for NWP 12 without conditions.

For Tribal Lands ("Indian Country"):

Does the project meet the conditions of the EPA water quality certification for NWP's?

Yes No

Box 12 List of other certifications or approvals/denials received from other federal, state, or local agencies for work described in this application:

Agency	Approval Type ²	Identification No.	Date Applied	Date Approved	Date Denied

² Would include but is not restricted to zoning, building, and floodplain permits

Part IV: Attachments

- | | Included |
|--|--------------------------|
| A. Delineation of Waters of the U.S., Including Wetlands | <input type="checkbox"/> |
| B. Color Photographs | <input type="checkbox"/> |
| C. Summary Table of Single and Complete Crossings | <input type="checkbox"/> |
| D. Required Drawings/Figures | <input type="checkbox"/> |
| E. Threatened or Endangered Species Reports and/or Letters | <input type="checkbox"/> |
| F. Historic Properties and Cultural Resources Reports and/or Letters | <input type="checkbox"/> |
| G. Conceptual Mitigation Plan | <input type="checkbox"/> |
| H. Other: | <input type="checkbox"/> |

End of Form

Instructions: [please do not include these pages when submitting form]

- 1) Complete Part I of the form first to determine if the project meets the conditions and requirements of NWP 12, including the General and Regional Conditions as well as the notification requirements. Additional information on the general conditions is available at the following website:**

<http://www.swf.usace.army.mil/Missions/Regulatory/Permitting/GeneralPermits.aspx>

- 2) Boxes 1 to 3:** Provide contact information for the Applicant, Agent, Owner, etc.

3) Box 4:

- a. **Nature of Activity:** Describe the overall activity or project. Give appropriate dimensions of structures such as wingwalls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms. The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach a separate sheet marked "Box 4 Nature of Activity."
- b. **Proposed Project Purpose:** Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project.

c. Delineation of waters of the U.S.:

Waters of the U.S. are defined under 33 CFR part 328.3 (a) as:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (4) All impoundments of waters otherwise defined as waters of the U.S. under the definition;
- (5) Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
- (6) The territorial seas;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section.

In addition, 33 CFR part 328.3 (b) states: The term wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, the ordinary high water mark, as well as any adjacent wetlands, demarcate the limits of non-tidal waters of the U.S. Wetlands are identified and delineated using the methods and criteria

established in the USACE *Wetlands Delineation Manual* (1987 Manual) (i.e., occurrence of hydrophytic vegetation, hydric soils, and wetland hydrology) as well as any applicable interim regional supplements.

Applicants should follow the USACE Fort Worth District procedures for jurisdictional determinations found at the following website:

<http://media.swf.usace.army.mil/pubdata/environ/regulatory/jurisdiction/jurisdictionaldeterminationprocedures.pdf>

- d. **Multiple Waters of the U.S.:** If the project impacts multiple waters of the U.S., include information for each water in the table in Attachment D.

4) Box 5:

Required drawings (see examples in separate file): Submit one legible copy of all drawings (8 1/2 x 11-inch or 11 x 17-inch) with a 1-inch margin around the entire sheet. The title box shall contain the title of the proposed project, date, and sheet number.

- i. **Vicinity map:** Cover an area large enough so the project can be easily located; include arrow marking the project area, identifiable landmarks (e.g., named waterbody, county, city), name or number of roads, north arrow, and scale.
- ii. **Plan view:** Include features such as existing bank lines, ordinary high water mark line(s), average water depth around the activity, dimensions of the proposed project, dimensions of any structures immediately adjacent to the proposed activity, north arrow, and scale.
- iii. **Elevation and/or cross-section views:** Include features such as water elevation as shown on plan view drawing, existing and proposed ground level, dimensions of the proposed project, dimensions of any structures immediately adjacent to the proposed activity, and scale.

- 5) Box 6:** A list of navigable waters in the Fort Worth District can be found at the following website:

<http://media.swf.usace.army.mil/pubdata/environ/regulatory/introduction/navlist.pdf>

Under Section 404 of the Clean Water Act, the USACE regulates the discharge of dredged or fill material into waters of the U.S. More information on regulated activities can be found at the following website:

<http://www.swf.usace.army.mil/Missions/Regulatory/RegulatedActivities.aspx>

- 6) Box 8:** Information on federally threatened or endangered species may be found on the U.S. Fish and Wildlife Service website and the Texas Parks and Wildlife Department website. Include an attachment if additional space is required for listing species or critical habitat potentially affected by the project.

http://www.fws.gov/southwest/es/ES_ListSpecies.cfm

<http://www.tpwd.state.tx.us/huntwild/wild/species/endang/index.phtml>

http://www.tpwd.state.tx.us/landwater/land/maps/gis/ris/endangered_species/index.phtml

- 7) Box 10:** When completing this box, be aware that the USACE will consider if the project has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the U.S. to the maximum extent practicable at the project site when determining appropriate and practicable mitigation necessary to ensure that adverse effects to the aquatic environment are minimal. The USACE may also require compensatory mitigation at a minimum one-for-one ratio for losses of wetlands, streams, and open waters to ensure that the project results in

minimal adverse effects on the aquatic environment. See the USACE Fort Worth District Regulatory Branch website for a mitigation plan template and requirements.

<http://www.swf.usace.army.mil/Missions/Regulatory/Permitting/Mitigation.aspx>

- 8) Box 11:** Projects in Texas should meet the conditions of the Texas Commission on Environmental Quality (TCEQ) Clean Water Act Section 401 certification for NWP 3. The TCEQ conditions of Section 401 certification for NWP 3 as well as a description of Best Management Practices can be found at the following website:

<http://www.swf.usace.army.mil/Portals/47/Users/053/21/821/NWP%202017%20Texas%20401cert.pdf>

Projects in Louisiana require water quality certification from the Louisiana Department of Environmental Quality (LDEQ). LDEQ has issued water quality certification for NWP 3 without conditions. Information about water quality certification from LDEQ can be found at the following website:

<http://www.swf.usace.army.mil/Portals/47/Users/053/21/821/NWP2017Louisiana401cert.pdf?ver=2017-03-24-115120-290>

- 9) Attachments:** Check the boxes in Part IV for those attachments that are included, and place a cover sheet or tab with each attachment behind the last page of the form. If Attachment D is not needed, discard this page, but if more room is necessary, include an additional table.

U. S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698



FEMA

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION 6
MITIGATION DIVISION

RE: Tezel Substation & Tie-In 138-kV Transmission Line Project

NOTICE REVIEW/ENVIRONMENTAL CONSULTATION

We have no comments to offer. We offer the following comments:

WE WOULD REQUEST THAT THE COMMUNITY FLOODPLAIN ADMINISTRATOR BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT. IF FEDERALLY FUNDED, WE WOULD REQUEST PROJECT TO BE IN COMPLIANCE WITH EO11988 & EO 11990.

Robert Brach
Development Services Engineer
Bexar County
1948 Probandt Street
San Antonio, TX 78214
(210) 335-6700

REVIEWER:

Colleen Sciano
Floodplain Management and Insurance Branch
Mitigation Division
(940) 383-7257

DATE: March 10, 2020

From: [Wray, Luke CTR \(FAA\)](#)
To: [Green, Derek J](#)
Cc: [Patterson, Kenneth \(FAA\)](#)
Subject: U.S. Mail ICO Burns McDonnell ***** San Antonio, TX ***** Proposal For Electric Substation & Transmission Line
Date: Tuesday, March 10, 2020 7:01:53 AM
Attachments: [image001.png](#)
[E-Filing Instructions.pdf](#)
[U.S. Mail ICO Burns McDonnell -- San Antonio, TX -- Proposal For Electric Substation & Transmission Line.pdf](#)

Howdy Derek,

The Obstruction Evaluation Group is in receipt your mail that proposing to construct a new electric substation and transmission line. E-filing is the preferred method of submitting an aeronautical study as it is the fastest and most accurate method of submission. E-filing immediately assigns an aeronautical study number to your project and establishes an electronic communications link with the FAA that allows you to obtain project status and notifications directly from the website.

*****Be sure to first sign up for an OEAAA account under 'New User Registration'.
***** It's very simple to do and your account is ready immediately after providing required information. Attached are supplemental instructions with step-by-step instructions for electronically submitting proposals are contained in the attachment under "ELECTRONIC FILING PROCEDRUES".

>>> Please note that each structure will need to have separate filings for the different locations.

Ken Patterson, the Specialist for Off-Airport studies in Texas will initially review your electronic submission/s and will contact you if any additional information is required. His contact information is kenneth.patterson@faa.gov and his phone number is 817-222-5920.

***** Request verification this email has been received *****

Respectfully,

Luke W. Wray
Federal Aviation Administration
Obstruction Evaluation Group
AJV-A520
Tetra Tech AMT Support
10101 Hillwood Parkway
Fort Worth, TX 76177

Office: 817-222-4559
luke.ctr.wray@faa.gov

Please visit our website:

<https://oeaaa.faa.gov>





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FEDERAL AVIATION ADMINISTRATION

OE/AAA®

OBSTRUCTION EVALUATION / AIRPORT AIRSPACE ANALYSIS

DESK REFERENCE GUIDE

SUBJECT: Add a new Case Off Airport

**You are required to have a registered e-filing account*

**Prepared by
CGH Technologies, Inc.
600 Maryland Ave., SW Suite 800W
Washington, DC 20024**

All references to software products remain the protected trademarks of their manufacturers. The instructions in this document may reference Microsoft application(s). This is not meant in any way to express a preference for any particular product since there are many different browsers, programs, and operating systems available to the user. For simplicity only, one brand/product is used in the examples that follow.



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If you've successfully registered, you can use your OE/AAA account to file your Notice of Proposed Construction or Alteration.

Note: To file Wind Turbine /Met Tower Notice of Proposed Construction or Alteration, exit this guide and refer to the "Add a New Case Off Airport for Wind Turbine and Met Tower" desk reference guide.

You can use your OE/AAA account to file your
The OE/AAA electronic filing (e-file) system allows you to:

- Submit an FAA Form 7460-1 via an electronic data screen.
- Generate a map directly from your account to be submitted electronically with your filing.
- Track the status of your case(s) while their going through the study process.

From your OE/AAA Portal Page you have:

- Instant access to your determination, requests for additional information, etc... as they are issued by the FAA.
- The ability to attach surveys, and additional background information directly to your electronic case file(s).

Create a New Case

To create a new case, click the **Add New Case (Off Airport)** link. This will bring up the *Notice of Proposed Construction or Alteration* Page. Complete each section according to the instructions below.

Obstruction Evaluation Version 2014.2.0.251	OE/AAA Portal Page				
Home					
FAA OE/AAA Offices					
View Determined Cases					
View Interim Cases					
View Proposed Cases					
View Supplemental Notices (Form 7460-2)					
View Circularized Cases					
Search Archives					
	<table border="1"> <thead> <tr> <th>My Account</th> <th>Off Airport Construction (includes on Military Airport)</th> </tr> </thead> <tbody> <tr> <td> Name: EXAMPLE User Name: EXAMPLE Login Time: 04/18/2014 IP Address: 06:28:47 PM </td> <td> My Cases (Off Airport) Add New Case (Off Airport) Add Supplemental Notice (7460-2 Form) My Sponsors Add New Sponsor Off Airport Contacts My Circ Comments </td> </tr> </tbody> </table>	My Account	Off Airport Construction (includes on Military Airport)	Name: EXAMPLE User Name: EXAMPLE Login Time: 04/18/2014 IP Address: 06:28:47 PM	My Cases (Off Airport) Add New Case (Off Airport) Add Supplemental Notice (7460-2 Form) My Sponsors Add New Sponsor Off Airport Contacts My Circ Comments
My Account	Off Airport Construction (includes on Military Airport)				
Name: EXAMPLE User Name: EXAMPLE Login Time: 04/18/2014 IP Address: 06:28:47 PM	My Cases (Off Airport) Add New Case (Off Airport) Add Supplemental Notice (7460-2 Form) My Sponsors Add New Sponsor Off Airport Contacts My Circ Comments				

Important: You must complete all required fields (indicated with an asterisk *) to successfully save your case. Missing data will result in a warning message at the top of your page identifying the required information.



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iOE/AAA® Internet



Notice of Proposed Construction or Alteration - Off Airport

Add New Case (Off Airport)

Sponsor (person, company, etc. proposing this action) * Sponsor:

Construction / Alteration Information

* Notice Of:

* Duration:

if Temporary : Months: Days:

Work Schedule - Start: (mm/dd/yyyy)

Work Schedule - End: (mm/dd/yyyy)

*For temporary cranes-Does the permanent structure require separate notice to the FAA? To find out, use the Notice Criteria Tool. If separate notice is required, please ensure it is filed. If it is not filed, please state the reason in the Description of Proposal.

State Filing:

Structure Details

* Latitude: N

* Longitude: W

* Horizontal Datum:

* Site Elevation (SE): (nearest foot)

* Structure Height (AGL): (nearest foot)

* Current Height (AGL): (nearest foot)

* For notice of alteration or existing provide the current AGL height of the existing structure. Include details in the Description of Proposal

Minimum Operating Height (AGL): (nearest foot)

* For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.

* Nacelle Height (AGL): (nearest foot)

* For Wind Turbines 500ft AGL or greater

* Requested Marking/Lighting:

Other :

Audio Visual Warning System(AVWS): Yes

* Only check this box if you are proposing the installation and use of an Audio Visual Warning System

* Current Marking/Lighting:

Other :

* Nearest City:

* Nearest State:

* Description of Location:

On the Project Summary page upload any certified survey.

* Description of Proposal:

Additional Location(s)

[Add New Location\(s\)](#)

Structure Summary

* Structure Type:

* Structure Name:

NOTAM Number:

FCC Number:

Prior ASN: - - - OE

Micro-Siting: Yes

*For Wind Turbine/Met Tower-Only check this box if you are re-filing a location previously studied due to micro-siting. The FAA will validate your latitude/longitude coordinates against the prior ASN to ensure the structure has not moved more than 500 feet.

Common Frequency Bands

<input type="checkbox"/>	Low Freq	High Freq	Freq Unit	ERP	ERP Unit
<input type="checkbox"/>	698	806	MHz	1000	W
<input type="checkbox"/>	806	824	MHz	500	W
<input type="checkbox"/>	824	849	MHz	500	W
<input type="checkbox"/>	851	866	MHz	500	W
<input type="checkbox"/>	869	894	MHz	500	W
<input type="checkbox"/>	896	901	MHz	500	W
<input type="checkbox"/>	901	902	MHz	7	W
<input type="checkbox"/>	930	931	MHz	3500	W
<input type="checkbox"/>	931	932	MHz	3500	W
<input type="checkbox"/>	932	932.5	MHz	17	dBW
<input type="checkbox"/>	935	940	MHz	1000	W
<input type="checkbox"/>	940	941	MHz	3500	W
<input type="checkbox"/>	1850	1910	MHz	1640	W
<input type="checkbox"/>	1930	1990	MHz	1640	W
<input type="checkbox"/>	2305	2310	MHz	2000	W
<input type="checkbox"/>	2345	2360	MHz	2000	W

Specific Frequencies

[Add Specific Frequency](#)

[Clone Prior ASN frequencies](#)

*Note: Selecting this link will only add frequency(ies)/power from the prior ASN listed in Structure Summary. Additional frequency(ies)/power must be manually added before submitting to the FAA if they are to be considered with your new filing.

I hereby certify that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to mark and/or light the structure in accordance with established marking and lighting standards as necessary.



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- A. *Sponsor: Select the Sponsor from the dropdown menu. This menu is populated from your *My Sponsors* list. The registered information will automatically display in your electronic public record as the Sponsor's Representative once the case has been completed and a valid FAA Determination is issued.
- B. *Notice Of: Select the type of proposal. New Construction would be a structure that has not yet been built. Alteration is a change to an existing structure such as the addition of a side mounted antenna, a change to the marking and/or lighting, a change to power and/or frequency, or a change to the height. Existing would be a correction to the latitude and/or longitude, a correction to the existing height, or if filing for an existing structure that has never been studied by the FAA.
- C. *Duration: If Permanent, so indicate. If Temporary, enter the estimated length of time the temporary structure will be up in Months/Days.
- D. Work Schedule: *(Not a Required Field)* Using the calendar icons next to the fields select the date that construction is expected to start and the date that construction should be completed.
- E. State Filing: *(Not a Required Field)* Indicate if the case has been filed with the state.
- F. *Structure Type: Select the type of structure from the Structure Type drop down list. "Note: Frequencies will not be accepted if your Structure Type is 'Lighting Study'."
- G. *Structure Name: Enter a name for the structure (e.g. 50 Ton Crane, Hotel, Tower, etc...)
- H. FCC Number: *(Not a Required Field)* If this is an existing tower that has been registered with the FCC, enter the Antenna Structure Registration number.
- I. Prior ASN: *(Not a Required Field)* If an FAA aeronautical study was previously conducted, enter the prior Aeronautical Study Number. Prior ASN data can be pre-populated into the Notice of Proposed Construction or Alteration-Off Airport form data fields. When the e-filer confirms the Prior ASN data, the following data fields are available for pre-population:
- Latitude/Longitude
 - Site Elevation
 - Above Ground Level Height (determined AGL from valid prior ASN)
 - Marking/Lighting (Recommended Marking /Lighting from valid prior ASN to requested Marking /Lighting)
- J. Micro-Sitting: *(Not a Required Field)* only check this box for a Wind Turbine/Met Tower location previously filed that has moved no more than 500 feet from the structure's original location and re-filed for aeronautical study requires a prior ASN to validate the submission meets the criteria to be filed with the FAA as a micro-siting study.



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- K. *Latitude/Longitude: Latitude and Longitude must be precise geographic coordinates entered in Degrees, Minutes, and Seconds to the hundredth of a second (e.g. 25-47-4.75 N, 80-19-7.26 W).
- L. *Horizontal Datum: Select either NAD83 or NAD27. North American Datum is a reference from which latitude/longitude measurements are made.
- M. *Site Elevation: Enter the site elevation above mean sea level expressed in whole feet rounded to the nearest foot (e.g. 12' 3" should be entered as 12). This data should match the ground contour elevations for the site.
- N. *Structure Height: Enter the total structure height above ground level in whole feet rounded to the next highest foot (e.g. 12' 3" should be entered as 13). The total structure height shall include anything mounted on top of the structure such as antennas, lightning rods, obstruction lights, etc.
- O. *Requested Marking and Lighting: Indicate the type desired.
- P. Audio Visual Warning System (AVWS)
- Q. *Current Marking/Lighting: Indicate the current M/L on the structure; if a new structure, select N/A Proposed Structure.
- R. Current AGL: Required for structures being e-filed as existing or alteration.
- S. Min Operating Height (AGL): * For aeronautical study of a crane or construction equipment the maximum height should be listed above as the Structure Height (AGL). Additionally, provide the minimum operating height to avoid delays if impacts are identified that require negotiation to a reduced height. If the Structure Height and minimum operating height are the same enter the same value in both fields.
- T. Nacelle Height: Required when Structure Type "Wind Turbine" is being filed and the Structure Height (AGL) is 500 feet or greater.
- U. *Nearest City/State: Enter the name of the nearest city and the actual state where the site will be located.
- V. *Description of Location: Enter a brief description of the actual location of the site including the address or the relationship of the structure to roads, airports, prominent terrain, existing structures, etc.
- W. *Description of Proposal: Enter a complete description that details the nature of the filing.
- X. Add new location: When submitting more than one case (e.g. a crane and a building or four building points) the following required fields indicated with an asterisk (*) must be completed to successfully save additional locations: G, I, J, K, L, M, N, O, P. Additional rows may be added in increments of 1 thru 5. To remove an additional row, select the **Delete** link.
- Y. Common Frequency Bands: (*Not a Required Field*) Check any that apply. "Note: Frequencies will not be accepted if your Structure Type is 'Lighting Study'."



- Z. Specific Frequencies: *(Not a Required Field)* any frequency band not listed in the Common Frequency Bands should be added here. Select the **Add Specific Frequency** link and enter the Low Frequency, High Frequency, Frequency Unit, Effective Radiated Power (ERP), and ERP Unit. Select **[Save]** or **[Cancel]** to be returned to the *Case Data Entry* page. If an e-filer intends to overlap protected FAA frequencies, specific coordination with the FAA Spectrum Engineering Group will be required. A textbox allows filers to submit rationale for the frequency overlap in the e-filed Notice of Proposed Construction or Alteration-Off Airport form. "Note: Frequencies will not be accepted if your Structure Type is 'Lighting Study'."
- AA. Clone Prior ASN frequencies – *(Not a Required Field)* The Prior ASN field must be filled before entering frequencies. This link is displayed after the Specific Frequency Bands section. This link is only available if the e-filer adds a Prior ASN that has frequencies included in the case. When selected the applicable Common Frequency Bands and/or Specific Frequencies from the prior ASN auto populate and are available for edit by the e-filer prior to saving the draft. Once the e-filer saves this data, it becomes part of the current filing and is transmitted to the FAA with the new ASN. The e-filer is permitted to add additional frequencies if necessary after cloned frequencies are pre-populated but duplicate entries are not allowed. "Note: Frequencies will not be accepted if your Structure Type is 'Lighting Study'."
- BB. Selecting the checkbox to accept the certify statement.
- CC. When all required fields are completed, select the **[Save]** button. This will save the case data as a draft and take you to the *Project Summary* screen².

After case data has been saved as a draft, the *Project Summary* screen will be displayed. Towards the right side of the page there will be a Map column and an Actions column. The Actions column contains the **Clone**, **Delete**, and **Upload a PDF** links. The Map column contains the **Verify Map** link.

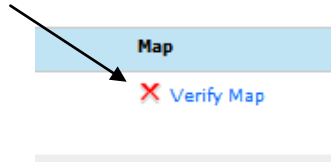
Project Summary : BRICK-000269775-14

[other Case to this Project](#) [Change the sponsor for this Project](#)

Map	Actions
0" N 00" W Verify Map	Clone Delete Upload a PDF

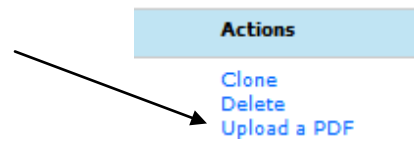


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To map the case, select the **Verify Map** link.
If the crosshairs on the map match with your proposed structure location, select the **[Verify Map]** button. This will save the verified map but will *NOT* submit the case to the FAA. It will also return you to the *Project Summary* screen.

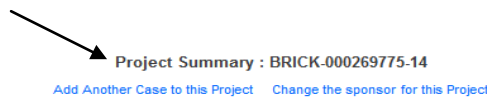
Attach Documents to Cases



For Off Airport cases you can upload PDF documents before and after submitting your case if needed.

Projects

One or more cases can be grouped into a Project. For example, each of the four building corner points can be a Case of a building Project. Project makes it easier to file, evaluate, manage, and approve related cases.

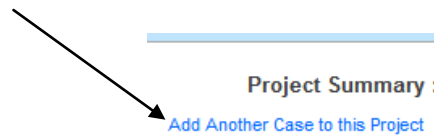


Structure	City, State	Lat/Long	Map	Actions
test009 Draft	treee, AZ	30° 30' 30.00" N 115° 30' 30.00" W	✗ Verify Map	Clone Delete Upload a PDF
test0010 Draft	treee, AZ	30° 30' 30.00" N 115° 30' 29.00" W	✗ Verify Map	Clone Delete Upload a PDF
test0011 Draft	treee, AZ	30° 30' 28.00" N 115° 30' 27.22" W	✗ Verify Map	Clone Delete Upload a PDF
test0012 Draft	treee, AZ	30° 30' 11.33" N 115° 30' 30.00" W	✗ Verify Map	Clone Delete Upload a PDF

[Upload a PDF to the Project](#)
Please upload all supporting case documentation including the latest certified survey, if available.



Add a Case



On the *Project Summary* screen you may select the **Add Another Case to this Project** link to add another case to this project. The cases entered this way will have the same project number.

Clone a Case



Another way to add a case to the project is to clone a new case from an existing case. E-filers can clone cases from the Project Summary screen of cases in their account regardless of the status (i.e. Draft/Submitted). To clone a case, click the **Clone** link. The cloning feature will copy most of the information over into a new *Case Data Entry* screen and link the cases together in a project. You may add as many cloned cases to your project as necessary. Once all of the maps for the project have been verified, the **[Submit]** button will appear on the *Project Summary* screen so that the entire project can be submitted to the FAA.

Delete a Case



You may only delete cases in Draft status. To delete a single case or a case from a project, select the **Delete** link located under the Actions header on the Project Summary screen. This will display the *Confirm Case Deletion* screen. To continue with the delete, select the **[I Confirm]** button to execute the deletion.



Submit to FAA

Note: Before submitting your case/project to the FAA, determine if you need to use the Clone or Delete features.

After the case data has been saved and map(s) verified, the **[Submit]** button will appear on the *Project Summary* screen to allow you to submit the case to the FAA. If you have provided all the information about your case or project, select the **[Submit]** button. This will take you to the *Confirm Project Submission* screen.

Notice of Proposed Construction or Alteration - Off Airport faa.gov Tools: Print this page

Project Name: BRICK-000269775-14 Sponsor: Brickell Heights LLC

Project Summary : BRICK-000269775-14
[Add Another Case to this Project](#) [Change the sponsor for this Project](#)

Structure	City, State	Lat/Long	Map	Actions
test009 Draft	treese, AZ	30° 30' 30.00" N 115° 30' 30.00" W	Show Map (Re-Verify)	Clone Delete Upload a PDF
test0010 Draft	treese, AZ	30° 30' 30.00" N 115° 30' 29.00" W	Show Map (Re-Verify)	Clone Delete Upload a PDF
test0011 Draft	treese, AZ	30° 30' 28.00" N 115° 30' 27.22" W	Show Map (Re-Verify)	Clone Delete Upload a PDF
test0012 Draft	treese, AZ	30° 30' 11.33" N 115° 30' 30.00" W	Show Map (Re-Verify)	Clone Delete Upload a PDF

[Upload a PDF to the Project](#)
Please upload all supporting case documentation including the latest certified survey, if available.

You may submit your Project to the FAA.

Submit

Select the **[I Confirm]** button to submit the case or project to the FAA. When the submission is done, OE/AAA will display the *Project Submission Success* screen.

Confirm Project Submission Project Name: BRICK-000269775-14

Please confirm you would like to submit Project BRICK-000269775-14 and associated cases to the FAA for processing.

I Confirm **Back**

The Aeronautical Study Number (ASN) assigned to your filed case(s) and other submission information is displayed. The Project Submission Success screen includes a link to a **state aviation contacts** map to determine if coordination of your proposed activity is necessary with your state aviation department.



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Project Submission Success

Project Name: **BRICK-000269775-13**

Project BRICK-000269775-13 has been submitted successfully to the FAA.

→ Your filing is assigned Aeronautical Study Number (ASN):
2014-AWP-1822-OE

[Return to Portal](#)

Please return to the system at a later date for status updates.

Please refer to the assigned ASN on all future inquiries regarding this filing.

Please return to the system at a later date for status updates.

It is the responsibility of each e-filer to exercise due diligence to determine if coordination of the proposed construction or alteration is necessary with their state aviation department. Please use the link below to contact your state aviation department to determine their requirements:

→ [State Aviation Contacts](#)

Project Submission Success

Project Name: **BRICK-000269775-14**

Project BRICK-000269775-14 has been submitted successfully to the FAA.

→ Your filing is assigned Aeronautical Study Number (ASN):
2014-AWP-1827-OE
2014-AWP-1828-OE
2014-AWP-1829-OE
2014-AWP-1830-OE

Please refer to the assigned ASN on all future inquiries regarding this filing.

Please return to the system at a later date for status updates.



Natural Resources
Conservation Service

State Office

101 S. Main Street
Temple, TX 76501
Voice 254.742.9800
Fax 254.742.9819

May 22, 2020

Burns & McDonnell
djgreen@burnsmcd.com

Attention: Derek Green, Senior Environmental Scientist, *via email*

Subject: LNU-Farmland Protection
Proposed Tezel Substation Tie-In 138-kV Transmission Line Project
Environmental Assessment of Natural Resources
Bexar County, Texas

We have reviewed the information provided in your correspondence dated February 28, 2020 concerning the proposed transmission line project located in Bexar County, Texas. We have evaluated the proposed site and provided technical resources related to soil and land use limitations for consideration within an Environmental Assessment (EA).

The proposed site does not involve USDA-NRCS Wetland Reserve Easements (WRE), a component of the Agricultural Conservation Easement Program (ACEP).

Please find the attached Custom Soil Resources Report. The soil physical and chemical properties are presented, along with additional restrictions or interpretations for the project area.

The major concern within the study area is soil depth. About 98 percent of the study area involves the Eckrant soil map unit, which is shallow (28 and 30 cm) to limestone bedrock. Additional consideration for larger construction equipment may be required in these areas.

To reduce erosion during construction, we strongly recommend the use of approved erosion control methods, including the use of erosion control equipment near heavily disturbed soil and reducing the amount of bare ground.

If you have further questions, please contact me at 254.742.9836 or by email at Carlos.Villarreal@usda.gov (Preferred).

Sincerely,

Carlos J. Villarreal
NRCS Soil Scientist

Attachment: **Custom Soil Resource Report for Bexar County, Texas**



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Bexar County, Texas**

Tezel Substation and Tie In 138 kV Transmission Line Project Study Area



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

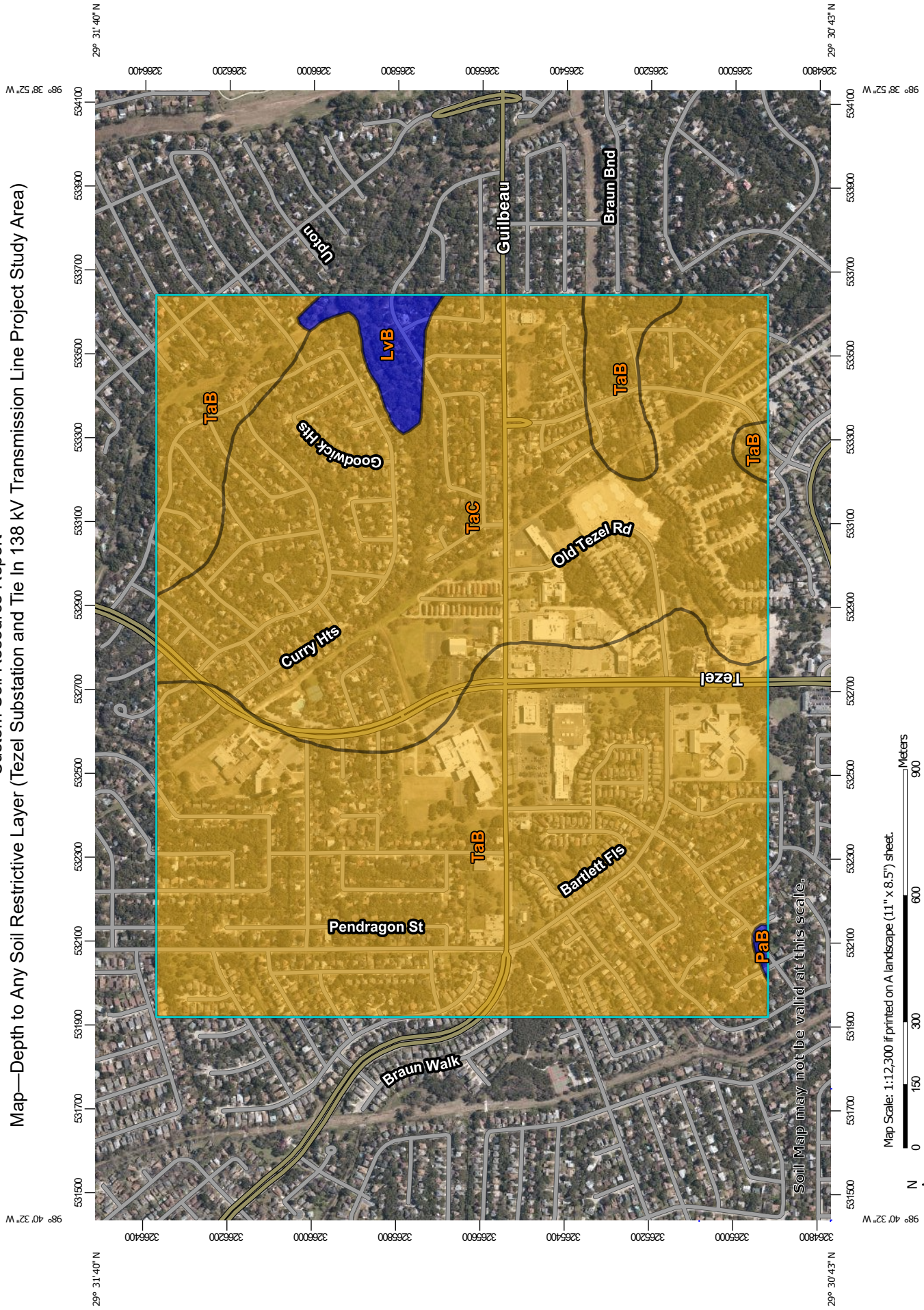
Depth to Any Soil Restrictive Layer (Tezel Substation and Tie In 138 kV Transmission Line Project Study Area)

A "restrictive layer" is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

This theme presents the depth to any type of restrictive layer that is described for each map unit. If more than one type of restrictive layer is described for an individual soil type, the depth to the shallowest one is presented. If no restrictive layer is described in a map unit, it is represented by the "> 200" depth class.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report
 Map—Depth to Any Soil Restrictive Layer (Tezel Substation and Tie In 138 kV Transmission Line Project Study Area)

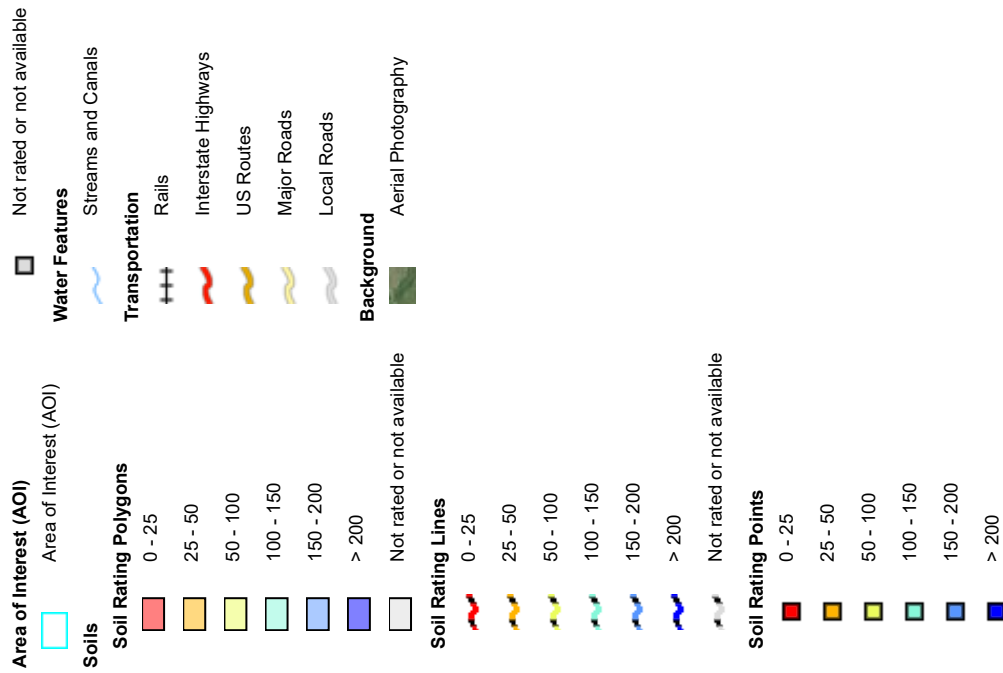


Map Scale: 1:12,300 if printed on A landscape (11" x 8.5") sheet.



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

MAP LEGEND



MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

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

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

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

Soil Survey Area: Bexar County, Texas
 Survey Area Data: Version 23, Sep 12, 2019

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

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

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

Table—Depth to Any Soil Restrictive Layer (Tezel Substation and Tie In 138 kV Transmission Line Project Study Area)

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
LvB	Lewisville silty clay, 1 to 3 percent slopes	>200	12.2	2.0%
PaB	Patrick soils, 1 to 3 percent slopes, rarely flooded	>200	0.8	0.1%
TaB	Eckrant cobbly clay, 1 to 8 percent slopes	28	341.7	55.1%
TaC	Eckrant very cobbly clay, 5 to 15 percent slopes	30	265.3	42.8%
Totals for Area of Interest			620.0	100.0%

Rating Options—Depth to Any Soil Restrictive Layer (Tezel Substation and Tie In 138 kV Transmission Line Project Study Area)

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No



TEXAS GENERAL LAND OFFICE
GEORGE P. BUSH, COMMISSIONER

March 5, 2020

Derek Green
Burns McDonnell
8911 North Capital of Texas Highway, Building 3, Suite 3100
Austin, TX 78759-7285

Re: Tezel Substation & Tie-In 138-kV Transmission Line Project

Dear Mr. Green:

On behalf of Commissioner Bush, I would like to thank you for your letter concerning the above-referenced project.

Using your map depicting the project's study area, it does not appear that the General Land Office will have any environmental issues or land use constraints at this time.

When a final route for this proposed project has been determined, please contact me and we can assess the route to determine if the project will cross any streambeds or Permanent School Fund (PSF) land that would require an easement from our agency.

In the interim, if you would like to speak to me further about this project, I can be reached by email at glenn.rosenbaum@glo.texas.gov or by phone at (512) 463-8180.

Again, thank you for your inquiry.

Sincerely,

A handwritten signature in black ink that reads "Glenn Rosenbaum". The signature is written in a cursive style.

Glenn Rosenbaum
Manager, Right-of-Way Department
Leasing Operations

From: [Caitlin Brashear](#)
To: [Green, Derek J](#)
Subject: Tezel Substation and Tie-In 138-kV Transmission Line Project (Track# 202009534)
Date: Thursday, March 19, 2020 1:05:29 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)

Good Afternoon Derek,

Our office has received your letter regarding the Tezel Substation & Tie-In 138-kV Transmission Line Project in San Antonio, TX. Before we can provide our response, I need a little more information. Can you verify if this project has a Federal nexus prompting our review Under Section 106 of the National Historic Preservation Act? Or has it been submitted to us for review just under the Antiquities Code of Texas? Please let me know if you have any questions.

Thank you,
Caitlin



Caitlin Edge Brashear

Historian, Federal Programs
History Programs Division
P.O. Box 12276 Austin, TX 78711-2276
P: 512-463-5851

thc.texas.gov



From: [Caitlin Brashear](#)
To: [Green, Derek J](#)
Subject: RE: Tezel Substation and Tie-In 138-kV Transmission Line Project (Track# 202009534)
Date: Friday, March 20, 2020 8:47:23 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)

Okay, great. Thank you for the clarification. I appreciate your quick response!

-Caitlin



Caitlin Edge Brashear
Historian, Federal Programs
History Programs Division
P.O. Box 12276 Austin, TX 78711-2276
P: 512-463-5851

thc.texas.gov



From: Green, Derek J [mailto:djgreen@burnsmcd.com]
Sent: Friday, March 20, 2020 8:46 AM
To: Caitlin Brashear <Caitlin.Brashear@thc.texas.gov>
Subject: RE: Tezel Substation and Tie-In 138-kV Transmission Line Project (Track# 202009534)

CAUTION: External Email – This email originated from outside the THC email system. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Caitlin:

There is no Federal nexus. Also, at this point we have no sites or routes, just a Study Area in which the project will be built.

Thanks

Derek

From: Caitlin Brashear <Caitlin.Brashear@thc.texas.gov>
Sent: Thursday, March 19, 2020 1:05 PM

To: Green, Derek J <djgreen@burnsmcd.com>

Subject: Tezel Substation and Tie-In 138-kV Transmission Line Project (Track# 202009534)

Good Afternoon Derek,

Our office has received your letter regarding the Tezel Substation & Tie-In 138-kV Transmission Line Project in San Antonio, TX. Before we can provide our response, I need a little more information. Can you verify if this project has a Federal nexus prompting our review Under Section 106 of the National Historic Preservation Act? Or has it been submitted to us for review just under the Antiquities Code of Texas? Please let me know if you have any questions.

Thank you,
Caitlin



Caitlin Edge Brashear

Historian, Federal Programs

History Programs Division

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thc.texas.gov





Life's better outside.®

April 14, 2020

Derek Green
Burns & McDonnell
88911 North Capital of Texas Highway
Building 3, Suite 3100
Austin, TX 78759

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Chairman-Emeritus
Fort Worth

T. Dan Friedkin
Chairman-Emeritus
Houston

Carter P. Smith
Executive Director

RE: Request for information for proposed CPS Energy Tezel Substation, Bexar County

Dear Mr. Green:

Texas Parks and Wildlife Department (TPWD) received the preliminary request regarding the project referenced above. On behalf of CPS Energy (CPS), Burns & McDonnell is preparing an Environmental Assessment (EA) and Alternate Siting and Routing Analysis for the proposed project.

Project Description

CPS Energy proposes to construct a new electric substation and transmission line in northwest San Antonio, near the intersection of Tezel Road and Guilbeau Road in Bexar County, Texas. Within an approximate 460 acre study area, a 1.5 to 2.5 acre tract would be developed for the new electric substation. Additionally, a new transmission line would be constructed to connect the new substation to the existing Bandera to Helotes 138-kV transmission line. Burns & McDonnell is collecting and evaluating environmental data for the study area.

TPWD staff reviewed the information provided and offer the following comments and recommendations:

Recommendation: When new construction is the only feasible option, TPWD recommends locating new substations in previously disturbed areas and routing new transmission lines along existing road, pipeline, transmission line or other utility ROW or easements to reduce habitat fragmentation. By utilizing previously disturbed areas, existing utility corridors, county roads, railroads, and highway ROW, adverse impacts to fish and wildlife resources would be mitigated by avoiding and/or minimizing impacts to undisturbed habitats. A copy of *TPWD Recommendations for Electrical Transmission/Distribution Line Design and Construction*, which include general recommendations for transmission line construction are available online at TPWD's Wildlife Habitat Assessment Program website.

Federal Regulations

Clean Water Act

Section 404 of the Clean Water Act (CWA) establishes a federal program to regulate the discharge of dredged and fill material into waters of the U.S., including wetlands. The U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) are responsible for making jurisdictional determinations and regulating wetlands and other waters under Section 404 of the CWA.

TPWD identified several aquatic resources in the project study area. These include:

- Tributaries of French Creek

Other named and unnamed ponds, drainages, potential wetlands and other features, both natural and manmade, may occur in the study area.

Recommendation: TPWD recommends selecting a substation site and developing a route for the proposed transmission line that avoids or minimizes the number of water body crossings. Creeks and tributaries in the study area have mostly been avoided by development and appear to have well developed riparian corridors that can provide important nesting, loafing, and feeding areas for migrating songbirds and other avian species.

All waterways and associated floodplains, riparian corridors, and wetlands, regardless of their jurisdictional status, provide valuable wildlife habitat and should be preserved to the maximum extent possible. Natural buffers contiguous to any wetland or aquatic system should remain undisturbed to preserve wildlife cover, food sources, and travel corridors. Transmission line support structures should be located as far from waterbodies as possible to preserve riparian vegetation. Necessary waterway crossings should be made perpendicular to channels to minimize disturbance of riparian habitat.

Aquatic resources in the study area, including those that have been manipulated or are completely manmade, provide habitat for wildlife. The destruction of inert microhabitats in aquatic habitats such as snags, brush piles, fallen logs, and pools should be avoided, as these provide habitat for a variety of fish and wildlife species and their food sources.

Best management practices (BMPs) for erosion control and sediment runoff should be installed prior to construction and maintained until disturbed areas are permanently revegetated using site-specific native vegetation, if applicable. BMPs should be properly installed in order to effectively minimize the amount

of sediment and other debris entering the waterways. During construction, trucks and equipment should use existing bridge or culvert structures to cross waterways, ponds or depressional wetlands, and equipment staging areas should be located in previously disturbed areas away from aquatic areas.

If the proposed project would impact waterways or associated wetlands, TPWD recommends consulting with the USACE for potential impacts to waters of the U.S. including jurisdictional determinations, delineations, and mitigation

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control, except when specifically authorized by the Department of the Interior. This protection applies to most native bird species, including ground nesting species. Additional information regarding the MBTA is available from the U.S. Fish and Wildlife Service (USFWS)-Southwest Regional Office (Region 2) at (505) 248-7882.

Review of aerial photography and the Ecological Mapping Systems of Texas (EMST), indicate that, overall, the study area consists primarily of urban low intensity and urban high intensity development. Habitats within the proposed urban project area are less diverse than much of the surrounding suburban or rural areas. However, remnant native trees, mature residential landscaping, and riparian corridors within urban areas can provide suitable habitat for wildlife species. While not as diverse as other areas in south central Texas, urban environments can provide cover, feeding, nesting and loafing habitat for many species of birds. Additionally, the project area is in the middle of the Central Migratory Flyway through which millions of birds pass during spring and fall migration.

Recommendation: TPWD recommends identifying previously disturbed areas for the substation and identifying existing utility corridors or other previously disturbed areas (e.g., existing roads, utility corridors or easements) to parallel the proposed transmission line. Additionally, TPWD recommends scheduling any vegetation clearing or trampling to occur outside of the March 15 - September 15 migratory bird nesting season in order to comply with the MBTA.

If vegetation clearing must be scheduled to occur during the nesting season, TPWD recommends the vegetation to be impacted should be surveyed for active nests by a qualified biologist. Nest surveys should be conducted no more than five days prior to the scheduled clearing to ensure recently constructed nests are identified. If active nests are observed during surveys, TPWD

recommends a 150-foot buffer of vegetation remain around the nests until the young have fledged or the nest is abandoned.

The potential exists for birds to collide with transmission lines and associated guy wires and static lines. Bird fatalities can also occur due to electrocution if perching birds simultaneously make contact with energized and grounded structures.

Recommendation: TPWD strongly recommends that transmission lines should be marked with line markers or bird flight diverters to reduce the potential of birds flying into the lines. Line alterations to prevent bird electrocutions should not necessarily be implemented *after* such events occur as all electrocutions may not be known or documented. Incorporation of preventative measures along portions of the routes that are most attractive to birds (as indicated by frequent sightings) prior to any electrocutions is a much preferred alternative.

TPWD recommends the transmission line design should utilize avian safety features described in the revised:

Avian Power Line Interaction Committee (APLIC). 2012. *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*. Edison Electric Institute and APLIC. Washington, D.C.

In particular, the overhead ground wire should be marked with line markers to increase its visibility. The design of components within the proposed substation should also implement APLIC avian safety features. Additional recommendations are available in the document entitled, “*TPWD Recommendations for Electrical Transmission/Distribution Line Design and Construction*” available on TPWD’s website.

State Regulations

Parks and Wildlife Code

Nongame Birds

State law prohibits any take or possession of nongame birds, including their eggs and nests. Laws and regulations pertaining to state-protection of nongame birds are contained in Chapter 64 of the Texas Parks and Wildlife (TPW) Code; specifically, Section 64.002 provides that no person may catch, kill, injure, pursue, or possess a bird that is not a game bird. TPW Code Section 64.003, regarding destroying nests or eggs, provides that, no person may destroy or take the nests, eggs, or young and

any wild game bird, wild bird, or wild fowl. TPW Code Chapter 64 does not allow for incidental take and therefore is more restrictive than the MBTA.

Although not documented in the Texas Natural Diversity Database (TXNDD), many bird species which are not listed as *threatened* or *endangered* are protected by Chapter 64 of the TPW Code and are known to be year-round or seasonal residents or seasonal migrants through the proposed project area.

Recommendation: Please review the *Federal Regulations: Migratory Bird Treaty Act* section above for recommendations as they are applicable for Chapter 64 of the Parks and Wildlife Code compliance.

State-listed Species

TPW Code regulates state-listed threatened and endangered animal species. The capture, trap, take or killing of state-listed threatened and endangered animal species is unlawful unless expressly authorized under a permit issued by USFWS or TPWD. Laws and regulations pertaining to state-listed endangered or threatened animals are contained in Chapters 67 and 68 of the Texas Parks and Wildlife (TPW) Code; laws pertaining to endangered or threatened plants are contained in Chapter 88 of the TPW Code. There are penalties, which may include fines and/or jail time in addition to payment of restitution values, associated with take of state-listed species. Please see “Laws and Regulations Applicable to TPWD Review” that are available online at TPWD’s Wildlife Habitat Assessment Program website.

For purposes of relocation, surveys, monitoring, and research, terrestrial state-listed species may only be handled by persons permitted through the TPWD Wildlife Permits Program. For more information regarding Wildlife Permits, please visit TPWD’s Wildlife Permits website or contact the Permits Office at (512) 389-4647.

The potential occurrence of state-listed species in the project area is primarily dependent upon the availability of suitable habitat. Direct impacts to high quality or suitable habitat therefore are directly proportional to the magnitude and potential to directly impact state-listed species. State-listed reptiles that are typically slow moving or unable to move due to cool temperatures are especially susceptible to being directly impacted during ROW clearing and construction of the transmission line or substation.

Recommendation: TPWD recommends reviewing the most current TPWD annotated county lists of rare species for Bexar County, as state-listed species could be present depending upon habitat availability. Also, substantial changes were made to the annotated list of rare species in March 2020. These lists are

available online at the TPWD Wildlife Diversity website. Environmental documents prepared for the project should include an inventory of existing natural resources within the alternative substation sites and transmission line routes. Specific evaluations should be designed to predict project impacts upon these natural resources including potential impacts to state-listed species.

The following General Construction Recommendations are provided to assist in project planning and to avoid and/or minimize potential impacts to wildlife, including state-listed species.

Recommendation: In general, TPWD recommends the judicious use and placement of sediment control fence to exclude wildlife from areas to be disturbed. In many cases, sediment control fence placement for the purposes of controlling erosion and protecting water quality can be modified minimally to also provide the benefit of excluding wildlife access to construction areas. The exclusion fence should be buried at least six inches and be at least 24 inches high. The exclusion fence should be maintained for the life of the project and only be removed after the project activities are completed and the disturbed sites have been revegetated or otherwise stabilized. Construction personnel should be encouraged to examine the inside of the exclusion area daily to determine if any wildlife species have been trapped inside the area of impact and provide safe egress opportunities prior to initiation of construction activities. Regarding trenches or excavations for support structure foundations, etc., TPWD recommends that any open trenches or deep excavation areas be covered overnight and/or inspected every morning to ensure no wildlife species have been trapped. For open trenches and excavated areas, escape ramps, fashioned from soil or wood, should be installed at an angle of less than 45 degrees (1:1) in excavated areas that will allow trapped wildlife to climb out on their own. If any state-listed species are trapped in trenches or excavated areas, they should be removed by personnel permitted by TPWD to handle state-listed species.

Recommendation: For soil stabilization and/or revegetation of disturbed areas within the proposed project area, TPWD recommends erosion and seed /mulch stabilization materials that avoid entanglement hazards to snakes and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife, TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding due to a reduced risk to wildlife. If erosion control blankets or mats would be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic mesh matting should be avoided.

Species of Concern

In addition to state- and federally-protected species, TPWD tracks special features, natural communities, species of concern (SOC), and species of greatest conservation need (SGCN) in the TXNDD and actively promotes their conservation. TPWD considers it important to evaluate and, if necessary, minimize impacts to rare species and their habitat to reduce the likelihood of endangerment.

Recommendation: TPWD recommends reviewing the most current TPWD annotated county lists of rare species for Bexar County, as SOC/SGCN species could be present depending upon habitat availability.

The TXNDD is intended to assist users in avoiding harm to rare species or significant ecological features. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Absence of information in an area does not imply that a species is absent from that area. Although it is based on the best data available to TPWD regarding rare species, the data from the TXNDD do not provide a definitive statement as to the presences, absence or condition of special species, natural communities, or other significant features within your project area. These data are not inclusive and **cannot be used as presence/absence data**. They represent species that could potentially be in your project area. This information cannot be substituted for on-the-ground surveys. The TXNDD data is updated continuously based on new, updated and undigitized records; therefore, TPWD recommends requesting the most recent TXNDD data on a regular basis. TXNDD data can be requested through the TXNDD website.

Please be aware that determining the actual presence of a species in a given area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency and population density (both wildlife and human). The absence of a species can be demonstrated only with great difficulty and then only with repeated negative observations, taking into account all the variable factors contributing to the lack of detectable presence.

Monarch Conservation Plan

Significant declines in the population of migrating monarch butterflies (*Danaus plexippus*) have led to widespread concern about this species and the long-term persistence of the North American monarch migration. As part of an international conservation effort, TPWD has developed a Texas Monarch and Native Pollinator Conservation Plan. One of the broad categories of action in the plan is to augment

Mr. Derek Green
Page 8
April 14, 2020

larval feeding and adult nectaring opportunities. The plan is available on TPWD's website.

Recommendation: For disturbed sites within the monarch migration corridor and for landscaping opportunities in urban settings, TPWD recommends revegetation efforts include planting or seeding native milkweed (*Asclepias* spp.) and nectar plants as funding and seed availability allow. Where appropriate and sustainable, TPWD recommends landscaping plans incorporate monarch-friendly plants. Information about monarch biology, migration, and butterfly gardening can be found on the Monarch Watch website.

TPWD advises review and implementation of these recommendations in the preparation of the environmental document for the project. Please contact me at (361) 825-3240 or russell.hooten@tpwd.texas.gov if you have any questions or we may be of further assistance.

Sincerely,



Russell Hooten
Wildlife Habitat Assessment Program
Wildlife Division

/rh 43334

Green, Derek J

From: Frank Ramirez (City Council) <Frank.Ramirez@sanantonio.gov>
Sent: Monday, March 9, 2020 4:15 PM
To: Green, Derek J
Subject: Follow-up

Derek,

It was an absolute pleasure speaking with you today re: the environmental study for CPS' substations and transmission lines.

I am eager to learn more about this process and how our office can assist with informing the public about this project.

Per our conversation, please feel free to contact me at any time if you need connections to resources in the Office of Sustainability or Development Services. I will be conducting preliminary outreach to each of these departments to gather recommendations that may be presented alongside the recommendations of your environmental study.

Thank you once again for your time and I look forward to speaking with you again soon.

Best,

Frank A. Ramirez IV | Neighborhood & Zoning Liaison | Councilwoman Ana Sandoval, District 7
Direct: 210.207.0874 | Frank.Ramirez@sanantonio.gov



Council District 7 Field Office
4414 Centerview Dr., Suite 160, San Antonio, Texas 78228
O: 210.207.0870 | District7@sanantonio.gov | Sign up for District 7 news [here!](#)

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Green, Derek J

From: Sabrina Santiago (TCL) <Sabrina.Santiago@sanantonio.gov>
Sent: Monday, March 16, 2020 3:49 PM
To: Green, Derek J
Subject: Tezel Substation

Good afternoon Mr. Green. I was forwarded by my manager a letter to our department requesting information pertaining to the proposed sub-station and transmission line along Bandera near Tezel rd. I need more information from you to get you the information you may need. I will only be able to give you information regarding drainage and floodplains. Can you tell me where the sub-station will be? I see the transmission line layout on your exhibit but not the sub-station. I appreciate your time!

Thank you,

Sabrina Santiago, EIT, CFM

Special Projects Manager

Public Works Department

1901 S. Alamo St | San Antonio, TX 78204

O: 210.207.0182 | F: 210.207.0032

www.sanantonio.gov



**CITY OF SAN ANTONIO
PUBLIC WORKS
DEPARTMENT**



Green, Derek J

From: Green, Derek J
Sent: Tuesday, March 17, 2020 8:58 AM
To: Sabrina Santiago (TCI)
Subject: RE: Tezel Substation

Ms. Santiago:

Thank you for your response. At the moment we do not know where the substation will be located, only that it will be within the Study Area boundary delineated by the red line in the figure that was enclosed with the original letter. The substation that is eventually selected will tie into the existing line you see in the map figure. Information on drainage and floodplains within the Study Area will be great.

We are in the data collection stage of the project at present. Several potential substation sites and transmission line routes to tie into the existing line will be identified and after an analysis lasting several months, including a public open-house meeting, these will be whittled down to the preferred site.

Thank you for your time.

Derek Green

From: Sabrina Santiago (TCI) <Sabrina.Santiago@sanantonio.gov>
Sent: Monday, March 16, 2020 3:49 PM
To: Green, Derek J <djgreen@burnsmcd.com>
Subject: Tezel Substation

Good afternoon Mr. Green. I was forwarded by my manager a letter to our department requesting information pertaining to the proposed sub-station and transmission line along Bandera near Tezel rd. I need more information from you to get you the information you may need. I will only be able to give you information regarding drainage and floodplains. Can you tell me where the sub-station will be? I see the transmission line layout on your exhibit but not the sub-station. I appreciate your time!

Thank you,

Sabrina Santiago, EIT, CFM

Special Projects Manager

Public Works Department

1901 S. Alamo St | San Antonio, TX 78204

O: 210.207.0182 | F: 210.207.0032

www.sanantonio.gov



**CITY OF SAN ANTONIO
PUBLIC WORKS
DEPARTMENT**





United States Department of the Interior



FISH AND WILDLIFE SERVICE

Austin Ecological Services Field Office

10711 Burnet Road, Suite 200

Austin, TX 78758-4460

Phone: (512) 490-0057 Fax: (512) 490-0974

<http://www.fws.gov/southwest/es/AustinTexas/>

<http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>

In Reply Refer To:

June 29, 2020

Consultation Code: 02ETAU00-2020-SLI-1697

Event Code: 02ETAU00-2020-E-03511

Project Name: CPS Energy - Proposed Tezel Substation and 138-kV Transmission Line Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that *may* occur within the county of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please note that new information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Also note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of federally listed as threatened

or endangered species and to determine whether projects may affect these species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

While a Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment, the Federal Agency must notify the Service in writing of any such designation. The Federal agency shall also independently review and evaluate the scope and content of a biological assessment prepared by their designated non-Federal representative before that document is submitted to the Service.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by a federally funded, permitted or authorized activity, the agency is required to consult with the Service pursuant to 50 CFR 402. The following definitions are provided to assist you in reaching a determination:

- *No effect* - the proposed action will not affect federally listed species or critical habitat. A “no effect” determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, if the project changes or additional information on the distribution of listed or proposed species becomes available, the project should be reanalyzed for effects not previously considered.
 - *May affect, but is not likely to adversely affect* - the project may affect listed species and/or critical habitat; however, the effects are expected to be discountable, insignificant, or completely beneficial. Certain avoidance and minimization measures may need to be implemented in order to reach this level of effect. The Federal agency or the designated non-Federal representative should consult with the Service to seek written concurrence that adverse effects are not likely. Be sure to include all of the information and documentation used to reach your decision with your request for concurrence. The Service must have this documentation before issuing a concurrence.
 - *Is likely to adversely affect* - adverse effects to listed species may occur as a direct or indirect result of the proposed action. For this determination, the effect of the action is neither discountable nor insignificant. If the overall effect of the proposed action is beneficial to the listed species but the action is also likely to cause some adverse effects to individuals of that species, then the proposed action “is likely to adversely affect” the listed species. The analysis should consider all interrelated and interdependent actions. An “is likely to adversely affect” determination requires the Federal action agency to initiate formal section 7 consultation with our office.
-

Regardless of the determination, the Service recommends that the Federal agency maintain a complete record of the evaluation, including steps leading to the determination of effect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>.

Migratory Birds

For projects that may affect migratory birds, the Migratory Bird Treaty Act (MBTA) implements various treaties and conventions for the protection of these species. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. Migratory birds may nest in trees, brushy areas, or other areas of suitable habitat. The Service recommends activities requiring vegetation removal or disturbance avoid the peak nesting period of March through August to avoid destruction of individuals, nests, or eggs. If project activities must be conducted during this time, we recommend surveying for nests prior to conducting work. If a nest is found, and if possible, the Service recommends a buffer of vegetation remain around the nest until the young have fledged or the nest is abandoned.

For additional information concerning the MBTA and recommendations to reduce impacts to migratory birds please contact the U.S. Fish and Wildlife Service Migratory Birds Office, 500 Gold Ave. SW, Albuquerque, NM 87102. A list of migratory birds may be viewed at <https://www.fws.gov/birds/management/managed-species/migratory-bird-treaty-act-protected-species.php>. Guidance for minimizing impacts to migratory birds for projects including communications towers can be found at: <https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/communication-towers.php>. Additionally, wind energy projects should follow the wind energy guidelines

<https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/wind-energy.php>) for minimizing impacts to migratory birds and bats.

Finally, please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan <https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents/eagles.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Austin Ecological Services Field Office

10711 Burnet Road, Suite 200

Austin, TX 78758-4460

(512) 490-0057

Project Summary

Consultation Code: 02ETAU00-2020-SLI-1697

Event Code: 02ETAU00-2020-E-03511

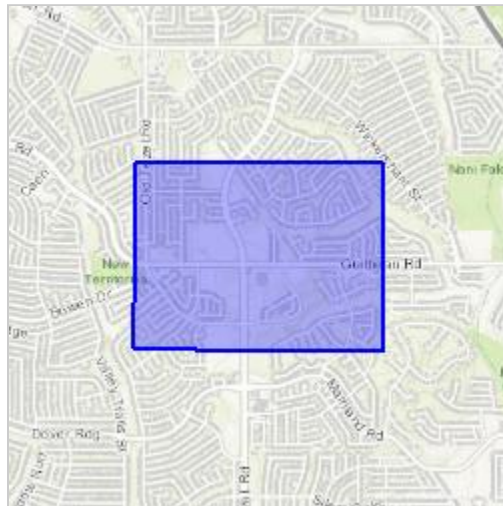
Project Name: CPS Energy - Proposed Tezel Substation and 138-kV Transmission Line Project

Project Type: TRANSMISSION LINE

Project Description: CPS Energy is proposing to build a substation and 138-kV transmission line in Bexar County, Texas.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/29.519478305297966N98.66132125959277W>



Counties: Bexar, TX

Endangered Species Act Species

There is a total of 24 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 3 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.
-

Birds

NAME	STATUS
<p>Golden-cheeked Warbler (=wood) <i>Dendroica chrysoparia</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33</p>	Endangered
<p>Least Tern <i>Sterna antillarum</i></p> <p>Population: interior pop. No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ Wind Energy Projects <p>Species profile: https://ecos.fws.gov/ecp/species/8505</p>	Endangered
<p>Piping Plover <i>Charadrius melodus</i></p> <p>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location is outside the critical habitat. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ Wind Energy Projects <p>Species profile: https://ecos.fws.gov/ecp/species/6039</p>	Threatened
<p>Red Knot <i>Calidris canutus rufa</i></p> <p>No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ Wind Energy Projects <p>Species profile: https://ecos.fws.gov/ecp/species/1864</p>	Threatened
<p>Whooping Crane <i>Grus americana</i></p> <p>Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758</p>	Endangered

Amphibians

NAME	STATUS
<p>San Marcos Salamander <i>Eurycea nana</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6374</p>	Threatened
<p>Texas Blind Salamander <i>Typhlomolge rathbuni</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5130</p>	Endangered

Fishes

NAME	STATUS
Fountain Darter <i>Etheostoma fonticola</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5858	Endangered

Clams

NAME	STATUS
Texas Fatmucket <i>Lampsilis bracteata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9041	Candidate
Texas Pimpleback <i>Quadrula petrina</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8966	Candidate

Insects

NAME	STATUS
[no Common Name] Beetle <i>Rhadine exilis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6942	Endangered
[no Common Name] Beetle <i>Rhadine infernalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3804	Endangered
Comal Springs Dryopid Beetle <i>Stygoparnus comalensis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7175	Endangered
Comal Springs Riffle Beetle <i>Heterelmis comalensis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3403	Endangered
Helotes Mold Beetle <i>Batrisodes venyivi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1149	Endangered

Arachnids

NAME	STATUS
Braken Bat Cave Meshweaver <i>Cicurina venii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7900	Endangered
Cokendolpher Cave Harvestman <i>Texella cokendolpheri</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/676	Endangered
Government Canyon Bat Cave Meshweaver <i>Cicurina vespera</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7037	Endangered
Government Canyon Bat Cave Spider <i>Neoleptoneta microps</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/553	Endangered
Madla Cave Meshweaver <i>Cicurina madla</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2467	Endangered
Robber Baron Cave Meshweaver <i>Cicurina baronia</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2361	Endangered

Crustaceans

NAME	STATUS
Peck's Cave Amphipod <i>Stygobromus (=Stygonectes) pecki</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8575	Endangered

Flowering Plants

NAME	STATUS
Bracted Twistflower <i>Streptanthus bracteatus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2856	Candidate
Texas Wild-rice <i>Zizania texana</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/805	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



United States Department of the Interior



FISH AND WILDLIFE SERVICE

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Austin, TX 78758-4460

Phone: (512) 490-0057 Fax: (512) 490-0974

<http://www.fws.gov/southwest/es/AustinTexas/>

<http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>

In Reply Refer To:

October 22, 2020

Consultation Code: 02ETAU00-2020-SLI-1697

Event Code: 02ETAU00-2021-E-00272

Project Name: CPS Energy - Proposed Tezel Substation and 138-kV Transmission Line Project

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that *may* occur within the county of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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This species list is provided by:

Austin Ecological Services Field Office

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Austin, TX 78758-4460

(512) 490-0057

Project Summary

Consultation Code: 02ETAU00-2020-SLI-1697

Event Code: 02ETAU00-2021-E-00272

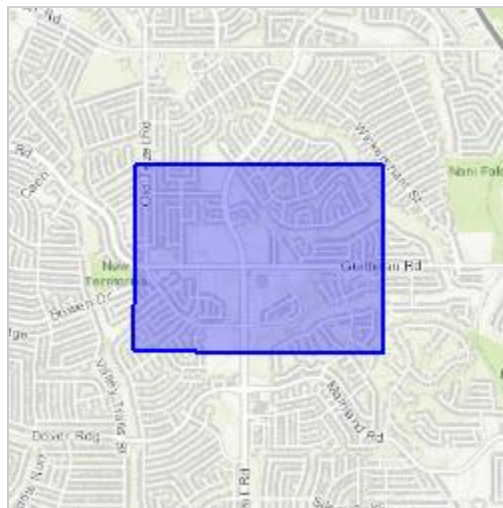
Project Name: CPS Energy - Proposed Tezel Substation and 138-kV Transmission Line Project

Project Type: TRANSMISSION LINE

Project Description: CPS Energy is proposing to build a substation and 138-kV transmission line in Bexar County, Texas.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/29.519478305297966N98.66132125959277W>



Counties: Bexar, TX

Endangered Species Act Species

There is a total of 24 threatened, endangered, or candidate species on this species list.

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-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.
-

Birds

NAME	STATUS
<p>Golden-cheeked Warbler (=wood) <i>Dendroica chrysoparia</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33</p>	Endangered
<p>Least Tern <i>Sterna antillarum</i></p> <p>Population: interior pop. No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ Wind Energy Projects <p>Species profile: https://ecos.fws.gov/ecp/species/8505</p>	Endangered
<p>Piping Plover <i>Charadrius melodus</i></p> <p>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location is outside the critical habitat. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ Wind Energy Projects <p>Species profile: https://ecos.fws.gov/ecp/species/6039</p>	Threatened
<p>Red Knot <i>Calidris canutus rufa</i></p> <p>No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ Wind Energy Projects <p>Species profile: https://ecos.fws.gov/ecp/species/1864</p>	Threatened
<p>Whooping Crane <i>Grus americana</i></p> <p>Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758</p>	Endangered

Amphibians

NAME	STATUS
<p>San Marcos Salamander <i>Eurycea nana</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6374</p>	Threatened
<p>Texas Blind Salamander <i>Typhlomolge rathbuni</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5130</p>	Endangered

Fishes

NAME	STATUS
Fountain Darter <i>Etheostoma fonticola</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5858	Endangered

Clams

NAME	STATUS
Texas Fatmucket <i>Lampsilis bracteata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9041	Candidate
Texas Pimpleback <i>Quadrula petrina</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8966	Candidate

Insects

NAME	STATUS
[no Common Name] Beetle <i>Rhadine exilis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6942	Endangered
[no Common Name] Beetle <i>Rhadine infernalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3804	Endangered
Comal Springs Dryopid Beetle <i>Stygoparnus comalensis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7175	Endangered
Comal Springs Riffle Beetle <i>Heterelmis comalensis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3403	Endangered
Helotes Mold Beetle <i>Batrisodes venyivi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1149	Endangered

Arachnids

NAME	STATUS
Braken Bat Cave Meshweaver <i>Cicurina venii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7900	Endangered
Cokendolpher Cave Harvestman <i>Texella cokendolpheri</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/676	Endangered
Government Canyon Bat Cave Meshweaver <i>Cicurina vespera</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7037	Endangered
Government Canyon Bat Cave Spider <i>Neoleptoneta microps</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/553	Endangered
Madla Cave Meshweaver <i>Cicurina madla</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2467	Endangered
Robber Baron Cave Meshweaver <i>Cicurina baronia</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2361	Endangered

Crustaceans

NAME	STATUS
Peck's Cave Amphipod <i>Stygobromus (=Stygonectes) pecki</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8575	Endangered

Flowering Plants

NAME	STATUS
Bracted Twistflower <i>Streptanthus bracteatus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2856	Candidate
Texas Wild-rice <i>Zizania texana</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/805	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX B - PUBLIC INVOLVEMENT

Who is CPS Energy?

Established in 1860, we are the nation's largest public power, natural gas and electric company, providing safe, reliable, and competitively-priced service to **860,934** electric and **358,495** natural gas customers in San Antonio and portions of 10 adjoining counties. Our customers' combined energy bills rank among the lowest of the nation's 20 largest cities – while providing about \$360 million to San Antonio every year - almost \$1M every day.

As a trusted and strong community partner, we continuously focus on job creation, economic development and educational investment. True to our **People First** philosophy, we are powered by our skilled workforce, whose commitment to the community is demonstrated through our employees'

volunteerism in giving back to our city and programs aimed at bringing value to our customers.

We are among the top public power wind energy buyers in the nation and number one in Texas for solar generation.



How can you follow the progress of this project?

The CPS Energy project team will post project information on the CPS Energy website at www.cpsenergy.com. (search: Tezel)

Who can answer your questions?

The website will include regular updates on the project as steps are completed.

Also, you may write, call or email to:

CPS Energy

Antonio DeMendonca, Project Manager
Tezel Substation &
Transmission Line Project

Mail Code 100311
P.O. Box 1771

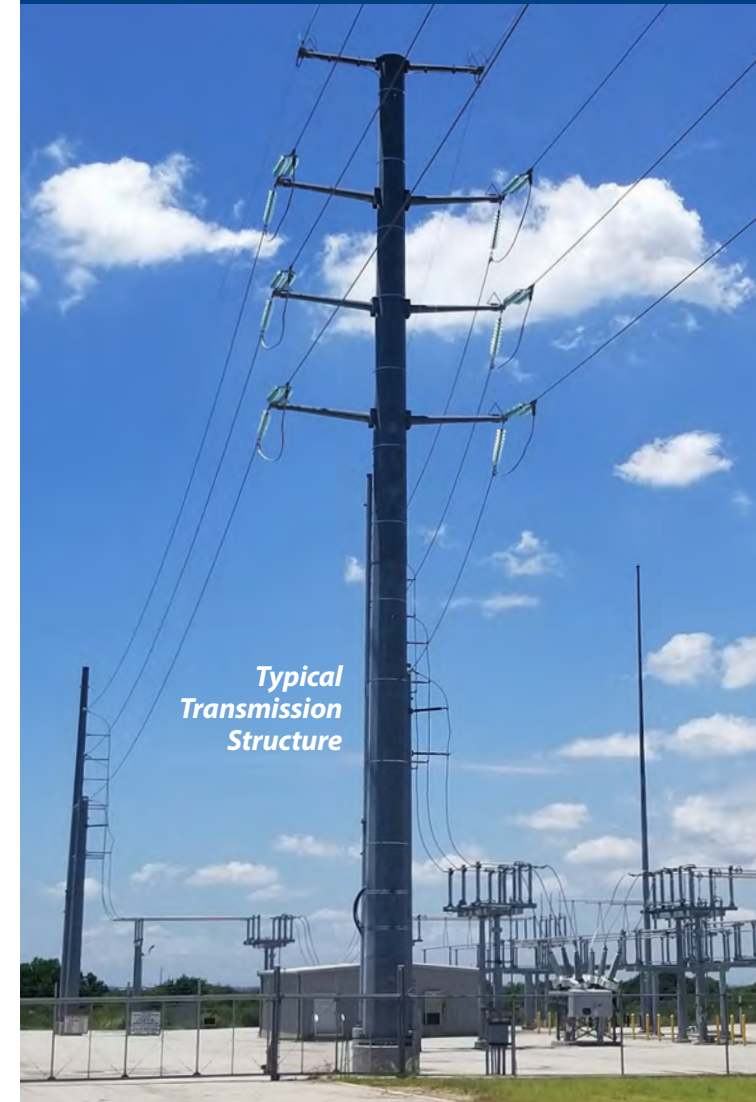
San Antonio, Texas 78296-1771
(210) 353-4895

tezelproject@cpsenergy.com



TEZEL

SUBSTATION AND TRANSMISSION LINE PROJECT



*Typical
Transmission
Structure*

INFORMATION ABOUT THE TEZEL SUBSTATION & TRANSMISSION LINE PROJECT

What is the Tezel Substation & Transmission Line Project?

CPS Energy is planning to construct a new electric substation and high-voltage transmission line in the northwest part of Bexar County in the area west of IH10 and inside Loop 1604 near the intersection of Guilbeau and Tezel Roads.

A substation is a local power hub or distribution point for electricity. This substation will improve reliability and provide additional electric capacity to homes and businesses in the area. The substation will be supplied from a new extension of an existing high-voltage transmission line within the ***Study Area** map shown.

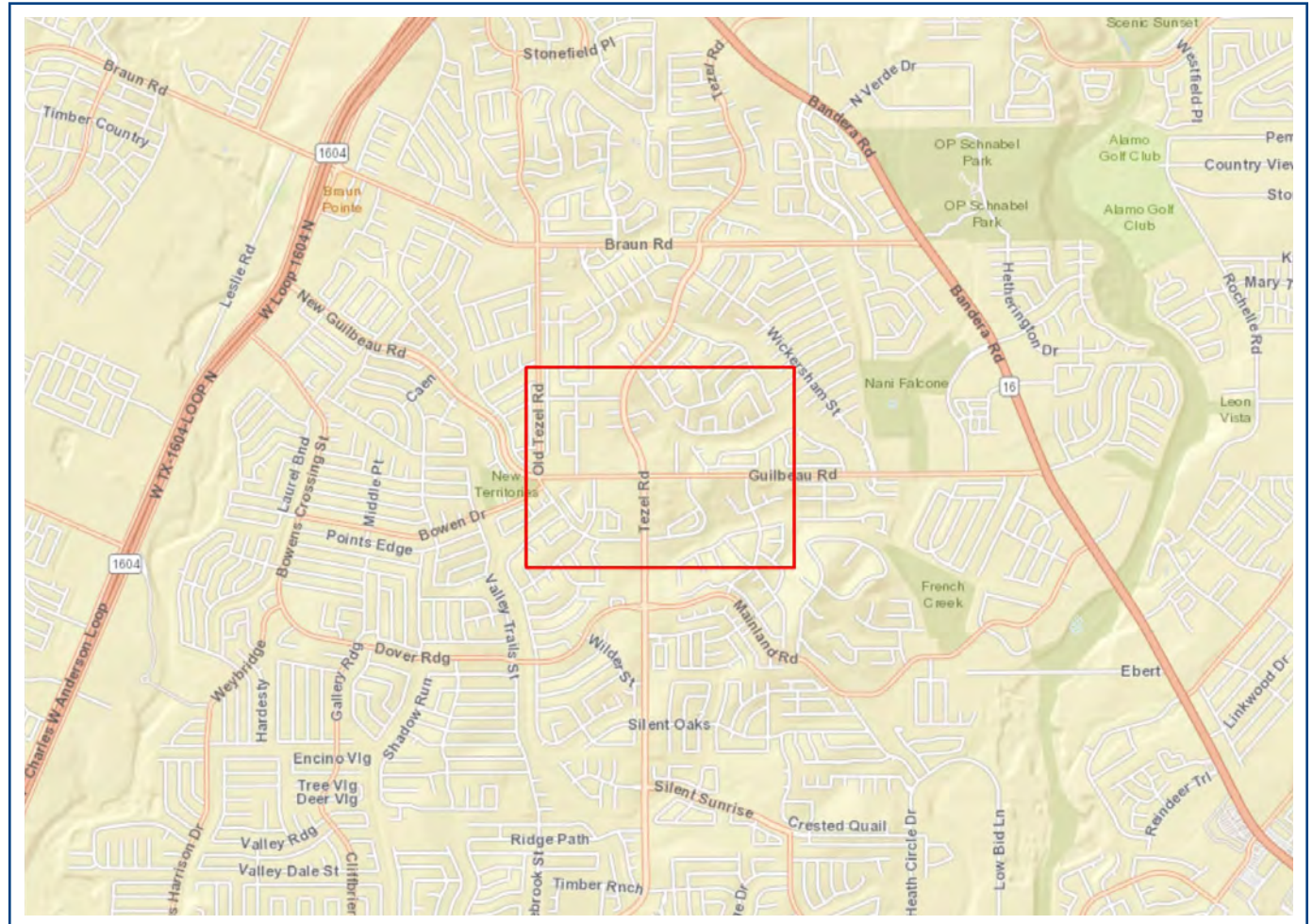
The substation requires at minimum 2 acres, the transmission right of way will be approximately 75 feet wide.

How might this project affect you?

CPS Energy is evaluating multiple substation site alternatives and transmission line options for the project within the study area. Your input and feedback is important to CPS Energy's evaluation of alternatives.

Why is this project needed?

The new substation will increase reliability of electric service by moving the electricity through new distribution circuits to meet the increased need for power in your area. It will reduce the likelihood of extended outages and restore power faster, as it will be a strong electric support system for your community.



Study Area Map

*The area identified, based on project need, is known as the "Study Area."

Typical Substation



¿Quién es CPS Energy?

Fundada en 1860, somos la compañía de energía pública, gas natural y electricidad más grande del país, brindando un servicio seguro, confiable y de precio competitivo a **860,934** clientes de electricidad y **358,495** clientes de gas natural en San Antonio y porciones de 10 condados adyacentes.

Las facturas de energía combinadas de nuestros clientes se encuentran entre las 20 ciudades más grandes del país, al tiempo que proporcionan alrededor de \$ 360 millones a San Antonio cada año, casi \$ 1 millón por día.

Como un socio comunitario confiable y fuerte, nos enfocamos continuamente en la creación de empleo, el desarrollo económico y la inversión educativa. Fieles a nuestra filosofía **People First**, estamos respaldados por nuestra mano de obra calificada, cuyo compromiso con la comunidad se demuestra

a través del voluntariado de nuestros empleados para retribuir a nuestra ciudad y programas destinados a aportar valor a nuestros clientes.

Estamos entre los principales compradores de energía eólica de energía pública en la nación y el número uno en Texas para la generación solar.



¿Cómo se puede seguir el progreso de este proyecto?

El equipo del proyecto de CPS Energy publicará la información del proyecto en el sitio web de CPS Energy en www.cpsenergy.com.
(buscar: Tezel)

¿Quién puede responder a sus preguntas?

El sitio web incluirá actualizaciones periódicas del proyecto a medida que se completen los pasos. Además, puede escribir, llamar o enviar un correo electrónico a:

CPS Energy

Antonio DeMendonca, Gerente de Proyecto
Proyecto de subestación y
de línea de transmisión Tezel

Mail Code 100311

P.O. Box 1771

San Antonio, Texas 78296-1771

(210) 353-4895

tezelproject@cpsenergy.com



PROYECTO DE SUBESTACIÓN Y LÍNEA DE TRANSMISIÓN

TEZEL



*Típica Estructura
de línea de
Transmisión*

INFORMACIÓN SOBRE PROYECTO DE SUBESTACIÓN Y LÍNEA DE TRANSMISIÓN TEZEL

¿Qué es el proyecto de subestación y línea de transmisión Tezel?

CPS Energy está planeando construir una nueva subestación eléctrica y una línea de transmisión de alto voltaje en el área justo al noreste de el Condado de Bexar el la zona oeste de IH 10 y dentro del Loop 1604 cerca de la intersección de los caminos Guilbeau y Tezel.

Una subestación es un centro de energía o punto de distribución local de electricidad. Esta subestación mejorará la fiabilidad y proporcionará capacidad eléctrica adicional a los hogares y negocios de la zona.

La subestación se suministrará desde una nueva extensión de una línea de transmisión de alto voltaje existente en el ***mapa del área de estudio** que se muestra.

La subestación requiere aproximadamente 2 áreas; el derecho de paso de la línea de transmisión tendrá aproximadamente 75 pies de ancho.

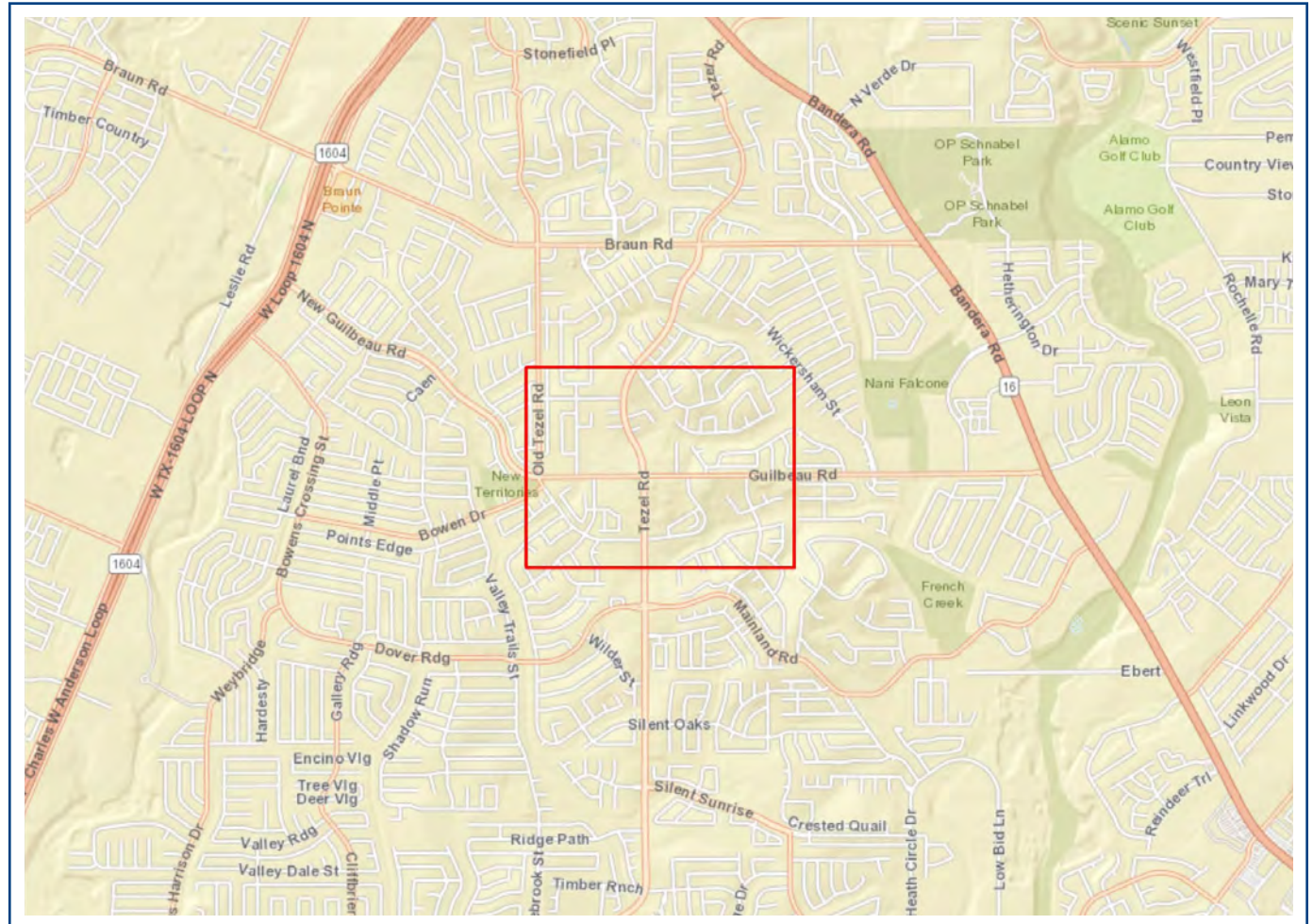
¿Cómo podría afectar este proyecto?

CPS Energy está evaluando múltiples alternativas de sitio de subestación y opciones de línea de transmisión para el proyecto dentro del área de estudio. Su aporte y comentarios son importantes para la evaluación de alternativas de CPS Energy.

¿Por qué se necesita este proyecto?

La nueva subestación aumentará la confiabilidad del servicio eléctrico al mover la electricidad a través de circuitos adicionales para satisfacer la mayor necesidad de energía en su área.

Reducirá la probabilidad de interrupciones prolongadas y restablecerá la energía más rápido, ya que será un fuerte sistema de soporte eléctrico para su comunidad.



Mapa del área de estudio

*El área identificada, según la necesidad del proyecto, se conoce como el "Área de estudio."

Una Subestación típica





July 8, 2020

Dear CPS Energy Customer:

Thank you for allowing us to serve your energy needs.

You are invited to a video broadcast to learn about a proposed project intended to improve electric service reliability in your area. Typically, our open houses are public forums held in person; however, due to ongoing COVID-19 concerns and guidance for maintaining social distance, this informational open house will be conducted via video broadcast for the enhanced safety of our customers and employees.

Your feedback is important, and we will offer opportunities through multiple channels: completing and mailing us the project questionnaire, sending us an email, or calling us on the phone. By reviewing the video and website information, you can learn more about the need for the project, along with substation site alternatives and transmission line routing options that we are currently evaluating. We welcome your questions, comments, and input regarding this project. Video details:

**CPS Energy Open House Video Broadcast
Tezel Substation & Transmission Line Project**

Open House video broadcast available beginning at 6 PM
Wednesday, July 15, 2020

View the video by visiting the project webpage at:

The Tezel Substation & Transmission Line Project involves the proposed construction of a new substation, transmission line, and associated distribution lines in the northwest area of Bexar County. The proposed substation will require a minimum of 2 acres of property and a transmission line connection to the existing 138kV Bandera to Helotes transmission line.

A brochure describing the proposed project and a map of the study area, along with the project questionnaire, are included in this packet. The email address for comments and questions regarding this project is: TezelProject@cpsenergy.com. To respond by phone, please call me at 210-353-4895.

We look forward to presenting this project to you, receiving your feedback, and answering your questions. Thank you in advance for taking the time to participate.

Sincerely,

A handwritten signature in blue ink that reads "Antonio DeMendonca".

Antonio DeMendonca
Project Manager

8 de julio de 2020

Estimado Cliente de CPS Energy:

Gracias por permitirnos atender sus necesidades energéticas.

Está invitado a una transmisión de video para conocer acerca del proyecto propuesto destinado a mejorar la confiabilidad del servicio eléctrico en su área. Habitualmente, nuestras Open Houses [Casas Abiertas] son foros públicos realizados en persona; sin embargo, debido a las preocupaciones continuas relacionadas al COVID-19 y las directrices para mantener el distanciamiento social, esta Open House [Casa Abierta] informativa se llevará a cabo a través de una transmisión de video para aumentar la seguridad de nuestros clientes y empleados.

Sus comentarios son importantes, y le ofrecemos la oportunidad de enviarlos a través de múltiples canales: completar y enviarnos el cuestionario del proyecto por correo, enviarnos un correo electrónico o comunicarse por teléfono. Al revisar el video y la información del sitio web, puede obtener más información sobre la necesidad del proyecto, junto con las alternativas del sitio de subestación y las opciones de ruta de la línea de transmisión que estamos evaluando actualmente. Agradecemos sus preguntas, comentarios y sugerencias sobre este proyecto. Detalles del video:

**Transmisión de Video de Open House [Casa Abierta] de CPS Energy
Proyecto de Subestación y Línea de Transmisión en Tezel**

Transmisión de video disponible a partir de las 6 PM

Miércoles, 15 de julio de 2020

Vea el video ingresando a la página web del proyecto en:

cpsenergy.com/Tezel

El Proyecto de Subestación y Línea de Transmisión en Tezel implica la construcción propuesta de una nueva subestación, línea de transmisión y líneas de distribución asociadas en el área noroeste del Condado de Bexar. La subestación propuesta requerirá un mínimo de 2 acres de propiedad y una conexión de la línea de transmisión a la línea de transmisión de 138kV existente de Bandera a Helotes.

En este paquete se incluye un folleto que describe el proyecto propuesto y un mapa del área de estudio, junto con el cuestionario del proyecto. La dirección de correo electrónico para comentarios y preguntas sobre este proyecto es: TezelProject@cpsenergy.com. Para consultas por teléfono, comuníquese al 210-353-4895.

Esperamos poder presentarle este proyecto, recibir sus comentarios y responder sus preguntas. Desde ya muchas gracias por tomarse el tiempo de participar.

Atentamente,



Antonio DeMendonca
Gerente del Proyecto

Scope, Purpose & Need



Scope

CPS Energy proposes to construct a new substation in the northwest part of Bexar County in the area west of IH10 and inside Loop 1604 near the intersection of Guilbeau and Tezel Roads. CPS Energy plans to install a new 138kV transmission line that will be connected to the existing Bandera Rd to Helotes transmission line in order to serve the new substation.

Purpose and Need

The new substation is needed to meet an increasing demand for electricity in the area from residential and commercial customers. The new substation will allow CPS Energy to maintain and improve the area's electrical reliability in order to reduce potential customer electric outages now and into the future.

The new substation will help relieve load from other surrounding substations and reduce the risk of overloading circuits.

The new substation needs to be connected to the existing 138kV Bandera Rd to Helotes transmission line.

System Planning – Growth & Reliability

“

Commercial



Electric Vehicles



Single-Family Homes



Reliability



System Planning – Infrastructure Solutions



Distribution Lines



Smart Devices



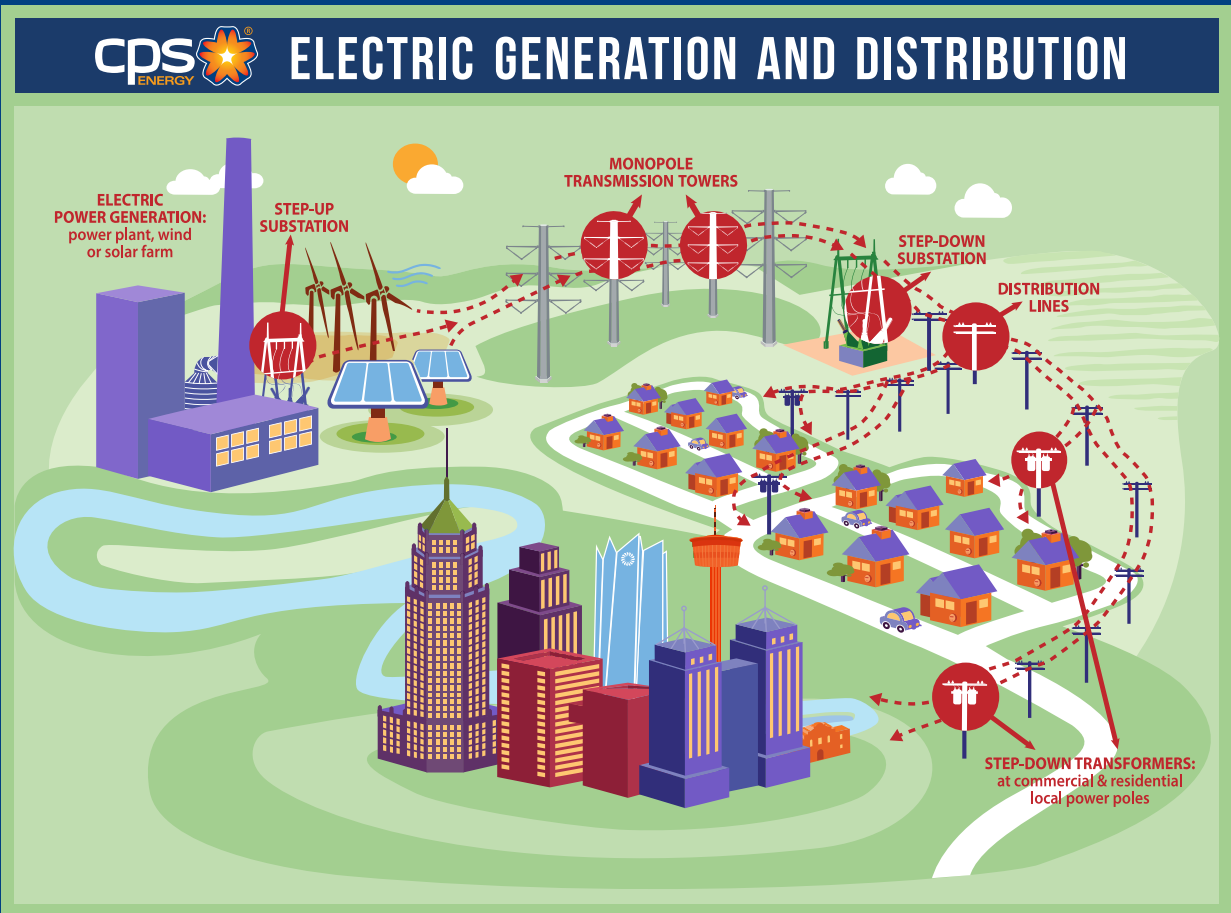
Transmission Lines



Substations



Generation to Customer Diagram



Routing and Siting Process Highlights



Determine a need for the project

- By utility planners and engineers

Define the study area

Gather data, identify constraints, and propose preliminary alternative route segments

- Obtain aerial photos of the study area
- Gather property boundary information
- Identify environmental/land-use constraints and opportunities
- Send letters to federal, state and local agencies requesting information about the study area
- Gather information regarding natural, cultural and human resources
- Assess easement/right-of-way features/concerns
- Evaluate alternative transmission structures

Conduct public involvement

- Notify landowners and interested parties
- Advertise open house
- Broadcast pre-recorded open house informational video to explain the project and solicit input on preliminary transmission segments & substation sites
- Respond to inquiries
- Evaluate public and agency input

Develop environmental assessment report

Recommend preferred route and site to Board of Trustees for approval

Anticipated Timeline



Gather information and land use data

Completed

Send letters to landowners

In Progress

Broadcast Project Video

July 15, 2020

Complete evaluation Public input, environment,
land use, engineering

August – November 2020

CPS Energy Board of Trustees Approval &
Notify landowners and interested parties

Dec. 2020 – Feb. 2021

Apply for City Ordinance

March – June 2021

Start construction

Mid 2022

Complete construction

May 2024



Substation Facts



Existing Substations

- As of 2019, there are approximately 110 existing substations in the CPS Energy service area.
- Substations operate on either 345 kV or 138 kV transmission voltages and either 34.5 kV or 13.2 kV distribution voltages.

New Substations

- The general location for a substation is determined by the demand for electricity in that area.
- A substation site must have access to public roadway.
- A substation site must have access to existing transmission and distribution lines.
- Site conditions for a substation are:
 - Location –not located in a floodplain
 - Size – minimum 2 acres
 - Terrain –relatively flat
 - Soil –natural soil, void of fill and waste

Typical Substations



Exeter Substation – Typical Air Insulated Substation (AIS)

Decorative Substation Wall Types



Dresden Substation – Decorative concrete wall (Art work provided by City of San Antonio)



Ball Park Substation – Decorative concrete wall

Typical Transmission Structures



Single Circuit Structure



Double Circuit Structure

Typical Transmission Easements

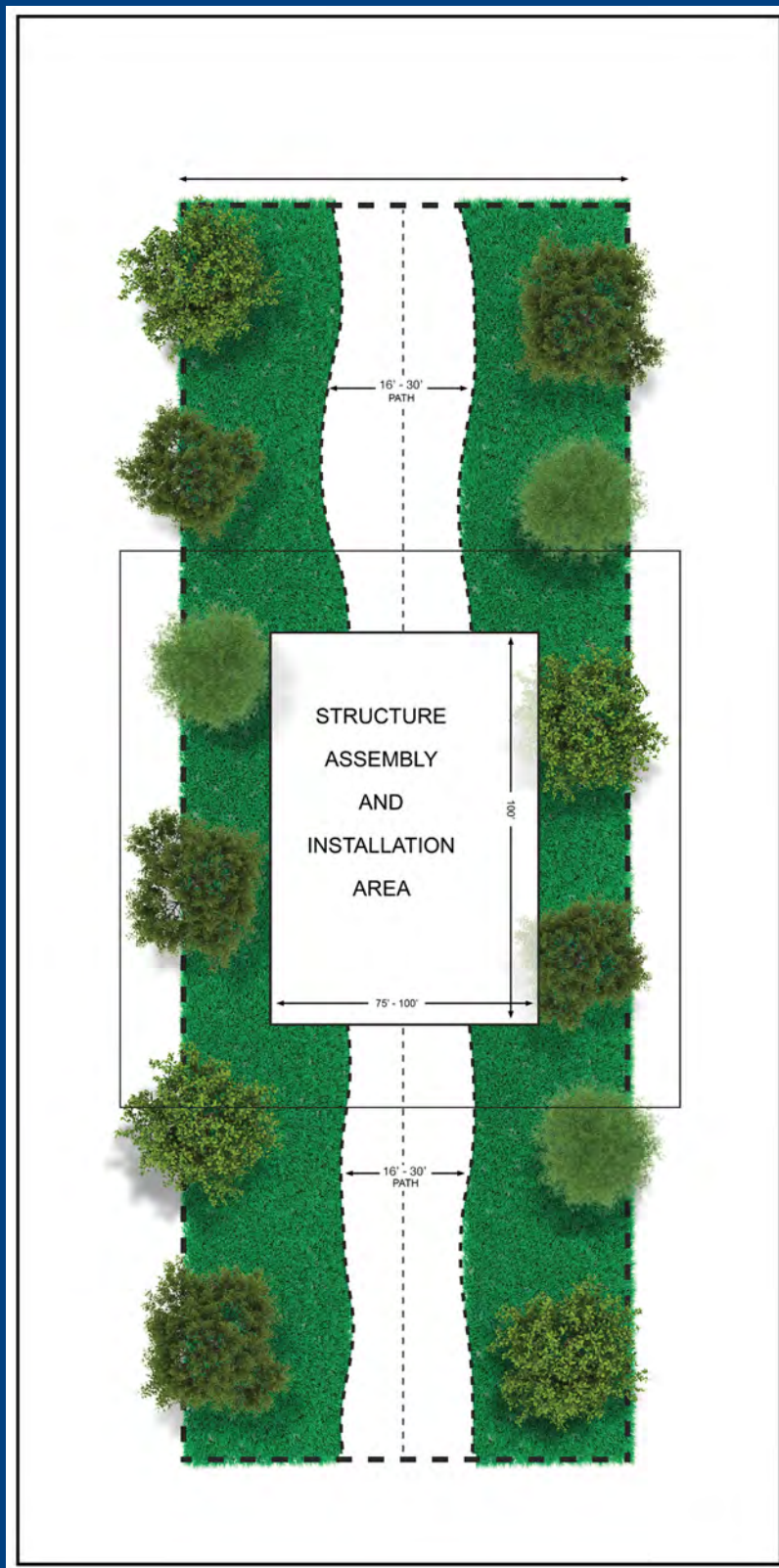


100ft clearing around transmission structure



16-30ft clearing along route

Sample Easement Clearing



Acquisition



- Mail “Bill of Rights” letter to affected landowners
- Contact property owner
- Obtain permission to conduct survey(s)
- Survey establishes boundaries of substation/easement
(Simultaneously perform environmental/ cultural surveys)
- Substation/easement area is defined/ described by
Registered Professional Land Surveyor
- Value of substation/easement established by
independent appraiser
- Negotiate with property owner for substation site/
easement or right-of-way for utility use

Right-of-Way Terms to Know



EASEMENT:

A right created by grant, reservation, agreement, or implication, which one party has in another party's land.

SURVEY:

The measurement of the boundaries of a parcel of land, its area, and sometimes its topography.

APPRAISAL:

The act or process of developing an opinion of value; an opinion of value.

NEGOTIATION:

The process by which two or more parties resolve differences to reach a mutually acceptable agreement.

EMINENT DOMAIN:

A governmental right to acquire private property for public use by condemnation, and the payment of just compensation.

FAIR MARKET VALUE:

The price that would probably be negotiated between a willing seller and a willing buyer in a reasonable time, usually arrived at by comparable sales in the same area.

STATE OF TEXAS LANDOWNER BILL OF RIGHTS:

Property owner rights that apply to any attempt by the government or a private entity to take your property, as prescribed in Texas Government Code Sec. 402.031 and Chapter 21 of the Texas Property Code.

Land Use Criteria



Land Use

Is site adjacent to an existing transmission line

Length of alternative route (miles)

Number of habitable structures¹ within 300 feet of route centerline/site

Number of churches within 300 feet of route centerline/site

Number of day care centers within 300 feet of route centerline/site

Number of schools within 300 feet of route centerline/site

Length of route utilizing existing electric facility ROW²

Length of route parallel to existing electric facility ROW

Length of route parallel to other existing ROW (roads, highways, utilities, etc.)

Length of route parallel to property lines (not following existing ROW)³

Length of route across parks/recreational areas⁴

Number of additional parks/recreational areas⁴ within 1,000 feet of route centerline

Length of route across conservation easements and/or mitigation banks

Length of route parallel to pipelines

Number of pipeline crossings

Number of transmission line crossings

Number of road crossings

Number of FAA registered public/military airports⁵ with at least one runway more than 3,200 feet in length located within 20,000 feet of the route centerline/site

Number of FAA registered public/military airports⁵ having no runway more than 3,200 feet in length located within 10,000 feet of the route centerline/site

Number of private airstrips within 10,000 feet of the route centerline/site

Number of heliports within 5,000 feet of the route centerline/site

Number of commercial AM radio transmitters within 10,000 feet of the route centerline/site

Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of the route centerline/site

Number of existing water wells within 200 feet of the route centerline

Number of oil and gas wells within 200 feet of the route centerline
(including dry or plugged wells)

Aesthetics

Estimated length of route/site within foreground visual zone^{6,7}
of park/recreational areas⁴



Land Use Criteria (continued)



Ecology

Is route/site in an area known to contain endangered karst invertebrate species (Zone 1)

Is route/site in an area having a high probability of containing endangered karst invertebrate species (Zone 2)

Is route/site within 500 feet of a known karst feature

Length of route across upland woodlands/brushland

Length of route across bottomland/riparian woodlands/brushland

Length of route across National Wetlands Inventory (NWI) mapped wetlands

Length of route across known occupied habitat of federally listed endangered or threatened species

Length of route across open water (lakes, ponds)

Number of stream crossings

Length of route parallel (within 100 feet) to streams

Length of route across Edwards Aquifer Recharge Zone

Length of route across Edwards Aquifer Contributing Zone

Length of route across FEMA mapped 100-year floodplain

Cultural Resources

Number of recorded historic or prehistoric sites crossed by route

Number of additional recorded historic or prehistoric sites within 1,000 feet of route centerline

Number of National Register listed or determined eligible sites crossed by route

Number of additional National Register listed or determined eligible sites within 1,000 feet of route centerline

Length of route crossing areas of high archaeological/historic site potential

1 Single-family and multi-family dwelling, and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230kV or less. **2** Includes instances of proposed double-circuiting or overbuilding existing transmission or distribution lines. **3** Apparent property boundaries created by existing roads, highways, or railroad ROWs are not "double-counted" in the length of ROW parallel to apparent property boundaries criteria. **4** Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the project. **5** As listed in the Chart Supplement South Central US (FAA 2019b formerly known as the Airport/Facility Directory South Central US), FAA 2019a. **6** One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of interstates, US and state highway criteria are not "double-counted" in the length of ROW within the visual foreground zone of FM roads criteria. **7** One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone of interstates, US and state highway criteria and/or with the total length of ROW within the visual foreground zone of FM roads criteria.

Local, State & Federal Agencies Contacted/Notified

“

FEDERAL

- Federal Aviation Administration
- Federal Emergency Management Agency
- Natural Resources Conservation Service
- U.S. Army Corps of Engineers
- U.S. Department of Defense Siting Clearinghouse
- U.S. Environmental Protection Agency
- U.S. Fish & Wildlife Service
- U.S. House of Representatives

STATE

- Texas Commission on Environmental Quality
- Texas Department of Transportation
 - Aviation Division
 - Environmental Affairs Division
 - San Antonio District Engineer
- Texas General Land Office
- Texas Historical Commission
- Texas House of Representatives
- Texas Nature Conservancy
- Texas Parks & Wildlife Department
- Texas Public Utility Commission
- Texas State Senate
- Texas Water Development Board

LOCAL

- Alamo Area Council of Governments
- Alamo Soil and Water Conservation District
- Bexar County Commissioners
- Bexar County Economic Development
- Bexar County Farm Bureau
- Bexar County Farm Service Agency
- Bexar County Flood Control
- Bexar County Historical Commission
- Bexar County Judge
- Bexar County Manager
- City of San Antonio Officials
- Edwards Aquifer Authority
- Northside ISD
- San Antonio River Authority
- San Antonio Water System
- San Antonio World Heritage Office

Endangered Species and Historic Features



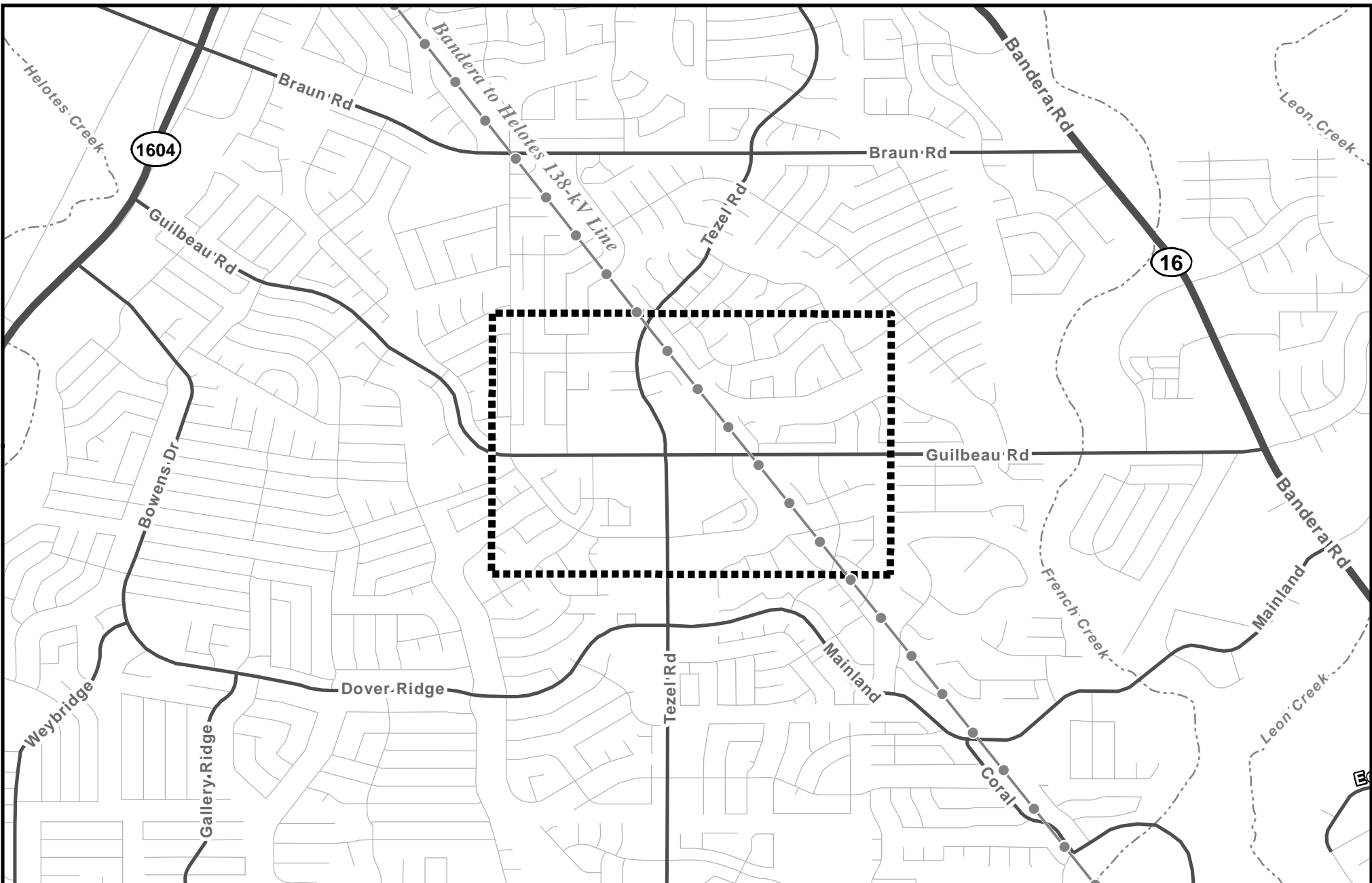
Native American dart points of Central Texas








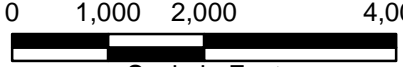




Golden-cheeked warbler

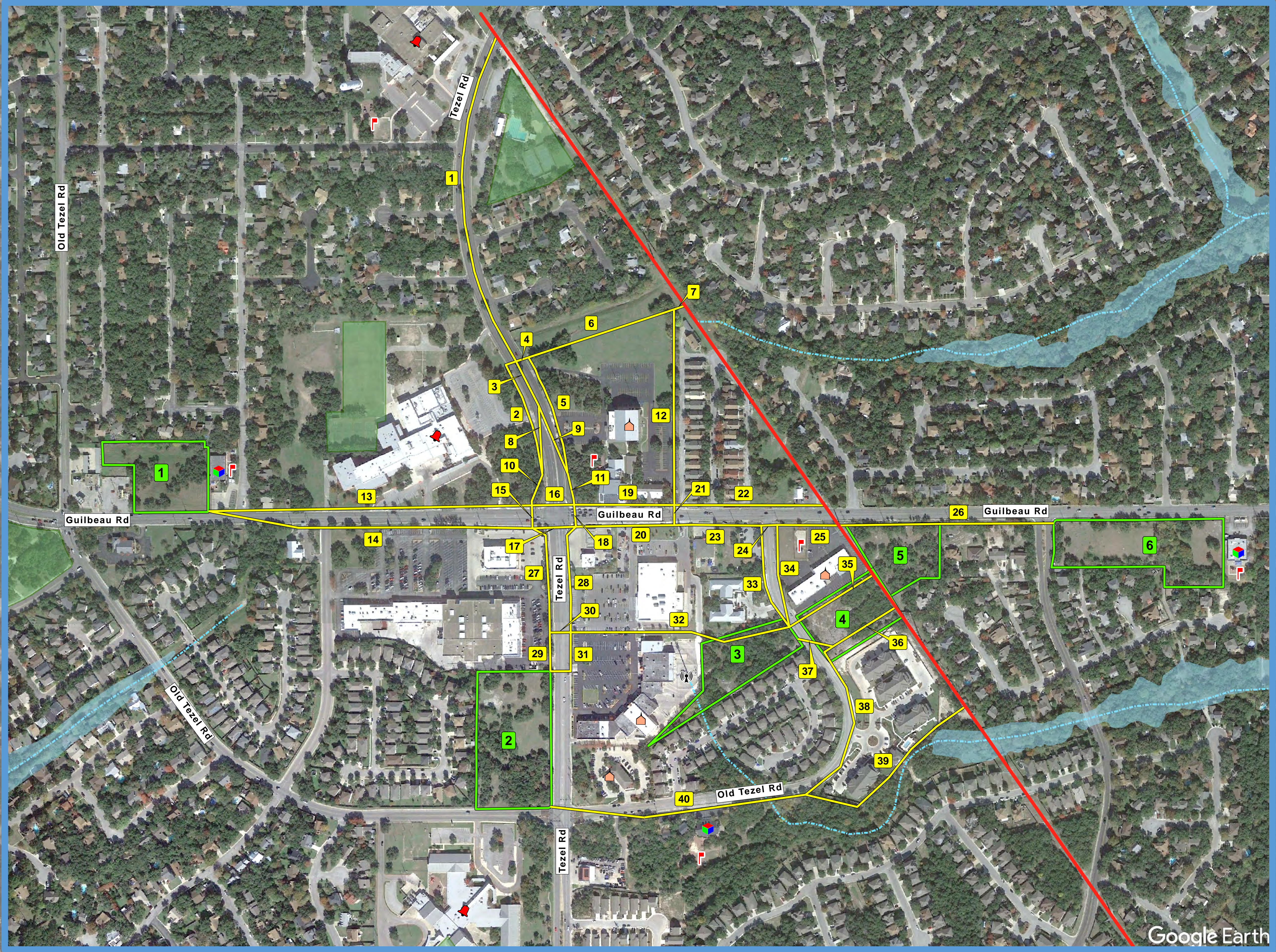


Karst invertebrates


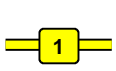
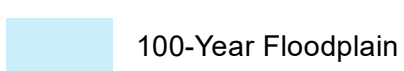




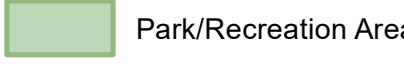






<ul style="list-style-type: none">  Study Area Boundary  Existing Transmission Line  State Highway  Major Road 	<ul style="list-style-type: none">  Local Road  Creek / Stream <div style="text-align: center;">  <p>NORTH</p>  <p>0 1,000 2,000 4,000 Scale in Feet</p> </div>	 	<p style="text-align: center;">Study Area Map Tezel Substation and Transmission Line Project CPS Energy Bexar County, Texas</p>
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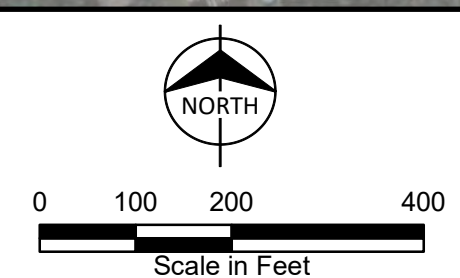
Path: Z:\Resources\Local\Clients\KCM\ENR\CPS\Em121323_Teziel\ArcGIS\MapFiles\AcDoc\Teziel_Constraints_Map.mxd gcoex Date: 6/17/2020



Google Earth

-  Potential Substation Site
-  Preliminary Segment and ID
-  100-Year Floodplain
-  Church
-  School
-  Study Area
-  Existing Transmission Line
-  Park/Recreation Area
-  Daycare / Early Learning Center
-  Tower
-  Creek/Stream
-  Playground

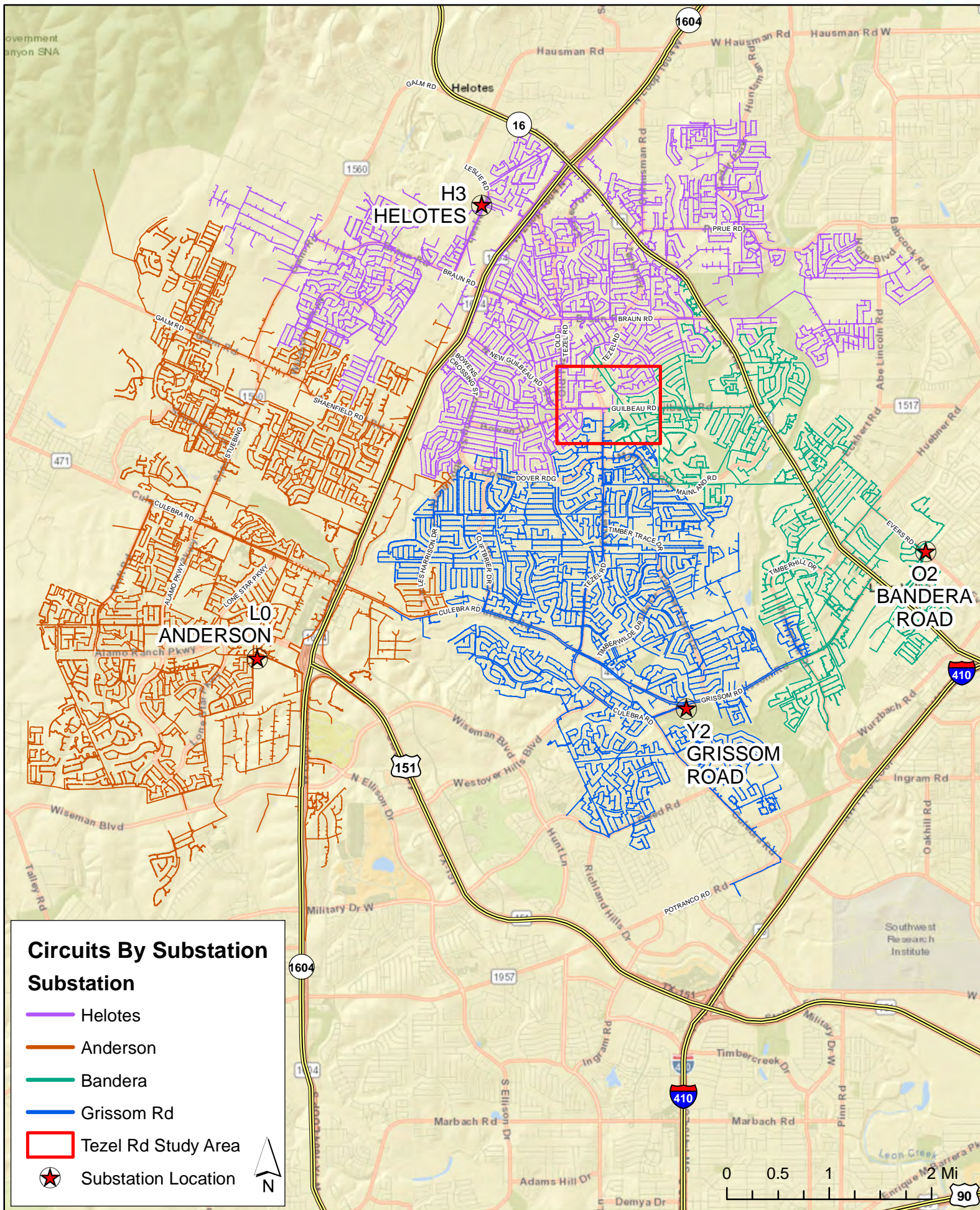
Base Map: 2019 Google Earth



Preliminary Alternative Sites/Routes
in Relation to Environmental and
Land Use Constraints
Teziel Substation and Transmission Line Project
CPS Energy
Bexar County, Texas

Issued: 6/17/2020

Tezel Study Area - Distribution Circuits





Tezel Substation & Transmission Line Project Questionnaire

Your feedback is important to us.

Please take a moment to respond to the following questions so we may evaluate public comments.

To submit electronically: save PDF to your computer, fill it out, save it and e-mail to tezelproject@cpsenergy.com

1. Did you review the Tezel Substation & Transmission Line Project informational packet?

Yes No

2. The informational packet was helpful.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Suggestions for improvements:

3. Did you view the Tezel Substation & Transmission Line Project Open House Video Broadcast? (Available July 15, 2020)

Yes No

4. The information presented in the video broadcast was helpful.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Suggestions for improvements:

5. I understand the need for the project.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6. After reviewing the informational packet and watching the video broadcast, do you still have questions about the project?

Yes No

7. If you answered yes to the previous question, would you like someone from the project team to contact you and discuss the project with you? If yes, please provide your contact information at the bottom of the next page.

Yes No

8. Below is a list of factors that CPS Energy and its consultants consider when identifying and evaluating alternative transmission line route segments and substation sites. Please rank your top five factors below from most important (1) to least important (5).

____ Proximity to residences

____ Visibility of structures

____ Proximity to businesses

____ Impact to woodland, grasslands/wetlands

____ Proximity to schools, churches, cemeteries and day care centers

____ Parallel property lines

____ Impact to streams/floodplains

____ Impact to endangered species and their habitat

____ Proximity to parks/recreational areas

____ Total line length

____ Impact to trees and other vegetation

____ Parallel existing roadways

____ Proximity to archaeological/historical site

____ Parallel existing transmission lines



9. What other factors do you feel should be considered when identifying and evaluating alternative transmission line segments and substation sites? _____

10. After your review of the informational packet or the project website, please indicate any features that should be added that were not identified or included on the Land Use and Environmental Constraints map. _____

11. Please identify any alternative transmission line segments or substation sites that are the most preferable to you. Please describe why. _____

12. Please identify any alternative transmission line segments or substation sites that are the least preferable to you. Please describe why. _____

13. Please indicate all that apply:
- A potential transmission line segment or segments is/are near my home/business.
List segment(s): _____
- A potential transmission line segment or segments cross my property.
List segment(s): _____
- A potential substation site is on or near my property.
List site: _____
- Other. Please specify _____
14. Do you own a 2-acre property or larger near the current alternative substation sites that you would be willing to sell to CPS Energy for construction and operation of an electric substation?
Yes No
15. Is there any other information you would like the project team to know, or take into consideration, when evaluating the project? _____

You may submit this form via mail or email to the following address

CPS Energy
Antonio DeMendonca
Mail Drop 100311
P.O. Box 1771
San Antonio, TX 78296

Email:
tezelproject@cpsenergy.com

Please provide your name and contact information below.
(Optional)

Name: _____
Address: _____
City _____ State _____ Zip _____
Telephone: _____
Email: _____

Su opinión es importante para nosotros.

Tómese un momento para responder las siguientes preguntas para que podamos evaluar los comentarios públicos.

Para enviar electrónicamente: guarde el PDF en su computadora, complételo, guárdelo y envíelo por correo electrónico a tezelproject@cpsenergy.com

1. ¿Revisó el paquete informativo del Proyecto de Subestación y Línea de Transmisión en Tezel?

Sí No

2. El paquete informativo fue útil.

Totalmente de Acuerdo De acuerdo Neutral En desacuerdo Totalmente en Desacuerdo

Sugerencias de mejoras:

3. ¿Vio la Transmisión de Video de Open House [Casa Abierta] del Proyecto de Subestación y Línea de Transmisión en Tezel? (Disponible el 15 de julio de 2020)

Sí No

4. La información presentada en la transmisión de video fue útil.

Totalmente de Acuerdo De acuerdo Neutral En desacuerdo Totalmente en Desacuerdo

Sugerencias de mejoras:

5. Entiendo la necesidad del proyecto.

Totalmente de Acuerdo De acuerdo Neutral En desacuerdo Totalmente en Desacuerdo

6. Después de revisar el paquete informativo y ver la transmisión de video, ¿aún tiene preguntas sobre el proyecto?

Sí No

7. Si respondió que sí a la pregunta anterior, ¿le gustaría que alguien del equipo del proyecto lo contacte y discuta el proyecto con usted? En caso afirmativo, proporcione su información de contacto en la parte inferior de la siguiente página.

Sí No

8. A continuación hay una lista de factores que CPS Energy y sus consultores consideran al identificar y evaluar segmentos alternativos de rutas de líneas de transmisión y sitios de subestaciones. Clasifique los cinco factores que considera más importantes a continuación, desde el más importante (1) hasta el menos importante (5).

____ Proximidad a las residencias

____ Visibilidad de estructuras

____ Proximidad a los negocios

____ Impacto en bosques, pastizales/humedales

____ Proximidad a escuelas, iglesias, cementerios y guarderías

____ Líneas de propiedad paralelas

____ Impacto en arroyos/llanuras de inundación

____ Impacto en especies en peligro de extinción y su hábitat

____ Proximidad a parques/áreas recreativas

____ Longitud total de la línea

____ Impacto en los árboles y otra vegetación

____ Carreteras paralelas existentes

____ Proximidad a sitio arqueológico/histórico

____ Líneas de transmisión paralelas existentes

9. ¿Qué otros factores, piensa usted, que deben considerarse al identificar y evaluar segmentos alternativos de líneas de transmisión y sitios de subestaciones? _____

10. Después de revisar el paquete informativo o del sitio web del proyecto, indique cualquier característica que deba agregarse que no haya sido identificada o incluida en el mapa de Uso del Suelo y Restricciones Ambientales. _____

11. Identifique cualquier segmento alternativo de línea de transmisión o sitio de subestación que le resulte más preferible. Por favor describa por qué _____

12. Identifique cualquier segmento alternativo de línea de transmisión o sitio de subestación que le resulte menos preferible. Por favor describa por qué. _____

13. Marque todos los que correspondan:
- Un posible segmento o segmentos de líneas de transmisión está(n) cerca de mi hogar/negocio.
Enumere el (los) segmento(s): _____
- Un posible segmento o segmentos de línea de transmisión cruza(n) mi propiedad.
Enumere el (los) segmento(s): _____
- Un posible sitio de subestación está en o cerca de mi propiedad.
Enumere el sitio: _____
- Otro. Especifique _____
14. ¿Es dueño de una propiedad de 2 acres o más cerca de los sitios de subestaciones alternativos actuales que estaría dispuesto a vender a CPS Energy para la construcción y operación de una subestación eléctrica?
Sí No
15. ¿Hay alguna otra información que le gustaría que el equipo del proyecto conozca, o tenga en cuenta, al evaluar el proyecto? _____

Puede enviar este formulario por correo o correo electrónico a la siguiente dirección

CPS Energy
Antonio DeMendonca
Mail Drop 100311
P.O. Box 1771
San Antonio, TX 78296

Correo Electrónico:
tezelproject@cpsenergy.com

Proporcione su nombre e información de contacto a continuación. (Opcional)

Nombre: _____
Dirección: _____
Ciudad _____ Estado _____ Código Postal _____
Teléfono: _____
Correo Electrónico: _____



Tezel Substation & Transmission Line Project Frequently Asked Questions

Project Overview

What is the Tezel Substation & Transmission Line Project?

CPS Energy is planning to construct and operate a new electric substation and connect to an existing high-voltage transmission line in the northwest part of Bexar County in the area west of IH10 and inside Loop 1604 near the intersection of Guilbeau and Tezel Roads. A substation is necessary to reduce the high voltage of electricity coming in from a transmission line to a lower voltage that can be distributed directly to end-users in the surrounding area. New transmission structures will be built to connect the new substation to an existing transmission line.

Why is the substation needed in this area?

The new substation is necessary to support growth in the area and improve reliability by shortening existing distribution lines serving homes and businesses, which reduces the potential for overloading and outages.

How much land is needed for this new substation?

The new substation will require at minimum 2 acres.

What is a transmission line?

A transmission line consists of specially-designed steel structures and wires that move electricity long distances at high voltages.

How does electricity get delivered to homes and businesses?

Typically, electricity is generated from remotely located electric power plants (including wind and solar farms) and then travels from those remote generating sources to substations closer to population centers through a system of high-voltage transmission lines. Once at a substation, the electricity is reduced to a voltage level that is appropriate for distribution to customers. Electricity then travels from the substation through the network of distribution lines, supplying electricity to homes and businesses.

When does construction begin?

Construction of the Tezel Substation & Transmission Line project is anticipated to begin mid-2022.

When will crews be working on this project?

Under normal circumstances, work will be performed Monday through Friday, from 8 A.M. – 5 P.M. Weekend work will be performed as needed.

Transmission Line Routes and Substation Sites

Where will the new substation be located?

Several possible substation sites have been identified, as well as multiple transmission routes offering different options for bringing electricity to the substation. In determining the various transmission line route options, CPS Energy and its consultants gather input from the community and federal, state, and local officials and agencies. This input is compiled into an Environmental Assessment Report, which is used to compare and evaluate transmission route and substation site options.

Who selects the final transmission line route and substation site?

The CPS Energy project team evaluates all of the information that has been gathered and compiled regarding the transmission line route and substation site options. The project team will present this data and their recommendation to the CPS Energy Board of Trustees, who will ultimately approve the site of the substation and the route of the transmission line, as this is located within San Antonio city limits

Environmental

Will it be necessary to remove trees and other vegetation to construct the project?

Yes, some removal of trees and other vegetation is often required to safely and reliably construct and operate transmission lines and substation sites. CPS Energy works with landowners and communities to responsibly comply with tree preservation requirements and minimize the impact to trees and other vegetation, clearing trees and other vegetation only where necessary to safely and reliably operate the transmission line and substation facilities.

Will the project impact endangered species in the area?

CPS Energy will conduct studies to identify endangered wildlife and plant species in the vicinity of the project and is committed to taking the required efforts to ensure endangered wildlife and plant species are not adversely affected as a result of the construction and operation of the project facilities.

Infrastructure

What will the transmission line pole look like?

CPS Energy generally uses galvanized steel tubular structures such as monopoles, although other types of structures may be used when the circumstances warrant.

What type of fencing will be installed around the perimeter of the substation?

CPS Energy's typical perimeter barrier is a chain link fence. However, the Tezel substation will have a combination of a chain link fence and wall on the sides facing residential properties and roads.

Will the substation or transmission lines create electric and magnetic fields (EMF) for people living nearby?

Substations and transmission lines are designed to operate safely for people living and working nearby and are not anticipated to result in any adverse EMF effects for people near them. For more information on EMF, please visit

<https://www.niehs.nih.gov/health/topics/agents/emf/index.cfm>

Real Property

Will this new substation affect my property value?

Appraisal studies tend to show that the presence of substations do not substantially affect property values in an adverse way.

What rights do landowners have when a utility acquires an approved substation site or the necessary transmission line right of way?

Landowners whose property will be crossed by the approved transmission line route or from whom the land for the substation site will be acquired have very specific rights, which are generally set out in The Texas Landowner Bill of Rights published by the Attorney General of Texas, a copy of which may currently be found at <https://www.texasattorneygeneral.gov/sites/default/files/files/divisions/general-oag/LandownersBillofRights.pdf>.

Interested landowners are encouraged to review that document to become more familiar with their rights under the law. Affected landowners will receive a copy of The Texas Landowner Bill of Rights from CPS Energy by US Mail before an easement is negotiated.

What is "eminent domain?"

It is the right of a government, or its agent, to acquire private property for public use, with payment of compensation for property acquired.

How will landowners along the chosen transmission route be affected?

CPS Energy will purchase a property right known as an easement for the length of the transmission line from existing property owners. In accordance with the terms of the easement, vegetation growing under the transmission line will be trimmed, and in some cases cleared to allow for the line construction. The easement document will also address issues such as roadways, fencing, access and notice rights, and other matters regarding CPS Energy's construction, operation, and maintenance of the transmission line facilities.

How much does CPS Energy pay for acquiring property rights from landowners?

CPS Energy evaluates property value using industry standard practices and offers land owner fair market value for property rights to be acquired.

Next Steps

What happens after the Open House Video Broadcast?

CPS Energy's project team will evaluate all project information, including public input received. The project team will identify potential transmission line routes and substation sites based on consideration of community values, recreational and park areas, historical and aesthetic values, and environmental integrity. The team will present this information and their site recommendation to the CPS Energy Board of Trustees for approval.

You may follow the project's progress at www.cpsenergy.com, search "Tezel".

Descripción del Proyecto

¿Qué es el Proyecto de Subestación y Línea de Transmisión en Tezel?

CPS Energy planea construir y operar una nueva subestación eléctrica y conectarse a una línea de transmisión de alto voltaje existente en la parte noroeste del Condado de Bexar en el área al oeste de la IH10 y dentro de la Carretera 1604 cerca de la intersección de las Carreteras Guillbeau y Tezel. Es necesaria una subestación para reducir el alto voltaje de la electricidad que entra desde una línea de transmisión a un voltaje más bajo que pueda distribuirse directamente a los usuarios finales en el área circundante. Se construirán nuevas estructuras de transmisión para conectar la nueva subestación a una línea de transmisión existente.

¿Por qué se necesita la subestación en esta área?

La nueva subestación es necesaria para apoyar el crecimiento en el área y mejorar la confiabilidad al acortar las líneas de distribución existentes que proveen electricidad a hogares y negocios, lo que reduce el potencial de sobrecarga y cortes.

¿Cuánta superficie de terreno se necesita para esta nueva subestación?

La nueva subestación requerirá como mínimo 2 acres.

¿Qué es una línea de transmisión?

Una línea de transmisión consiste en estructuras de acero especialmente diseñadas y cables que transportan electricidad a largas distancias a altos voltajes.

¿Cómo se provee la electricidad a los hogares y los negocios?

Por lo general, la electricidad se genera a partir de plantas de energía eléctrica ubicadas en una zona apartada (incluidas las granjas eólicas y solares) y luego viaja desde esas fuentes de generación apartadas a subestaciones más cercanas a los centros de población a través de un sistema de líneas de transmisión de alto voltaje. Una vez en una subestación, la electricidad se reduce a un nivel de voltaje apropiado para su distribución a los clientes. Luego, la electricidad viaja desde la subestación a través de la red de líneas de distribución, suministrando electricidad a hogares y negocios.

¿Cuándo comienza la construcción?

Se espera que la construcción del Proyecto de Subestación y Línea de Transmisión en Tezel comience a mediados de 2022.

¿Cuándo trabajarán los equipos en este proyecto?

En circunstancias normales, el trabajo se realizará de lunes a viernes a partir de las 8 a.m. - 5 p.m. El trabajo de fin de semana se realizará según sea necesario.

Rutas de Líneas de Transmisión y Sitios de Subestaciones

¿Dónde se ubicará la nueva subestación?

Se han identificado varios posibles sitios para la subestación, así como múltiples rutas de transmisión que ofrecen diferentes opciones para llevar electricidad a la subestación. Al determinar las diversas opciones de ruta de la línea de transmisión, CPS Energy y sus consultores recopilan información de la comunidad y los funcionarios y agencias federales, estatales y locales. Dichos aportes se recopilan en un Informe de Evaluación Ambiental, que se utiliza para comparar y evaluar las opciones de ruta de transmisión y sitio de subestación.

¿Quién selecciona la ruta final de la línea de transmisión y el sitio de la subestación?

El equipo del proyecto de CPS Energy evalúa toda la información que se ha reunido y recopilado con respecto a la ruta de la línea de transmisión y las opciones del sitio de la subestación. El equipo del proyecto presentará estos datos y su recomendación a la Junta de Fiduciarios de CPS Energy, que finalmente aprobará el sitio de la subestación y la ruta de la línea de transmisión, ya que se encuentra dentro de los límites de la ciudad de San Antonio.

Medioambiental

¿Será necesario quitar árboles y otra vegetación para construir el proyecto?

Sí, a menudo se requiere cierta remoción de árboles y otra vegetación para construir y operar líneas de transmisión y sitios de subestación de manera segura y confiable. CPS Energy trabaja con propietarios y comunidades para cumplir de manera responsable con los requisitos de preservación de árboles y minimizar el impacto en los árboles y otra vegetación, quitando árboles y otra vegetación solo donde sea necesario para operar de manera segura y confiable la línea de transmisión y las instalaciones de subestación.

¿El proyecto afectará a especies en peligro de extinción en el área?

CPS Energy llevará a cabo estudios para identificar especies de plantas y vida silvestre en peligro de extinción en las cercanías del proyecto y se compromete a realizar los esfuerzos necesarios para garantizar que las especies de plantas y vida silvestre en peligro de extinción no se vean afectadas negativamente como resultado de la construcción y operación de las instalaciones del proyecto.

CPS Energy eliminará árboles y otra vegetación solo donde sea necesario para operar de manera segura y confiable las instalaciones de la subestación y la línea de transmisión.

Infraestructura

¿Cómo será el poste de la línea de transmisión?

CPS Energy generalmente utiliza estructuras tubulares de acero galvanizado como un poste individual, aunque se pueden utilizar otros tipos de estructuras cuando las circunstancias lo justifiquen.

¿Qué tipo de cerca se instalará alrededor del perímetro de la subestación?

La barrera perimetral típica de CPS Energy es una cerca de alambre. Sin embargo, la subestación en Tezel tendrá una combinación de una cerca de alambre y una pared en los lados que dan a propiedades residenciales y carreteras.

¿La subestación o las líneas de transmisión crearán campos eléctricos y magnéticos (EMF) para las personas que viven cerca?

Las subestaciones y las líneas de transmisión están diseñadas para operar de manera segura para las personas que viven y trabajan cerca y no se prevé que produzcan ningún efecto EMF adverso para las personas en sus cercanías. Para obtener más información sobre EMF, visite

<https://www.niehs.nih.gov/health/topics/agents/emf/index.cfm>

Bienes Inmuebles

¿Esta nueva subestación afectará el valor de mi propiedad?

Los estudios de evaluación tienden a mostrar que la presencia de subestaciones no afecta sustancialmente los valores de las propiedades de manera adversa.

¿Qué derechos tienen los propietarios cuando una empresa de servicios públicos adquiere un sitio de subestación aprobado o el derecho de paso de la línea de transmisión necesaria?

Los propietarios cuya propiedad será atravesada por la ruta aprobada de la línea de transmisión o de quienes se adquirirán los terrenos para el sitio de la subestación tienen derechos muy específicos, que generalmente se establecen en la Declaración de Derechos del Propietario de Terrenos de Texas publicada por el Abogado General de Texas, un copia de la cual se puede encontrar actualmente en <https://www.texasattorneygeneral.gov/sites/default/files/files/divisions/general-oag/LandownersBillofRights.pdf>.

Se alienta a los propietarios interesados a revisar ese documento para familiarizarse con sus derechos reconocidos por la ley. Los propietarios afectados recibirán una copia de la Declaración de Derechos del Propietario de Terrenos de Texas de CPS Energy por el Correo de los Estados Unidos antes de negociar un derecho de acceso a la propiedad.

¿Qué es un “dominio eminente/expropiación”?

Es el derecho de un gobierno, o su agente, de adquirir una propiedad privada para uso público, con el pago de una compensación por la propiedad adquirida.

¿Cómo se verán afectados los propietarios a lo largo de la ruta de transmisión elegida?

CPS Energy adquirirá un derecho de propiedad conocido como derecho de acceso a la propiedad por la longitud de la línea de transmisión de los propietarios existentes. De acuerdo con los términos del derecho de acceso a la propiedad, la vegetación que crece debajo de la línea de transmisión se recortará y, en algunos casos, se eliminará para permitir la construcción de la línea. El documento de derecho de acceso a la propiedad también abordará cuestiones tales como carreteras, cercas, derechos de acceso y notificación, y otros asuntos relacionados con la construcción, operación y mantenimiento de las instalaciones de la línea de transmisión de CPS Energy.

¿Cuánto paga CPS Energy por adquirir los derechos de propiedad de los propietarios?

CPS Energy evalúa el valor de la propiedad utilizando prácticas estándar de la industria y ofrece al propietario un valor justo de mercado para los derechos de propiedad que se adquirirán.

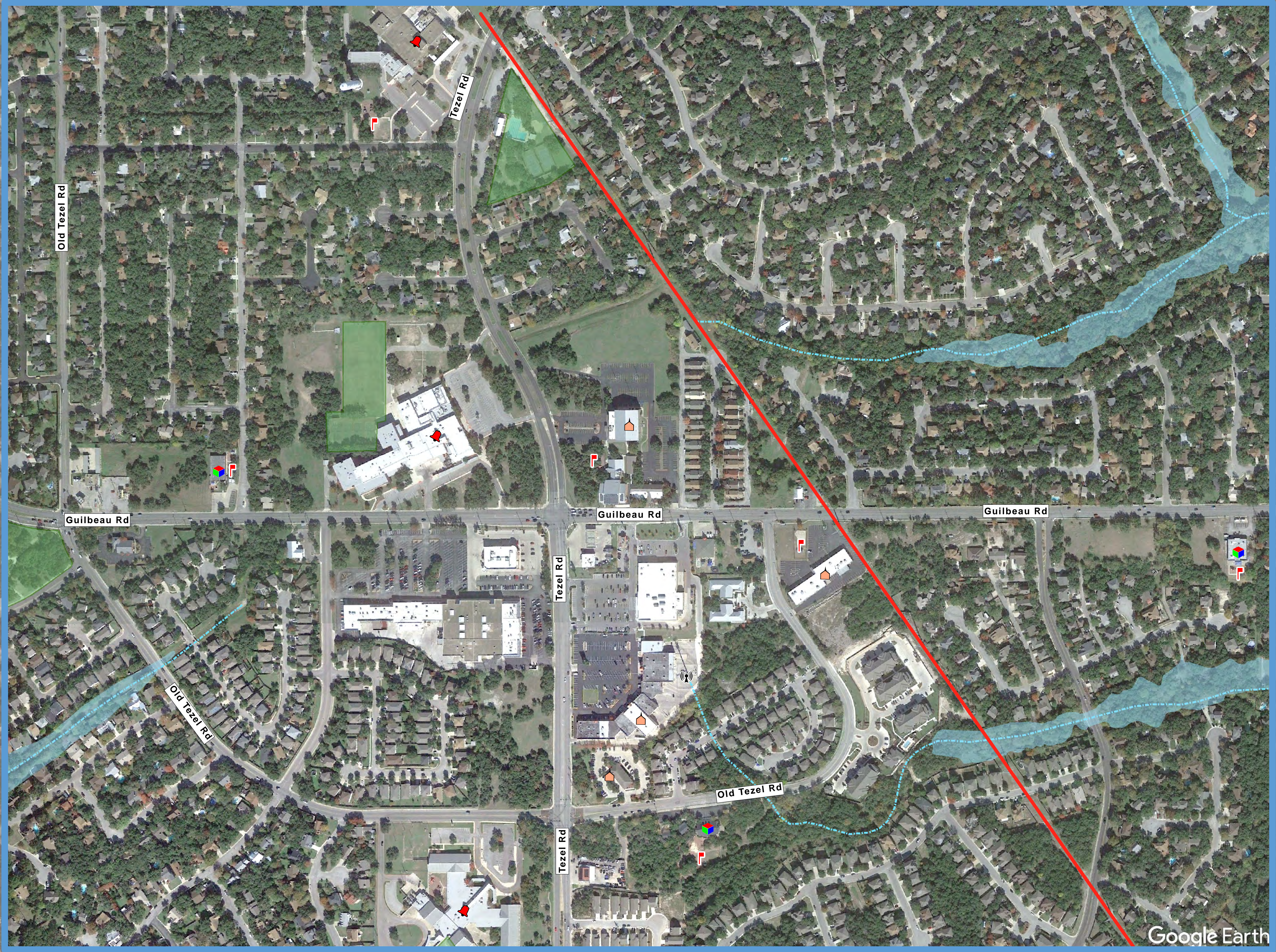
Próximos Pasos

¿Qué sucede después de la Transmisión de Video de Open House [Casa Abierta]?

El equipo de proyecto de CPS Energy evaluará toda la información del proyecto, incluidas las aportaciones públicas recibidas. El equipo del proyecto identificará posibles rutas de líneas de transmisión y sitios de subestaciones basándose en la consideración de los valores de la comunidad, las áreas recreativas y de parques, los valores históricos y estéticos, y la integridad ambiental. El equipo presentará esta información y la recomendación de su sitio a la Junta de Fiduciarios de CPS Energy para su aprobación.

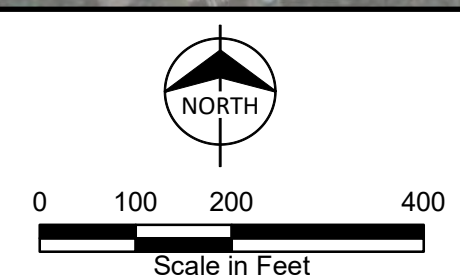
Puede seguir el progreso del proyecto en www.cpsenergy.com, busque “Tezel”.

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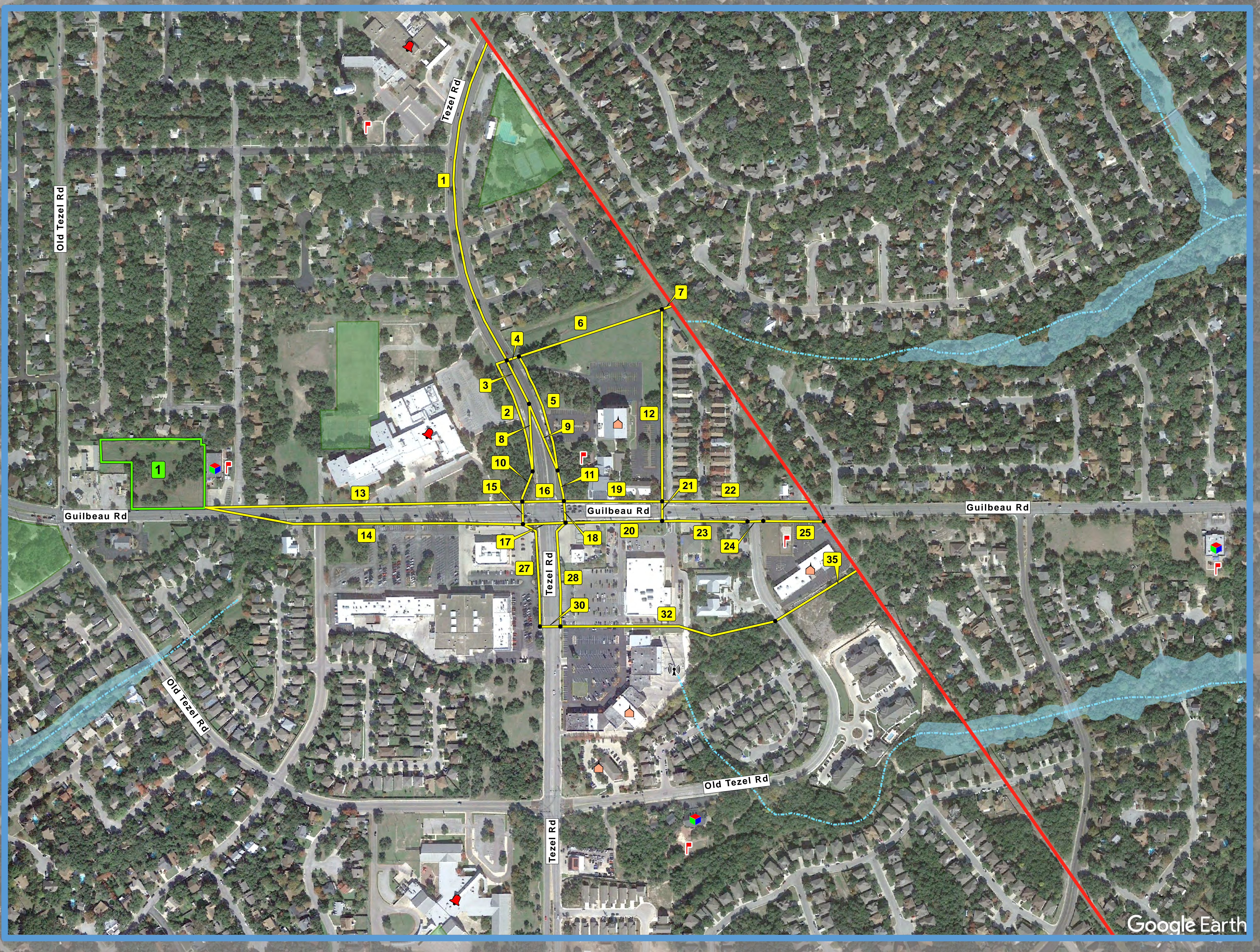
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- Study Area
- 100-Year Floodplain
- Church
- School
- Existing Transmission Line
- Park/Recreation Area
- Daycare / Early Learning Center
- Tower
- Creek/Stream
- Playground



Environmental and Land Use Constraints
Tezel Substation and Transmission Line Project
CPS Energy
Bexar County, Texas

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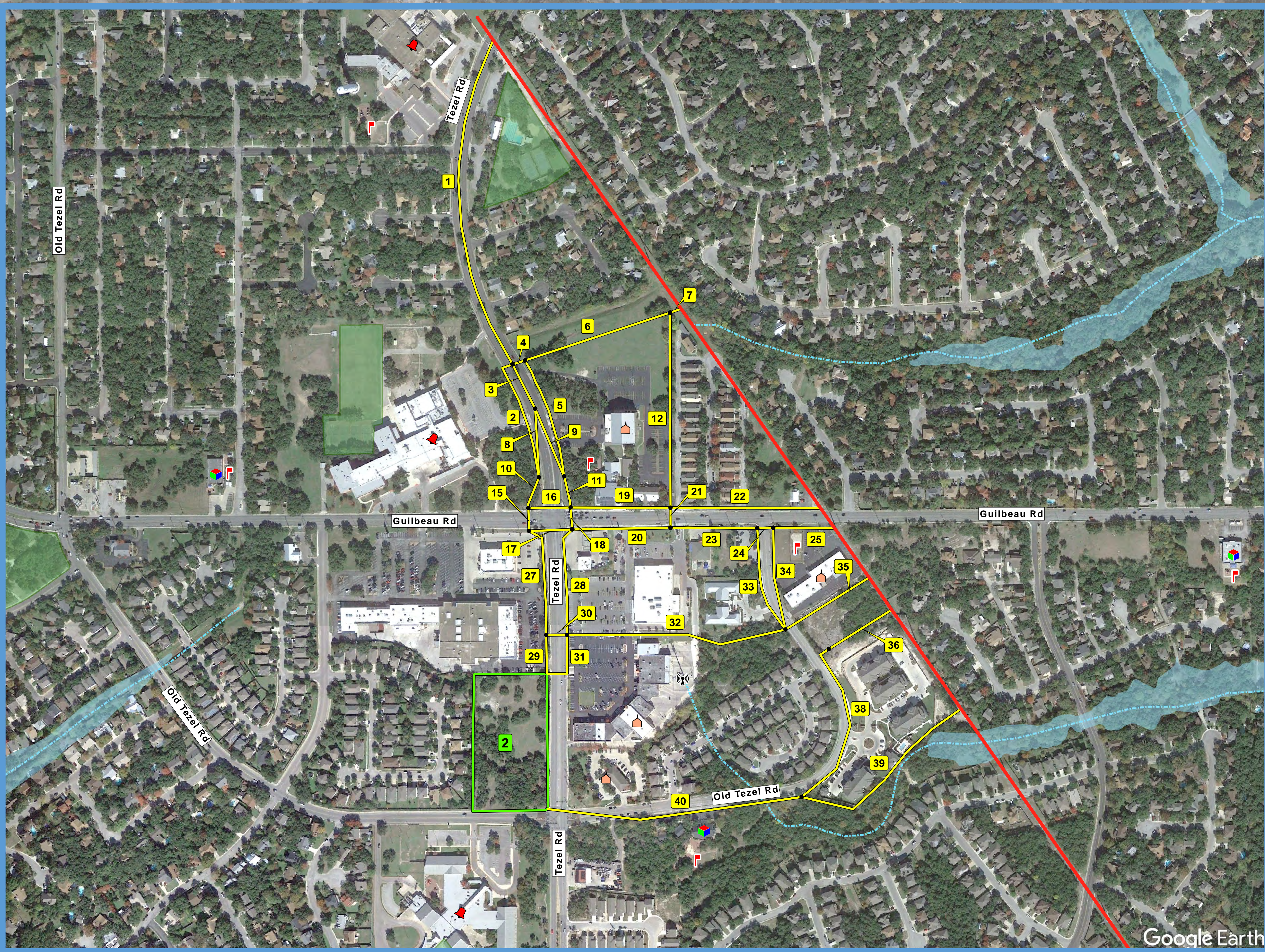
Potential Substation Site	Preliminary Segment and ID	100-Year Floodplain	Church	School
Study Area	Existing Transmission Line	Park/Recreation Area	Daycare / Early Learning Center	Tower
	Creek/Stream		Playground	

Base Map: 2019 Google Earth

Scale In Feet

Site 1 and Preliminary Alternative Route Segments
in Relation to Environmental and
Land Use Constraints
Tezel Substation and Transmission Line Project
CPS Energy
Bexar County, Texas

Issued: 7/8/2020

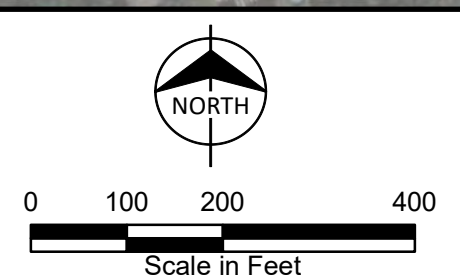


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- | | | | | |
|---------------------------|----------------------------|----------------------|---------------------------------|--------|
| Potential Substation Site | Preliminary Segment and ID | 100-Year Floodplain | Church | School |
| Study Area | Existing Transmission Line | Park/Recreation Area | Daycare / Early Learning Center | Tower |
| | Creek/Stream | | Playground | |

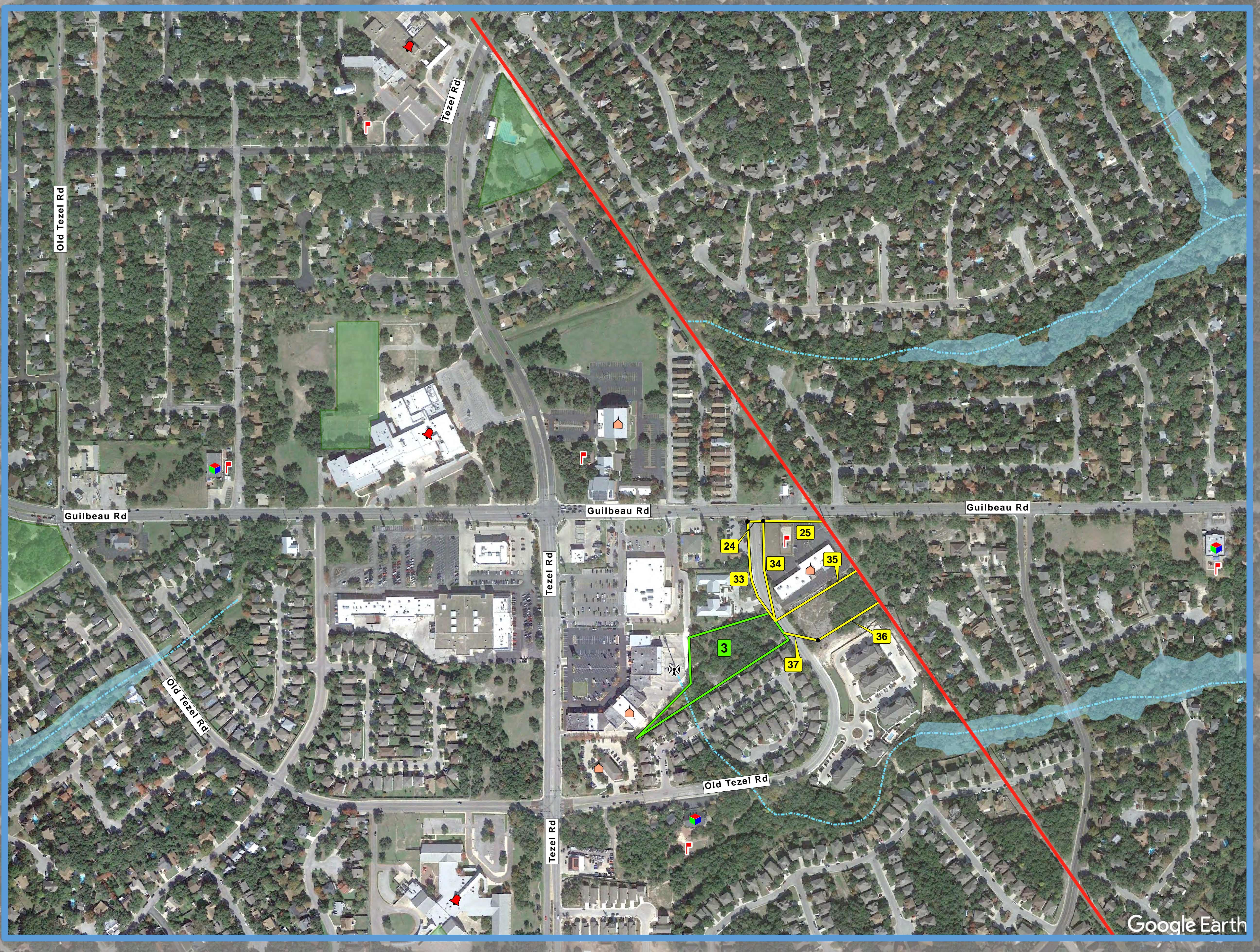
Base Map: 2019 Google Earth




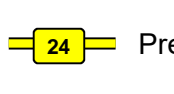
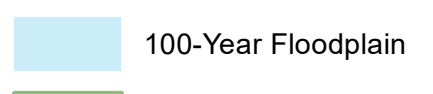




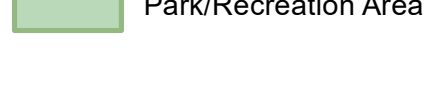
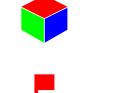


Site 2 and Preliminary Alternative Route Segments
in Relation to Environmental and
Land Use Constraints
Tezel Substation and Transmission Line Project
CPS Energy
Bexar County, Texas

Issued: 7/8/2020

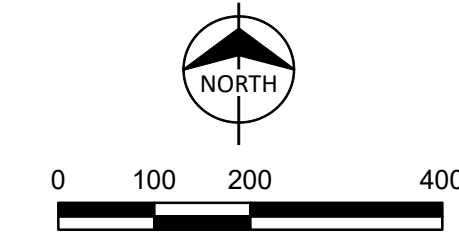
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Google Earth

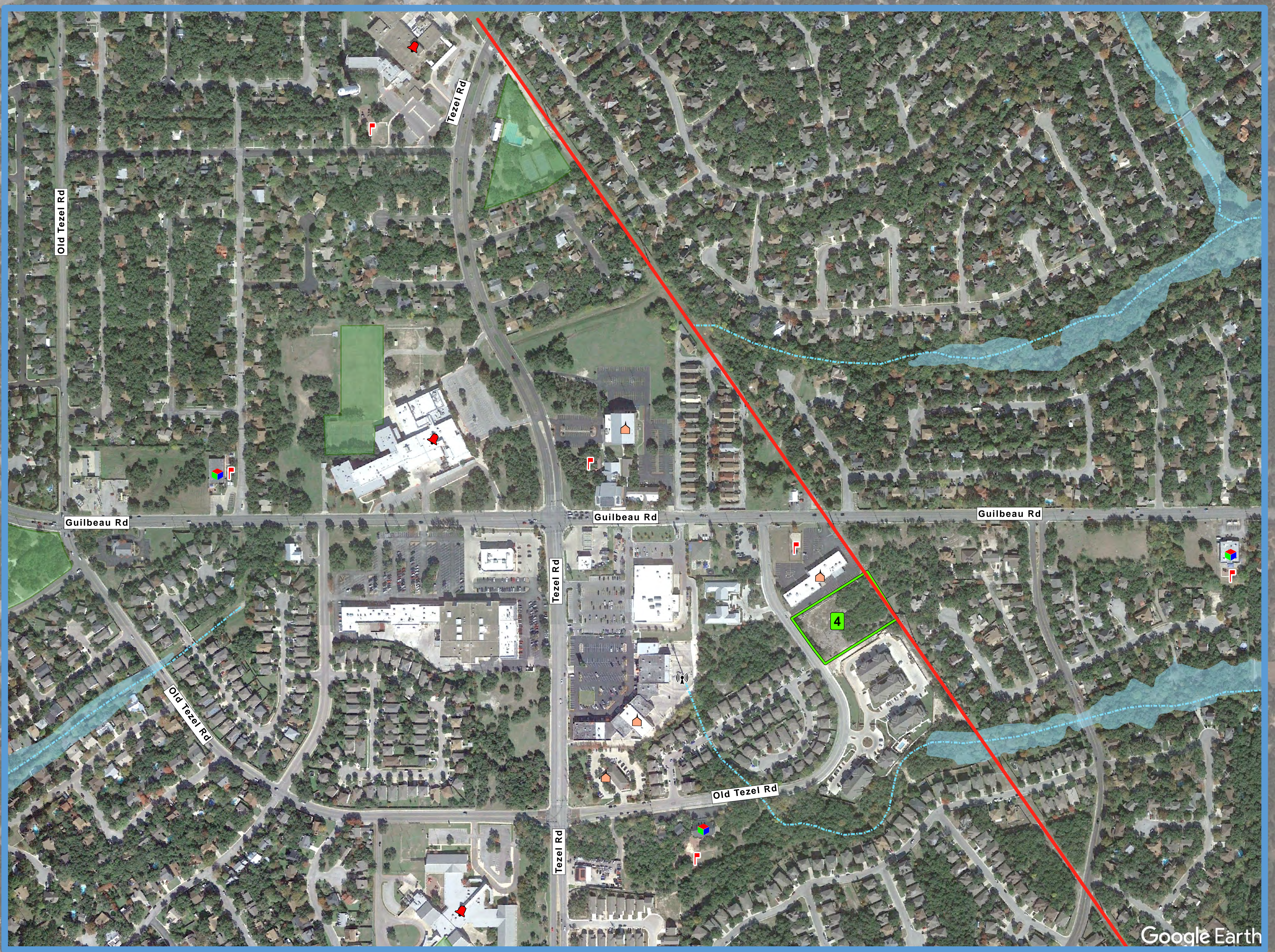
-  Potential Substation Site
-  Preliminary Segment and ID
-  100-Year Floodplain
-  Church
-  School
-  Study Area
-  Existing Transmission Line
-  Park/Recreation Area
-  Daycare / Early Learning Center
-  Tower
-  Playground

Base Map: 2019 Google Earth



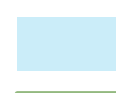




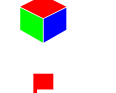

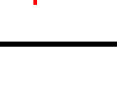


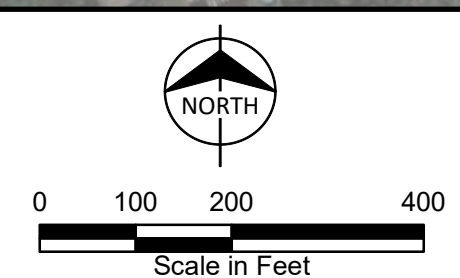

Site 3 and Preliminary Alternative Route Segments
in Relation to Environmental and
Land Use Constraints
Tezel Substation and Transmission Line Project
CPS Energy
Bexar County, Texas

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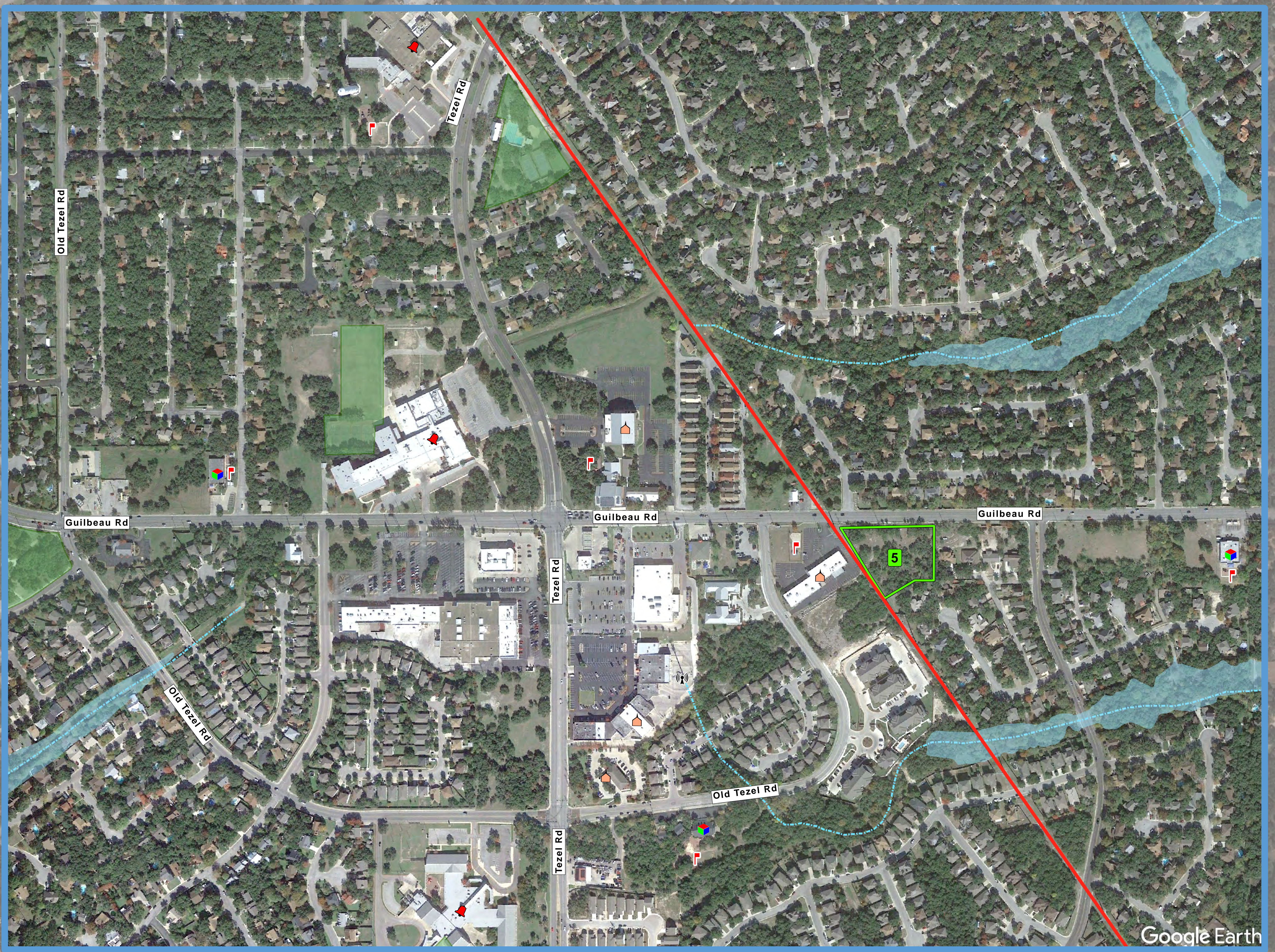
Google Earth

-  Potential Substation Site
-  Existing Transmission Line
-  100-Year Floodplain
-  Church
-  School
-  Creek/Stream
-  Park/Recreation Area
-  Daycare / Early Learning Center
-  Tower
-  Playground



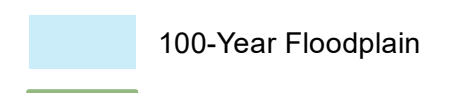



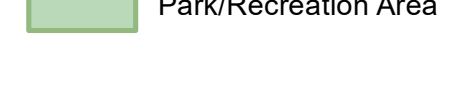
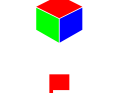

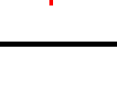


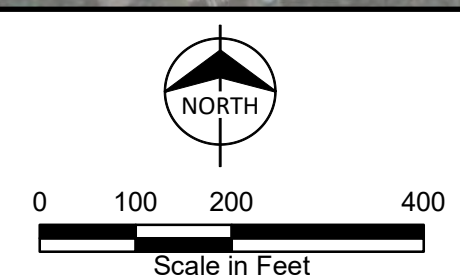
Site 4 in Relation to Environmental and Land Use Constraints
 Tezel Substation and Transmission Line Project
 CPS Energy
 Bexar County, Texas

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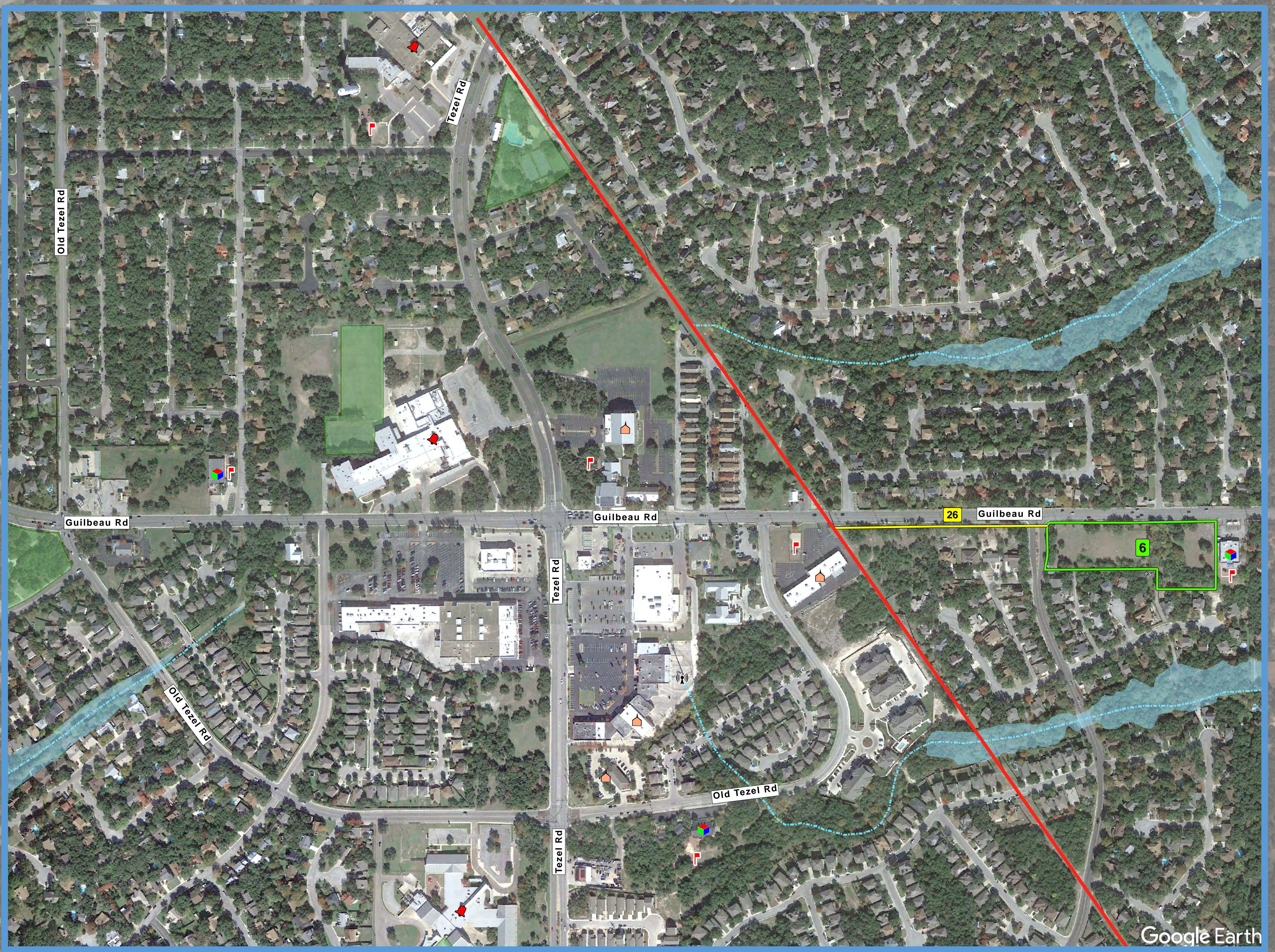
Google Earth

-  Potential Substation Site
-  Existing Transmission Line
-  100-Year Floodplain
-  Church
-  School
-  Creek/Stream
-  Park/Recreation Area
-  Daycare / Early Learning Center
-  Tower
-  Playground


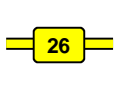
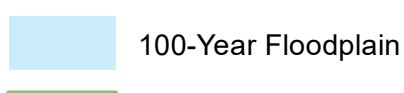




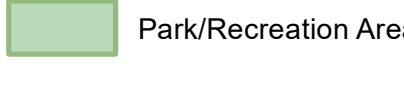






Site 5 in Relation to Environmental and Land Use Constraints
 Tezel Substation and Transmission Line Project
 CPS Energy
 Bexar County, Texas

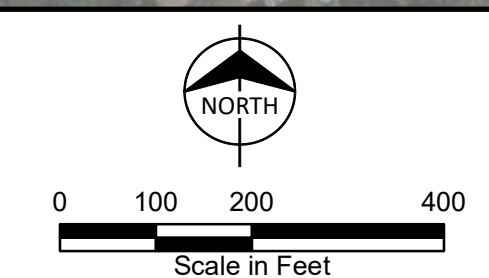
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Google Earth

-  Potential Substation Site
-  Preliminary Segment and ID
-  100-Year Floodplain
-  Church
-  School
-  Study Area
-  Existing Transmission Line
-  Park/Recreation Area
-  Daycare / Early Learning Center
-  Tower
-  Creek/Stream
-  Playground

Base Map: 2019 Google Earth



Site 6 and Preliminary Alternative Route Segments in Relation to Environmental and Land Use Constraints Teziel Substation and Transmission Line Project CPS Energy Bexar County, Texas

Issued: 6/24/2020

Substation Site	Route #	Transmission Segments
Site #1	1	1-2-10-13
	2	1-2-10-15-14
	3	1-3-8-10-13
	4	1-3-8-10-15-14
	5	1-3-9-11-16-13
	6	1-3-9-11-16-15-14
	7	1-3-9-11-18-17-14
	8	1-4-5-11-16-13
	9	1-4-5-11-16-15-14
	10	1-4-5-11-18-17-14
	11	7-6-4-3-8-10-13
	12	7-6-4-3-8-10-15-14
	13	7-6-4-3-9-11-16-13
	14	7-6-4-3-9-11-16-15-14
	15	7-6-4-3-9-11-18-17-14
	16	7-6-4-2-10-13
	17	7-6-4-2-10-15-14
	18	7-6-5-11-16-13
	19	7-6-5-11-16-15-14
	20	7-6-5-11-18-17-14
	21	7-12-19-16-13
	22	7-12-19-18-17-14
	23	7-12-19-16-15-14
	24	7-12-21-20-17-14
	25	7-12-21-20-17-15-13
	26	7-12-21-20-18-16-13
	27	22-19-16-13
	28	22-19-16-15-14
	29	22-19-18-17-14
	30	22-21-20-17-14
	31	22-21-20-17-15-13
	32	22-21-20-18-16-13
	33	25-24-23-20-17-14
	34	25-24-23-20-18-16-13
	35	25-24-23-20-17-15-13
	36	25-24-23-21-19-16-13
	37	35-32-28-17-14
	38	35-32-28-17-15-13
	39	35-32-28-18-16-13
	40	35-32-30-27-14
	41	35-32-30-27-15-13

Substation Site	Route #	Transmission Segments
Site #2	1	1-2-10-15-27-29
	2	1-2-10-16-18-28-31
	3	1-3-8-10-15-27-29
	4	1-3-8-10-16-18-28-31
	5	1-3-8-10-16-18-28-30-29
	6	1-3-9-11-16-15-27-29
	7	1-3-9-11-18-17-27-29
	8	1-3-9-11-18-28-31
	9	1-3-9-11-18-28-30-29
	10	1-4-5-11-16-15-27-29
	11	1-4-5-11-18-17-27-29
	12	1-4-5-11-18-28-31
	13	1-4-5-11-18-28-30-29
	14	7-6-4-2-10-15-27-29
	15	7-6-4-2-10-15-17-28-31
	16	7-6-4-3-8-10-15-27-29
	17	7-6-4-3-8-10-15-17-28-31
	18	7-6-4-3-9-11-16-15-27-29
	19	7-6-4-3-9-11-18-17-27-29
	20	7-6-4-3-9-11-18-28-31
	21	7-6-4-3-9-11-18-28-30-29
	22	7-6-5-11-16-15-27-29
	23	7-6-5-11-18-17-27-29
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	35	22-19-18-28-30-29
	36	22-19-18-28-31
	37	22-21-20-28-31
	38	22-21-20-17-27-29
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	40	25-24-23-20-17-27-29
	41	25-24-23-20-28-31
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	43	25-24-33-32-30-29
	44	25-24-33-32-31
	45	25-34-32-30-29
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	52	35-34-24-23-20-28-30-29
	53	35-34-24-33-32-30-29
	54	35-34-24-23-20-28-31
	55	35-34-24-33-32-31
	56	35-34-24-23-20-17-27-29
	57	36-38-40
	58	39-40

Substation Site	Route #	Transmission Segments
Site #3	1	25-24-33
	2	25-34
	3	35
	4	36-37
Site #4		None
Site #5		None
Site #6	1	26

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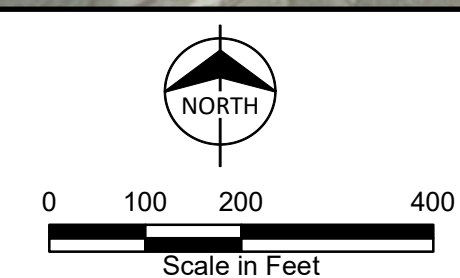
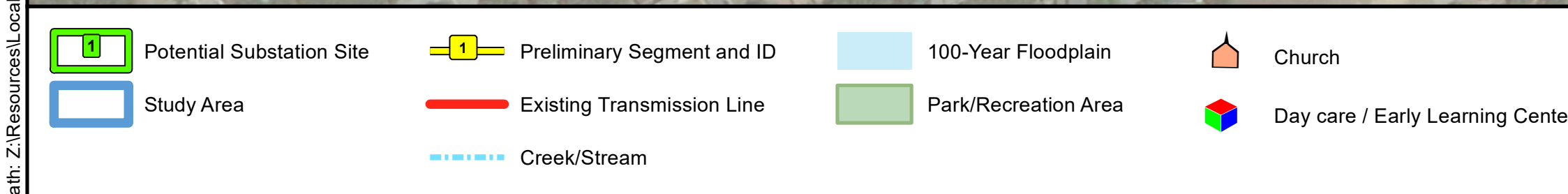


Figure 2-2
Primary Alternatives in Relation to
Environmental and Land Use Constraints
Tezel Substation and Transmission Line Project
CPS Energy
Bexar County, Texas



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- 1 Potential Substation Site
- 1 Primary Segment and ID
- 100 Habitable Structure Footprint
- 1 Park/Recreation Area
- 1 Study Area
- Existing Transmission Line
- 100 Habitable Structure / Land Use Feature ID
- 📶 Tower
- Creek/Stream

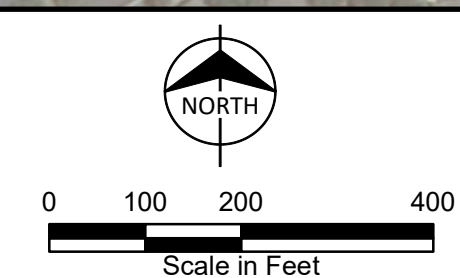


Figure 6-1
 Habitable Structures and Other Land Use Features
 in the Vicinity of the Primary Alternatives
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